



# Trucking in Canada

2004



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Statistics Canada  
Transportation Division  
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# Trucking in Canada

2004

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February 2006

Catalogue no. 53-222-XIE  
ISSN 1481-0719

Frequency: Annual

Ottawa

La version française de cette publication est disponible sur demande (n° 53-222-XIF au catalogue).

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- . not available for any reference period
  - .. not available for a specific reference period
  - ... not applicable
  - 0 true zero or a value rounded to zero
  - 0<sup>s</sup> value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
  - P preliminary
  - r revised
  - x suppressed to meet the confidentiality requirements of the *Statistics Act*
  - E use with caution
  - F too unreliable to be published
- 

## Acknowledgements

This publication was prepared in the Transportation Division under the direction of **Gordon Baldwin**, director; **Bruce Meyer**, assistant director; **John Ross**, former chief, trucking section; **Ed Hamilton**, chief, trucking section; **Joe Foti**, chief operations; **John Nicoletta** and **Denis Pilon**, unit heads, trucking section.

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# Highlights

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## **For-hire trucking: Quarterly and annual industry statistics, 2004**

### **Canadian-based carriers with annual revenues of \$1 million or more**

#### **For-hire trucking: Quarterly statistics, 2004**

- There were, on average, 3,197 for-hire motor carriers in 2004, up 12% from last year. Operating revenues totalled \$25.1 billion, an average of \$7.2 million per carrier. On a quarterly basis, operating revenues were \$1.8 billion, up 5.2% from last year.
- In 2004, for-hire carriers showed lower quarterly operating ratio (the total operating expenses divided by the total operating revenues) compared to 2003. The operating ratio decreased to 0.95 in the first quarter down to 0.92 for all other quarters.
- In 2004, domestic movements accounted for almost two thirds of revenues (64%) and totalled \$15.1 billion, an increase of 18% from 2003. Total revenues generated from international transborder movements (movements between Canada and United States and Mexico) amounted to \$8.73 billion in 2004, up 18 % from the previous year.

#### **For-hire trucking: Annual supplement statistics, 2004**

- In 2004, for-hire motor carriers generated \$24.0 billion in total revenues and incurred \$22.6 billion in total expenses, resulting in net operating revenues of \$1.5 billion.
- The profit margin (net operating income as a percentage of total operating revenues) was 6.1%.
- Total assets of for-hire motor carriers based in Canada with annual revenues of \$1 million or more reached \$12.0 billion. Total assets increase an average by 11.5% per carrier.
- The return on equity at 16.6% indicated a positive financial leverage with a rate of return on capital employed of 15.7%.



# Chapter 1

## Trucking in Canada

### The trucking industry in 2004

The trucking industry plays an important role in the Canadian economy and for Canadians in general. In 2004, trucking contributed \$14.8 billion to the economy, a little less than one third of the total output generated from the transportation sector. With economic growth and increased consumer demand, the importance of the trucking industry continues to rise. Trucking impacts all of us in that much of what we buy, from food to clothing to building materials, is brought to us by truck.

### The Canadian economy in 2004<sup>1</sup>

In 2004, gross domestic product (GDP) increased 2.9%, up from 2.0% growth a year earlier. Economic growth in Alberta, British Columbia, Saskatchewan, the Northwest Territories and the Yukon was above the national average. During the last three years, growth in GDP has averaged 2.7% per year.

In the west, Alberta topped the provinces in economic growth with a 4.3% increase in 2004. Record oil prices and strong foreign demand stimulated the energy sector and boosted the economy. With a 4.0% increase, British Columbia's economy was the next strongest in the west due to gains in residential construction and forestry. In Saskatchewan, higher output in manufacturing and agriculture helped advance GDP 3.4%.

In the northern part of the country, GDP for the Northwest Territories accelerated 5.2% as diamond mining operations continued to positively impact the economy. Yukon's economy grew 3.5%, largely due to advances in construction and mining. After a decline in 2003, Nunavut's GDP rose 0.5%, with gains in public administration and construction.

Although gross domestic product rose in all of the provinces east of Saskatchewan, except for a decline in Newfoundland and Labrador, the increases were below the national average. Ontario experienced the largest increase at 2.7%. There was growth in manufacturing, particularly in the motor vehicle sector, and in wholesale trade. Both Manitoba's and Quebec's economies grew 2.3% in 2004. Manitoba benefited from gains in the manufacturing, transportation and retail trade sectors. Quebec, on the other hand, continued to benefit from activity in the residential construction sector and experienced a recovery in manufacturing, particularly in the aerospace sector.

In Atlantic Canada, New Brunswick's economy grew 2.0% in 2004. The manufacturing sector bounced back and the construction sector continued to do well. GDP in Prince Edward Island rose 1.8%, with increases in manufacturing and residential construction. Gains in manufacturing of rail cars and high tech equipment and in retail trade helped edge Nova Scotia's economy up 1.4%. Newfoundland and Labrador's economy was slowed in 2004 by operational problems in the oil and gas sector along with strikes in the

private and public sectors, all of which contributed to a 1.4% decline in GDP. Residential construction activity, however, continued to be strong.

### International trade and the trucking industry

Exports rebounded in 2004, despite the strength of the Canadian dollar in comparison to the American currency. The Canadian dollar appreciated 7.7% against the U.S. dollar in 2004. Total exports to the United States grew 6.6% while imports from the United States rose 2.6%. Trade with the United States accounted for 85% of Canada's total exports and 59% of Canada's total imports in 2004.

Trucking continued to be the dominant mode, in terms of revenue, for transporting goods between Canada and the United States. About 53% of the exports to the United States and 78% of the imports from the United States were moved by truck in 2004.

### The transportation industry and the role of trucking

The transportation and warehousing sector bounced back in 2004 as GDP rose 4.5% after experiencing growth of only 1.0% in 2003. There were gains in all industries except postal service. Truck transportation had the largest increase, \$749 million, while air transportation advanced \$273 million and rail transportation grew \$232 million.

### Employment<sup>2</sup>

There was little change between 2003 and 2004 in the number of people employed in the top five<sup>3</sup> transportation industries. In total, 451,000 people were employed in this group. The largest employer was the trucking industry, accounting for 37% or 168,000 of the people working in these transportation industries. The next largest employer was transit and ground passenger transportation, employing 98,000 people. The share of people working in the trucking industry has been relatively constant since 1997, ranging from 35% to 37%. (See Figure 1.2.)

1. Gross Domestic Product at basic prices, North American Industry Classification System (NAICS), chained 1997 dollars, CANSIM table 379-0017 for Canada industry detail and CANSIM table 379-0025 for provincial industry detail. Statistics Canada.

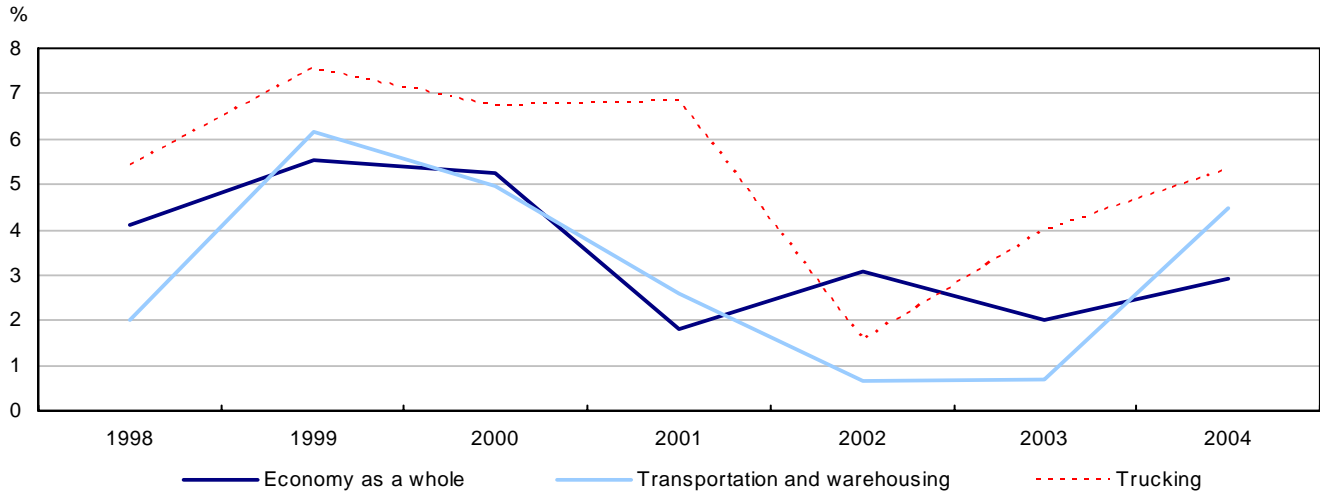
Gross Domestic Product (GDP), expenditure-based, provincial economic accounts, chained 1997 dollars, CANSIM table 384-0002 for Canada, provincial and territories totals. Statistics Canada.

Provincial and Territorial Gross Domestic Product from the April 27, 2005 and November 8, 2005 Daily releases. Statistics Canada.

2. Source: CANSIM, Table 281-0024, Employment (SEPH), unadjusted for seasonal variation, by type of employee for selected industries classified using the North American Industry Classification Systems (NAICS), annual (Persons). SEPH data excludes the self-employed. Statistics Canada.

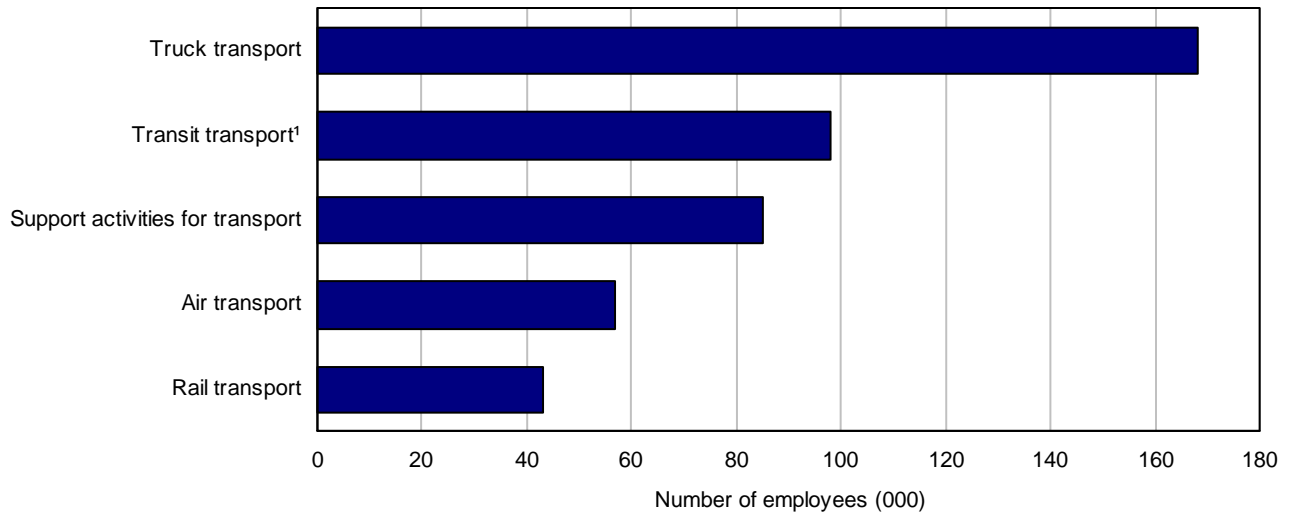
3. Based on 1998 to 2002 data.

**Figure 1.1**  
**Annual variation in GDP, chained 1997 prices**



**Source:** Gross Domestic Product at basic prices, North American Industry Classification System (NAICS), chained 1997 dollars, CANSIM table 379-0017 for Canada industry detail. Statistics Canada.  
 Gross Domestic Product (GDP), expenditure-based, provincial economic accounts, chained 1997 dollars, CANSIM table 384-0002 for Canada. Statistics Canada.

**Figure 1.2**  
**Employment in top 5 transportation industries, 2004**



1. This category consists of Transit and Ground Passenger Transportation.

**Source:** Statistics Canada, CANSIM, Table 281-0024, Employment (SEPH), unadjusted for seasonal variation, by type of employee for selected industries classified using the North American Industry Classification Systems (NAICS), annual (Persons). SEPH data excludes the self-employed.

## About this publication

Trucking in Canada, 2004 presents information about the trucking industry in 2004. This chapter provides a discussion of the role of trucking in the Canadian economy.

Table 1 summarizes Statistics Canada's coverage of the Canadian trucking industry, and explains how to use this publication to locate information about various classes of **for-hire** carriers.

**Chapter 2** presents financial and operating data about for-hire carriers with annual operating revenues of **\$1 million or more** in 2004. These statistics were collected as part of the 2004 Motor Carriers of Freight (MCF) survey program. The MCF collects operating and financial data in a quarterly sample survey of for-hire carriers. The survey gathers information on the size, structure and economic performance of motor freight carriers. In an annual supplement, it also collects balance sheet and equipment information. This chapter includes financial data on revenues, expenditures and operating ratios, plus selected economic indicators.

**Chapter 3:** The For-hire Trucking (Commodity Origin/Destination) Survey has been redesigned. The results have not been included in this publication but instead will be published at a later date. See Chapter 3 in this publication for further details.

A **For-Hire Carrier** is any carrier that undertakes the transport of goods for compensation.

**Owner operators** own or lease one or more power units and provide hauling services under contract to for-hire or private carriers.

A **private carrier** is a company whose principal occupation is not trucking, but which maintains its own fleet of vehicles (owned or leased) for transporting its own freight.

**Chapter 4** presents a description of the survey methodologies and data quality.

**Chapter 5** presents a study about a socio-economic profile of truck drivers, which is Canada's most popular occupation among men.

Finally, a paper is provided that analyzes the type of truck traffic on Canada's roads, using data on registrations and performance from the Canadian Vehicle Survey in **Chapter 6** followed by a **Glossary** of terms used in this publication.

**Table 1**  
**2004 Statistical coverage of the Canadian trucking industry**

Carrier type	For hire carriers		Owner-operators
<b>Data source</b>	MCF Surveys (financial & operating statistics)	MCF Survey Administrative data (operational and financial)	MCF Survey Administrative data (operational and financial)
<b>Frequency</b>	Quarterly and annual	Annual	Annual
<b>Carrier size</b>	<b>Operating revenue &gt; or = \$1 million</b>	<b>Operating revenue \$30,000 - &lt; \$1 million</b>	<b>Operating revenue &gt; or = \$30,000</b>
<b>Class or level</b>	Medium – \$1 to 12 million Large – \$12 to 25 million Top – \$25 million and over (from annual revenue)	Operating revenue Small carriers \$30,000 - <\$1million (from annual revenue)	N/A
<b>Geography</b>	Canada Regions Provinces Territories	Canada Regions Provinces Territories	Canada Regions Provinces Territories
<b>For more information</b>	Chapter 2 Sections 2.1 & 2.2	Service bulletin	Service bulletin

**Notes:** MCF refers to the motor carriers of freight.

## Chapter 2

### Survey of Motor Carriers of Freight, Financial Statistics, 2004

#### Introduction

This chapter provides statistical information about the financial performance of companies operating in the Canadian for-hire trucking industry. The statistics are derived from the results of quarterly and annual surveys of for-hire motor carriers of freight based in Canada. This chapter consists of two sections:

- **Section 1** – Findings of the **quarterly survey of motor carriers of freight** (with annual operating revenues of **at least \$1 million**), dealing primarily with the revenue and expense statements of for-hire carriers.

This quarterly survey is designed specifically to gather data on various components of the revenue and expense statements of for-hire motor carriers, broken down by region of domicile, type of service and type of movement.

- **Section 2** – Findings of the **annual survey of motor carriers of freight** (with annual operating revenues of **at least \$1 million**), dealing primarily with the balance sheets of for-hire carriers.

This annual survey, which is a supplement to round out the financial information provided by the quarterly survey, collects data on the main elements of the balance sheets of for-hire trucking companies, broken down by region of domicile, type of service and size of company. It includes income and expense statements as well as financial ratios such as profitability, financial leverages and solvency.

Seasonal adjustment removes seasonal fluctuations from the original or “unadjusted” data series. Thus, **seasonally adjusted data** capture the more fundamental trend in a data series and provide more appropriate comparisons over time.

The **operating ratio** is the share of total operating revenues absorbed by total operating expenses (excluding interest charges). It is calculated by dividing operating expenses by operating revenues. A drop in the ratio indicates an improvement in financial performance. A ratio greater than 1.00 represents an operating loss.

#### Section 1 – Quarterly Motor Carriers of Freight Survey

On average, there were 3,197 Canada-based for-hire carriers with annual revenues of more than \$1 million operating in 2004. This is a 12% increase over the 2,846 carriers counted in 2003.

#### 1.1 Economic activity reflected in seasonally adjusted operating revenues and expenses

Revenues, expenses and operating ratios that are seasonally adjusted (seasonal fluctuations removed) reveal the fundamental overall trends in the performance of Canadian for-hire trucking.

Overall, seasonally adjusted operating revenues from for-hire trucking totalled \$25.24 billion, up 18% from the \$21.41 billion reported in 2003 (see Figure 2.1).<sup>1</sup> For 2004, that represents an annual average of \$6.31 billion in seasonally adjusted revenues per quarter. In addition, seasonally adjusted revenues rose steadily during the year, from \$6.09 billion in the first quarter to \$6.56 billion in the fourth quarter.

Average annual seasonally adjusted revenues per carrier were \$1.97 million per quarter, up 5% from 2003 (\$1.88 million). Seasonally adjusted revenues per carrier also increased continuously during the year, from \$1.87 million per carrier in the first quarter to \$2.03 million in the fourth quarter of 2004.

Seasonally adjusted operating expenses totalled \$23.42 billion, up 17% from 2003 (\$20.03 billion). Seasonally adjusted average annual expenses were \$5.85 billion per quarter. Seasonally adjusted expenses climbed steadily through the year, peaking in the fourth quarter at \$6.01 billion.

The seasonally adjusted quarterly operating ratio improved continuously during 2004, from 0.94 in the first quarter to 0.92 at the end of the year (see Figure 2.2). This means that for each dollar of revenue, the disposable gross profit was 8 cents. The last time that for-hire carriers' operating ratio was at this level was in the second quarter of 2001 (14 quarters ago).

#### 1.2 Differences by carrier size

While they made up less than 3% of the total number of carriers with revenues of more than \$1 million, the top carriers (over \$25 million in annual revenues) accounted for 29% of overall operating revenues (see Figure 2.3). Their unadjusted annual operating ratio was 0.94.

Trucking companies with annual revenues between \$12 million and \$25 million, which make up about a fifth of the carriers covered by the QMCF Survey, also accounted for 29% of total operating revenues. Their unadjusted annual operating ratio was 0.91.

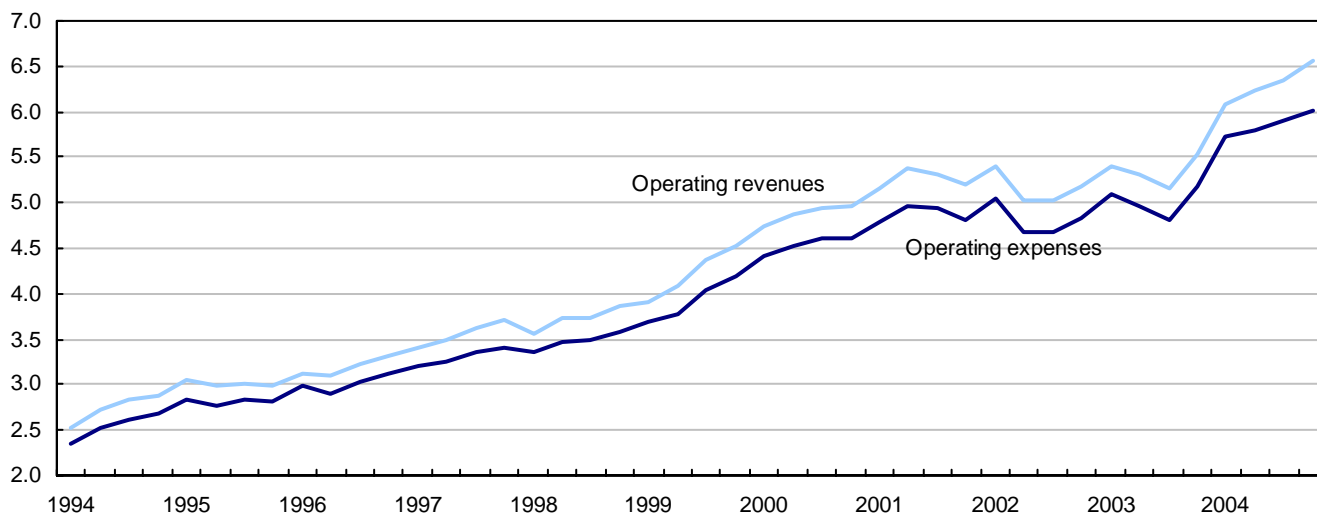
Carriers with annual revenues between \$2 million and \$12 million made up the majority of companies, with 60% of the total, and accounted for 37% of total operating revenues. Their unadjusted annual operating ratio was 0.92.

1. For all subsequent figures, the reference year is 1994.

**Figure 2.1**

**Operating Revenues and Expenses (Seasonally Adjusted Data), 1994 - 2004**

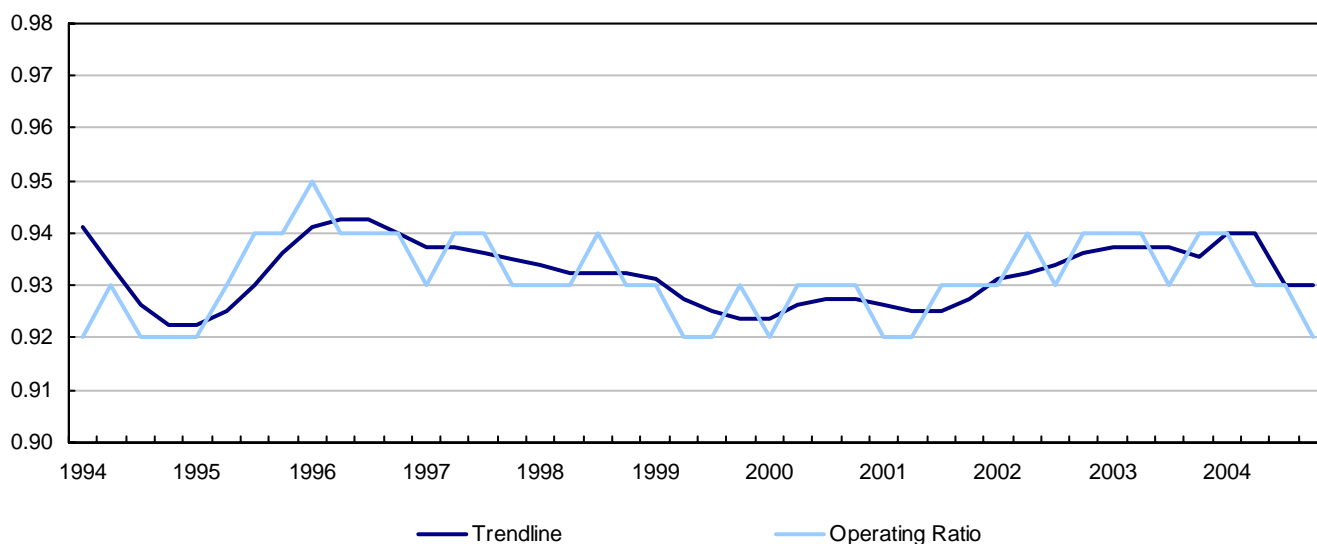
\$ billion



**Source:** Quarterly Motor Carriers of Freight survey, Cansim: Table 403-0002.

**Figure 2.2**

**Quarterly Operating Ratios (Seasonally Adjusted Data) and Trend, 1994 - 2004**



**Note:** Trendline is based on fourth quarter moving average.

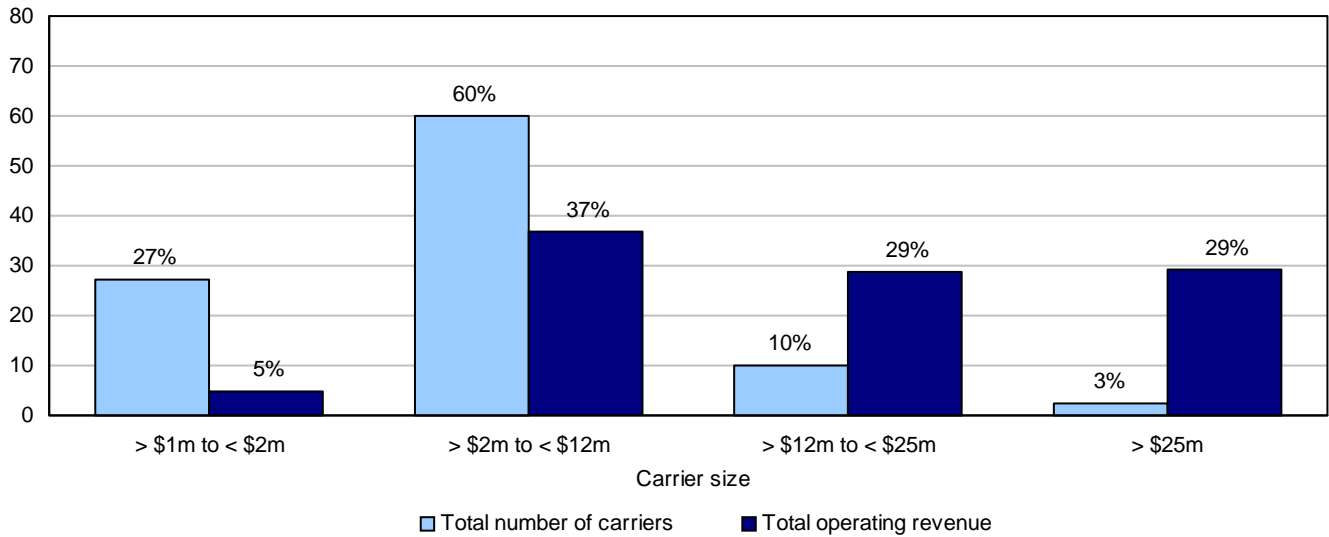
**Source:** Quarterly Motor Carriers of Freight survey, CANSIM Table 403-0002.

The smallest carriers, with annual revenues between \$1 million and \$2 million, made up more than 27% of the total number of companies but accounted for only 5% of the overall operating revenues. Their unadjusted annual operating ratio was 1.00.

**1.3 General freight transportation and long-distance trucking remained the sectors dominant activities**

General freight operations generated \$14.57 billion in revenue, accounting for just over 60% of the transportation activities of for-hire carriers in 2004. Of that figure, 70% came from the truckload type and 30% from the less-than-truckload

**Figure 2.3**  
**Number and Operating Revenue Shares by Type of Carrier Size, 2004**



Source: Quarterly Motor Carrier of Freight survey.

type. Among the other major types of freight, other specialized freight accounted for 17% of the sector's total revenues, followed by bulk liquids and dry bulk products at 9% and 6% respectively (see Table 2.1).

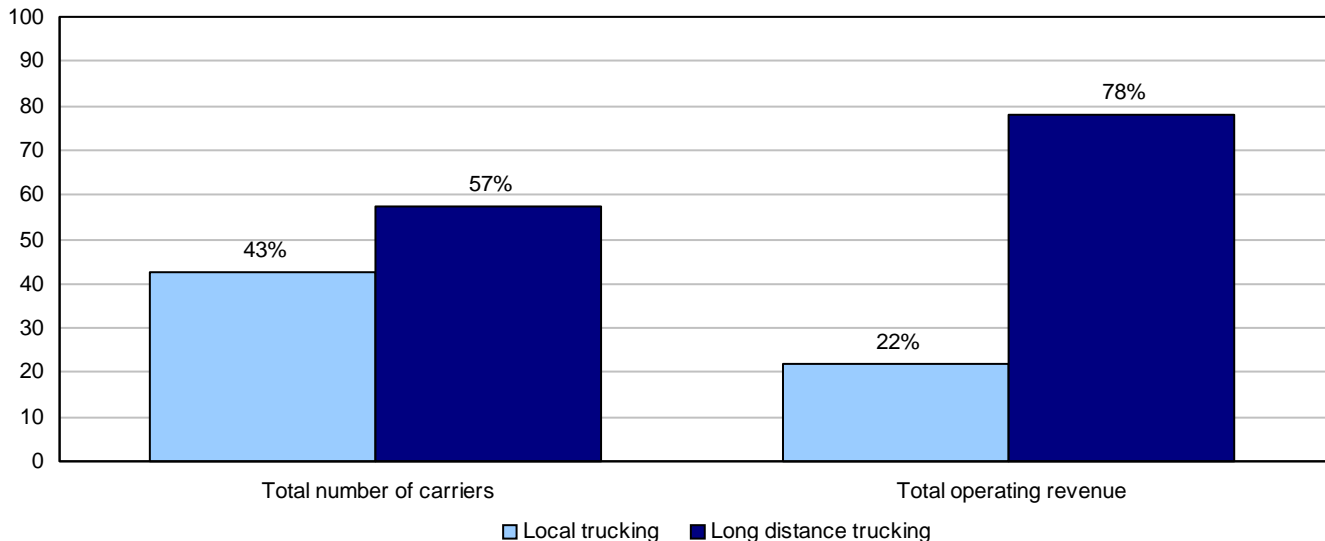
In comparison with the previous year, there were increases in all major types of freight carried. Among the largest increases were 24% for transportation of bulk liquids, 21% for less-than-truckload general freight, and 17% for other specialized freight.

Long-distance trucking accounted for 57% of the total number of companies and 78% of total transportation revenues<sup>2</sup> (see Figure 2.4). On average, long-distance carriers had annual operating revenues of \$11.19 million per company and an unadjusted annual operating ratio of 0.93.

Local trucking accounted for 43% of the total number of companies and 22% of total revenues. On average, local carriers had annual operating revenues of about \$4.29 million per company and an unadjusted annual operating ratio of 0.93.

2. Excludes household goods moving data.

**Figure 2.4**  
**Number and Operating Revenue Shares by Type of Trucking, 2004**



Source: Quarterly Motor Carrier of Freight survey.

## 1.4 Performance differences between carrier types

Overall since 1994, specialized freight carriers have had a slightly lower unadjusted operating ratio than general freight carriers (see Figure 2.5).

In 2004, specialized freight carriers started the year with an operating ratio of 0.94 in the first quarter. In the second quarter, however, the performance of general freight carriers improved significantly, as their operating ratio fell to 0.92. After edging back up to 0.93 in the third quarter, it ended the year at 0.92.

For their part, general freight carriers started the year with an operating ratio of 0.95. This ratio improved continuously through the year, finishing at 0.91 in the fourth quarter.

## 1.5 Revenues from domestic and cross-border trucking posted similar large gains in 2004

Revenues from the movement of goods within Canada totalled \$15.51 billion in 2004, which represents 64% of total trucking revenues. This is a year-over-year increase of 18% from 2003. About 65% of the above total was for transportation within provinces, and 35% for transportation between provinces.

Cross-border trucking between Canada, the United States and Mexico continued to play a key role. Revenues from international freight movements totalled \$8.73 billion, up 18% from 2003. At a more detailed level, freight movements out of Canada increased by 15%, while movements into Canada rose by 21%.

Over the last 10 years, the proportion of revenues from international cross-border movements has been increasing, and the proportion of revenues from movements within Canada has been shrinking (see Figure 2.6).

## 1.6 Most expense items increased in 2004

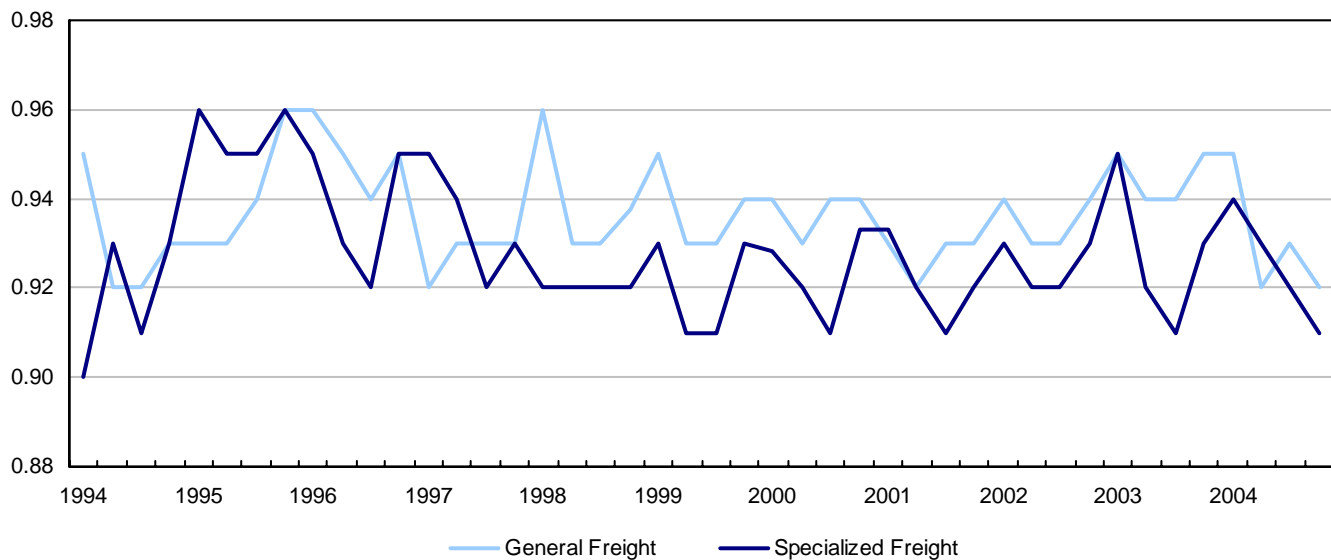
Overall, for-hire carriers' leading expense categories were wages and salaries, at 27% of total expenses, and owner operator payments, at 24% of total expenses (see Figure 2.7). It is interesting to note, however, that some differences emerge when company size is taken into account. For example, for companies in the smallest revenue category (annual revenues between \$1 million and \$2 million), wages and salaries made up 35% of their total expenses, a substantial portion of their operating budgets, while owner operator payments accounted for only 10% of total expenses. Conversely, for the largest carriers (annual revenues of more than \$25 million), wages and salaries made up fewer than 25% of total expenses, while payments to owner operators accounted for about 27% of total expenses.

In comparison with the previous year, the largest per carrier increases were in maintenance expenses (+10%), purchases of transportation services (+7%), owner operator payments (+6%), miscellaneous expenses (+5%), wages and salaries (+3%) and fuel costs (+3%).

Fluctuations in fuel prices remained a source of concern for carriers in 2004. Road diesel fuel prices kept rising through most of the year, reaching their highest levels in more than 10 years (see Figure 2.8).

Figure 2.5

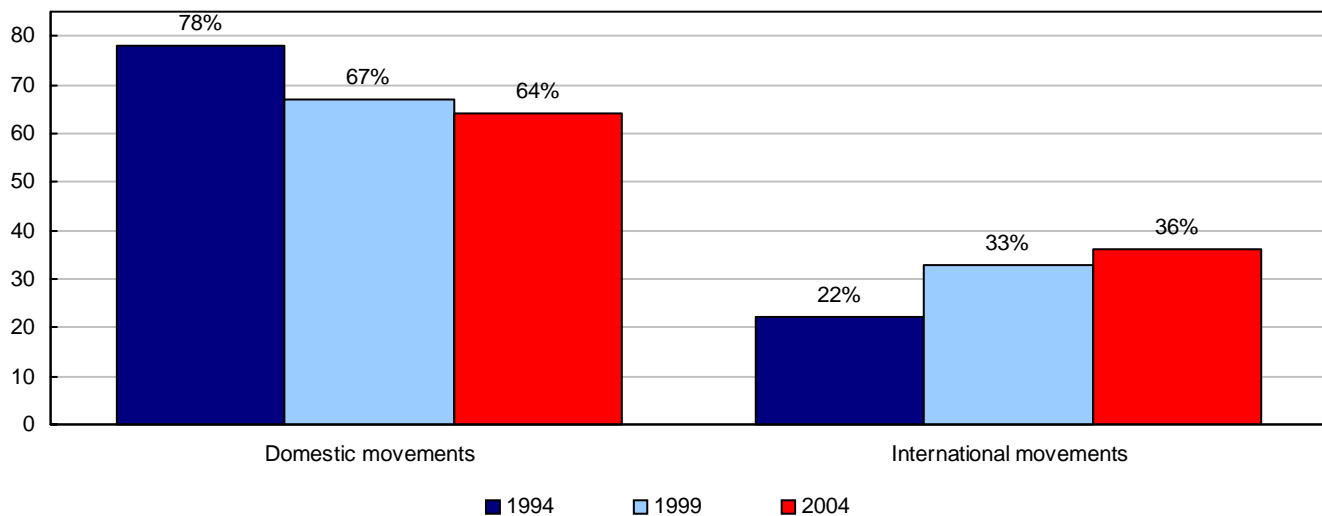
Trends in Operating Ratios by Type of Carrier, 1994 - 2004



Source: Quarterly Motor Carrier of Freight survey, CANSIM Table 403-0002.

Figure 2.6

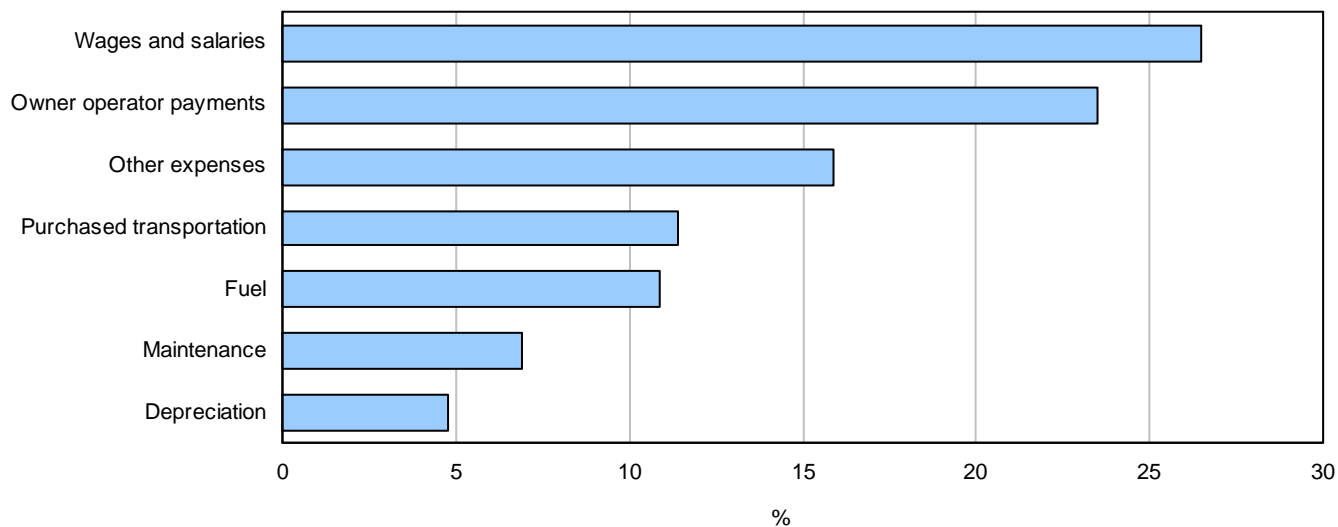
Transportation Revenue - Domestic and International Share, 1994-2004



Source: Quarterly Motor Carrier of Freight survey.

Figure 2.7

Percent Distribution of Operating Expenses, 2004



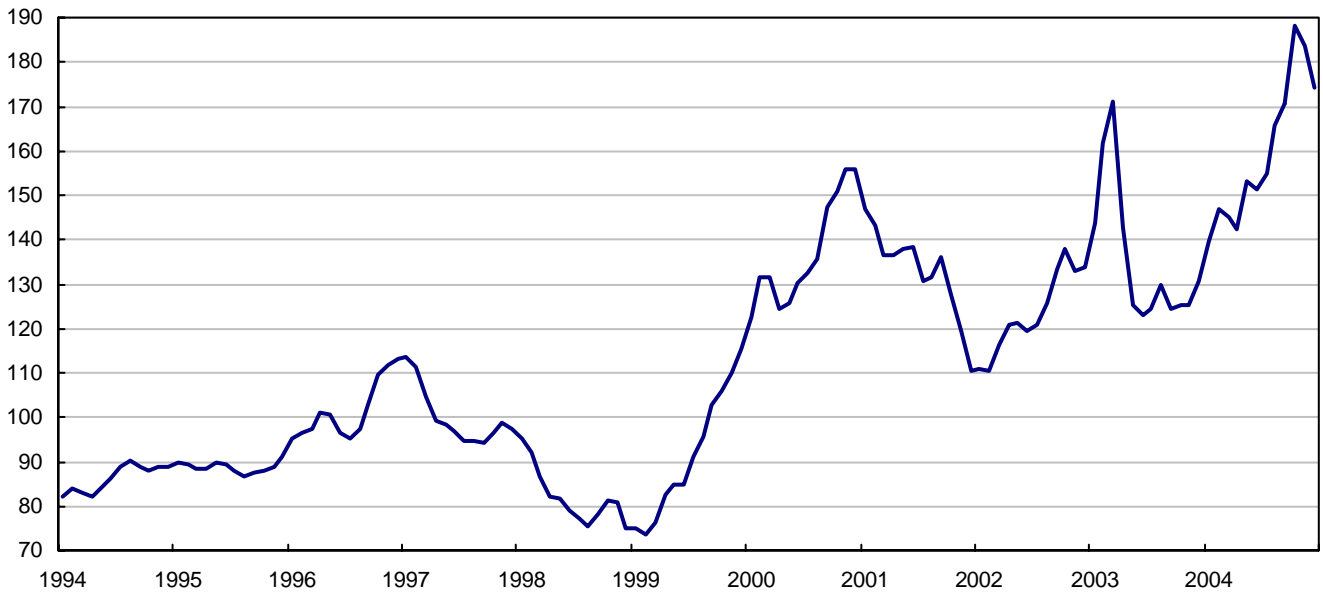
Source: Quarterly Motor Carrier of Freight survey.



**Figure 2.8**

**Diesel Fuel Price Index (Excluding taxes and transportation) - Monthly, 1994-2004**

Index 1997=100



**Source:** Diesel Fuel Price Index, Canada, Industrial Product Price Index, Statistics Canada. CANSIM Table 329-0046.

Table 2.1

## Quarterly Motor Carriers of Freight Survey, for-hire carriers: summary statistics by quarter, 2004 – Canada

	Quarter			
	I	II	III	IV
	number			
Number of carriers surveyed	782	766	768	770
Estimated total number of carriers	3,260.0	3,186.0	3,115.0	3,225.0
	\$'000,000			
<b>Revenues and expenses</b>				
General freight : truckload	2,534.2	2,555.2	2,556.3	2,524.8
General freight : less than truckload	1,105.2	1,133.7	1,077.2	1,078.6
Dry bulk	306.8	345.5	361.9	356.5
Liquid bulk	493.1	523.5	531.2	559.1
Household goods moving	110.5	164.5	197.1	169.0
Forest products	266.6	296.0	311.3	346.7
Other specialized freight <sup>1</sup>	1,031.2	1,011.2	955.9	1,033.8
Other transportation revenue	55.9	71.5	94.9	82.8
<b>Total transportation revenues</b>	<b>5,903.4</b>	<b>6,101.2</b>	<b>6,085.8</b>	<b>6,151.3</b>
Other revenues	261.4	205.8	226.1	211.8
<b>Total operating revenues</b>	<b>6,164.8</b>	<b>6,307.0</b>	<b>6,312.0</b>	<b>6,363.1</b>
Salaries and wages <sup>2</sup>	1,548.6	1,548.7	1,543.2	1,550.2
Fuel expenses	1,389.8	1,335.7	1,373.7	1,374.3
Maintenance and garage expenses	668.4	614.4	618.7	646.1
Owner-operator expenses	398.9	399.7	411.3	407.2
Other purchased transportation <sup>3</sup>	644.4	686.3	661.4	662.1
Depreciation	275.8	283.8	278.1	280.9
Miscellaneous expenses <sup>4</sup>	916.4	950.9	949.9	912.4
<b>Total operating expenses</b>	<b>5,842.3</b>	<b>5,819.4</b>	<b>5,836.3</b>	<b>5,833.2</b>
<b>Operating ratio</b>	<b>0.95</b>	<b>0.92</b>	<b>0.92</b>	<b>0.92</b>
<b>Seasonally adjusted data</b>				
Total operating revenues	6,088.2	6,238.9	6,348.4	6,560.8
Total operating expenses	5,724.6	5,783.0	5,900.3	6,008.2
Operating ratio	0.94	0.93	0.93	0.92
	number			
<b>Employment</b>				
Company drivers	80,239	81,705	83,109	81,549
Owner operators	36,867	36,045	36,284	37,066
Total number of drivers	117,106	117,750	119,393	118,615
Company employees	137,162	138,166	134,393	135,521
<b>Power units</b>				
Number of trucks	11,567	15,675	13,640	11,762
Number of road tractors	71,945	68,811	67,482	65,106

1. Other includes heavy machinery, etc.

2. Including employee benefits.

3. Includes driver services, vehicle lease or rent, total purchased transportation and load broker services.

4. Includes terminal expenses and other operating expenses (insurance, administration, etc.)

Table 2.2

Quarterly Motor Carriers of Freight Survey, for-hire carriers: summary statistics by region, 2004<sup>5</sup>

Quarter	Atlantic region				Québec				Ontario			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
	number											
Number of carriers surveyed	128	131	131	132	142	145	147	151	205	198	192	193
Estimated total number of carriers	183	190	193	194	671	705	714	744	1,220	1,169	1,078	1,135
	\$'000,000											
General freight : truckload	182.9	196.9	206.6	216.0	559.1	587.4	638.1	590.4	1,208.1	1,170.4	1,135.0	1,151.9
General freight : less than truckload	115.7	127.1	128.2	145.2	234.6	284.6	255.0	235.1	515.1	521.9	463.6	469.1
Dry bulk	9.9	9.8	9.2	10.4	42.8	67.3	67.6	65.8	152.4	166.2	155.5	167.1
Liquid bulk	12.0	15.9	11.5	12.7	118.6	63.4	71.9	59.6	120.3	173.3	206.7	173.1
Household goods moving	8.4	12.6	13.5	9.0	16.1	24.5	27.6	24.4	51.0	76.4	87.9	76.1
Forest products	27.1	32.8	29.6	30.4	76.3	115.2	115.1	154.3	42.9	49.6	59.6	51.4
Other specialized freight <sup>1</sup>	59.9	76.0	60.3	70.6	146.0	129.1	131.5	159.4	331.2	341.7	321.5	328.9
Other transportation revenue	3.2	1.7	4.0	2.7	7.2	14.6	5.9	9.9	20.4	19.3	42.9	14.5
<b>Total transportation revenues</b>	<b>419.1</b>	<b>472.8</b>	<b>462.8</b>	<b>497.0</b>	<b>1,200.7</b>	<b>1,286.1</b>	<b>1,312.7</b>	<b>1,298.8</b>	<b>2,441.5</b>	<b>2,518.8</b>	<b>2,472.7</b>	<b>2,432.1</b>
Other revenues	12.6	11.8	8.7	10.4	74.9	44.1	54.3	55.8	120.5	74.5	99.7	78.8
<b>Total operating revenues</b>	<b>431.7</b>	<b>484.6</b>	<b>471.5</b>	<b>507.4</b>	<b>1,275.7</b>	<b>1,330.2</b>	<b>1,367.0</b>	<b>1,354.6</b>	<b>2,562.0</b>	<b>2,593.3</b>	<b>2,572.4</b>	<b>2,510.9</b>
Salaries and wages <sup>2</sup>	89.7	96.7	101.9	108.1	331.5	348.3	349.8	352.5	708.8	696.1	651.9	621.9
Fuel expenses	119.9	116.5	111.2	111.1	229.7	228.8	236.0	252.0	544.5	502.2	536.7	517.5
Maintenance and garage expenses	33.8	37.5	40.3	43.7	166.4	155.6	158.1	164.9	292.9	264.2	251.9	264.4
Owner-operator expenses	24.4	26.7	24.9	29.8	94.8	92.2	97.8	97.5	159.5	159.1	155.3	148.2
Other purchased transportation <sup>3</sup>	54.5	74.0	65.6	79.3	125.2	123.3	136.4	122.9	252.2	292.2	295.3	300.1
Depreciation	16.1	18.4	17.9	21.6	79.6	76.9	70.8	73.8	110.4	125.5	109.6	107.1
Miscellaneous expenses <sup>4</sup>	70.0	76.2	71.0	77.8	188.7	189.7	198.4	173.3	362.3	358.6	390.4	351.4
<b>Total operating expenses</b>	<b>408.3</b>	<b>446.0</b>	<b>432.7</b>	<b>471.3</b>	<b>1,215.9</b>	<b>1,214.7</b>	<b>1,247.3</b>	<b>1,237.0</b>	<b>2,430.6</b>	<b>2,397.9</b>	<b>2,390.9</b>	<b>2,310.7</b>
<b>Operating ratio</b>	<b>0.95</b>	<b>0.92</b>	<b>0.92</b>	<b>0.93</b>	<b>0.95</b>	<b>0.91</b>	<b>0.91</b>	<b>0.91</b>	<b>0.95</b>	<b>0.92</b>	<b>0.93</b>	<b>0.92</b>
	number											
Company drivers	3,670	4,096	4,399	4,768	17,282	19,720	20,888	20,270	36,793	36,358	35,284	33,618
Owner operators	3,198	2,912	2,846	2,887	6,301	6,720	6,543	6,867	13,884	13,680	13,980	14,340
<b>Total number of drivers</b>	<b>6,868</b>	<b>7,007</b>	<b>7,245</b>	<b>7,655</b>	<b>23,583</b>	<b>26,440</b>	<b>27,431</b>	<b>27,137</b>	<b>50,677</b>	<b>50,038</b>	<b>49,264</b>	<b>47,958</b>

See notes at the end of this table.

Table 2.2

Quarterly Motor Carriers of Freight Survey, for-hire carriers: summary statistics by region, 2004<sup>5</sup> – concluded

Quarter	Prairies				British Columbia and Territories				Canada			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
	number											
Number of carriers surveyed	215	207	210	209	92	85	88	85	782	766	768	770
Estimated total number of carriers	775	741	749	771	412	381	381	381	3,260	3,186	3,115	3,225
	\$'000,000											
General freight : truckload	449.5	451.9	417.4	408.7	134.6	148.6	159.2	157.7	2,534.2	2,555.2	2,556.4	2,524.8
General freight : less than truckload	193.3	160.2	179.1	193.7	46.5	39.8	51.3	35.5	1,105.2	1,133.7	1,077.2	1,078.6
Dry bulk	79.3	82.3	109.0	95.0	22.4	20.0	20.7	18.3	306.8	345.5	361.9	356.5
Liquid bulk	205.6	217.2	181.5	239.7	36.6	53.8	59.6	74.0	493.1	523.5	531.2	559.1
Household goods moving	16.8	23.9	30.0	34.5	18.1	27.1	38.0	24.9	110.5	164.5	197.1	169.0
Forest products	66.9	45.7	52.5	47.6	53.3	52.7	54.6	62.9	266.6	296.0	311.3	346.7
Other specialized freight <sup>1</sup>	304.6	271.8	299.3	312.6	189.6	192.6	143.2	162.4	1,031.2	1,011.2	955.9	1,033.8
Other transportation revenue	19.8	25.0	26.1	39.2	5.2	10.9	16.1	16.4	55.9	71.5	94.9	82.8
<b>Total transportation revenues</b>	<b>1,335.9</b>	<b>1,277.9</b>	<b>1,295.0</b>	<b>1,371.2</b>	<b>506.3</b>	<b>545.5</b>	<b>542.7</b>	<b>552.2</b>	<b>5,903.4</b>	<b>6,101.2</b>	<b>6,085.8</b>	<b>6,151.3</b>
Other revenues	44.5	52.2	48.1	48.5	8.8	23.2	15.3	18.3	261.3	205.8	226.1	211.9
<b>Total operating revenues</b>	<b>1,380.3</b>	<b>1,330.1</b>	<b>1,343.0</b>	<b>1,419.7</b>	<b>515.1</b>	<b>568.7</b>	<b>558.0</b>	<b>570.5</b>	<b>6,164.8</b>	<b>6,307.0</b>	<b>6,312.0</b>	<b>6,363.1</b>
Salaries and wages <sup>2</sup>	318.1	310.4	327.3	355.5	100.4	97.2	112.3	112.2	1,548.6	1,548.7	1,543.2	1,550.2
Payments to owner operator	345.9	321.6	325.1	327.0	149.9	166.5	164.8	166.6	1,389.8	1,335.7	1,373.7	1,374.3
Fuel expenses	134.6	117.5	125.8	132.6	40.7	39.6	42.7	40.6	668.4	614.4	618.7	646.2
Maintenance and garage expenses	87.5	91.1	100.5	99.3	32.6	30.6	32.8	32.4	398.9	399.7	411.3	407.2
Other purchased transportation <sup>3</sup>	153.5	132.8	99.4	101.8	59.0	64.0	64.8	58.0	644.4	686.3	661.4	662.1
Depreciation	52.5	48.8	65.4	59.0	17.3	14.3	14.5	19.3	275.8	283.8	278.1	280.9
Other expenses <sup>4</sup>	208.5	212.2	200.2	210.5	86.9	114.2	90.0	99.5	916.4	950.9	949.9	912.4
<b>Total operating expenses</b>	<b>1,300.7</b>	<b>1,234.4</b>	<b>1,243.6</b>	<b>1,285.7</b>	<b>486.9</b>	<b>526.4</b>	<b>521.8</b>	<b>528.6</b>	<b>5,842.3</b>	<b>5,819.4</b>	<b>5,836.3</b>	<b>5,833.2</b>
<b>Operating ratio</b>	0.94	0.93	0.93	0.91	0.95	0.93	0.94	0.93	0.95	0.92	0.92	0.92
	number											
Company drivers	17,254	16,829	16,840	17,695	5,240	4,702	5,698	5,199	80,239	81,705	83,109	81,549
Owner operators	9,066	8,566	8,845	8,492	4,418	4,168	4,068	4,480	36,867	36,045	36,284	37,066
<b>Total number of drivers</b>	<b>26,320</b>	<b>25,395</b>	<b>25,685</b>	<b>26,187</b>	<b>9,657</b>	<b>8,870</b>	<b>9,766</b>	<b>9,679</b>	<b>117,106</b>	<b>117,750</b>	<b>119,392</b>	<b>118,615</b>

1. Other includes heavy machinery, etc.

2. Including employee benefits.

3. Includes driver services, vehicle lease or rent, total purchased transportation and load broker services.

4. Includes terminal expenses and other operating expenses (insurance, administration, etc.)

5. Except for financial data, the values shown are averages of the quarterly data.

Table 2.3

Quarterly Motor Carriers of Freight Survey, for-hire carriers: general and specialized freight, by quarter, 2004<sup>4</sup>

	Quarter I			Quarter II		
	General freight	Specialized freight	Total	General freight	Specialized freight	Total
	number					
Number of carriers surveyed	355	427	782	343	423	766
Estimated total number of carriers	1,669	1,591	3,260	1,597	1,589	3,186
	\$'000,000					
<b>Total operating revenues</b>	<b>3,871.5</b>	<b>2,293.3</b>	<b>6,164.8</b>	<b>3,868.5</b>	<b>2,438.5</b>	<b>6,307.0</b>
Salaries and wages <sup>1</sup>	1,005.3	543.3	1,548.6	981.6	567.1	1,548.7
Payments to owner-operator	856.3	533.5	1,389.8	793.0	542.7	1,335.7
Fuel expenses	437.5	231.0	668.4	389.1	225.3	614.4
Maintenance expenses	226.3	172.7	398.9	209.5	190.2	399.7
Depreciation	166.7	109.1	275.8	171.5	112.3	283.8
Purchased transportation <sup>2</sup>	443.6	200.7	644.4	464.6	221.7	686.3
Other expenses <sup>3</sup>	540.9	375.6	916.4	548.1	402.7	950.9
<b>Total operating expenses</b>	<b>3,676.5</b>	<b>2,165.8</b>	<b>5,842.3</b>	<b>3,557.5</b>	<b>2,262.0</b>	<b>5,819.4</b>
<b>Operating ratio</b>	<b>0.95</b>	<b>0.94</b>	<b>0.95</b>	<b>0.92</b>	<b>0.93</b>	<b>0.92</b>
	number					
Company drivers	50,382	29,857	80,239	50,867	30,838	81,705
Owner operator	22,819	14,048	36,867	22,037	14,008	36,045
<b>Total number of drivers</b>	<b>73,201</b>	<b>43,905</b>	<b>117,106</b>	<b>72,903</b>	<b>44,846</b>	<b>117,750</b>

See notes at the end of this table.

Table 2.3

Quarterly Motor Carriers of Freight Survey, for-hire carriers: general and specialized freight, by quarter, 2004<sup>4</sup> – concluded

	Quarter III			Quarter IV		
	General freight	Specialized freight	Total	General freight	Specialized freight	Total
	number					
Number of carriers surveyed	338	430	768	336	434	770
Estimated total number of carriers	1,570	1,544	3,115	1,586	1,639	3,225
	\$'000,000					
<b>Total operating revenues</b>	<b>3,740.6</b>	<b>2,571.3</b>	<b>6,312.0</b>	<b>3,793.0</b>	<b>2,570.1</b>	<b>6,363.1</b>
Salaries and wages <sup>1</sup>	930.1	613.1	1,543.2	909.7	640.5	1,550.2
Payments to owner-operator	807.7	566.1	1,373.7	822.9	551.3	1,374.3
Fuel expenses	371.1	247.6	618.7	389.1	257.0	646.2
Maintenance expenses	198.2	213.2	411.3	199.9	207.3	407.2
Depreciation	150.6	127.5	278.1	153.4	127.5	280.9
Purchased transportation <sup>2</sup>	488.2	173.2	661.4	482.4	179.7	662.1
Other expenses <sup>3</sup>	522.3	427.6	949.9	531.9	380.5	912.4
<b>Total operating expenses</b>	<b>3,468.1</b>	<b>2,368.3</b>	<b>5,836.3</b>	<b>3,489.3</b>	<b>2,343.9</b>	<b>5,833.2</b>
<b>Operating ratio</b>	<b>0.93</b>	<b>0.92</b>	<b>0.92</b>	<b>0.92</b>	<b>0.91</b>	<b>0.92</b>
	number					
Company drivers	49,649	33,460	83,109	47,236	34,314	81,549
Owner operator	21,824	14,460	36,284	22,782	14,284	37,066
<b>Total number of drivers</b>	<b>71,472</b>	<b>47,920</b>	<b>119,392</b>	<b>70,018</b>	<b>48,598</b>	<b>118,615</b>

1. Including employee benefits.

2. Includes driver services, vehicle lease or rent, total purchased transportation and load broker services.

3. Includes terminal expenses and other operating expenses (insurance, administration, etc.).

4. Except for financial data, the values shown are averages of the quarterly data.

**Table 2.4**  
**For-hire carriers, revenues by type of movement by quarter, 2004**

	Quarter			
	I	II	III	IV
	number			
Number of carriers in sample	782	766	768	770
Estimated number of carriers	3,260	3,186	3,115	3,225
	\$ '000,000			
<b>Operating revenues</b>				
<b>Domestic</b>				
Intraprovincial	2,310.2	2,509.9	2,583.5	2,636.4
Interprovincial	1,337.6	1,360.1	1,374.0	1,398.2
<b>Total – Domestic</b>	<b>3,647.9</b>	<b>3,870.1</b>	<b>3,957.5</b>	<b>4,034.7</b>
<b>International</b>				
Into Canada	1,136.8	1,148.8	1,123.8	1,086.3
Out of Canada	1,118.7	1,081.9	1,004.5	1,030.3
<b>International – Total</b>	<b>2,255.5</b>	<b>2,230.7</b>	<b>2,128.3</b>	<b>2,116.6</b>
Total – Other	0.0	0.4	0.0	0.0
<b>Transportation revenues</b>	<b>5,903.4</b>	<b>6,101.2</b>	<b>6,085.8</b>	<b>6,151.3</b>
Other revenues	261.3	205.8	226.1	211.9
<b>Operating revenue – Total</b>	<b>6,164.8</b>	<b>6,307.0</b>	<b>6,312.0</b>	<b>6,363.1</b>

## Section 2

### Annual Survey of Motor Carriers of Freight, 2004

In 2004, the estimated size of the population (annual supplement Q5) was 3,114 carriers compared to 2,894 carriers in 2003, a 7.6% increase.

#### 2.1 A steady improvement of profitability

Analysis of the balance sheets of Canada-based for-hire trucking companies with annual revenues of \$1 million or more revealed that carriers have generally improved their profitability in 2004. These companies generated net operating income of \$1.5 billion (\$24.0 billion in total revenues and \$22.6 billion in total expenses). The operating profit margin was higher in 2004 (6.1%) than the margin posted in 2003 (4.4%) (Table 2.5).

The operating profit margin increased for carriers based in all regions. The greatest increases in operating profit margins were recorded in the Territories (+8.0%) and the Prairies (+2.3%). All types of activity advanced, except movers (-0.4%). Among the largest increases were companies transporting other specialized freight (+2.9%) and forest products (+2.5%) (Table 2.6, 2.7 and Figure 2.8).

The profit margin grew for carriers grouped by all revenue size. While carriers with annual revenues between \$5 million and \$12 million experienced the largest increase, rising 2.6%, top carriers (those with annual revenues of more than \$25 million), showed the weakest rise with 0.6% (Table 2.9).

#### 2.2 Short-term liquidity

A number of balance sheet items rose in 2004 indicating an improvement in the financial performance of for-hire motor carriers of freight. Total assets were \$12.0 billion, up 20.0% overall; an average increase per carrier of 11.5%.

Total liabilities were \$7.9 billion, up 12.3% on a per carrier basis from 2003. The proportion of long-term debt relative to total liabilities was at 45.5%. Shareholders' equity reached \$4.1 billion in 2004 from \$3.4 billion in 2003.

The short-term liquidity of for-hire carriers was lower than that of 2003, as the working capital ratio totalled 1.12, down from 1.14 in 2003. Between 2003 and 2004, the working capital ratio was lower for liquid bulk, other specialized freight and forest products carriers, while it was higher for the other 3 types of carriers.

From the 5 groups of carriers classified by revenue size, there was an improvement in short-term liquidity between 2003 and 2004 for 3 groups, small carriers (with annual revenues between \$1 and \$2 million) and the top carriers (annual revenues of more than \$25 million) (see Table 2.6, 2.7 and 2.9) were the exceptions.

Short term liquidity was lower in all regions except for Quebec and Ontario (see Table 2.6, 2.7 and 2.9).

#### 2.3 Changes in long-term liquidity

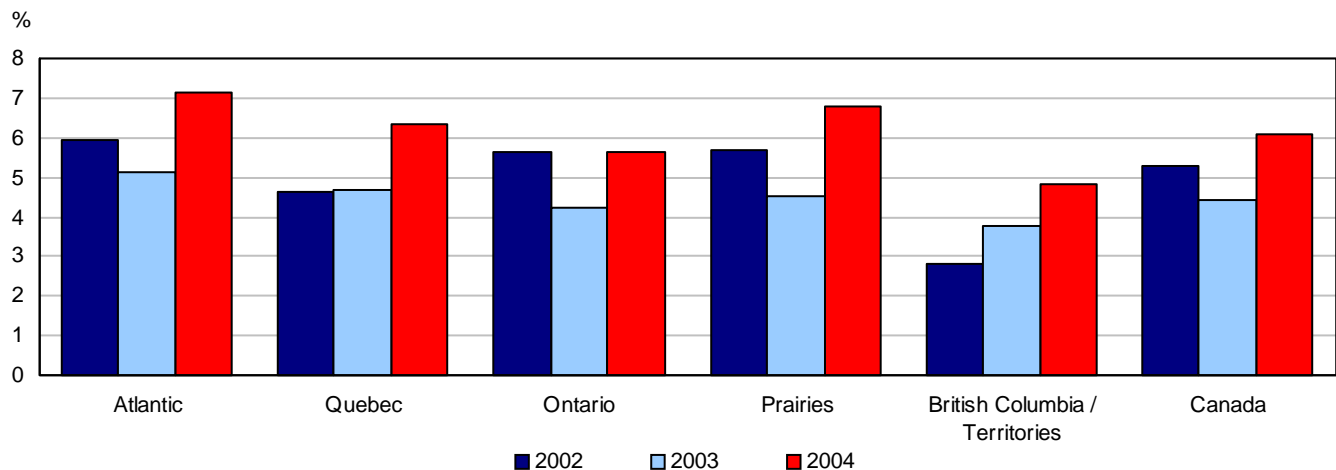
Long-term liquidity, as measured by the long-term debt to equity ratio was unchanged at 0.47. On a regional basis results varied, ranging from a low of 0.37 for the Atlantic to 0.52 registered for the Prairies. In the Territories the ratio was exceptionally high at 0.70. Globally, increasing ratios were observed in all regions with the exception of Quebec and Ontario. The long-term debt to equity ratio increased for all type of activity with the exception of liquid bulk and dry bulk. The long-term debt to equity ratio was notably lower for local carriers at 0.45 compare to 0.48 for long-distance carriers (see Tables 2.5, 2.6, 2.7 and 2.8).

#### 2.4 Financial leverage remains positive

In 2004, the return on equity of 16.6% (similar to the ratio observed in 2003) remained greater than the return on capital employed (15.7%). This has been the 8<sup>th</sup> consecutive year

Figure 2.9

#### Profit margins by region



Source: Annual Survey of Motor Carriers of Freight.



that returns on equity have been greater than returns on capital employed. This means that for-hire trucking companies posted, a higher return on equity than the interest rate they paid on borrowed funds, producing more cash flow for financing company operations. On a regional basis, returns on equity exceeded return on capital employed in all regions with the exception of British-Columbia and the Territories. By type of activity, financial leverage remains positive for all types of activity with the exception of other specialized freight. By company size, the financial leverage was positive for all revenue sizes apart from the carriers with annual revenues between \$12 million and \$25 million dollars (see Table 2.5, 2.6 and 2.9).

## **2.5 Trends for owned and leased equipment**

The annual survey of for-hire motor carriers of freight also gathers information on equipment in service. According to

the 2004 survey results, the quantity of equipment in service totalled 184,733 units, for an average of 59 units per carrier. Owned equipment increased from 133,272 units in 2003 to 150,015 units in 2004, while leased equipment decreased from 35,798 units in 2003 to 34,717 in 2004. The proportion of leased equipment in service decreased from 21% to 19%.

Leased units in service (semi-trailers and other equipment) by type of activity represented 21% of equipment in service for general freight carriers and 15% for specialized freight carriers.

Finally, temperature-controlled and non-controlled semi-trailers and low beds represented the most popular equipment for general freight carriers, 63% of equipment, while it only represented 20% of specialized freight carriers equipment (Table 2.11).

Table 2.5

Annual Motor Carriers of Freight Survey, for-hire carriers, summary of financial statistics<sup>1</sup>, 2000-2004

	2000	2001	2002	2003	2004
Number of carriers in sample	765	724	793	748	752
Estimated number of carriers	2,831	2,838	2,909	2,894	3,114
<b>Balance sheet</b>			\$'000,000		
Current assets	3,548.5	3,843.1	3,935.2	4,010.2	4,806.2
Current liabilities	3,046.2	3,126.8	3,315.0	3,528.8	4,307.8
<b>Working capital</b>	<b>502.3</b>	<b>716.3</b>	<b>620.2</b>	<b>481.3</b>	<b>498.4</b>
Long-term assets	5,826.5	6,124.8	6,281.4	5,978.1	7,176.8
<b>Net assets</b>	<b>6,328.8</b>	<b>6,841.1</b>	<b>6,901.7</b>	<b>6,459.4</b>	<b>7,675.1</b>
Long-term liabilities	3,262.2	3,444.1	3,384.0	3,014.6	3,598.8
Owner(s) equity	3,066.0	3,397.0	3,517.7	3,444.9	4,076.4
<b>Long-term capital employed</b>	<b>6,328.2</b>	<b>6,841.1</b>	<b>6,901.7</b>	<b>6,459.4</b>	<b>7,675.1</b>
<b>Income statement</b>			\$'000,000		
Operating revenues	17,601.9	19,524.9	19,341.3	20,505.2	24,010.8
Operating expenses	16,672.0	18,405.8	18,317.1	19,600.1	22,550.6
<b>Net operating income</b>	<b>929.9</b>	<b>1,119.0</b>	<b>1,024.2</b>	<b>905.1</b>	<b>1,460.3</b>
Other revenues	555.8	464.0	476.9	603.2	866.3
Other expenses	734.1	762.5	597.6	729.8	1,355.5
<b>Net other income</b>	<b>-183.2</b>	<b>-298.8</b>	<b>-120.6</b>	<b>-126.5</b>	<b>-489.2</b>
<b>Net income before taxes</b>	<b>746.6</b>	<b>820.2</b>	<b>903.6</b>	<b>778.4</b>	<b>975.3</b>
Provisions for income taxes	201.5	192.8	183.5	205.2	298.5
<b>Net income before extraordinary items</b>	<b>545.2</b>	<b>627.4</b>	<b>720.2</b>	<b>573.2</b>	<b>676.8</b>
Extraordinary items	21.8	96.2	9.4	9.2	8.6
<b>Net profit</b>	<b>523.4</b>	<b>531.2</b>	<b>710.7</b>	<b>564.1</b>	<b>668.2</b>
<b>Financial ratios</b>					
<b>Profitability</b>					
Operating profit margin %	5.28	5.73	5.30	4.41	6.08
Operating ratio	0.95	0.94	0.95	0.96	0.94
Return on assets %	5.82	6.29	7.05	5.74	5.65
<b>Leverage</b>					
Return on equity %	17.78	18.47	20.47	16.64	16.60
Return on capital employed %	14.84	15.57	16.38	16.17	15.69
Interest coverage ratio	4.88	4.34	4.98	3.92	5.25
<b>Solvency</b>					
Working capital ratio	1.16	1.23	1.19	1.14	1.12
Long-term debt to equity ratio	0.52	0.50	0.49	0.47	0.47

1. Data are from the Annual Motor Carriers of Freight Survey (Supplement – Q5).

Table 2.6

## Annual Motor Carriers of Freight Survey, for-hire carriers, financial statistics by region, 2004

	Canada	Atlantic region	Québec	Ontario	Prairies	British Columbia	Territories
Number of carriers in sample	752	119	153	192	206	75	7
Estimated number of carriers	3,114	180	741	1,107	720	358	7
<b>Balance sheet</b>	\$'000,000						
Current assets	4,806.2	365.7	980.4	1,836.6	1,244.3	358.3	20.9
Current liabilities	4,307.8	318.5	894.2	1,685.1	1,063.0	321.3	25.7
<b>Working capital</b>	<b>498.4</b>	<b>47.2</b>	<b>86.2</b>	<b>151.5</b>	<b>181.3</b>	<b>36.9</b>	<b>-4.7</b>
Long-term assets	7,176.8	531.9	1,774.4	2,780.1	1,653.8	395.7	40.9
<b>Net assets</b>	<b>7,675.1</b>	<b>579.1</b>	<b>1,860.5</b>	<b>2,931.6</b>	<b>1,835.1</b>	<b>432.6</b>	<b>36.2</b>
Long-term liabilities	3,598.8	213.7	852.4	1,345.3	961.2	201.0	25.2
Owner(s) equity	4,076.4	365.4	1,008.1	1,586.3	873.9	231.6	11.0
<b>Long-term capital employed</b>	<b>7,675.1</b>	<b>579.1</b>	<b>1,860.5</b>	<b>2,931.6</b>	<b>1,835.1</b>	<b>432.6</b>	<b>36.2</b>
<b>Income statement</b>	\$'000,000						
Operating revenues	24,010.8	1,779.4	5,146.7	9,769.1	5,190.0	2,035.4	90.3
Operating expenses	22,550.6	1,652.4	4,819.8	9,216.3	4,838.6	1,942.4	81.0
<b>Net operating income</b>	<b>1,460.3</b>	<b>126.9</b>	<b>326.9</b>	<b>552.8</b>	<b>351.4</b>	<b>92.9</b>	<b>9.3</b>
Other revenues	866.3	15.5	209.4	266.3	331.5	30.1	13.5
Other expenses	1,355.5	53.8	316.0	500.7	397.9	69.0	18.0
<b>Net other income</b>	<b>-489.2</b>	<b>-38.3</b>	<b>-106.6</b>	<b>-234.4</b>	<b>-66.4</b>	<b>-38.9</b>	<b>-4.5</b>
<b>Net income before taxes</b>	<b>975.3</b>	<b>88.7</b>	<b>220.3</b>	<b>318.4</b>	<b>289.2</b>	<b>54.0</b>	<b>4.8</b>
Provisions for income taxes	298.5	18.7	53.2	85.3	117.4	19.8	4.1
<b>Net income before extraordinary items</b>	<b>676.8</b>	<b>70.0</b>	<b>167.1</b>	<b>233.0</b>	<b>171.8</b>	<b>34.2</b>	<b>0.7</b>
Extraordinary items	8.6	0.1	0.0	2.1	6.3	0.1	0.0
<b>Net profit</b>	<b>668.2</b>	<b>69.9</b>	<b>167.0</b>	<b>230.9</b>	<b>165.5</b>	<b>34.1</b>	<b>0.7</b>
<b>Financial ratios</b>							
<b>Profitability</b>							
Operating profit margin %	6.08	7.13	6.35	5.66	6.77	4.57	10.32
Operating ratio	0.94	0.93	0.94	0.94	0.93	0.95	0.90
Return on assets %	5.65	7.80	6.06	5.05	5.93	4.53	1.19
<b>Leverage</b>							
Return on equity %	16.60	19.15	16.57	14.69	19.66	14.75	6.72
Return on capital employed %	15.69	17.13	15.14	14.39	17.79	16.02	16.66
Interest coverage ratio	5.25	9.43	4.58	4.08	8.77	4.53	4.98
<b>Solvency</b>							
Working capital ratio	1.12	1.15	1.10	1.09	1.17	1.11	0.82
Long-term debt to equity ratio	0.47	0.37	0.46	0.46	0.52	0.46	0.70

**Table 2.7**  
**For-hire carriers, summary statistics by type of activity, 2004**

	General freight	Movers	Liquid bulk	Dry bulk	Forest products	Other specialized freight	All industries
Number of carriers in sample	335	75	76	73	42	151	752
Estimated total number of carriers	1,573	227	308	280	208	517	3,114
<b>Balance sheet</b>	\$'000,000						
Current assets	2,728.3	168.4	656.5	348.1	166.7	738.1	4,806.2
Current liabilities	2,535.7	108.2	594.5	271.5	173.9	624.0	4,307.8
<b>Working capital</b>	<b>192.6</b>	<b>60.2</b>	<b>62.0</b>	<b>76.6</b>	<b>-7.2</b>	<b>114.2</b>	<b>498.4</b>
Long-term assets	3,833.8	161.8	1,047.4	690.4	353.6	1,089.7	7,176.8
<b>Net assets</b>	<b>4,026.4</b>	<b>222.0</b>	<b>1,109.4</b>	<b>767.1</b>	<b>346.4</b>	<b>1,203.9</b>	<b>7,675.1</b>
Long-term liabilities	1,852.7	91.5	581.8	356.2	154.8	561.7	3,598.8
Owner(s) equity	2,173.7	130.4	527.6	410.9	191.6	642.2	4,076.4
<b>Long-term capital employed</b>	<b>4,026.4</b>	<b>222.0</b>	<b>1,109.4</b>	<b>767.1</b>	<b>346.4</b>	<b>1,203.9</b>	<b>7,675.1</b>
<b>Income statement</b>	\$'000,000						
Operating revenues	14,351.9	708.2	2,122.6	1,589.5	1,058.0	4,180.6	24,010.8
Operating expenses	13,584.3	689.8	1,943.6	1,463.3	993.1	3,876.5	22,550.6
<b>Net operating income</b>	<b>767.7</b>	<b>18.4</b>	<b>179.0</b>	<b>126.1</b>	<b>65.0</b>	<b>304.1</b>	<b>1,460.3</b>
Other revenues	480.3	29.1	200.1	24.4	17.9	114.4	866.3
Other expenses	711.7	21.4	257.3	88.5	64.1	212.6	1,355.5
<b>Net other income</b>	<b>-231.3</b>	<b>7.8</b>	<b>-57.2</b>	<b>-64.1</b>	<b>-46.1</b>	<b>-98.2</b>	<b>-489.2</b>
<b>Net income before taxes</b>	<b>536.4</b>	<b>26.2</b>	<b>121.8</b>	<b>62.0</b>	<b>18.8</b>	<b>210.1</b>	<b>975.3</b>
Provisions for income taxes	142.8	5.4	41.6	-0.7	-1.5	111.0	298.5
<b>Net income before extraordinary items</b>	<b>393.6</b>	<b>20.8</b>	<b>80.2</b>	<b>62.8</b>	<b>20.4</b>	<b>99.1</b>	<b>676.8</b>
Extraordinary items	2.1	0.0	0.1	0.2	0.0	6.1	8.6
<b>Net profit</b>	<b>391.4</b>	<b>20.7</b>	<b>80.1</b>	<b>62.6</b>	<b>20.4</b>	<b>93.0</b>	<b>668.2</b>
<b>Financial ratios</b>							
<b>Profitability</b>							
Operating profit margin %	5.35	2.60	8.43	7.94	6.14	7.27	6.08
Operating ratio	0.95	0.97	0.92	0.92	0.94	0.93	0.94
Return on assets %	6.00	6.29	4.71	6.04	3.92	5.42	5.65
<b>Leverage</b>							
Return on equity %	18.11	15.93	15.20	15.28	10.63	15.44	16.60
Return on capital employed %	16.17	14.42	13.34	10.83	8.95	21.57	15.69
Interest coverage ratio	5.68	5.51	5.64	3.95	2.55	5.25	5.25
<b>Solvency</b>							
Working capital ratio	1.08	1.56	1.10	1.28	0.96	1.18	1.12
Long-term debt to equity ratio	0.46	0.41	0.52	0.46	0.45	0.47	0.47

Table 2.8

## Annual Motor Carriers of Freight Survey, for-hire carriers: financial statistics by local and long distance trucking and type of activity, 2004

	Local				
	General freight	Liquid bulk	Dry bulk	Forest products	Other specifications
Number of carriers in sample	78	37	25	19	26
Estimated number of carriers	464	205	159	122	156
<b>Balance sheet</b>	\$'000,000				
Current assets	347.7	223.4	95.8	77.7	122.3
Current liabilities	319.7	202.1	75.1	76.0	64.9
<b>Working capital</b>	<b>28.0</b>	<b>21.3</b>	<b>20.7</b>	<b>1.7</b>	<b>57.4</b>
Long-term assets	448.8	392.1	200.2	128.3	157.5
<b>Net assets</b>	<b>476.8</b>	<b>413.4</b>	<b>220.9</b>	<b>130.1</b>	<b>214.9</b>
Long-term liabilities	239.1	167.0	74.9	61.1	106.6
Owner(s) equity	237.6	246.4	145.9	69.0	108.3
<b>Long-term capital employed</b>	<b>476.8</b>	<b>413.4</b>	<b>220.9</b>	<b>130.1</b>	<b>214.9</b>
<b>Income statement</b>	\$'000,000				
Operating revenues	2,152.4	991.1	408.3	435.0	883.4
Operating expenses	2,038.2	899.6	377.2	402.5	837.7
<b>Net operating income</b>	<b>114.2</b>	<b>91.5</b>	<b>31.1</b>	<b>32.5</b>	<b>45.8</b>
Other revenues	50.4	22.5	7.0	14.0	18.3
Other expenses	99.2	49.0	21.8	37.0	29.8
<b>Net other income</b>	<b>-48.8</b>	<b>-26.5</b>	<b>-14.8</b>	<b>-22.9</b>	<b>-11.6</b>
<b>Net income before taxes</b>	<b>65.4</b>	<b>65.0</b>	<b>16.3</b>	<b>9.6</b>	<b>38.4</b>
Provisions for income taxes	22.5	29.3	-7.5	-3.3	43.7
<b>Net income before extraordinary items</b>	<b>42.8</b>	<b>35.6</b>	<b>23.8</b>	<b>12.9</b>	<b>-5.3</b>
Extraordinary items	0.7	0.0	0.0	0.0	0.0
<b>Net profit</b>	<b>42.1</b>	<b>35.6</b>	<b>23.8</b>	<b>12.9</b>	<b>-5.3</b>
<b>Financial ratios</b>					
<b>Profitability</b>					
Operating profit margin %	5.31	9.23	7.61	7.47	5.18
Operating ratio	0.95	0.91	0.92	0.93	0.95
Return on assets %	5.38	5.78	8.03	6.26	-1.90
<b>Leverage</b>					
Return on equity %	18.03	14.45	16.28	18.70	-4.92
Return on capital employed %	17.18	18.43	9.61	11.36	23.55
Interest coverage ratio	4.95	6.79	4.26	2.84	4.15
<b>Solvency</b>					
Working capital ratio	1.09	1.11	1.28	1.02	1.89
Long-term debt to equity ratio	0.50	0.40	0.34	0.47	0.50

Table 2.8

## Annual Motor Carriers of Freight Survey, for-hire carriers: financial statistics by local and long distance trucking and type of activity, 2004 – concluded

	Long distance					
	General freight (TL)	General freight (LTL)	Liquid bulk	Dry bulk	Forest products	Other specifications
Number of carriers in sample	196	61	39	48	23	125
Estimated number of carriers	928	181	104	121	86	362
<b>Balance sheet – Bilan</b>	\$'000,000					
Current assets	1,641.7	738.9	433.1	252.3	89.0	615.9
Current liabilities	1,578.9	637.1	392.4	196.3	98.0	559.1
<b>Working capital</b>	<b>62.8</b>	<b>101.9</b>	<b>40.7</b>	<b>56.0</b>	<b>-8.9</b>	<b>56.8</b>
Long-term assets	2,309.0	1,076.1	655.3	490.2	225.3	932.2
<b>Net assets</b>	<b>2,371.7</b>	<b>1,178.0</b>	<b>696.0</b>	<b>546.2</b>	<b>216.4</b>	<b>989.0</b>
Long-term liabilities	1,187.7	425.9	414.8	281.2	93.7	455.1
Owner(s) equity	1,184.0	752.0	281.1	265.0	122.7	533.9
<b>Long-term capital employed</b>	<b>2,371.7</b>	<b>1,178.0</b>	<b>696.0</b>	<b>546.2</b>	<b>216.4</b>	<b>989.0</b>
<b>Income statement</b>	\$'000,000					
Operating revenues	8,592.5	3,607.1	1,131.5	1,181.2	623.0	3,297.2
Operating expenses	8,140.4	3,405.6	1,044.0	1,086.1	590.6	3,038.9
<b>Net operating income</b>	<b>452.1</b>	<b>201.4</b>	<b>87.5</b>	<b>95.1</b>	<b>32.5</b>	<b>258.3</b>
Other revenues	301.9	128.1	177.5	17.5	3.9	96.1
Other expenses	458.8	153.6	208.2	66.7	27.1	182.7
<b>Net other income</b>	<b>-156.9</b>	<b>-25.5</b>	<b>-30.7</b>	<b>-49.3</b>	<b>-23.2</b>	<b>-86.6</b>
<b>Net income before taxes</b>	<b>295.1</b>	<b>175.9</b>	<b>56.8</b>	<b>45.8</b>	<b>9.3</b>	<b>171.7</b>
Provisions for income taxes	82.3	38.0	12.2	6.8	1.8	67.3
<b>Net income before extraordinary items</b>	<b>212.8</b>	<b>137.9</b>	<b>44.6</b>	<b>39.0</b>	<b>7.5</b>	<b>104.5</b>
Extraordinary items	1.4	0.0	0.1	0.2	0.0	6.1
<b>Net profit</b>	<b>211.4</b>	<b>137.9</b>	<b>44.5</b>	<b>38.8</b>	<b>7.5</b>	<b>98.4</b>
<b>Financial ratios</b>						
<b>Profitability</b>						
Operating profit margin %	5.26	5.58	7.73	8.05	5.21	7.84
Operating ratio	0.95	0.94	0.92	0.92	0.95	0.92
Return on assets %	5.39	7.60	4.10	5.25	2.38	6.75
<b>Leverage</b>						
Return on equity %	17.98	18.34	15.86	14.72	6.10	19.56
Return on capital employed %	15.35	17.39	10.32	11.32	7.50	21.14
Interest coverage ratio	5.28	7.07	4.79	3.86	2.33	5.60
<b>Solvency</b>						
Working capital ratio	1.04	1.16	1.10	1.29	0.91	1.10
Long-term debt to equity ratio	0.50	0.36	0.60	0.51	0.43	0.46

Table 2.9

## Annual motor carriers of freight survey, for-hire carriers: financial statistics by revenue size, 2004

	≥ \$1m to < \$2m	≥ \$2m to < \$5m	≥ \$5m to < \$12m	≥ \$12m to < \$25m	≥ \$25m
Number of carriers in sample	154	183	170	165	80
Estimated number of carriers	940	1,139	667	288	80
<b>Balance sheet</b>	\$'000,000				
Current assets	261.9	697.6	1,053.2	1,274.3	1,519.2
Current liabilities	256.7	518.2	924.7	1,109.8	1,498.5
<b>Working capital</b>	<b>5.2</b>	<b>179.4</b>	<b>128.5</b>	<b>164.5</b>	<b>20.7</b>
Long-term assets	477.3	1,054.7	1,391.6	1,948.2	2,304.9
<b>Net assets</b>	<b>482.5</b>	<b>1,234.1</b>	<b>1,520.2</b>	<b>2,112.7</b>	<b>2,325.7</b>
Long-term liabilities	215.3	547.7	721.7	949.2	1,164.8
Owner(s) equity	267.2	686.4	798.5	1,163.5	1,160.8
<b>Long-term capital employed</b>	<b>482.5</b>	<b>1,234.1</b>	<b>1,520.2</b>	<b>2,112.7</b>	<b>2,325.7</b>
<b>Income statement</b>	\$'000,000				
Operating revenues	1,353.2	3,635.3	5,293.8	6,409.0	7,319.5
Operating expenses	1,255.4	3,385.5	4,929.9	6,018.2	6,961.5
<b>Net operating income</b>	<b>97.8</b>	<b>249.8</b>	<b>363.9</b>	<b>390.8</b>	<b>358.0</b>
Other revenues	35.3	102.9	117.2	243.7	367.2
Other expenses	80.4	214.7	271.0	340.5	448.9
<b>Net other income</b>	<b>-45.1</b>	<b>-111.8</b>	<b>-153.8</b>	<b>-96.8</b>	<b>-81.7</b>
<b>Net income before taxes</b>	<b>52.7</b>	<b>138.0</b>	<b>214.3</b>	<b>294.0</b>	<b>276.3</b>
Provisions for income taxes	4.4	32.7	47.9	133.5	79.9
<b>Net income before extraordinary items</b>	<b>48.3</b>	<b>105.3</b>	<b>166.4</b>	<b>160.5</b>	<b>196.3</b>
Extraordinary items	0.1	0.5	0.4	0.2	7.4
<b>Net profit</b>	<b>48.2</b>	<b>104.9</b>	<b>166.0</b>	<b>160.3</b>	<b>188.9</b>
<b>Financial ratios</b>					
<b>Profitability</b>					
Operating profit margin %	7.23	6.87	6.87	6.10	4.89
Operating ratio	0.93	0.93	0.93	0.94	0.95
Return on assets %	6.53	6.01	6.81	4.98	5.13
<b>Leverage</b>					
Return on equity %	18.06	15.35	20.84	13.80	16.91
Return on capital employed %	14.10	14.50	17.68	16.15	14.95
Interest coverage ratio	4.44	4.37	4.94	7.22	4.87
<b>Solvency</b>					
Working capital ratio	1.02	1.35	1.14	1.15	1.01
Long-term debt to equity ratio	0.45	0.44	0.47	0.45	0.50

**Table 2.10**

**Annual motor carriers of freight, for-hire carriers: Semi-trailers and other operated equipment by region, 2004**

	Atlantic region	Québec	Ontario	Prairies	British Columbia	Territories	Canada
Van / semi-trailer non-temperature controlled	5,825	22,725	42,255	12,952	4,010	353	88,120
Van / semi-trailer temperature controlled	3,197	4,985	7,918	4,188	2,297	21	22,607
Flatdeck	1,706	6,835	7,089	9,690	2,893	73	28,287
Other trailers <sup>1</sup>	1,539	6,996	6,933	5,042	2,965	41	23,516
Tank (liquid and dry bulk)	496	2,511	8,308	7,946	884	19	20,162
Other type of equipment	92	144	670	1,020	115	0	2,041
<b>Grand total</b>	<b>12,854</b>	<b>44,196</b>	<b>73,172</b>	<b>40,838</b>	<b>13,165</b>	<b>507</b>	<b>184,733</b>
Owned	9,054	38,156	59,451	31,440	11,408	506	150,015
Leased	3,799	6,040	13,721	9,399	1,758	1	34,717

1. Includes full trailers, dump trailers and container-chassis.

**Table 2.11**

**Annual motor carriers of freight, for-hire carriers: Semi-trailers and other operated equipment by industry, 2004**

	General freight		Specialized freight		All industries	
	Owned	Leased	Owned	Leased	Owned	Leased
Van / semi-trailer non-temperature controlled	59,144	16,311	10,666	2,000	69,810	18,310
Van / semi-trailer temperature controlled	10,917	3,433	6,180	2,077	17,097	5,510
Flatdeck	11,024	2,483	12,790	1,991	23,814	4,473
Other trailers <sup>1</sup>	12,681	2,681	7,092	1,062	19,773	3,743
Tank (liquid and dry bulk)	1,358	196	16,463	2,146	17,821	2,341
Other type of equipment	257	199	1,444	141	1,700	340
<b>Grand total</b>	<b>95,382</b>	<b>25,302</b>	<b>54,633</b>	<b>9,414</b>	<b>150,015</b>	<b>34,717</b>

1. Includes full trailers, dump trailers and container-chassis.



## Chapter 3

### Trucking Commodity Origin and Destination Survey, 2004

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The For-Hire Trucking (Commodity Origin and Destination) Survey has been re-designed and will be replaced by the new Trucking Commodity Origin and Destination (TCOD) Survey beginning with reference year 2004. Data for the 2004 reference year was not available at the time of this publication release but is expected to be available in the spring of 2006.

The new survey was re-designed after consultations with the provinces and territories, Transport Canada and various industry groups. The main objective was to meet their current needs for information relating to freight movements of the entire trucking industry.

The new survey aims to cover all shipments performed by the trucking industry, improve the data quality of the information collected and to provide more detailed data at provincial and territorial levels.

New to the TCOD Survey is the addition of the Local Trucking segment, improved coverage of the Used Household and Office Goods Moving industry and the addition of some Private Trucking establishments (trucking establishments in companies whose primary activity is something other than

trucking). Further improvements include an increase in the sample of shipments, an increase in the number of trucking establishments profiled over the telephone and the inclusion of all shipments collected from electronic data reporters.

The scope of the survey remains unchanged with that of previous years. The objective is to measure the activities of Canadian-based trucking companies with annual operating revenues of one million dollars or more. The available variables also remain unchanged, including tonnes transported, commodities carried, revenues generated and origins and destinations of shipments. Further intentions of the new survey include the release of data at the provincial and territorial level as well as data for the local trucking segment.

Data are expected to be released in the Statistics Canada Daily in the spring of 2006.

For further information regarding the new TCOD Survey please refer to Chapter 5 "Redesign of the Trucking Commodity Origin and Destination Survey" in **Trucking in Canada, 2003** Catalogue No. 53-222-XIB.

# Chapter 4

## Survey Methodology and Data Quality

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### Introduction

This chapter describes the methodology of the surveys of the trucking industry carried out by the Transportation Division of Statistics Canada. Sections 1 and 2 provide, for each survey, descriptions of the target and survey populations, the sample design, and the data processing and estimation methods. Notes for historical comparisons are also provided. In Section 3, the quality of the data presented in this publication is discussed and quality indicators for some key statistics are given.

Several methodology terms (target population, survey population, survey frame, stratification, sampling weight, imputation, etc.) are frequently used in this chapter. Their definitions can be found in the Glossary located at the end of this document.

Users who require additional information can obtain details from the Transportation Division upon request (Telephone: 1-866-500-8400, Email: [transportationstatistics@statcan.ca](mailto:transportationstatistics@statcan.ca), Fax: 613-951-0579).

### Section 1 Quarterly For-Hire Motor Carriers of Freight (QMCF) Survey and its Annual Supplement (Q5) – Chapter 2

#### A. Survey objectives

The principal objective of these surveys is to provide information about the size, structure and economic performance of Canada's for-hire trucking industry. Financial data are used as inputs to the System of National Accounts. Federal and provincial governments use the data to formulate policies and to monitor the trucking industry in Canada. Trucking companies and associations use the published statistics for benchmarking purposes.

#### B. Populations

##### Target population

The target population for both surveys includes all Canadian domiciled for-hire motor carriers (companies) of freight with annual operating revenues of \$1 million or more.

##### Survey population

###### 2004 QMCF

The survey population consists of all companies on Statistics Canada's business register, the Central Frame Data Base (CFDB), classified as for-hire trucking with an annual gross business income value of \$1 million or more. The CFDB is a dynamic database, updated on an ongoing basis. Since 1997, the survey population is updated each quarter to reflect the most up-to-date information on the CFDB.

###### 2004 Q5 Annual Supplement

The survey population consisted of all companies on the CFDB at the end of 2004 classified as for-hire trucking with an annual gross business income value of \$1 million or more. This population was slightly more up-to-date than the QMCF fourth quarter survey population.

#### C. Sample design

##### 2004 QMCF

A sample of carriers was selected from the survey population for the first quarter of 2004. Sample rotation, except among carriers that have a substantial impact on the survey estimates, was made for the 2004 reference year in order to reduce response burden. Rather than selecting an independent sample in the first quarter of every reference year, the previous year's fourth quarter sample is rotated to minimize the sample overlap from one year to the next. This sample was then updated each quarter so that it would remain representative of the survey population. Each segment of the industry and each province and territory of Canada was represented in the sample.

The carriers on the first quarter survey frame were first grouped (stratified) according to their province or territory of domicile and their type of activity. Since 1997, the type of activity is defined according to the North American Industrial Classification System (NAICS). Then, within each province (or territory)/type of activity combination, the carriers were divided into three size groups (strata). The size was measured by annual gross business income.

For reasons of efficiency, carriers in the largest size stratum within each province (or territory)/type of activity combination were included in the sample with certainty. Carriers in the remaining size strata were sampled according to a probability mechanism called simple random sampling with rotation, which gives every carrier within the same stratum an equal chance of selection. The number of carriers selected from each stratum is determined such that the total sample size is minimized subject to fixed levels of precision for estimates of operating revenues, for each province (or territory) and for each type of activity. The coefficient of variation, described in Section 3, was used as the measure of precision. All carriers in Newfoundland and Prince Edward Island, as well as in Yukon, Nunavut and Northwest Territories were included in the sample with certainty due to the small number of in-scope carriers in these provinces/territories.

The first quarter sample for 2004 consisted of 1026 carriers representing a survey population of 4162 carriers. Table 4.1 presents the survey population size and sample size for each region of domicile and type of activity. The sample size is presented in parentheses beside the population size. Note

that the estimated number of carriers in the population is generally smaller than the survey population, due to out-of-business or out-of-scope units identified during collection that were included in error on the survey frame.

For each of the second, third and fourth quarters of 2004, the previous quarter sample was updated so that it would remain representative of the updated survey population for that quarter. Units in the previous quarter sample no longer in the survey population were removed, and a sample of the units new to the survey population for that quarter (births) was added. The births were assigned to the strata defined for the first quarter, and a random sample of them was selected from each stratum. The fraction of births selected in each stratum was the same as the fraction of units selected in that stratum for the first quarter.

#### **2004 Q5 Annual Supplement**

The 2004 Q5 survey sample was the fourth quarter 2004 QMCF sample, updated to reflect any changes between the fourth quarter QMCF survey population and the Q5 survey population. Companies no longer in the survey population were removed, and a sample of new units was added (just as is done for each quarter of QMCF). Table 4.2 presents the total survey population size and sample size for each region of domicile and type of activity.

### **D. Data collection and processing**

#### **2004 QMCF**

At the end of each quarter, a QMCF questionnaire was sent to each sampled carrier. The data were collected by mail-back, facsimile or through computer assisted telephone interviews. The survey data were captured and checked for errors and inconsistencies. Inconsistent, questionable and missing data were referred back to the carrier for clarification or revision. Problems or missing data which could not be resolved with the carrier were then replaced with consistent values (were imputed) using Statistics Canada's Generalized Edit and Imputation System. The system imputes the data using different imputation rules depending on the type of carrier and the type of data to be imputed. For example, the data can be imputed from historical files (using data from previous QMCF and Q5 surveys), or by using representative data from another carrier. The data were then verified by subject matter specialists.

#### **2004 Q5 Annual Supplement**

For the 2004 Q5 survey, the questionnaires were mailed in early spring of 2005. The carriers were asked to report data pertaining to their own 12-month accounting period ending no later than March 31, 2005. The processing methods were similar to those used for the 2004 QMCF survey.

### **E. Estimation**

Since only a sample of carriers was contacted for the QMCF survey, the individual values were weighted to represent the whole industry within the scope of the survey. The value for each carrier in the sample was multiplied by the sampling weight for that carrier, and then the weighted data from all sampled carriers belonging to a given estimation domain (e.g. general freight in Ontario) were summed to obtain the estimate. The same method was used to produce the estimates for the Q5 survey.

The financial ratios presented in Chapter 2 (e.g. operating ratio) are for-hire trucking industry level ratios. They are calculated by dividing the estimate of one total (e.g. total operating expenses) by another (e.g. total operating revenues). The result may differ somewhat from a ratio calculated as the average of the individual ratios of each carrier.

#### **Notes for historical comparisons**

- The target population for the 1988 and 1989 QMCF surveys consisted of carriers with annual operating revenues of \$250,000 or more.
- The survey frame prior to 1995 was maintained by Transportation Division and updated annually from an administrative file of tax filers.
- Prior to 1997, the same survey population and sample was used for all four quarters of the reference year for QMCF.
- Prior to 2000, an independent sample was selected in the first quarter and updated for each of the following quarters of the reference year. Since 2000, rather than selecting an independent sample in the first quarter of every reference year, a sample rotation – except among carriers that have a substantial impact on the survey estimates – was performed in order to minimize the sample overlap from one year to the next. The sample rotation thus reduces the response burden.

**Table 4.1****Quarterly Motor Carriers of Freight Survey, for-hire carriers, first quarter, 2004 – Survey population and sample size<sup>1</sup> by region and type of activity**

Region	Type of activity				Total
	General freight	Household goods movers	Bulk	Other	
Atlantic	124 (72) <sup>1</sup>	22 (22)	38 (31)	90 (60)	274 (185)
Québec	451 (94)	53 (11)	122 (33)	220 (42)	846 (180)
Ontario	903 (153)	125 (23)	213 (34)	230 (38)	1,471 (248)
Prairies	439 (110)	48 (30)	332 (81)	231 (64)	1,050 (285)
British Columbia and Territories	222 (43)	34 (13)	83 (35)	182 (37)	521 (128)
Total	2,139 (472)	282 (99)	788 (214)	953 (241)	4,162 (1,026)

1. Data in parentheses show sample size.

**Table 4.2****2004 Motor Carriers of Freight Survey Annual Supplement (Q5) – Survey population and sample size<sup>1</sup> by region and type of activity**

Region	Type of activity				Total
	General freight	Household goods movers	Bulk	Other	
Atlantic	135 (75) <sup>1</sup>	24 (24)	40 (33)	96 (61)	295 (193)
Québec	503 (103)	51 (10)	146 (39)	239 (43)	939 (195)
Ontario	954 (157)	125 (21)	223 (32)	241 (41)	1,543 (251)
Prairies	496 (116)	49 (30)	364 (85)	249 (70)	1,158 (301)
British Columbia and Territories	250 (39)	37 (14)	92 (37)	202 (38)	581 (128)
Total	2,338 (490)	286 (99)	865 (226)	1,027 (253)	4,516 (1,068)

1. Data in parentheses show sample size.

Table 4.3

## 2004 Quarterly Motor Carriers of Freight Survey – Quality measures by region and by type of activity

	1st quarter			2nd quarter		
	Response rate	Relative imputation rate	CV	Response rate	Relative imputation rate	CV
<b>Region</b>	%					
Atlantic	48.4			58.0		
Revenues		30.7	2.9		48.2	3.8
Expenses		30.1	3.0		48.4	3.7
Québec	58.5			71.7		
Revenues		43.5	9.3		38.8	6.2
Expenses		43.9	9.2		42.3	5.8
Ontario	42.9			54.6		
Revenues		61.7	4.0		55.8	3.6
Expenses		61.8	4.0		56.2	3.6
Prairies	42.3			50.2		
Revenues		55.1	4.8		49.3	4.7
Expenses		56.1	4.8		51.5	4.6
British Columbia and Territories	42.4			48.2		
Revenues		52.7	7.4		52.0	8.8
Expenses		53.0	7.2		52.5	8.4
<b>Main type of activity</b>						
General freight	45.9			61.5		
Revenues		54.9	4.1		49.0	3.2
Expenses		55.0	4.1		50.6	3.1
Specialized freight	46.8			52.5		
Revenues		51.2	3.3		51.3	3.5
Expenses		51.9	3.2		52.5	3.4
<b>Total</b>	46.4			56.5		
Revenues		53.5	2.8		49.9	2.4
Expenses		53.9	2.8		51.3	2.3
	3rd quarter			4th quarter		
	Response rate	Relative imputation rate	CV	Response rate	Relative imputation rate	CV
<b>Region</b>	%					
Atlantic	57.3			58.3		
Revenues		26.8	2.8		24.9	3.1
Expenses		26.9	2.8		24.7	2.9
Québec	71.4			69.5		
Revenues		38.9	5.9		27.7	4.9
Expenses		39.0	5.6		27.8	4.7
Ontario	59.4			56.5		
Revenues		48.9	4.6		39.9	4.8
Expenses		49.4	4.7		40.1	4.7
Prairies	54.8			54.1		
Revenues		40.4	4.1		40.5	4.6
Expenses		39.6	4.3		40.9	4.5
British Columbia and Territories	52.3			50.6		
Revenues		38.9	9.5		44.6	11.5
Expenses		38.6	9.8		45.3	12.0
<b>Main type of activity</b>						
General freight	63.3			62.5		
Revenues		41.4	3.4		34.0	3.7
Expenses		41.8	3.4		34.3	3.6
Specialized freight	56.1			54.6		
Revenues		43.8	4.2		40.6	3.9
Expenses		43.3	4.2		40.7	3.9
<b>Total</b>	59.2			58.1		
Revenues		42.4	2.6		36.6	2.6
Expenses		42.4	2.6		36.9	2.6

Table 4.4

## 2004 Motor Carriers of Freight Survey Annual Supplement (Q5) – Quality measures by region, by type of activity and by size

	Response rate	Relative imputation rate	CV
		%	
<b>Region</b>			
Atlantic	68.9		
Revenues		15.1	2.7
Expenses		16.1	2.5
Québec	90.9		
Revenues		14.8	5.6
Expenses		11.8	5.6
Ontario	82.3		
Revenues		22.0	4.6
Expenses		22.2	4.5
Prairies	77.2		
Revenues		19.9	4.9
Expenses		21.9	5.1
British Columbia and Territories	76.8		
Revenues		13.3	11.5
Expenses		13.4	11.8
<b>Type of activity</b>			
General freight (local)	79.5		
Revenues		30.4	12.9
Expenses		29.3	12.9
General freight (long distance)	86.4		
Revenues		13.0	3.4
Expenses		12.5	3.5
Specialized freight (local)	77.6		
Revenues		34.7	11.2
Expenses		36.7	11.5
Specialized freight (long distance)	79.2		
Revenues		18.2	5.2
Expenses		17.8	5.1
Household goods movers	64.0		
Revenues		26.2	7.7
Expenses		32.4	8.0
<b>Size (based on total annual operating revenue)</b>			
Less than \$2,000,000	83.1		
Revenues		16.0	8.8
Expenses		18.1	8.8
\$2,000,000 to \$4,999,999	73.8		
Revenues		21.8	7.5
Expenses		24.0	7.5
\$5,000,000 to \$11,999,999	75.9		
Revenues		26.0	9.5
Expenses		26.4	9.6
\$12,000,000 and above (excluding top carriers)	78.2		
Revenues		33.0	8.4
Expenses		30.4	8.5
Top carriers	100		
Revenues		0.0	0.0
Expenses		0.7	0.0
<b>Total</b>	79.9		
Revenues		18.7	2.7
Expenses		18.7	2.7

## Chapter 5

### A recent portrait of the trucking occupation in Canada

by Vincent Dubé and Denis Pilon

The trucking industry plays a major role in the Canadian economy. To be convinced of this, just consider the industry's revenues: more than 53% of Canadian products exported to the United States and 78% of products imported to Canada were shipped by truck in 2004.

However, because of the sector's steady growth, an aging work force but also various other factors that have caused this occupation to lose some popularity, it appears that the industry is currently faced with an urgent need for qualified truckers. In fact, according to the findings of a study conducted by the Canadian Trucking Human Resources Council (CTHRC), the trucking industry needs some 37,000 new drivers annually to offset changes of occupation, the growth of the industry and attrition (CTHRC, 2003).

The ability to recruit and retain new qualified truckers has thus become a major challenge. In light of this situation, the present study seeks to provide a recent overall picture of the situation of truckers based on different data sources (see Data sources and limitations). This is especially important considering the great diversity of the trucking sector. Three major facets of the occupation are examined: the employment situation, socioeconomic characteristics and labour market characteristics.

#### Structural changes in the job market

According to data from the Labour Force Survey (LFS), there were approximately 271,000 active truckers in Canada in 2004. When compared with 1987,<sup>1</sup> that represents an increase of 28% (59,000 truckers). This is slightly less than the 29% increase registered for all occupations combined during the same period (see Table 5.1).

**Table 5.1**  
**Distribution of employed truckers by industry**

	1987		2004	
	thousands	%	thousands	%
Agriculture, forestry, fishing and hunting	2.6	1	2.5	1
Mining, oil and gas extraction	6.2	3	5.9	2
Construction	14.6	7	13.0	5
Manufacturing	33.9	16	27.0	10
Wholesale trade	14.3	7	21.0	8
Retail trade	15.7	7	11.3	4
Transportation and warehousing	106.8	50	175.3	65
Government	4.0	2	2.5	1
Management of companies and enterprises	1.6	1	3.4	1
Other industries	12.5	6	9.4	3
<b>Total industries</b>	<b>212.2</b>	<b>100</b>	<b>271.3</b>	<b>100</b>

Source: Labour Force Survey.

#### Data sources and limitations

There is no single complete source of information available on truckers. The data are drawn primarily from the Labour Force Survey (LFS) but also from Censuses, the Survey of Labour Income Dynamics (SLID) and the Quarterly Motor Carriers of Freight Survey (QMCF). Because these sources do not cover exactly the same population, there is some lack of precision. Also, since they do not necessarily have the same reference year, the most recent data available were given precedence in order to provide the most current analysis possible. Lastly, considering the great diversity of the trucking sector, caution must be exercised in generalizing some results concerning the occupation as a whole. For example, when observing various characteristics (wages, hours worked, etc.), it is not possible to distinguish between truckers specializing in local transport and long-haul truckers, which is a major limitation.

Nearly two-thirds of truckers worked for an employer whose principal activity was directly associated with transportation and warehousing in 2004.<sup>2</sup> This industry group thus closely corresponds to the segment defined as for-hire trucking, since 95% of it (166,000 truckers) consists of the truck transportation subsector.<sup>3</sup> After transportation and warehousing, the

1. These are the earliest data available from the LFS. Note that 1987 was also the year that trucking industry was deregulated with the *Motor Vehicle Transport Act* (MVTA).
2. In the LFS, the industry is determined by the general nature of the activity performed by the employer for whom the respondent works (main job only).
3. This subsector (NAICS 484) includes establishments whose principal activity consists in providing transportation of freight using trucks.

main employers of truckers in 2004 were the manufacturing, wholesale trade and retail trade sectors. Note that truckers working for employers whose principal activity is not transportation, but who own vehicles primarily intended to transport their own goods, are included in the segment called private trucking.

It is interesting to note that while employment among truckers was distributed evenly between the two segments in 1987, almost the entire increase in the number of truckers after that was dependent on the for-hire segment. This result appears to reflect an increase in the use of outsourcing (see Figure 5.1).

### Wage earners predominate

Wage-earning truckers accounted for nearly 80% of all truck drivers in 2004. Typically, these drivers are assigned for a given period to a truck belonging to the company that employs

them. Depending on its size, the company may own a fleet of anywhere from two to more than a hundred trucks (see Table 5.2).

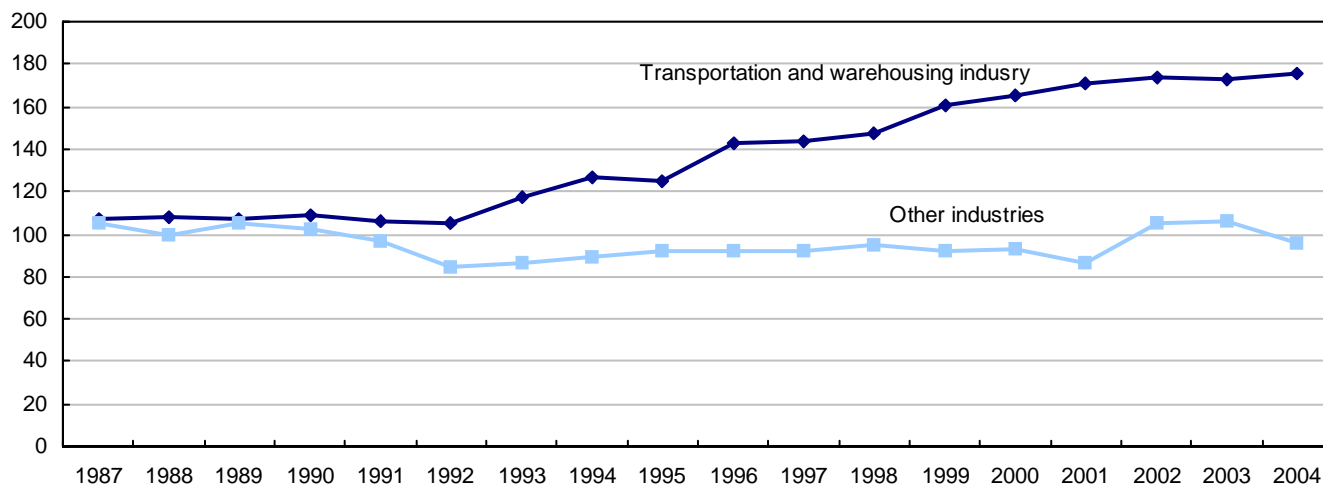
For their part, independent truckers accounted for approximately 20% of truck drivers. Independent truckers have their own equipment (either owned or rented) and are responsible for their conditions of operation. They may also have employees to assist them in their work. Thus, some 7% of them employed workers in 2004. Also, approximately 94% of independent truckers were classified as being in for-hire trucking in 2004.

Since 1987, the number of independent truckers has generally grown slowly, while the number of wage-earning truckers has more tended to fluctuate. For example, their number declined by 6% (13,000 truckers) during the period from 2002 to 2004 (see Figures 5.2 and 5.3).

Figure 5.1

Since 1987, almost the entire increase in the number of truckers in Canada has been dependent on trucking in the transportation and warehousing industry

Number of truckers (in thousands)



Source: Labour Force Survey.

Table 5.2

Total employment and distribution by type of employment

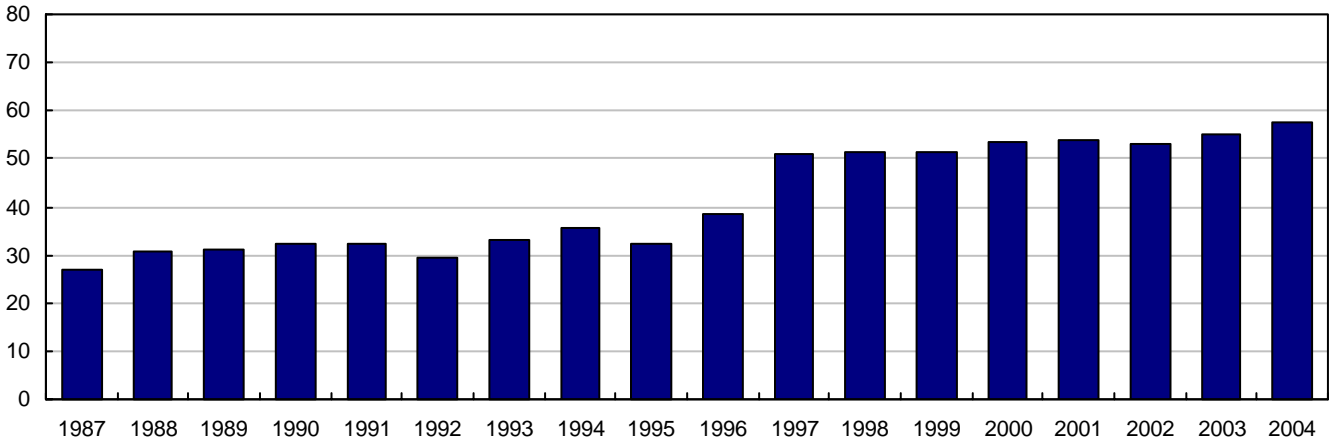
	All occupations	Truckers		
		Total	For-hire	Private
thousands				
<b>Total jobs</b>	<b>15,949.7</b>	<b>271.3</b>	<b>165.6</b>	<b>105.7</b>
Employee	85	79	67	97
Self-employed	15	21	33	3
			100%	
with paid employee(s)	34	7	6	F
with no paid employees	65	93	94	F

Source: Labour Force Survey, 2004.



**Figure 5.2**  
**Number of independent truckers continues slow rise**

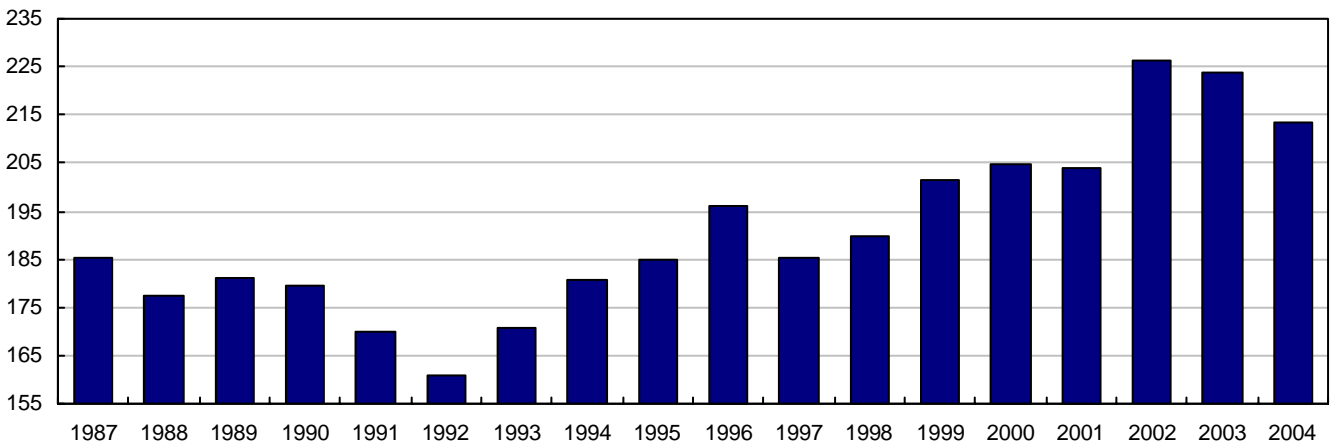
Independent truckers (in thousands)



Source: Labour Force Survey.

**Figure 5.3**  
**In 2004, the number of wage-earning truckers declined slightly for a second consecutive year**

Wage-earning truckers (in thousands)



Source: Labour Force Survey.

## Truckers within the trucking industry

The Quarterly Motor Carriers of Freight Survey (QMCF) provides a more detailed picture of the employment situation in the for-hire trucking segment (medium and large carriers only).<sup>4</sup>

According to this source, in 2004, 66% of truckers were classified as company drivers, that is, salaried employees; 29% were owner-operators, that is, self-employed workers who owned their business; and 5% were paid by personnel leasing agencies (see Table 5.3).

Nearly four truckers in five were mainly specialized in long-haul trucking (76%), compared to 24% for local trucking.<sup>5</sup> Note that there are several major differences between these types of trucking, notably with respect to working conditions. For example, truckers engaged in long-distance hauling usually do not return to their home terminal each evening and must maintain a daily logbook in compliance with the National Safety Code on hours of service.

Also, approximately 62% of truckers hauled mainly general freight in 2004, compared to 38% carrying mainly specialized freight (movers are excluded). One of the principal differences between these activities is the type

of equipment used. As a rule, the transport of general freight uses pallets that are stored inside standard vans or semi-trailers, while the transport of specialized freight instead requires adapted equipment. On this subject, among the main activities in which truckers were employed in the transport of specialized freight were the haulage of "other specialized freight" (cars, livestock, etc.) with 16% of truckers, and the haulage of liquid bulk with 9% of all truckers.

Lastly, among truckers engaged in long distance movement of general freight, just over 70% of them were involved in truckload haulage; in other words, they carried freight from a single shipper to its final destination. Hence, approximately 30% of truckers specialized in less-than-truckload haulage, which consists of carrying the freight of more than one shipper in a single truck. This requires the use of truck terminals for assembling freight.

4. Companies having annual revenues of \$1 million and over and whose purpose is to transport freight for remuneration.

5. Note that a road carrier can engage in both local and long-distance trucking activities. Data on movers are excluded.

**Table 5.3**

### Distribution of truckers in the for-hire trucking segment<sup>1</sup>

	Company drivers	Owner-operators	Agency drivers	Total
Total number	82,599	36,876	6,588	126,063
<b>Overall distribution (%)</b>	<b>66</b>	<b>29</b>	<b>5</b>	<b>100</b>
<b>By activity</b>				
General freight (%)	61	77	61	62
Household goods moving (%)	3	1	2	3
Liquid bulk (%)	9	5	8	9
Dry bulk (%)	7	5	7	7
Forest products (%)	4	1	4	4
Other specialized freight (%)	15	12	17	16
Total (%)	100	100	100	100
<b>By type of trucking</b>				
Total number <sup>2</sup>	79,818	36,155	6,536	122,509
Local trucking (%)	26	20	17	24
Long distance trucking (%)	74	80	83	76
Total (%)	100	100	100	100
<b>By type of load</b>				
Total number <sup>3</sup>	40,313	18,471	4,178	62,962
Truckload (%)	71	69	72	71
Less than truckload (%)	29	31	28	29
Total (%)	100	100	100	100

1. Carriers with annual operating revenues of \$1 million or more.

2. Exclude Household goods moving.

3. Long distance carriers of general freight only.

**Source:** Quarterly Motor Carriers of Freight, 2004.

### A typically male occupation

Despite several awareness-building campaigns to promote non-traditional jobs, women still occupy a marginal place within the occupation. Thus, according to the LFS, 97% of persons with trucking as their occupation were men in 2004. While different factors have contributed to this situation, it would seem that considering women's key role in the family unit, the number of hours spent outside the home may be a major drawback for women wishing to start a family in two-earner couples<sup>6</sup> (see Table 5.4).

### An aging population

Truckers comprise a relatively older workforce, with an average age of 42 for wage-earning truckers and 45 for their self-employed counterparts in 2004. Also, a larger proportion of them were older workers, since approximately 18% of all truckers were 55 years of age or older in 2004, compared to 13% for workers in general.

For a more detailed picture, if we compare the ten most popular occupations among men, truck driving ranked second behind that of janitor. It also had the largest increase in average age when compared to 1987, almost on par with retail trade managers (see Table 5.5).

When ratios are calculated expressing the number of young workers (entrants to the occupation) in relation to the number of workers taking their retirement over the next ten years (leavers), a similar pattern emerges, underlining the greying of the occupation (see Figure 5.4). For purposes of this calculation, Ratio 1 represents the number of male truckers under 25 years of age over those aged 55 and over.

6. Marshall (1993) showed that in families with children or where both spouses work, most women took on most of the household responsibilities.

**Table 5.4**  
**Total employment and distribution by type of employment and province of residence**

	All occupations	Truckers		
		Total	For-hire	Private
		thousands		
		%		
<b>Total employment</b>	<b>15,949.70</b>	<b>271.3</b>	<b>165.6</b>	<b>105.7</b>
<b>Type of trucker</b>				
Employee	84.6	78.7	67.2	96.6
Self-employed	15.4	21.3	32.8	3.4
<b>Age</b>				
15 - 24	15	5	4	8
25 - 54	71	76	78	74
25 - 34	22	20	21	18
35 - 44	26	29	29	28
45 - 54	24	27	27	27
55 and over	13	19	18	19
<b>Sex</b>				
Male	53.2	97.5	97.6	97.3
Female	46.8	2.5	2.4	2.7
<b>Education</b>				
High school not completed	14.4	33.9	34.5	32.9
High school completed	20.3	27.0	24.5	30.9
Some post-secondary	10.0	8.9	9.5	7.9
Post-secondary diploma	34.1	27.2	28.6	25.1
University degree	21.2	3.0	3.0	3.1
<b>Province</b>				
Newfoundland and Labrador	1.3	1.1	0.8	1.6
Prince Edward Island	0.4	0.4	0.3	0.7
Nova Scotia	2.8	2.8	2.5	3.4
New Brunswick	2.2	3.3	3.4	3.1
Quebec	23.1	22.3	21.7	23.3
Ontario	39.6	35.6	38	31.8
Manitoba	3.6	4.5	4.9	3.9
Saskatchewan	3	4.1	4.3	3.7
Alberta	11	12.9	12.1	14.2
British Columbia	12.9	13.0	12.0	14.7

Source: Labour Force Survey, 2004

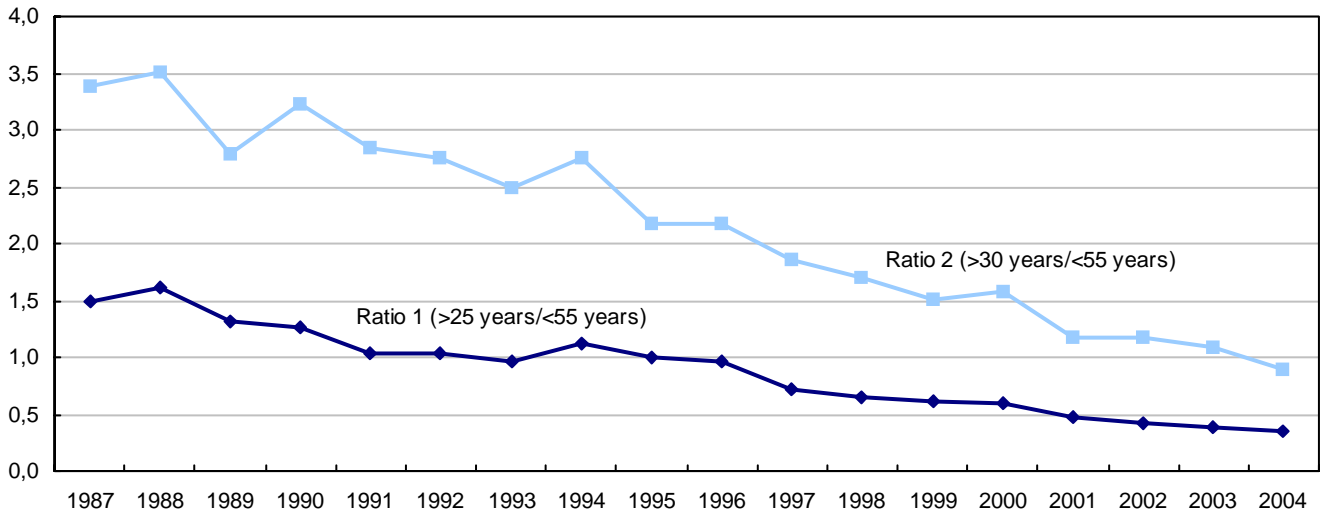
**Table 5.5**  
**Average age of male employees by occupation**

Occupation*	1987	2004	Diff.
Truck drivers	37	42	5
Retail sales persons and sales clerks	31	32	2
Retail trade managers	35	40	5
Farmers and farm managers	33	36	3
Material handlers	32	36	3
Janitors, caretakers and building superintendents	39	43	4
Automotive service technicians, truck mechanics and mechanical repairers	33	36	3
Carpenters	36	37	1
Construction trades helpers and labourers	32	32	0
Food counter attendants, kitchen helpers and related	24	25	1
<b>All occupations</b>	<b>36</b>	<b>38</b>	<b>3</b>

\* Classified by popularity criterion based on the 2001 Census.  
Source: Labour Force Survey, 2004.

**Figure 5.4**  
**Trucking occupation hard hit by aging of workforce**

Ratio of entrants to leavers



Source: Labour Force Survey.

While the downward slope of the curve is not a positive outcome, what is especially troubling in Figure 4 is actually the presence of ratios below unity, which means that there will be more persons leaving the industry than entering it. For example, the ratio of 0.5 observed in 2001 indicates that there were twice as many male truckers aged 55 and over as truckers under 25 years of age that year.

Also, in order to better assess the phenomenon of the greying of the occupation, a second ratio was used, this time using the under-30 group as the group of entrants (Ratio 2 in Figure 4). Despite a certain lag, largely the same trend is observed. Thus, 2004 is the first year in which truckers over 55 years of age outnumber those under age 30 in the industry.

This means that unless the situation turns around (as a result of increased immigration, for example; see Growing number of truckers from outside Canada), the occupation might be hit by a large number of retirements in the coming years. However, truckers may possibly tend to remain longer in the labour force. For example, Duschesne (2004), studying data from the 2001 Census, observed that trucking was the sixth most popular occupation among employed men aged 65 and over (4,255 persons, up 82% from the 1996 Census). Also, a U.S. study found that the turnover rates for older and/or more experienced truckers tend to be lower, since a change of employment entails greater risks (Min and Lambert, 2002). The results of a survey of unemployed truck drivers point in a similar direction, with the finding that younger drivers are more likely to resign than older drivers (CTHRC, 2003).

### **Growing number of truckers from outside Canada**

According to the 2001 Census, 13% of truckers included in the labour force were immigrant workers, up 88% from the 1991 Census. Furthermore, approximately one-third of these truckers had been in Canada for less than ten years in 2001, compared to 19% in 1991 (figures not shown). Even so, the proportion of immigrants in the occupation remained below the 20% observed for all occupations combined.

### **Few young people entering the occupation**

Just as worrisome as the number of retirements is the lack of young workers engaged in the occupation. Only 5% of truckers were under 25 years of age in 2004, three times less than in the labour force as a whole. Similarly, just over one-quarter of truckers were between 15 and 34 years of age, whereas in the labour force as a whole, the corresponding proportion was 37%.

From the standpoint of the supply of truckers, this finding seems to indicate that today's young workers are less inclined to enter the occupation than were those in the previous generation. Although various reasons for this are often cited in trucking circles—demanding living conditions, the poor perception of the occupation and the appeal of competing occupations (particularly those in the construction field)—a study of young people would be the most reliable way to learn more about this subject.

If we turn our attention to the demand for truckers, several more concrete factors may shed light on the situation. First, legislation on the age for driving a truck undoubtedly plays a role. In Canada, the minimum age for obtaining a commercial vehicle driver's licence ranges between 18 and 20 depending on the province, while in the United States the age is 21 in most states.

Second, the fact that someone barely meets the minimum age does not mean that the next day, that person can hit the road in an eighteen-wheeler loaded with freight. In practice, the minimum age demanded by transport companies is often higher than the age set by legislation. While this situation may also be related to much more prohibitive insurance costs for young drivers (especially in international transport), it seems attributable to the importance assigned to practical driving experience in the occupation, an aspect that is likely correlated to age. In fact, in a survey of fleet managers conducted by the CTHRC (2003), experience was cited as the main factor in the decision to hire a trucker. Furthermore, the minimum number of years of experience required to drive a semi-trailer truck was three years.

### **Low education levels do not necessarily reflect skills**

Overall, truckers have a lower education level than the average for all occupations. Even though the qualification level for the occupation is high school completion, LFS figures show that more than one-third of truckers did not have a high school diploma in 2004, compared to 14% for all workers. By way of explanation, probably a major factor contributing to this situation is the fact that many employers did not (and in numerous cases still do not) require any diploma or certificate, other than the driver's licence corresponding to the type of truck used.<sup>7</sup> Additionally, the fact that the occupation has a larger proportion of older workers could also have an impact

in this regard, since older workers are generally more likely to have less education.

Also, as noted by Nix (2003), the training taken by truckers is not always reflected in the education level. In fact, while some courses may lead to recognized accreditations, this is not always the case. In-house training courses provided by the employer are typical examples of this.

Even so, a large number of professional drivers would appear to need training in order to better adapt to the current labour market (Macleod, 2002). However, the matter of training and skills is a fairly complex one. For example, it has been observed that more education would instead increase the likelihood of truckers finding a job outside the trucking sector (CTHRC, 2003).

### **English the main language of work**

According to data from the 2001 Census, some 85% of Canadian truckers reported using English as one of the main languages at work. In Quebec, the corresponding proportion was 40% (figures not shown). On this subject, it seems likely that the opening of markets to increased international trade under NAFTA has also favoured the use of English as a language of work in Francophone settings. For example, truckers who cross the border must be able to speak in functional English with U.S. customs officers.

### **Few differences among the provinces**

Overall, truckers' place of residence exhibited a pattern similar to that of the labour force as a whole in 2004 (Table 4). However, there were some differences by sector of activity. For instance, British Columbia and Alberta had a larger proportion of the truckers in private trucking than in for-hire trucking. On the other hand, Ontario had a larger proportion of workers in for-hire trucking.

### **Full-time work, lower unionization rate and prevalence of small establishments**

Very few truckers work part-time in the industry. In fact, according to the LFS, approximately 97% of wage-earning truckers worked full-time hours in 2004. Only one-quarter of wage-earning truckers were unionized, a proportion lower than that observed for employees in general (32%). It should also be noted that truckers in the for-hire trucking segment had a unionization rate nearly 10% lower than their counterparts in private trucking. Furthermore, approximately 78% of wage-earning truckers worked for establishments with fewer than 100 employees, compared to two-thirds of wage earners overall (see Table 5. 6).

### **An average wage**

According to the LFS, the average weekly wage of a wage-earning trucker working full-time was \$791 in 2004, representing approximately \$41,100 per year assuming that the trucker worked the entire year. He or she thus earned slightly more than the average for all wage-earning workers, which was \$778 per week (or \$40,500 per year, based on the same assumption). On average, those who were unionized earned on average 11% more than their non-unionized counterparts (figures not shown).

7. However, it should be noted that there are additional requirements depending on the type of freight transported, such as dangerous goods, or the type of equipment used.

**Table 5.6**  
**Labour market characteristics**

	All occupations	Truckers		
		Total	For-hire	Private
<b>Total</b>	<b>15,949.7</b>	<b>271.3</b>	<b>165.6</b>	<b>105.7</b>
<b>Type of work</b>				
Full-time	81.5	96.5	97.0	95.8
Part-time	18.5	3.5	3.0	4.2
<b>Employed only</b>				
	13,497.9	213.4	111.3	102.1
<b>Size of establishment</b>				
Under 20 employees	33.1	39.0	42.6	35.1
20 to 29 employees	32.9	38.7	37.0	40.5
100 to 500 employees	21.3	17.2	15.8	18.6
over 500 employees	12.6	5.2	4.6	5.9
<b>Unionization</b>				
Covered by a union	31.8	25.4	19.8	31.6
Not covered by a union	68.2	74.6	80.2	68.5
<b>Employed full-time – Total</b>				
	11053.5	206.2	108.1	98.1
<b>Weekly wage</b>				
<b>Total</b>	<b>777.7</b>	<b>791.4</b>	<b>828.6</b>	<b>740.4</b>
<b>By hours usually worked</b>				
Under 30.0 hours	766.06	775.71	800.03	747.66
30.0 to 39.9 hours	709.09	696.55	709.75	686.94
40.0 to 49.9 hours	768.32	722.74	754.1	698.65
50.0 to 59.9 hours	1002.22	830.16	832.73	826.29
60.0 to 69.9 hours	1078.49	917.19	939.01	869.79
70.0 hours and over	1176.54	1032.63	1042.26	1010.64
<b>Hours usually worked</b>				
Under 30.0 hours	15.6	10.1	10.4	9.9
30.0 to 39.9 hours	32.2	11.5	9.3	14.1
40.0 to 49.9 hours	41.6	39.9	33.0	47.4
50.0 to 59.9 hours	6.8	19.3	22.1	16.1
60.0 to 69.9 hours	2.5	12.0	15.6	8.0
70.0 hours and over	1.3	7.2	9.5	4.7
Average	39.5	47.3	50.0	44.4

Source: Labour Force Survey, 2004.

The average weekly wage was slightly higher in for-hire trucking than in private trucking. This situation is likely due to differences between these segments in the type of work performed. Truckers engaged in for-hire trucking generally do more long-distance haulage than their counterparts in private trucking, who are more specialized in local haulage. Also, it is not surprising that truckers engaged in long-distance haulage earn more, since they generally work longer hours and must make more compromises with respect to their personal and family life.

### Earning their pay

It may seem fairly obvious that there is a relationship between the number of hours worked and truckers' earnings. For example, drivers who worked more than 70 hours per week earned on average more than \$1,000 per week (figures not shown). But despite the fact that overtime hours worked are often paid at a higher rate (especially in local haulage of freight), it may be seen that the marginal gains from overtime generally fall off. On this subject, it is worth noting that a recent American study (Monaco and Willmert, 2003) found that lower weekly wage rates for truckers are associated with higher probabilities of exceeding the maximum weekly hours allowed under rules governing hours of service.

### Actual earnings of wage-earning truckers are stagnating

An examination of how the average weekly wage of wage-earning truckers has evolved since 1998<sup>8</sup> reveals that it has not actually changed since that time (see Figure 5.5). In fact, in real terms it rose 2% in six years, representing an average annual growth of approximately 0.3%, a figure lower than the 0.4% observed for all occupations combined. While the great diversity of the trucking sector makes it difficult to generalize, this finding nevertheless seems to show that overall, the lack of skilled truckers has not thus far pushed up wages. However, it is important to specify that some sectors, such as long-distance haulage, may have actually registered sizable wage increases.

### Seniority and education level have less impact on wages

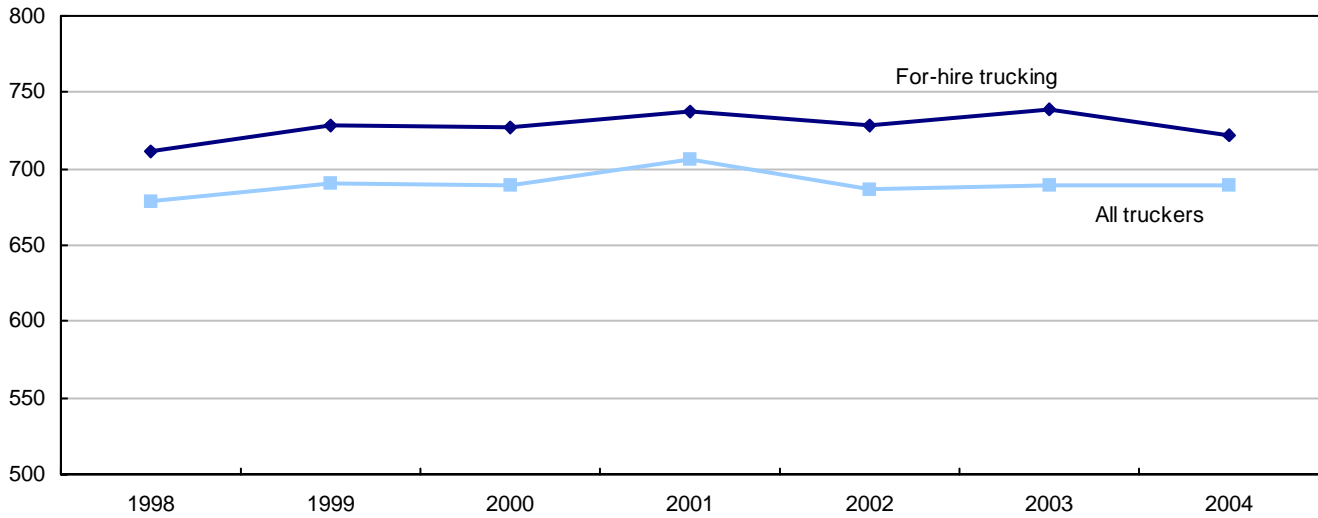
On the one hand, seniority appears to play a lesser role in trucking, especially in the for-hire segment. While it is true that inexperienced workers face some barriers to entry, the wages of persons who enter the occupation appear to peak relatively quickly. For example, when the least experienced

8. These are the most recent data available.

**Figure 5.5**

**Real wages of wage-earning truckers working full-time were relatively flat from 1998 to 2004**

Average weekly wage in 1998 dollars



Source: Labour Force Survey.

group of workers in for-hire trucking (aged 20 to 24) is compared to the most experienced (55 and over), a difference of \$100 in weekly wages is observed, compared to nearly \$350 for wage-earners in general (figures not shown). The number of hours worked according to age group does not appear to be a major factor explaining this result, since few differences are observed in this regard (figures not shown). On the other hand, a comparison among male truckers shows that there are also few wage differences according to education level. For example, in 2004, there was a gap of less than \$20 weekly between those who had not finished high school, those who had and those with post-secondary education (figures not shown).

**Few wage differences by category of worker**

According to the 2001 Census, there do not appear to be major differences between categories of workers (see Table 5.7). This being said, it may be seen that in 2000, the average annual employment income of self-employed truckers was nevertheless slightly higher than that of salaried employees. However, it should be kept in mind that these workers cannot receive non-wage benefits, unlike their employed counterparts. As a result, self-employed workers (independent truckers) are less likely to be covered by supplementary medical, dental care and disability insurance plans. Similarly, not being eligible for sickness benefits, they are more like to incur larger financial losses if they stop working because of illness (Akyeampong and Sussman, 2003). Furthermore, since they are not eligible for an employer-sponsored pension plan, they must also save more for their retirement.

**Wage-earning truckers have fewer benefits**

Benefits, such as employer-sponsored insurance and retirement plans, are other indicators of job quality (Marshall, 2003). According to 2002 Survey of Labour Income Dynamics (SLID)<sup>9</sup> data, a smaller proportion of wage-earning truckers received benefits than of workers in all occupations combined.

This situation is especially apparent with respect to retirement plans, with only 28% of truckers participating in a job-related retirement plan compared to 44% of workers in all occupations combined (see Table 5.8). This is consistent with the findings of Hébert (2005), who observed that Quebec trucking companies have relatively low involvement in retirement plans, since only approximately 25% of them provide such plans to their personnel, compared to roughly 50% for the various other insurance plans (medical care, drugs, life insurance, etc.).

**Fewer two-income families among truckers**

There are fewer families with two income earners among truckers than among workers in general. According to the 2002 SLID, approximately 70% of spouses in husband-wife families in which a trucker was the principal income earner had gainful employment, compared to 82% for all workers combined. As noted by Bess (1999), this situation might be explained by the fact that truckers are more inclined to work more hours to support their family. Or it might instead reflect the difficulty of reconciling the heavy demands of the occupation—especially with respect to the time spent outside the home—with the demands on a two-income family.

**Keep on trucking**

Because of the very nature of the job, characterized by long trips from one destination to another, the highly competitive nature of the sector and a pay structure that encourages truckers to put in more hours to increase their earnings (see A different system of compensation), truckers generally have very long work weeks. It is therefore not surprising that according to the LFS, wage-earning truckers worked on average 47 hours per week in 2004 and 38% of them were at work 50 hours or more weekly.

9. These are the most recent data available.

**Table 5.7**

**Average employment income of truckers working full-time for the full year**

	All	Wage-earners	Self-employed workers	Self-employed workers with personnel	Self-employed workers without personnel
	\$	\$	\$	\$	\$
Truckers (total)	38,750	38,769	38,776	39,938	38,232
For-hire	39,229	39,190	39,466	40,405	39,058
Private – wholesale trade	36,046	35,973	37,587	38,307	36,909
Private – manufacturing	41,975	41,935	44,554	F	F
All occupations	43,298	43,450	47,148	55,030	31,470

Source: 2001 Census.

**Table 5.8**

**Employer benefits**

	All occupations	Company drivers
Employer-sponsored benefits	%	
Dental care plan	60.0	54.3
Life/disability insurance plan	59.8	55.3
Medical insurance plan	65.0	60.8
Dental care or life/disability or medical plan	67.4	65.2
Retirement plan	43.5	28.1

Note: Persons with paid employment; includes persons with more than one job. Data concerning the main job are used where there is more than one job.

Source: Survey of Labour Income Dynamics, 2002.

For their part, independent truckers worked 49 hours per week on average, and 70% of them were at work 50 hours or more weekly. One of the main reasons for this would appear to be that in addition to driving, independent truckers must spend more time on related activities (management tasks, mechanical maintenance, etc.).

**A different system of compensation**

While most Canadian wage earners are paid by the hour or by the week, this is not always the case for truckers. While truckers specializing in local transport are often paid by the shipment (or trip), those specializing in long-haul trucking are generally paid by the number of kilometres (or miles) travelled.<sup>10</sup>

Also, a system of supplementary financial bonuses is often put in place by carriers seeking, for example, to motivate truckers to maintain good driving records. According to an independent study on the trucking industry in Quebec, some 10% to 15% of companies grant premiums on an individual basis while some 20% pay performance premiums. Overall, these premiums are said to account for 5% to 7% of truckers' earnings (Hébert, 2005).

10. To be precise, rates based on the number of km can vary depending on different situations: whether the truck is loaded or empty, the weight of the load, the type of freight, the loading capacity (e.g., number of pallets), the destination (whether international or intraprovincial haulage), etc.

Truckers in for-hire trucking had an even longer workweek. For wage-earning truckers, it averaged 50 hours, and for 47% of drivers it was 50 hours or more. For self-employed truckers, it averaged 55 hours and was 50 hours or more for 71% of them. This difference between segments is mainly due to the fact that truckers working for companies specializing in haulage (for-hire trucking) are thought to be more likely to make long hauls (Table 5.6).

As others have noted (Bess 1999, Nix 2003), these figures may underestimate the actual hours worked by long-haul truckers. Since they represent the number of hours usually paid or contracted, they may tend to reflect the official number of hours entered in logbooks, which often exclude much of the time spent not driving but nevertheless worked. Waiting periods, mechanical inspections and customs inspections are typical examples of activities often entered in logbooks as rest periods. This practice enables truckers, most of whom are paid on the basis of the distance travelled, to keep their hours of service for driving and thus maximize their earnings (Nix, 2003).

**Truckers have more irregular schedules**

According to the Workplace and Employee Survey (WES), 42% of truckers worked flexible hours in 2001,<sup>11</sup> meaning that their start and stop times could vary. This statistic was higher in for-hire trucking, where 45% of truckers had flexible

11. These are the most recent data available.



hours.<sup>12</sup> These results indicate that this type of work is more common among truckers than in the technical personnel and trades group (32%) or in all occupations combined (34%).

Furthermore, the WES data indicate that more than a third (34%) of truckers were not working the same number of paid hours each week, not counting overtime. This rate is more

than double the rate observed for all occupations combined (15%; see A relatively demanding occupation).

12. However, it should be noted that the study of coefficients of variation recommends that this statistic be interpreted with caution.

### A relatively demanding occupation

Given the relationship that may exist between long hours of work/irregular work schedules and the level of stress, it is fairly intuitive that truckers may be especially vulnerable in this regard.<sup>13</sup> Added to this are the shippers' demanding requirements regarding adherence to schedules, despite the constraints associated with driving or shipments (difficult road conditions, road congestion, waits at customs, etc.) and the fact that truckers may find themselves far from their loved ones for days at a time. Thus according to SLID figures, just over seven truckers in ten reported their work life and their personal life as being very stressful or somewhat stressful in 2002.<sup>14</sup>

Overall, long hours of work would appear to have had a harmful effect on health, since they led to unhealthy changes in lifestyle, such as lack of physical exercise, lack of sleep and unhealthy eating habits. (Shields, 2000). It is therefore not surprising that male truckers had one of the highest rates of non-participation in the labour market for

health reasons or because of an illness-related disability at 3.7% (compared to 2.6% for all workers), according to LFS figures for 2004.<sup>15</sup> Similarly, each trucker had lost on average the equivalent of nine days for these same reasons during the year, compared to six days for male workers in general.<sup>16</sup>

13. Williams (2003) observed that the source of workplace stress most often cited by Canadian workers in 1994 and 2000 was the excessive number of work hours or job requirements.

14. Persons aged 16 and over whose principal job was as a trucker.

15. The non-participation rate is the proportion of hours lost to the total weekly hours usually worked by all full-time employees. Men employed full-time only, excluding maternity leave.

16. The number of days lost per worker is calculated by multiplying the non-participation rate by the estimated number of workable days in the year (250). Men employed full-time only, excluding maternity leave.

### Can truckers take comfort in comparisons?

In order to obtain a broader picture of the situation, truckers' working conditions were compared to the ten most popular occupations as well as to all occupations having the same skill level (high school completion or less) among men. For this purpose, the number of weekly hours, the hourly wage and the weekly wage were used as indicators of working conditions.

As may be seen right away, the trucker occupation ranks second in number of hours worked weekly, behind farmers but far ahead of other occupations. As to weekly wages, truckers ranked also second, behind retail trade managers. Furthermore, truckers' wages were considerably higher than those of all workers combined who had high school completion or less, but lower than the wages observed for all occupations combined. Lastly, despite the high number of

Table 5.9

### Average hours usually worked, average hourly wage and weekly wage for full-time male employees by occupation

Ten most popular occupations for men <sup>1</sup>	2004			
	Hours worked <sup>2</sup>	50 hours/week and over (%)	Hourly wage (\$)	Weekly wage (\$)
Truck drivers	47.3	38%	16.9	792.9
Truck drivers - Transportation industry	49.9	51%	16.8	829.6
Retail sales persons and sales clerks	39.8	7%	14.1	568.5
Retail trade managers	42.7	15%	23.6	1005.6
Farmers and farm managers	48.1	F	14.0	655.9
Material handlers	40.0	2%	15.6	624.0
Janitors, caretakers and building superintendants	39.6	2%	14.6	576.8
Automotive service technicians, truck mechanics and mechanical repairers	41.1	4%	17.8	731.5
Carpenters	41.5	6%	18.1	749.5
Construction trades helpers and labourers	42.4	14%	15.8	669.1
Food counter attendants, kitchen helpers and related	37.0	0%	9.9	367.8
All occupations	40.7	8%	21.1	856.1
Education = High school completion or less	41.3	F	17.3	715.6

1. As identified in the 2001 Census.

2. Number of weekly hours usually worked.

Source: Labour Force Survey, 2004.

## How big is the trucker shortage?

Despite the fact that a shortage in an occupation is identified by employers, there is no universally applied definition or direct indicators to empirically evaluate its size. That being said, Shah and Burke (2003) propose an interesting definition presenting a shortage as a situation where the demand for workers for a particular occupation is greater than the supply of workers who are qualified, available and willing to do the work under existing market conditions. Besides, labour shortages are a complex phenomenon and many different types exist. For instance, one could observe a situation where a certain quantity of labour is available but the skills of the work force (defined as a mix of experience, education and training) do not come close to those required or do not meet the expectations of employers. There is also the situation where a pool of qualified workers exists, but under current market conditions, they would rather work in a different occupation (recruitment problem).

However, in the absence of an exact measure, one way to provide a picture of the shortage size in an occupation is to observe various characteristics (pressure points) of the labour market, as measured by factors such as trends in employment and earnings (Veneri, 1999). The rates of growth of employment, wages and the unemployment rate have been used here to determine pressure points that have developed in the past three years<sup>17</sup>. Pressure points are observed in an occupation when:

- the annual rate of growth of employment during the past three years is at least 50% higher than the average for all occupations;
- the annual rate of growth of earnings during the past three years is at least 30% higher than the average for all occupations;
- the annual unemployment rate is at least 30% lower than the average for all occupations.

**Table 5.10**

### Pressure points in the occupation

	Employment	Earnings	Unemployment rate (%) 2004	Pressure points
	Average annual growth (%) 2001-2004	Average annual growth (%) 2001-2004		
All occupations	2.2	2.3	7.2	0
Truck drivers	1.8	1.4	5.3	0
For-hire	0.8	1.6	3.9	1
Private	4.2	1.4	7.4	1

**Source:** Labour Force Survey, 2001 to 2004.

Overall, none of these criteria identified pressure points in the trucker occupation in 2004. However, if the analysis is broken down by both segments of the trucking sector, a pressure point is observed in each one—first, because the unemployment rate in for-hire trucking in 2004, was 46% lower than that observed in all occupations combined; and second, because the average annual growth of employment in private trucking from 2001 to 2004, was nearly double than that observed in all occupations combined. Lastly, it is

important to keep in mind that this result represents the occupation as a whole at the Canada level. Hence, it is possible, when analysing a more specific population, like long distance truckers living in Ontario, to have a different result than the one presented here.

17. These criteria are a variant of those described and applied by the U.S. Bureau of Labour Statistics for the same purposes (see Veneri, 1999).

weekly hours, truckers' hourly wage was nevertheless in the middle of the range. It was also fairly similar to the wage observed in occupations with the same skill level. However, it remained below the hourly wage for male full-time workers as a group (see Table 5.9).

## Summary

Nearly 271,000 persons worked as truckers in 2004. Of that number, some four truckers in five were wage-earners, while the others were instead self-employed workers, commonly known as owner-operators. Similarly, just over 60% of all truckers worked directly for a company whose principal activity was truck transport of freight. Overall, it was found on the one hand that the large majority of truckers are men and truckers tend to be older and less educated than workers in all occupations combined, and also, a smaller percentage of

truckers are immigrants than is the case in all occupations combined. On the other hand, truckers earn a wage near the average for all occupations, but they receive fewer benefits, especially with respect to a retirement plan. Also, they work many more hours than the average for all occupations, often according to irregular schedules.

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# Chapter 6

## Too many trucks on the road?

by Gord Baldwin

### Summary

Since the late 1990s, car drivers have had the growing perception that the roads have become more congested with trucks.

In fact, between 2000 and 2003, the number of trucks actually decreased by 0.2% while the number of cars grew by 5.5%.

However, trucks travel much greater distances than cars. As a result car drivers are likely to see more trucks on the road than the registration counts would suggest.

In 2003, based on provincial registration data, there were 27 cars for every truck. However, based on the distances that vehicles travel, the likelihood that car drivers encounter trucks increases because trucks drive 2.5 times more kilometres on average than cars.

The likelihood of seeing a truck varies with the day of the week, the time of the day and the location. Trucks are relatively more 'visible' during weekdays, at night and at border crossings than cars.

With the population on the rise and the economy growing, the competition is likely to get even more intense.

At border crossing points, for example, the congestion in truck traffic has already reached substantial proportions (although dedicated lines for commercial traffic may improve the situation at the actual crossing).

This paper analyzes the type of truck traffic on Canada's roads, using data on registrations and performance from the Canadian Vehicle Survey. This is a voluntary vehicle-based survey started in 1999 and conducted by Statistics Canada with funding from Transport Canada.

### Truck traffic: A case of "just-in-time"

A major factor in truck traffic on roads these days is the concept of "just-in-time" delivery of freight, where factories require delivery that's synchronized with manufacturing processes.

The trucking industry has become so efficient that manufacturing plants and other businesses can use them as warehouses on wheels. Parts and products are scheduled to arrive as they are needed, rather than taking up space on a warehouse floor.

In addition, one of the fastest growing sources of business has been linked to cross-border trade. Road dominated as a means of transportation for trade between Canada and the United States in 2003. In terms of revenue, over 53% of Canadian exports and 79% of imports were moved by truck.<sup>1</sup>

In 2003, the roughly 2,200 long distance for-hire trucking companies based in Canada that had annual operating revenues of \$1 million or more generated \$16.8 billion in revenues, up 7.5% from 2002.

Transborder movements accounted for 22% of total shipments and 47% of revenues. Carriers hauled 8.7 million shipments across the Canada-US border in 2003, with freight totalling more than 85 million tonnes. These transborder shipments generated \$8.0 billion in revenues.

Without a doubt, Ontario is the centre of Canada's trucking industry. In 2003, freight originating in Ontario for long-distance trucking accounted for 38% of domestic tonnage and 37% of domestic revenues in Canada.

With all this truck traffic, there appears to be a perception that congestion, especially with the competition for road space between cars and trucks, is growing in Canada since the late 1990s.

There are "public concerns that there are too many trucks on the road".<sup>2</sup> What may be the cause? "As a result of deregulation, there are far too many trucks on the road..." is one explanation put forward.<sup>3</sup>

That's one perception. But just how does it work out in reality?

### Fewer trucks on the road

Between 2000 and 2003, the number of registered trucks decreased by 0.2% while the number of cars went up by 5.5%.

In 2003, the number of registered trucks in Canada reached 660,450. These consisted of 378,258 light trucks and 282,192 large trucks. (Small trucks ranged from 4.5 tonnes up to just under 15 tonnes, while large trucks weighed 15 tonnes or more.)

On the other hand, the country had 17.8 million registered cars.

1. The data in this section come from Trucking in Canada, 2003, Statistics Canada Catalogue no. 53-222-XIB.
2. See Western Transportation Advisory Council, Moving Forward A Guide on the Importance of Transportation in Canada, December, 1999, page 21; [www.westac.com/pdfs/mffreight.pdf](http://www.westac.com/pdfs/mffreight.pdf). See also a speech by Mr. Paul Szabo (Mississauga South, Lib.), "There certainly is a perception that there are too many trucks on the road and they're impeding others' ability to be mobile," 37<sup>th</sup> Parliament, 1<sup>st</sup> Session, Standing Committee on Transport and Government Operations, Tuesday, April 30, 2002, [www.parl.gc.ca/InfoComDoc/37/1/TRGO/Meetings/Evidence/trgoev62-e.htm](http://www.parl.gc.ca/InfoComDoc/37/1/TRGO/Meetings/Evidence/trgoev62-e.htm).
3. See Ms. Cathy Walker, Proceedings of the Subcommittee on Transportation Safety, Standing Senate Committee on Transport and Communications; Issue 6—Evidence, Ottawa, Thursday, February 13, 1997, [www.parl.gc.ca/english/senate/com-e/safe-e/06ev-e.htm](http://www.parl.gc.ca/english/senate/com-e/safe-e/06ev-e.htm).

In Canada, in 2000, there were 661,446 trucks registered: 391,291 small trucks and 270,155 large trucks. This compared to 16.8 million registered cars (on-road vehicles up to 4.5 tons).

In other words, for every truck registered with a provincial or territorial government in 2003, there were 27 cars. This was up from 25 cars for every truck just three years earlier.

In terms of the largest trucks such as 18-wheelers, there were 63 cars for every truck in 2003, up from 62 in 2000.

#### Vehicle body types

The vehicle body types, not surprising, are quite different for the small trucks versus the large trucks. This description also helps give a better picture of the vehicles in the respective groups. Small trucks, in 2003, were made up of:

- 4% vans;
- 11% pickups;
- 81% straight trucks;
- 3% tractor trailers;
- 2% others

Large trucks, in 2003, were made up of:  
41% straight trucks;  
58% tractor trailers;  
1% others.

The small truck fleet is made up of 40% gasoline users, 58% diesel and 2% other fuels. This compares with the large truck fleet where only 7% use gasoline while 93% use diesel. For more information on these topics, see **Canadian Vehicle Survey, Annual 2003**, Statistics Canada Catalogue no. 53-223-XIE.

#### Trucks travel longer distances

Trucks are more 'visible' on the road not just because they are bigger. They also travel longer distances than cars, increasing the likelihood to encounter them on the road.

According to Canadian Vehicle Survey data, trucks travelled an estimated 26.6 billion km in 2000, compared with an estimated 282 billion km for cars.

Three years later, trucks travelled about 25 billion km (-7%), while the estimated distance for cars was 286 billion km (+1.5%).

This change is due to an increase in registered cars combined while truck registrations declined and a larger reduction in average distance travelled by trucks relative to cars.

In 2000, trucks drove, on average, 3.5 times the number of kilometres driven by cars. By 2003, trucks drove 2.5 times the average distance driven by cars. This means that car drivers are more likely to encounter a truck than the registration counts would suggest.

A car driver is more likely to see a big truck rather than a small one, even if the number of registered small trucks is higher.

In fact, the large trucks travelled 18.6 billion km in 2003, while the small trucks travelled 6.2 billion km.

For large trucks, the average annual distance was three to four times higher, reflecting their use for long-haul trucking. Large trucks put in over 66,000 km a year, small trucks about 19,000 and cars over 16,000.4 In 2000, large trucks averaged over 81,000 km a year, small trucks about 18,600 and cars around 17,000 km.

**Table 6.1**  
**Vehicle-kilometres driven, Canada, 2003**

Vehicle type	Total	Annual average	Daily average
	billions of vehicle-km	km per vehicle	
Small trucks	6.2	19,144	52
Large trucks	18.6	66,640	183
Cars	286.3	16,333	45

**Source:** Statistics Canada, Canadian Vehicle Survey, Annual 2003, Catalogue no. 53-223-XIE, pages 26 and 30.

#### Trucks run mostly on weekdays

Are cars and trucks sharing the road at the same time? If they do, it could also contribute to perceptions about the volume of truck traffic.

Truck traffic is more concentrated during weekdays. Small trucks travel only about 8% of their total kilometres on weekends, while large trucks travel only about 11% of their total distance.

In comparison, travel for both small and large trucks put in an estimated 20% of their total estimated weekly travel during their peak day (Thursday for small trucks and Tuesday for large trucks).

Car traffic is much more balanced. Cars travel between 12% and 16% of kilometres driven every day.

As a result on average, a car driver is likely to see more trucks on weekdays than during the weekend.

#### Volume of traffic varies with time of day

The volume of traffic also varies with the time of day.

Cars, small trucks and large trucks are all competing for road space primarily during the day from 6 a.m. to 6 p.m.

Small trucks drive 87% of their kilometres during the day, cars 77% and large trucks 68%.

Both large trucks and cars drive about one-fifth of their daily journey during the evening, that is, from 6 p.m. to midnight, compared to about one-tenth for small trucks.

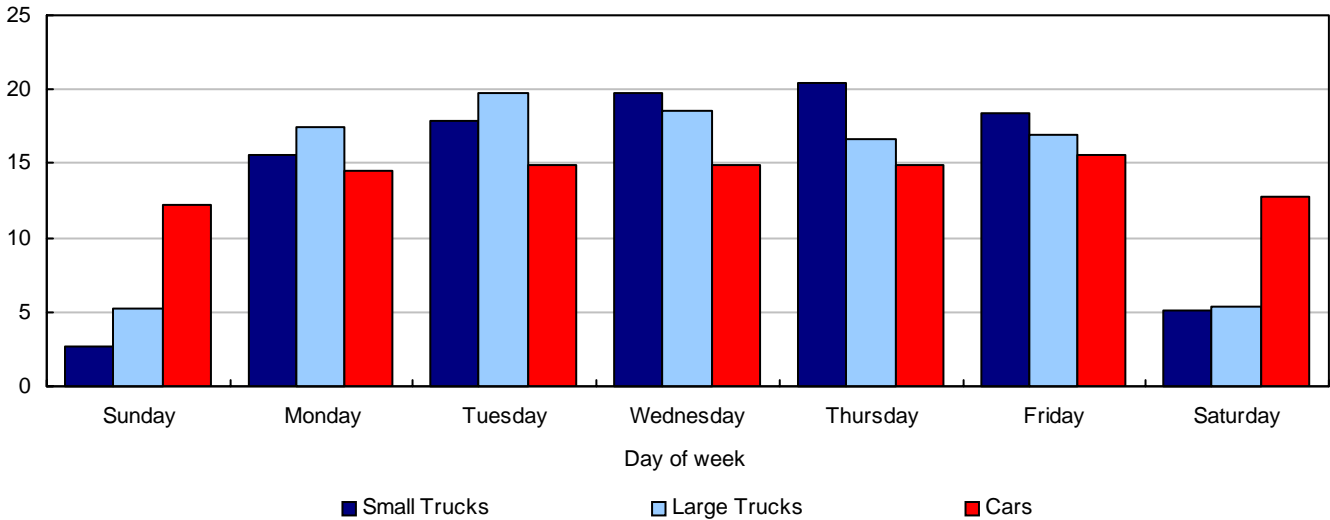
Large trucks put the largest proportion of their travelling time between midnight and 6 a.m., registering about 12% of their kilometres. This compares with only 4% for small trucks and 3% for cars.<sup>5</sup>

4. Statistics Canada, Canadian Vehicle Survey, Annual 2003, Catalogue no. 53-223-XIE, page 30.

5. Statistics Canada, Canadian Vehicle Survey, Annual 2003, Catalogue no. 53-223-XIE, page 44.

**Figure 6.1**  
**Trucks travel mostly on weekdays**

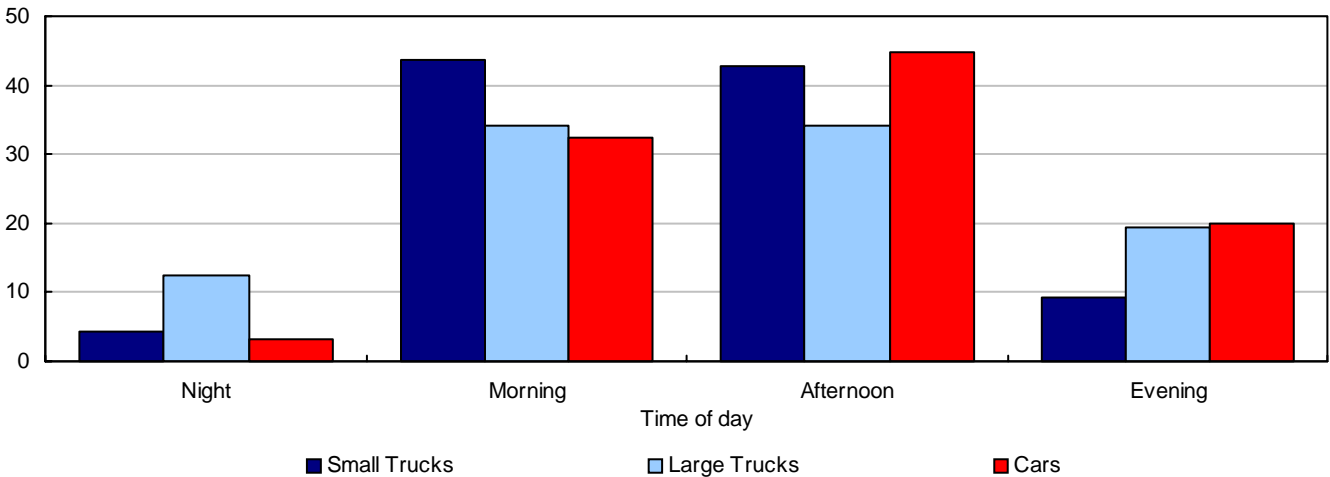
% of vehicle-km



**Source:** Statistics Canada, Canadian Vehicle Survey, Annual, 2003, Catalogue no. 53-223-XIE.

**Figure 6.2**  
**All vehicle types compete for the roads on daytime**

% of vehicle-km



**Source:** Statistics Canada, Canadian Vehicle Survey, Annual, 2003, Catalogue no. 53-223-XIE.

According to the Ontario Trucking Association: "If more shippers were willing to have freight delivered at night when traffic volumes are at their lowest, some of the truck traffic could be taken out of the road during peak congestion periods."<sup>6</sup>

Relatively speaking, there are far fewer cars for every truck at border crossings. In 2003, there were 27 cars per truck based on registration. However, there were only two to six personal vehicles for every truck, for southbound traffic at the border crossings shown below.

**Truck congestion at border crossings**

Truck activity is not only concentrated into certain days of the week and certain times of the day. It is also concentrated in specific areas, and one key region commanding attention is the Canada-US border.

6. Ontario Trucking Association, *Relieving Traffic Congestion: A Discussion Paper*, Spring 2001, page 8, [www.ontruck.org/issues/docs/pdf/relievingtrafficcongestion.pdf](http://www.ontruck.org/issues/docs/pdf/relievingtrafficcongestion.pdf).

**Table 6.2**

**Vehicles crossing into the United States from Canada, by US border crossing, 2003<sup>1</sup>**

US border crossing	Trucks	Personal vehicles	Ratio of personal vehicles to trucks
Detroit MI	1,634,319	6,315,590	3.9
Alexandria Bay NY	297,220	649,161	2.2
Buffalo-Niagara NY	1,162,961	6,414,415	5.5
Port Huron MI	928,074	1,965,011	2.1
Blaine WA	365,089	2,299,636	6.3
<b>Total</b>	<b>6,728,228</b>	<b>30,220,184</b>	<b>4.5</b>

1. The data in this table are different from the other data in this report because:
- They are not from Statistics Canada's Canadian Vehicle Survey (CVS)
  - These data would include vehicles of all nationalities crossing the border. The CVS data are Canadian registered vehicles only.
  - The US border crossing data for personal vehicles includes motorcycles and snowmobiles which are not included in the CVS.
  - The US border crossing data can group several crossings. For example, the Buffalo-Niagara data include the Lewiston Bridge, Peace Bridge, Rainbow Bridge and Whirlpool Bridge data.

**Source:** Bureau of Transportation Statistics, Border Crossing/Entry data, based on data from U.S. Customs Service, [www.BTS.gov](http://www.BTS.gov).

Based on US Customs border crossing counts, at five selected Customs stations in 2003, there were 4.5 cars (personal vehicles) crossing into the United States from Canada for every truck.

At some busy commercial crossing such as Alexandria Bay, N.Y., and Port Huron, Michigan, the figures approached only two cars for every truck crossing.

At Canadian border crossing, the trend is the same for northbound traffic. The proportion of truck traffic is increasing at many border crossings.

For all land crossings in 2003, there were 4.5 cars for every truck that crossed into Canada from the United States.<sup>7</sup>

Canadian crossing data show the vehicle's nationality. There were 7.2 US cars for every US truck, and 3.4 Canadian cars for every Canadian truck.

Over time, the number of Canadian cars relative to trucks has greatly changed at many border points. For example, at the bridge from Sarnia to Port Huron, Michigan., between 1990 and 2004, the annual ratio of US cars to US trucks ranged from a low of 4.0 to a high of 6.5.

For Canadian vehicles, the ratio ranged from a low of 1.2 to a high of 12.1.

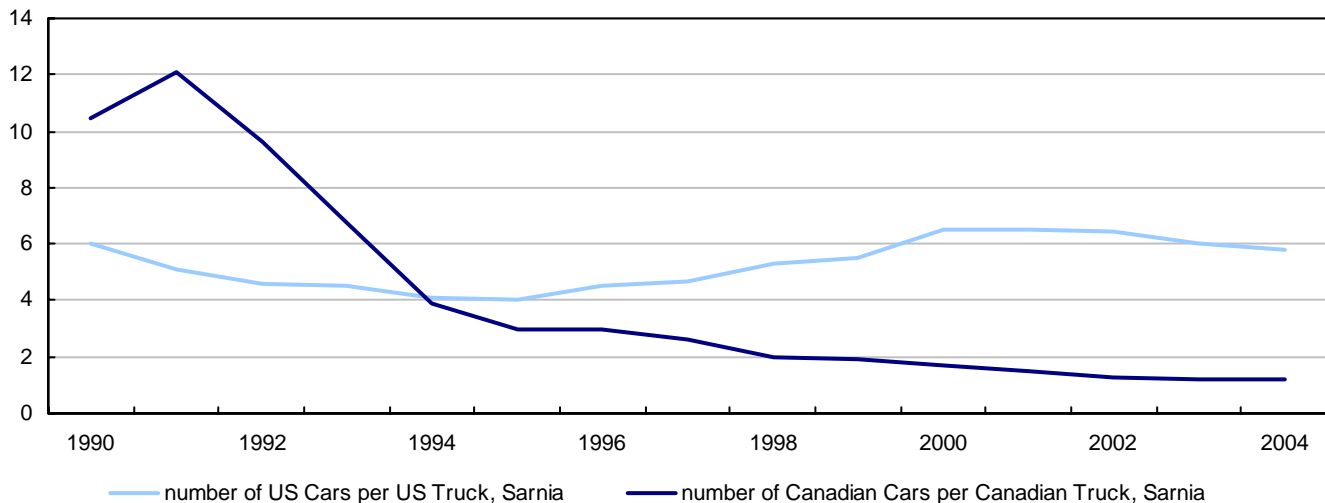
Commercial and personal vehicles may queue up in separate lines at the border. However, the proportion of cars to trucks is likely to be a lot lower than national registration data showing 27 cars to every truck.

7. Statistics Canada CANSIM Table 427-0002. The frontier count is done using the information collected about the entrants into Canada recorded on forms by Canada Customs and Revenue Agency (CCRA) officials. Each port of entry sends in its administrative data according to an understanding signed by Statistics Canada and CCRA. At all ports of entry across Canada, a count is done to determine the number of vehicles (cars, trucks, motorcycles, snowmobiles and bicycles) in the case of highway and ferry points.

**Figure 6.3**

**Ratio of cars to trucks at Sarnia border crossing, northbound traffic, from 1990 to 2004**

Ratio of cars to trucks in Sarnia



**Source:** Statistics Canada, Number of vehicles travelling between Canada and the United States, monthly, CANSIM Table 427-0002.

## Glossary

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**Bill of lading.** A contract setting out the details for transporting goods from a consignor (shipper) to a consignee (receiver). The bill of lading usually contains a description of the goods, the origin and destination, the weight and the transportation charges.

**Commodity.** The description of the transported merchandise as recorded on the carrier's shipping document. This information is encoded according to the standard classification of transported goods (SCTG).

**Current ratio.** A measure of liquidity obtained by dividing current assets by current liabilities. This ratio is used to show the ability to pay current debts from current assets.

**Destination.** The point to which goods were delivered by the final carrier.

**Domestic shipment.** A shipment whose origin and destination are in Canada.

**Fiscal year (Motor Carriers of Freight Survey, Q5 Annual Supplement).** Any 12 month period adopted by a carrier as its annual accounting period, ending any time between April 1, 2004 and March 31, 2005.

**For-hire carrier.** Any carrier which undertakes the transport of goods for compensation.

**Freight forwarders.** Companies that play an intermediary role between the shipper and the carrier by arranging the transport of freight for a fee. These companies are excluded from this report.

**General freight.** Freight that is packed (not bulk) and does not need specialized transportation equipment.

**Imputation.** Procedure of completing a response by using values from one or more records on the same file or from external sources. (e.g. historical data on non-respondents, administrative sources, etc.)

**Industry activity statistics.** Statistics that describe the output of the industry in such terms as tonnes, tonne-kilometres, vehicle kilometres traveled, commodities transported from point to point.

**Industry structure statistics.** Statistics that describe the size, performance and economic health of the industry, such as revenues, expenses, balance sheets, equipment operated, employment. These are also referred to as input variables.

**Intercity shipment (For-hire Trucking Commodity Origin/Destination Survey).** A shipment transported for a distance greater than 24 km.

**Interest coverage ratio.** The number of times a company can meet the interest payments of its creditors. The ratio is calculated by dividing the net income before interest and taxes by the amount of interest paid.

**Interline shipment.** The movement of a consignment by an initiating carrier to an intermediate point. From this point, a subsequent carrier moves the consignment to another point which may be an intermediate point or the final destination.

**International motor carrier.** A Canadian-based for-hire or private carrier that operates in the United States, or Mexico.

**Interprovincial motor carrier.** A for-hire or private carrier that operates in more than one province or territory.

**Less than truckload (LTL).** LTL carriers are characterized by the use of terminals to consolidate shipments, generally from several shippers, into a single truck for haulage between a load assembly terminal and a disassembly terminal, where the load is sorted and shipments are re-routed for delivery.

**Leverage.** The extent to which the company has been financed by debt.

**Local carrier.** A company which gains the majority of its revenues by providing trucking services within a metropolitan area and its hinterland, (see NAICS definition and For-hire Motor Carriers of Freight-Annual Supplement survey).

**Long-distance carrier.** A company which gains the majority of its revenues by providing trucking services between metropolitan areas (see NAICS definition and For-hire Motor Carriers of Freight-Annual Supplement survey).

**Long-term debt ratio.** The percentage of capital provided by creditors. This ratio is used as a measure of solvency and is obtained by dividing long term liabilities by long term liabilities plus *total* owners equity.

**North American Industrial Classification System (NAICS).** Classification system developed in 1997 which allows the reporting of an integrated system of economic statistics by breaking down Canada's total economic production into industries. Trucking industries (industry group 484) are establishments primarily engaged in the truck transportation of goods. This industry group is a part of the major groups 48-49 (transportation, warehousing and storage industries) which include establishments primarily engaged in transporting passengers and goods, warehousing and storing goods, and providing services to these establishments. The modes of transportation are road (trucking, transit and ground passenger), rail, water, air and pipeline.

**Operating expenses.** Operating expenses include expenses incurred in carrying motor carrier freight operations only. These generally exclude non-operating expenses such as capital loss, interest paid, etc.



**Operating ratio.** The proportion of operating revenues absorbed by operating expenses. Calculated by dividing operating expenses by operating revenues.

**Operating revenues.** Operating revenues include revenues pertaining to the motor carriers of freight operations only. These correspond to the total amount billed by the carrier and exclude revenues earned by other carriers in the case of interline shipments.

**Origin.** The point at which goods were received by the initial road carrier. Road carrier in this context includes piggyback (a rail movement where the transport of goods is in highway trailers/containers on railway cars).

**Owner operators.** Owner operators own/lease one or more power units and provide hauling services under contract to for-hire or private carriers.

**Private carrier.** A company whose principal occupation is not trucking but maintains its own fleet of vehicles (owned or leased) for transporting its own freight.

**Probill.** A document which is made by the trucking company from the bill of lading. It is a company control document describing the handling of a shipment of goods and usually contains information on origin, destination, commodity description, weight (or other measurement), rate, revenues and interlining. A probill is sometimes referred to as a waybill.

**Profit margin.** The percentage of profit earned from each revenue dollar. It is obtained by dividing net income after taxes by total revenues and multiplying by 100.

**Province or territory of domicile.** The province or territory where the head office of the carrier is located.

**Relative imputation rate.** The proportion of the corresponding published estimate that is accounted for by the imputed data.

**Response rate.** The number of carriers that gave complete or partial answers to the survey divided by the total number of carriers in-scope for the survey (cases resolved and unresolved).

**Return on assets.** A measure of profitability, calculated as a percentage and obtained by dividing net income after taxes by total assets and multiplying by 100.

**Return on equity.** A measure of the financial return to owners of a business. Calculated by dividing net income before extraordinary items by owners equity.

**Return on long-term capital employed.** Measures the financial return to the providers of long term capital and is obtained by dividing net income before interest and taxes by the sum of long term liabilities plus owners equity.

**Sampling.** A procedure used to select randomly a part of a group for examination. Rather than examining an entire group referred to as the population or universe, one may examine a part of the group called a "sample".

**Sampling weight.** A raising factor attached to each sampled unit to obtain estimates for the population from a sample. The basic concept of the sampling weight can be explained

by using the representation rate. For example, if 2 units are selected out of 10 population units at random, then each selected unit represents 5 units in the population including itself, and is given the sampling weight of 5. A survey with a complex sample design requires a more complicated way of calculating the sampling weight. However, the sampling weight is still equal to the number of units in the population the unit represents.

**Shipment (For-hire Trucking Commodity Origin/Destination Survey).** A quantity of merchandise transported by a for-hire carrier from one person or organization (consignor or shipper) to another person or organization (consignee or receiver).

**Shipping document.** Any document recording the transportation of goods by a carrier, which can be sampled. A probill (waybill), bill of lading, load manifest, trip report, invoice, or the individual records of a summary sheet or tape are considered to be shipping documents.

**Stratification.** A non-overlapping partition of the survey population into relatively homogeneous groups with respect to certain characteristics such as geographical and industrial classification, size, etc. These groups are called strata and are used for sample allocation and selection.

**Survey frame.** A list of all units in the survey population (e.g. carriers, shipments) that carries the contact (e.g., name, address) and the classification information (e.g. industrial, geographical and size) of the units to be surveyed.

**Survey population.** Collection of all units (e.g. carriers, shipments) for which the survey can realistically provide information. The survey population may differ from the target population due to the operational difficulty in identifying all the units that belong to the target population.

**Target population.** Collection of all units (e.g. carriers, shipments) for which the information is required.

**Tonne-kilometre.** An expression of weight (mass) multiplied by distance from origin to destination for each shipment. This is the standard output measure of the trucking industry.

**Top carriers.** A group of for-hire motor carriers of freight with annual revenues of \$25 million and more per carrier.

**Trip report.** A statement giving details of at least one trip of a transport vehicle detailing the origin, destination, commodity, weight (or other measurement), rate, revenues and interlining. It may include both inbound and outbound journeys.

**Truckload (TL).** A shipment generally devoted to the goods of a single shipper, taken directly from a point of origin to one or more destination points.

**Weight (Mass).** An expression of the weight of goods shipped as noted on the shipping document. Liquids, gases, pieces and other items not rated on a weight basis are assigned weights from a conversion table.

**Working capital ratio.** See current ratio.

## Definitions of financial ratios

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### Profitability

$$\text{Operating profit margin (\%)} = \frac{\text{Net operating income}}{\text{Operating revenue}} \times 100$$

$$\text{Operating ratio} = \frac{\text{Operating expenses}}{\text{Operating revenue}}$$

$$\text{Return on assets (\%)} = \frac{\text{Net income before extraordinary items}}{\text{Total assets}} \times 100$$

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### Leverage

$$\text{Return on equity (\%)} = \frac{\text{Net income before extraordinary items}}{\text{Owner's equity}} \times 100$$

$$\text{Return on capital employed (\%)} = \frac{\text{Net income before tax and interest}}{\text{Long term capital employed}} \times 100$$

$$\text{Interest coverage ratio} = \frac{\text{Net income before tax and interest}}{\text{Interest expenses}}$$

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### Solvency

$$\text{Working capital ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$\text{Long-term debt to equity ratio} = \frac{\text{Long-term debt}}{\text{Long term capital employed}}$$

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