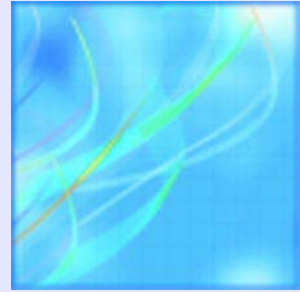


Service Bulletin - Surface and Marine Transport Results of the Annual Motor Carriers of Freight Survey of Small For-hire Carriers and Owner Operators



2006

Highlights

Small for-hire carriers:

- In 2006, there were 7,988 small for-hire carriers with less than \$1 million in revenue. These represented 63% of carriers in the for-hire carriers segment.
- Small for-hire carriers generated total operating revenue of \$2.0 billion, for an average per carrier of \$249,000. Overall, small for-hire carriers generated 6% of total revenue for the sector.
- Small for-hire carriers reported operating expenses of \$1.9 billion or about \$235,000 per carrier. Their main expenses were salaries, wages and benefits, which represented 24% of total expenses, fuel (21%) and other expenses (18%).
- Compared to the previous year, total operating revenue dropped 6%, while total operating expenses decreased 7%.
- Intra-provincial movements were responsible for 71% of the total operating revenue (\$1.4 billion). These movements were followed by international movements, which represented 18% of total revenue (\$360 million). Interprovincial movements were responsible for 11% of total revenue (\$216 million).
- A little more than half (56%) of these carriers were specialized in long-distance transportation. This activity generated 56% of all operating revenue for small for-hire carriers.
- Geographically, Quebec was home to the largest number of small for-hire carriers with 37% of the Canadian carriers, followed by Ontario with 26%, and Alberta and British Columbia with 12% each.
- Small for-hire carriers reported an average of three employees of which 81% were full-time employees. In addition, they operated an average of one straight truck, two road tractors and two semi-trailers.

Owner operators :

- In 2006, there were 43,951 trucking firms who self-identified as owner operators. Of these carriers, 99% reported revenue less than \$1 million.
- Overall, owner operators generated \$9.5 billion in operating revenue, about \$215,000 per carrier.
- Compared to the previous year, total operating revenue improved 22%, while total operating expenses increased 17%.
- Operating expenses for these carriers totalled \$8.3 billion, or \$190,000 per carrier. The main operating expenses incurred by owner operators were fuel (30%), salaries, wages and benefits (20%), and other expenses (19%).

- Almost three out of four owner operators offered their services exclusively to for-hire carriers, while 20% of them worked exclusively for private carriers.
- Intra-provincial movements accounted for 59% of the total operating revenue generated by owner operators (\$5.6 billion). These were followed by international movements with 28% (\$2.6 billion) of revenue. Interprovincial movements were the source of 13% (\$1.3 billion) of overall revenue.
- The majority of owner operators (57%) specialized in long distance transportation. This type of transportation service generated 58% of operating revenue.
- Ontario was home to the largest number of owner operators with 40% of all Canadian carriers, followed by Quebec (15%) and Alberta (16%).
- The average owner operator firm had two employees and operated one road tractor.

Analysis

Annual Motor Carriers of Freight Survey of Small For-hire Carriers and Owner Operators: Financial and Operating Statistics, 2006

Introduction

The Annual Motor Carriers of Freight Survey (AMCFS) provides information on the structure and performance of two distinct groups of carriers located in Canada: small for-hire carriers and owner operators.

Small for-hire carriers are carriers with annual operating revenue between \$30,000 and \$1 million. Combined with AMCFS data on medium and large carriers with revenue of \$1 million or more, this information helps to provide a more complete picture of the for-hire trucking industry.

Owner operators are independent operators who provide transport services under contract to for-hire carriers, private carriers, or both.¹ While most owner operators are small businesses, the data in this publication cover all those that generated revenue of \$30,000 or more in 2006. Thus, the estimates will likely include some owner operators who generated revenue of \$1 million or more in 2006.

The financial estimates for the survey (revenue and expense data) are based on administrative files from the Tax Estimates Program. The other types of data (on activities, territory served, employment, equipment, fuel and distance) are collected through computer-assisted telephone interviews.

The publication is in three parts: section 1 contains results for small for-hire carriers, section 2 for owner operators, and section 3 contains a general review of the quality of data used in the survey.

Data limitations

Users are advised that financial data used in this article were taken from administrative records (tax files), which were not collected for statistical purposes. The financial data are compiled by Statistics Canada from a sample of Canada Revenue Agency T1 records of unincorporated firms' tax files and T2 records of incorporated firms' tax files.

Furthermore, operating ratios are not presented because they could be misinterpreted. Unincorporated businesses do not report labour costs in the same manner as incorporated ones on their tax returns. This is because working owners obtain their remuneration from profits, and they do not appear as expenses in the same way as salaries and wages do for incorporated companies. Also, fuel costs may have been reported under more than one expense category or may not be obtainable from the source of tax data. The result is an underestimation of total expenses, which would distort any calculated operating ratio.

1. A **private carrier** is one for which trucking is not the main activity, but which owns or leases vehicles for the primary purpose of hauling its own goods. Private trucking is not part of the for-hire trucking industry. Note that, following persistent problems with data quality, the private carrier trucking survey was discontinued after reference year 1998. Since that date, therefore, it has no longer been possible to obtain data on this segment of the trucking industry.

Statistical Tables

Table 1
Summary statistics by size, for-hire carriers, 2006

	Small carriers \$30,000 ⁴ to \$999,999	Medium and large carriers \$1 million ⁵ to \$24.9 million	Top carriers \$25 million and over	Total
Estimated number of carriers (No.)	7,988	4,546	91	12,625
	millions of dollars			
Operating revenue	1,991	22,988	8,308	33,287
Operating expenses	1,876	21,532	7,803	31,211
Salaries and wages ¹	448	5,898	1,895	8,241
Fuel	400	2,923	717	4,041
Owner operator expenses	70	3,770	2,096	5,936
Purchased transport ²	221	2,734	1,307	4,261
Maintenance	205	1,570	403	2,178
Depreciation	200	1,249	346	1,795
Other expenses ³	331	3,388	1,040	4,759
Operating ratio (%)	...	0.94	0.94	...
Number of employees (No.)	26,307	126,489	38,206	191,002
Equipment operated (No.)				
Straight trucks	4,197	13,624	2,172	19,993
Road tractors	12,832	65,782	16,086	94,700

1. Includes 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. See methodology in Section 3.

5. Includes carriers from the Annual survey of small for-hire carriers and owner operators with annual operating revenue greater than \$1 million.

Note(s): Totals may not add due to rounding. Data for top, medium and large carriers are collected from the Quarterly motor carriers of freight survey while the small carriers data are from the Annual survey of small for-hire carriers and owner operators.

Table 2
Summary statistics by type of activity, small for-hire carriers, 2006

	Total	General freight	Household	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of carriers (No.)	7,989	2,864	177	650	1,904	671	1,723
	thousands of dollars						
Operating revenue	1,991,160	699,175	64,258	176,883	371,245	208,411	471,188
Operating expenses	1,875,985	669,547	62,195	157,199	343,655	198,904	444,485
Salaries and wages	442,596	138,053	24,485	43,431	81,322	54,669	100,636
Benefits	5,830	2,269	68	1,021	857	728	887
Fuel	400,193	148,843	4,414	27,284	74,222	43,252	102,178
Owner operator expenses	69,859	30,841	940	5,392	8,495	10,878	13,313
Purchased transport	221,175	96,145	6,484	10,647	41,998	18,748	47,153
Maintenance	205,136	69,987	4,404	14,724	40,563	26,324	49,134
Depreciation	200,327	60,186	4,006	29,961	39,050	20,495	46,629
Insurance	78,533	27,299	2,249	6,078	14,110	7,520	21,277
Rent	55,064	23,812	2,775	5,445	6,526	4,166	12,340
Other expenses	197,273	72,112	12,372	13,217	36,510	12,125	50,937
Full time employees (No.)	21,387	7,504	1,122	2,913	3,707	1,878	4,263
Equipment operated (No.)	32,392	11,291	748	3,225	5,842	3,200	8,086
Straight trucks (No.)	4,197	1,101	442	416	1,644	124	470
Distance travelled ('000 km)	215,082	65,439	19,138	34,430	74,252	6,695	15,128
Average distance ('000 km)	51	59	43	83	45	54	32
Road tractors (No.)	12,832	4,480	142	1,915	1,788	1,309	3,198
Distance travelled ('000 km)	1,305,756	465,307	9,384	165,135	152,733	160,188	353,009
Average distance ('000 km)	102	104	66	86	85	122	110
Semi-trailers (No.)	13,341	5,121	150	x	x	1,509	3,605
Other (No.)	2,021	589	13	x	x	258	812
Total distance ('000 km)	1,520,839	530,747	28,522	199,564	226,986	166,883	368,137
Fuel consumed ('000 L)	680,045	233,977	15,310	75,084	105,061	74,436	176,177

Note(s): Some totals may not add due to rounding.

Table 3
Summary statistics by type of activity, local transport¹, small for-hire carriers, 2006

Local carriers	Total	General freight	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of carriers (No.)	3,370	754	248	1,522	263	583
	thousands of dollars					
Operating revenue	811,935	199,563	68,524	298,164	81,587	164,097
Operating expenses	753,992	190,557	58,993	277,110	77,995	149,337
Salaries and wages	189,950	40,616	16,447	65,074	23,527	44,286
Benefits	2,184	883	266	600	187	248
Fuel	142,335	38,239	11,500	54,612	14,647	23,337
Owner operator expenses	21,217	7,747	1,834	7,538	880	3,218
Purchased transport	95,762	26,922	5,623	35,311	11,189	16,717
Maintenance	82,412	14,849	4,894	33,244	9,818	19,607
Depreciation	87,329	19,784	11,192	33,283	7,577	15,493
Insurance	29,770	7,823	2,126	11,153	2,708	5,960
Rent	22,526	9,467	670	5,719	1,881	4,789
Other expenses	80,508	24,228	4,439	30,577	5,582	15,682
Full time employees (No.)	8,418	2,742	552	2,623	553	1,948
Equipment operated (No.)	11,928	3,223	530	4,115	1,002	3,058
Straight trucks (No.)	2,934	666	211	1,595	116	346
Distance travelled ('000 km)	146,945	37,356	19,943	71,530	6,522	11,594
Average distance ('000 km)	50	56	95	45	56	34
Road tractors (No.)	3,979	1,043	198	1,148	433	1,157
Distance travelled ('000 km)	311,039	77,660	19,370	89,399	37,895	86,715
Average distance ('000 km)	78	74	98	78	88	75
Semi-trailers (No.)	4,416	1,393	x	x	408	1,381
Other (No.)	600	122	x	x	44	174
Total distance ('000 km)	457,987	115,016	39,314	160,930	44,418	98,309
Fuel consumed ('000 L)	231,490	54,338	22,880	79,089	19,219	55,964

1. Excludes household goods movers.

Note(s): Some totals may not add due to rounding.

Table 4
Summary statistics by type of activity, long-distance transport¹, small for-hire carriers, 2006

Long distance carriers	Total	General freight	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of carriers (No.)	4,440	2,110	402	381	408	1,139
	thousands of dollars					
Operating revenue	1,114,967	499,612	108,359	73,081	126,824	307,091
Operating expenses	1,059,798	478,990	98,206	66,545	120,909	295,148
Salaries and wages	228,160	97,437	26,983	16,248	31,142	56,350
Benefits	3,580	1,386	755	258	541	640
Fuel	253,445	110,605	15,784	19,610	28,605	78,841
Owner operator expenses	47,702	23,094	3,557	957	9,998	10,096
Purchased transport	118,929	69,223	5,024	6,687	7,559	30,436
Maintenance	118,319	55,138	9,830	7,319	16,506	29,526
Depreciation	108,991	40,402	18,769	5,767	12,918	31,135
Insurance	46,516	19,476	3,952	2,957	4,813	15,318
Rent	29,764	14,346	4,775	807	2,285	7,551
Other expenses	104,392	47,884	8,777	5,933	6,543	35,255
Full time employees (No.)	11,846	4,762	2,360	1,084	1,325	2,315
Equipment operated (No.)	19,717	8,068	2,696	1,727	2,198	5,028
Straight trucks	820	435	205	49	7	124
Distance travelled ('000 km)	48,997	28,083	14,486	2,722	172	3,534
Average distance ('000 km)	60	65	71	56	25	29
Road tractors (No.)	8,712	3,437	1,717	640	876	2,042
Distance travelled ('000 km)	985,332	387,647	145,764	63,334	122,293	266,294
Average distance ('000 km)	113	113	85	99	140	130
Semi-trailers (No.)	8,776	3,728	x	x	1,101	2,224
Other (No.)	1,407	467	x	x	213	638
Total distance ('000 km)	1,034,331	415,731	160,251	66,056	122,465	269,828
Fuel consumed ('000 L)	433,245	179,639	52,204	25,972	55,218	120,212

1. Excludes household goods movers.

Note(s): Some totals may not add due to rounding.

Table 5
Summary statistics by type of movement, small for-hire carriers, 2006

	Intraprovincial carriers	Extraprovincial carriers						
		Total	Intraprovincial	Interprovincial	International			
					Sub ¹ total	Into Canada	Out of Canada	
Estimated number of carriers (No.)	4,858	3,129	...	...	...	...	...	...
			thousands of dollars					
Operating revenue	1,003,989	987,179	411,382	216,207	359,590	157,587	202,003	
Operating expenses	919,804	956,187	390,840	207,428	357,919	157,005	200,914	
Transportation expenses	672,435	716,783	293,972	155,553	267,258	117,275	149,983	
Maintenance and garage expenses	106,753	98,382	39,820	20,842	37,720	18,044	19,676	
Administrative and general office expenses	140,616	141,021	57,048	31,033	52,940	21,686	31,254	
Full time employees (No.)	11,608	9,779	...	...	...	...	...	...
Salaries and wages (\$'000)	226,078	216,518	...	...	...	...	...	...
			number					
Equipment operated	15,691	16,701	...	...	...	...	...	...
Straight trucks	3,317	880	...	...	...	...	...	...
Road tractors	6,227	6,605	...	...	...	...	...	...
Semi-trailers	4,768	8,574	...	...	...	...	...	...
Other	1,378	643	...	...	...	...	...	...

Note(s): Total may not add due to rounding.

Table 6
Summary statistics by province or territory of domicile, small for-hire carriers, 2006

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
Estimated number of carriers (No.)	7,988	83	42	150	256	2,957	2,053
	thousands of dollars						
Operating revenue	1,991,160	26,335	16,402	44,642	58,065	625,543	513,821
Operating expenses	1,875,984	25,043	16,164	41,613	55,644	588,343	506,127
Salaries and wages	442,596	6,008	4413	10,093	14,049	141,654	104,706
Benefits	5,831	x	x	x	327	1,975	1,476
Fuel	400,193	8,044	4966	13,988	18,494	119,580	102,594
Owner operator expenses	69,858	x	x	x	47	28,773	22,130
Purchased transport	221,175	3,485	454	2,865	1,753	43,877	95,416
Maintenance	205,135	1,851	1563	3,681	4,323	86,400	41,292
Depreciation	200,326	2,780	1284	3,598	7,558	64,649	41,605
Insurance	78,533	1,002	810	1,374	2,133	23,907	22,706
Rent	55,063	150	x	917	1,352	17,103	16,423
Other expenses	197,273	1,642	2552	4,876	5,609	60,426	57,779
Full time employees (No.)	21,387	261	109	467	525	6,771	5,373
	Manitoba	Saskat- chewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
Estimated number of carriers (No.)	186	285	981	981	10	x	x
	thousands of dollars						
Operating revenue	55,780	84,210	270,368	292,377	2,300	x	x
Operating expenses	51,433	80,613	235,904	271,771	2,078	x	x
Salaries and wages	12,344	14,901	57,284	76,344	234	x	x
Benefits	109	251	727	757	x	x	x
Fuel	15,080	20,461	49,050	47,177	755	x	x
Owner operator expenses	1,185	1,000	6,500	10,104	x	x	x
Purchased transport	3,845	13,356	26,274	29,447	152	x	x
Maintenance	3,887	9,272	21,440	31,120	290	x	x
Depreciation	5,545	10,253	33,838	28,864	202	x	x
Insurance	1,579	2,877	11,591	10,391	104	x	x
Rent	1,412	2,369	6,496	8,681	x	x	x
Other expenses	6,449	5,873	22,706	28,888	299	x	x
Full time employees (No.)	769	1,108	2,782	3,192	13	x	x

Note(s): Some totals may not add due to rounding.

Table 7
Number of employees by owned and leased vehicle and by province or territory of domicile, small for-hire carriers, 2006

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	number						
Estimated number of carriers	7,988	83	42	150	256	2,957	2,053
Employees							
Drivers							
Full time	15,759	F	F	F	F	4,673	3,849
Part time	2,704	F	F	F	F	930	584
Other employees							
Full time	5,629	F	F	F	F	2,098	1,523
Part time	2,217	F	F	F	F	964	473
Total - drivers and other employees							
Full time	21,387	261	109	467	525	6,771	5,373
Part time	4,920	61	44	98	242	1,895	1,057
	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
	number						
Estimated number of carriers	186	285	981	981	10	x	x
Employees							
Drivers							
Full time	F	F	2,155	2,501	x	x	x
Part time	F	F	353	316	x	x	x
Other employees							
Full time	F	F	628	691	x	x	x
Part time	F	F	206	286	x	x	x
Total - drivers and other employees							
Full time	769	1,108	2,782	3,192	13	x	x
Part time	116	239	559	602	8	x	x

Note(s): Some totals may not add due to rounding.

Table 8
Equipment operated by province or territory of domicile, small for-hire carriers, 2006

	Owned and leased				Total
	Straight trucks	Road tractors	Semi-trailers	Other equipment	
	number				
Newfoundland and Labrador	48	176	174	29	427
Prince Edward Island	13	98	137	20	268
Nova Scotia	72	313	330	25	740
New Brunswick	78	382	295	50	805
Québec	1,509	3,113	2,906	578	8,105
Ontario	1,113	3,127	4,723	695	9,659
Manitoba	139	511	570	65	1,285
Saskatchewan	126	949	794	35	1,905
Alberta	429	2,187	1,761	348	4,726
British Columbia	658	1,962	1,625	171	4,415
Yukon	x	x	x	x	x
Northwest Territories	x	x	x	x	x
Nunavut	x	x	x	x	x
Canada					
Owned and leased	4,197	12,832	13,342	2,021	32,392
Operated by owner operator	F	F	F	F	5,848

Note(s): Some totals may not add due to rounding.

Table 9
Estimated annual distance travelled by owned and leased vehicle and by province or territory of domicile, small for-hire carriers, 2006

	Total	Straight trucks	Road tractors
	thousands kilometres		
Newfoundland and Labrador	19,719	2,949	16,770
Prince Edward Island	10,800	412	10,388
Nova Scotia	29,918	3,892	26,026
New Brunswick	41,681	4,186	37,495
Quebec	438,662	76,298	362,364
Ontario	378,530	47,820	330,710
Manitoba	49,666	3,258	46,408
Saskatchewan	100,125	8,395	91,730
Alberta	213,756	32,201	181,555
British Columbia	235,619	34,964	200,655
Yukon	1,506	x	x
Northwest Territories	434	x	x
Nunavut	422	x	x
Canada	1,520,839	215,082	1,305,757

Note(s): Some totals may not add due to rounding.

Table 10
Summary statistics, owner operators, 2002 to 2006

	2006	2005	2004	2003	2002
Estimated number of owner operators (No.)	43,951	37,591	35,609	36,281	35,085
	thousands of dollars				
Operating revenue	9,451,122	7,769,747	7,443,278	7,397,099	7,023,352
Operating expenses	8,339,087	7,122,068	6,771,732	6,761,844	6,566,395
Salaries and wages	1,634,378	1,568,729	1,465,703	1,539,416	1,511,473
Benefits	25,874	35,379	27,790	25,105	32,455
Fuel	2,462,384	1,750,750	1,719,729	1,460,718	1,595,854
Owner operator expenses	0	0	0	0	0
Purchased transport	948,448	848,650	721,180	845,089	744,175
Maintenance	806,748	768,567	774,732	740,397	618,103
Depreciation	874,196	737,157	676,058	716,735	789,964
Insurance	311,365	291,962	296,424	252,684	248,801
Rent	240,918	236,837	240,164	223,703	246,777
Other expenses	1,034,776	884,038	849,953	957,998	778,792
Full time employees ¹(No.)	67,723	60,765	58,604	62,518	62,400
Equipment operated (No.)	96,577	86,949	84,125	87,925	90,048

1. Working owner included.

Note(s): Some totals may not add due to rounding.

Table 11
Distribution of owner operators by carrier types and by region of domicile, owner operators, 2006

	Owner operator working for			Total
	For-hire carriers	Private carriers	Both	
	number			
Atlantic	1,679	469	247	2,395
Quebec	4,692	1,162	774	6,628
Ontario	12,480	3,619	1,556	17,655
Prairies	7,415	2,500	684	10,599
British Columbia	5,014	1,058	565	6,637
Territories	17	12	8	37
Canada	31,297	8,820	3,834	43,951

Note(s): Some totals may not add due to rounding.

Table 12
Summary statistics by size, owner operators, 2006

	Total	Small enterprises (\$30,000 to \$999,999)	Medium and large enterprises (\$1 million and over)
Estimated number of owner operators (No.)	43,951	43,322	629
	thousands of dollars		
Operating revenue	9,451,122	8,157,480	1,293,642
Operating expenses	8,339,087	7,100,131	1,238,956
Salaries and wages ¹	1,660,252	1,355,201	305,051
Fuel	2,462,384	2,272,982	189,402
Purchased transport ²	948,448	571,582	376,866
Maintenance	806,748	730,747	76,001
Depreciation	874,196	755,833	118,363
Other expenses ³	1,587,059	1,413,786	173,273
Number of employees ⁴(No.)	87,170	81,720	5,451
Equipment operated (No.)			
Straight trucks	15,786	15,016	770
Road tractors	44,848	42,262	2,586

1. Includes employee benefits.

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

3. Includes terminal and insurance expenses.

4. Working owners, full and part time employees are included.

Note(s): Totals may not add due to rounding.

Table 13
Summary statistics by type of activity, local transport¹, owner operators, 2006

Local carriers	Total	General freight	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number reporting (No.)	17,947	5,325	1,854	5,968	1,835	2,965
	thousands of dollars					
Operating revenue	3,653,076	850,243	632,176	1,107,744	526,965	535,948
Operating expenses	3,185,933	737,201	566,876	949,004	463,734	469,118
Salaries and wages	731,083	172,145	149,039	193,951	104,811	111,137
Benefits	10,881	3,196	2,287	2,521	995	1,882
Fuel	776,065	191,811	132,948	232,573	110,708	108,025
Owner operator expenses	0	0	0	0	0	0
Purchased transport	396,847	101,817	71,024	109,426	45,827	68,753
Maintenance	320,044	52,085	50,112	107,166	70,334	40,347
Depreciation	363,209	76,602	66,751	117,222	51,375	51,259
Insurance	116,152	22,645	20,970	35,302	19,765	17,470
Rent	102,535	26,603	15,353	33,498	10,479	16,602
Other expenses	369,116	90,297	58,392	117,344	49,441	53,642
Full time employees ²(No.)	27,343	7,637	3,726	8,592	2,844	4,544
Equipment operated (No.)	41,972	11,345	5,118	13,824	5,322	6,363
Straight trucks (No.)	11,612	3,304	1,015	5,691	346	1,256
Distance travelled ('000 km)	578,392	157,105	44,593	304,880	13,548	58,266
Average distance ('000 km)	50	48	44	54	39	46
Road tractors (No.)	15,775	5,138	1,905	3,807	2,234	2,691
Distance travelled ('000 km)	1,595,874	594,742	255,295	278,936	210,304	256,597
Average distance ('000 km)	101	116	134	73	94	95
Semi-trailers (No.)	11,665	2,609	x	x	2,266	1,672
Other (No.)	2,920	294	x	x	476	744
Total distance ('000 km)	2,174,267	751,848	299,889	583,816	223,851	314,863
Fuel consumed ('000 L)	1,096,087	343,501	155,555	326,969	127,763	142,299

1. Excludes household goods movers.

2. Working owner included.

Note(s): Some totals may not add due to rounding.

Table 14
Summary statistics by type of activity, long-distance transport¹, owner operators, 2006

Long distance carriers	Total	General freight	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of owner operators (No.)	24,873	12,258	2,003	2,712	1,492	6,408
	thousands of dollars					
Operating revenue	5,514,328	2,591,603	466,329	485,757	437,166	1,533,473
Operating expenses	4,886,375	2,288,250	393,712	434,103	392,123	1,378,187
Salaries and wages	854,832	375,773	69,556	88,184	85,821	235,498
Benefits	12,554	4,542	656	1,225	2,234	3,897
Fuel	1,643,066	834,197	140,601	124,530	108,637	435,101
Owner operator expenses	0	0	0	0	0	0
Purchased transport	470,003	232,266	26,063	35,076	29,642	146,956
Maintenance	469,078	206,723	39,563	37,909	56,352	128,531
Depreciation	487,046	184,423	47,017	52,266	47,286	156,054
Insurance	187,833	84,727	19,823	16,583	15,687	51,013
Rent	131,317	67,562	4,490	10,222	10,213	38,830
Other expenses	630,646	298,035	45,943	68,109	36,252	182,307
Full time employees ²(No.)	36,985	18,138	2,916	4,108	2,478	9,345
Equipment operated (No.)	52,131	22,785	3,167	6,254	5,078	14,847
Straight trucks (No.)	3,048	1,675	65	589	519	200
Distance travelled ('000 km)	269,657	178,924	5,277	49,752	20,146	15,558
Average distance ('000 km)	88	107	81	84	39	78
Road tractors (No.)	28,187	13,021	2,236	2,797	2,130	8,003
Distance travelled ('000 km)	4,315,333	2,180,654	383,115	419,311	244,077	1,088,176
Average distance ('000 km)	153	167	171	150	115	136
Semi-trailers (No.)	17,759	7,174	x	x	2,278	6,043
Other (No.)	3,138	915	x	x	152	601
Total distance ('000 km)	4,584,989	2,359,578	388,391	469,063	264,223	1,103,734
Fuel consumed ('000 L)	2,183,055	1,100,337	168,108	207,397	138,494	568,719

1. Excludes household goods movers.

2. Working owner included.

Note(s): Some totals may not add due to rounding.

Table 15
Summary statistics by type of activity, owner operators, 2006

	Total	General freight	Household	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of owner operators (No.)	43,951	17,583	1,131	3,857	8,680	3,327	9,373
	thousands of dollars						
Operating revenue	9,451,123	3,441,846	283,718	1,098,505	1,593,501	964,131	2,069,422
Operating expenses	8,339,088	3,025,451	266,779	960,588	1,383,107	855,857	1,847,306
Salaries and wages	1,634,378	547,919	48,461	218,595	282,136	190,632	346,635
Benefits	25,874	7,738	2,440	2,942	3,746	3,229	5,779
Fuel	2,462,383	1,026,008	43,253	273,549	357,103	219,344	543,126
Owner operator expenses	0	0	0	0	0	0	0
Purchased transport	948,449	334,084	81,598	97,087	144,502	75,469	215,709
Maintenance	806,748	258,807	17,626	89,675	145,075	126,686	168,879
Depreciation	874,197	261,025	23,941	113,768	169,488	98,661	207,314
Insurance	311,365	107,372	7,380	40,793	51,885	35,452	68,483
Rent	240,919	94,165	7,067	19,843	43,720	20,692	55,432
Other expenses	1,034,776	388,332	35,014	104,336	185,452	85,693	235,949
Full time employees ¹ (No.)	67,723	25,775	3,395	6,642	12,700	5,322	13,889
Equipment operated (No.)	96,577	34,130	2,474	8,285	20,078	10,400	21,210
Straight trucks (No.)	15,785	4,979	1,127	1,080	6,280	864	1,455
Distance travelled ('000 km)	876,299	336,029	28,250	49,870	354,632	33,694	73,824
Average distance ('000 km)	56	67	25	46	56	39	51
Road tractors (No.)	44,849	18,159	886	4,141	6,605	4,364	10,694
Distance travelled ('000 km)	6,084,634	2,775,397	173,428	638,410	698,247	454,380	1,344,772
Average distance ('000 km)	136	153	196	154	106	104	126
Semi-trailers (No.)	29,876	9,783	x	x	x	4,544	7,715
Other (No.)	6,066	1,209	x	x	x	628	1,346
Total distance ('000 km)	6,960,933	3,111,426	201,678	688,280	1,052,879	488,074	1,418,596
Fuel consumed ('000 L)	3,347,097	1,443,838	67,955	323,662	534,367	266,257	711,018

1. Working owner included.

Note(s): Some totals may not add due to rounding.

Table 16
Summary statistics by type of movement, owner operators, 2006

	Intraprovincial carriers	Extraprovincial carriers						
		Total	Intraprovincial	Interprovincial	International			
					Sub total	Into Canada	Out of Canada	
Estimated number of carriers (No.)	19,423	24,528	...	...	...	...	...
			thousands of dollars					
Operating revenue	3,906,714	5,544,491	1,675,975	1,265,572	2,602,944	1,229,037	1,373,907	
Operating expenses	3,442,053	4,897,101	1,475,341	1,119,535	2,302,225	1,084,507	1,217,718	
Transportation expenses	2,527,044	3,633,317	1,080,877	846,902	1,705,538	797,572	907,966	
Maintenance and garage expenses	361,482	445,268	151,191	103,011	191,066	89,159	101,907	
Administrative and general office expenses	553,527	818,515	243,273	169,622	405,620	197,775	207,845	
Full time employees (No.)	30,447	37,276	...	...	...	...	...
Salaries and wages (\$'000)	776,261	858,116	...	...	...	...	...
			number					
Equipment operated	44,989	51,587	...	...	...	...	...
Straight trucks	13,102	2,684	...	...	...	...	...
Road tractors	17,172	27,676	...	...	...	...	...
Semi-trailers	11,872	18,006	...	...	...	...	...
Other	2,843	3,221	...	...	...	...	...

Note(s): Total may not add due to rounding.

Table 17
Summary statistics by province or territory of domicile, owner operators, 2006

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
Estimated number of owner operators (No.)	43,951	273	154	671	1,297	6,628	17,654
	thousands of dollars						
Operating revenue	9,451,122	65,317	31,861	176,873	293,553	1,418,563	3,211,087
Operating expenses	8,339,087	61,893	28,721	159,466	262,070	1,303,419	2,866,629
Salaries and wages	1,634,378	13,985	5,529	32,154	50,218	274,825	535,706
Benefits	25,874	160	x	342	388	5,547	7,383
Fuel	2,462,384	19,871	9,599	54,232	102,486	327,277	926,588
Owner operator expenses	0	0	0	0	0	0	0
Purchased transport	948,448	3,043	1,410	20,375	8,675	156,180	382,838
Maintenance	806,748	5,744	3,238	11,682	25,855	165,036	205,377
Depreciation	874,196	6,917	2,656	19,256	27,688	121,872	295,403
Insurance	311,365	3,267	1,305	4,834	9,682	43,889	88,010
Rent	240,918	1,248	x	2,516	5,415	53,606	59,777
Other expenses	1,034,776	7,658	4,748	14,075	31,664	155,187	365,548
Full time employees (No.)	67,723	474	233	1,134	2,239	12,302	23,805
	Manitoba	Saskat- chewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
Estimated number of owner operators (No.)	1,982	1,759	6,858	6,638	21	15	0
	thousands of dollars						
Operating revenue	444,540	468,124	1,815,979	1,517,320	5,606	2,299	0
Operating expenses	378,865	405,424	1,553,587	1,311,561	5,109	2,343	0
Salaries and wages	67,079	78,537	338,767	235,928	1146	505	0
Benefits	519	3,505	5,115	2,897	x	x	0
Fuel	148,659	132,281	371,130	368,453	1418	390	0
Owner operator expenses	0	0	0	0	0	0	0
Purchased transport	23,500	26,008	176,707	149,236	92	384	0
Maintenance	29,197	53,006	166,624	139,656	1083	250	0
Depreciation	38,750	33,509	180,963	146,364	514	304	0
Insurance	11,276	13,980	73,882	60,995	145	99	0
Rent	13,482	16,070	59,140	29,194	x	x	0
Other expenses	46,404	48,527	181,258	178,838	541	327	0
Full time employees (No.)	3,713	3,090	11,077	9,593	39	22	0

Note(s): Some totals may not add due to rounding.

Table 18
Number of employees by type and by province or territory of domicile, owner operators, 2006

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	number						
Estimated number of owner operators	43,951	273	154	671	1,297	6,628	17,654
Employees							
Drivers							
Full time	57,631	F	F	952	F	9,800	21,082
Part time	8,655	F	F	133	F	1,764	2,380
Other Employees							
Full time	10,092	F	F	182	F	2,503	2,723
Part time	10,792	F	F	131	F	1,385	4,161
Total							
Full time	67,723	474	233	1,134	2,239	12,302	23,805
Part time	19,447	139	60	264	580	3,149	6,541
	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
	number						
Estimated number of owner operators	1,982	1,759	6,858	6,638	21	15	0
Employees							
Drivers							
Full time	F	F	9,284	8,345	F	F	0
Part time	F	F	1,765	1,501	F	F	0
Other Employees							
Full time	F	F	1,793	1,248	F	F	0
Part time	F	F	1,626	1,896	F	F	0
Total							
Full time	3,713	3,090	11,077	9,593	39	22	0
Part time	1,184	736	3,390	3,397	7	0	0

Note(s): Some totals may not add due to rounding.

Table 19
Equipment operated by province or territory of domicile¹, owner operators, 2006

	Straight trucks	Road tractors	Semi-trailers	Other equipment	Total
	number				
Newfoundland and Labrador	118	335	255	48	756
Prince Edward Island	54	174	x	F	351
Nova Scotia	208	832	x	F	1,683
New Brunswick	139	1,706	864	83	2,791
Quebec	2,609	7,259	5,690	634	16,192
Ontario	6,192	16,655	8,764	2,002	33,613
Manitoba	450	2,472	1,610	321	4,852
Saskatchewan	358	2,217	2,151	279	5,005
Alberta	2,428	7,441	5,527	1,050	16,447
British Columbia	3,201	5,725	4,305	1,563	14,793
Yukon	F	F	F	F	62
Northwest Territories	F	F	F	F	31
Nunavut	0	0	0	0	0
Canada	15,786	44,848	29,878	6,065	96,577

1. Owned and leased by a company.

Note(s): Some totals may not add due to rounding.

Table 20
Estimated annual distance travelled by type of vehicle and by province or territory of domicile, owner operators, 2006

	Total distance	Straight trucks	Road tractors
	thousands kilometres		
Newfoundland and Labrador	52,471	4,760	47,712
Prince Edward Island	26,259	1,009	25,250
Nova Scotia	127,319	16,313	111,006
New Brunswick	244,663	5,229	239,435
Quebec	930,656	119,898	810,758
Ontario	2,932,284	376,006	2,556,278
Manitoba	402,392	23,155	379,237
Saskatchewan	351,309	22,736	328,573
Alberta	1,045,717	135,548	910,168
British Columbia	843,883	170,100	673,784
Yukon	F	F	F
Northwest Territories	F	F	F
Nunavut	0	0	0
Canada	6,960,933	876,298	6,084,635

Note(s): Some totals may not add due to rounding.

Methodology and data quality

Introduction

This section describes the methodology of the Annual Motor Carriers of Freight Survey of Small For-hire Carriers and Owner Operators. Included are descriptions of the target and survey populations, the sample design, and the data processing and estimation methods. The quality of the data presented in this publication is discussed and quality indicators for some key statistics are given.

This information will provide the user with a better understanding of the strengths and limitations of the data, and how they can be effectively used and analyzed. The information may be of particular importance when making comparisons with data from other surveys or sources of information, and in drawing conclusions regarding changes over time, differences between geographic areas and differences among sub-groups of the target population.

Several terms used in this chapter are defined below:

Target Population: all units (e.g. carriers) for which the information is required.

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

Survey Frame: a list of all units in the survey population that carries classification information (e.g. industrial, geographical and size) of the units. This list is used for sample design and selection.

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.

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 that the unit represents.

Data Sources and Methodology

A. Survey Objectives

The objective of this survey is to obtain information on small for-hire carriers and owner operators in terms of their structure and performance on an annual basis.

B. Populations

Target Population

The target population includes all Canadian-domiciled for-hire motor carriers (companies) with annual operating revenue greater than or equal to \$30 thousand and less than \$1 million, as well as all Canadian-domiciled owner operators with annual operating revenue of \$30 thousand and more. Courier and messenger services are not covered by this survey, nor are private carriers.

Survey Population

The 2006 survey population consists of all companies on Statistics Canada's Business Register, the Central Frame Data Base (CFDB), classified as trucking companies with annual gross business income greater than or equal to \$30 thousand and less than \$1 million, or with annual gross business income of \$1 million and more if these companies are known as owner operators. In addition, the survey population includes some companies from an administrative file of 2006 tax filers, classified as trucking companies with annual operating revenue greater than or equal to \$30 thousand and less than \$1 million that are not yet found on the Business Register.

C. Sample Design

The number of trucking companies on the survey frame is large and for that reason a sample of them is selected to represent the population. The survey uses a two-phase sample design, where a large first-phase sample is selected and the second-phase sample is drawn as a sub-sample from these companies. The design of the sampling procedures used in each phase is described below.

First-Phase

The first-phase sample is drawn independently for incorporated and unincorporated companies. The list of unincorporated companies on the Business Register is classified using province/territory of domicile, North American Industrial Classification System (NAICS) code, and size (measured by annual gross business income). Companies with the same classification form a stratum within which a first-phase sample is selected. The complete list of incorporated companies on the survey frame is included in the first-phase sample.

Second-Phase

The second-phase sample is a sub-sample of the first-phase sample. The companies included in the first-phase sample are again classified using province/territory of domicile, NAICS code, and size. Companies with the same classification form a stratum within which a second-phase sample is selected.

The overall size of the second phase sample and its allocation among strata are determined to satisfy precision requirements for provincial estimates under given cost constraints. The coefficient of variation is used as the measure of precision. The sample size and the estimated population size by province or territory of domicile are given in **Table 21**.

Table 21**Estimated population size and sample size by province or territory of domicile, annual motor carriers of freight survey: small for-hire carriers and owner operators, 2006**

	Estimated carriers in survey population	Carriers selected		In-scope carriers selected
		Phase 1	Phase 2	
	number			
Newfoundland and Labrador	369	317		150
Prince Edward Island	197	117		69
Nova Scotia	829	617		323
New Brunswick	1,574	1,160		235
Quebec	9,929	8,796		554
Ontario	19,971	14,720		656
Manitoba	2,207	1,350		273
Saskatchewan	2,079	1,592		294
Alberta	8,019	6,673		526
British Columbia	7,796	5,029		492
Yukon	31	21		16
Northwest Territories	16	19		11
Nunavut	3	2		2
Canada	53,020	40,413		3,601

D. Data Collection and Processing

During the collection period, financial data is obtained for all units in the first-phase sample from an administrative file of tax filers. The companies included in the second-phase sample are contacted via telephone interview in order to collect operational data.

The survey data are checked for errors and inconsistencies. Problems or missing data are replaced with consistent values (are imputed) using Statistics Canada's Generalized Edit and Imputation System. The system imputes data using imputation rules that select representative data from another carrier. The data is then verified by subject matter specialists.

E. Estimation

Since only a sample of carriers was contacted for the AMCF survey, the individual values are weighted to represent the whole industry within the scope of the survey. The value of each carrier is multiplied by the weight for that carrier, and then the weighted data from all sampled carriers belonging to a given estimation domain (e.g. Ontario) are summed to obtain the estimate.

F. Reference Period

The reference period for collection purposes is the firm's own 12-month accounting period whose year-end occurred on any date from April 1, 2006 to March 31, 2007, inclusive.

Data Quality

Any survey suffers from errors. While considerable effort is made to ensure a high standard throughout all survey operations, the resulting estimates are inevitably subject to a certain degree of error. The total survey error is defined as the difference between the survey estimate and the true population value for which the survey estimate aims. The total survey error consists of two types of errors; sampling and non-sampling errors. Sampling error occurs when

a sample survey is carried out. Non-sampling errors arise due to various reasons other than sampling. These two types of errors are further explained below.

A. Sampling Error

The Annual Motor Carriers of Freight Survey of Small For-hire Carriers and Owner Operators is subject to sampling error. When a sample is selected from a population, estimates based on the sample data will not in general be exactly the same as what would be obtained from a census of that population.

The difference between the estimates from a sample survey and a census conducted under the same conditions is referred to as the sampling error. Factors such as the sample size, the sample design, the variability of the population characteristic under study and the estimation method affect the sampling error. In general, a larger sample size produces a smaller sampling error. If the population is very heterogeneous like the trucking industry, a large sample size is needed to obtain a reliable estimate.

B. Non-sampling Errors

The sampling error is only one component of the total survey error. Errors arising from all phases of a survey are called non-sampling errors. For example, non-sampling error can arise when a respondent provides incorrect information or does not answer certain questions or when a unit in the target population is omitted or covered more than once or when a unit that is out of scope for the survey is included by mistake or when errors occur in data processing, such as coding and capture errors.

The effects of some of the non-sampling errors will cancel out over a large number of observations, but systematically occurring errors (i.e. those that do not tend to cancel) will contribute to a bias in the estimates. For example, if carriers consistently tend to under-report their revenue, then the resulting estimate of the total revenue will be below the true population total.

As the sample size becomes closer to the population size, the sampling error component of the total survey error is expected to decrease. However, this is not necessarily true for the non-sampling error component.

In general, non-sampling errors are difficult to evaluate and special studies must be conducted to estimate them. However, certain measures such as imputation rates are easily obtained and can be used as indicators for portions of the non-sampling errors. Different types of non-sampling error together with their associated measures are discussed below.

I. Coverage Errors

Coverage errors arise when the survey frame does not adequately cover the target population. As a result, certain units belonging to the target population are either excluded (under coverage), or counted more than once (over coverage). In addition, out of scope units may be present in the survey frame (over coverage). Errors in the North American Industrial Classification Standard (NAICS) code on the survey frame may also result in either over or under coverage of the trucking industry.

II. Response Errors

Response errors occur when a respondent provides incorrect information due to misinterpretation of the survey questions or lack of correct information, gives wrong information by mistake, or is reluctant to disclose the correct information. Large response errors are likely to be caught during editing; however, others may simply go through undetected.

III. Non-response Errors

Non-response errors can occur when a respondent does not respond at all (total non-response) or responds only to some questions (partial non-response). These errors can have a serious effect if non-respondents are systematically different from respondents in survey characteristics and/or the non-response rate is high.

IV. Processing Errors

Apart from coverage, response and non-response errors as described above, errors that occur during the processing of the data constitute another component of the non-sampling error. Processing errors can arise in data capture, coding, transcription, imputation, outlier detection and treatment, and other types of data handling.

A coding error occurs when a field is coded erroneously because of misinterpretation of coding procedures or poor judgment (e.g. errors in NAICS coding). A data capture error occurs when data are misinterpreted or keyed incorrectly. For this survey, errors in financial data can occur when the data are being transcribed from the tax returns.

Once data are coded and captured, they are subject to editing and imputation of missing or erroneous values. The quality of the data depends on the amount of imputation and the difference between the imputed and the true, but unknown, values. Using invalid assumptions when developing the imputation system could result in bias in the imputed data.

The non-sampling error as a whole is only one part of the total survey error but its contribution may be important. To minimize the effect of this type of error, a quality assurance program is carried out for this survey. For instance, various quality assurance procedures are exercised at the data capture step. The data editing procedures identify some inconsistencies in the data structure and the imputation procedures correct the identified inconsistencies.

C. Some Measures of Data Quality

This section presents some indicators of the data quality of the Annual Motor Carriers of Freight Survey of Small For-hire Carriers and Owner Operators as shown in Table 22. To assist the user in evaluating the potential effect of non-response and imputation, relative imputation rates for key characteristics (number of employees, fuel consumed, and operating revenue) are presented. The relative imputation rate is defined as the proportion of the corresponding published estimate that is accounted for by imputed data. For example, assume that the total published estimate is \$25 million, composed of \$20 million from non-imputed data and \$5 million from imputed data. Then the relative imputation rate is 0.2 (\$5 million divided by \$25 million) or 20%. The lower the relative imputation rate, the more reliable the published estimate.

Table 22
Quality measures by province or territory of domicile, annual motor carriers of freight survey: small for-hire carriers and owner operators, 2006

	For-hire carriers			Owner-operators		
	Response rate	Relative imputation rate	Coefficient of variation	Response rate	Relative imputation rate	Coefficient of variation
	percent					
Newfoundland and Labrador	67.3	...	...	68.3	...	...
Total employment	...	36.4	10.4	...	23.0	7.6
Fuel consumed ¹	...	80.9	10.3	...	44.6	10.0
Total revenues	...	0.0	12.6	...	0.2	8.1
Prince Edward Island	69.2	...	...	74.4	...	...
Total employment	...	36.1	14.2	...	26.0	8.0
Fuel consumed ¹	...	42.5	20.0	...	56.0	11.8
Total revenues	...	0.0	15.1	...	0.0	10.3
Nova Scotia	76.9	...	...	73.5	...	...
Total employment	...	17.8	15.6	...	32.3	5.1
Fuel consumed ¹	...	57.8	10.9	...	55.4	7.2
Total revenues	...	0.0	8.3	...	0.2	3.9
New Brunswick	75.0	...	...	70.1	...	...
Total employment	...	23.5	12.9	...	34.1	7.7
Fuel consumed ¹	...	59.8	12.5	...	55.7	5.6
Total revenues	...	0.0	12.2	...	0.0	3.4
Québec	76.0	...	...	73.9	...	...
Total employment	...	27.9	8.9	...	26.9	7.4
Fuel consumed ¹	...	59.0	7.3	...	61.3	6.3
Total revenues	...	0.0	5.6	...	0.5	4.8
Ontario	73.7	...	...	65.2	...	...
Total employment	...	25.4	13.2	...	35.3	5.0
Fuel consumed ¹	...	54.9	9.8	...	59.0	5.4
Total revenues	...	0.1	6.2	...	0.0	3.4
Manitoba	78.2	...	...	72.6	...	...
Total employment	...	39.0	24.1	...	27.8	9.1
Fuel consumed ¹	...	55.4	22.8	...	50.0	5.9
Total revenues	...	0.0	7.3	...	0.3	3.5
Saskatchewan	74.4	...	...	69.9	...	...
Total employment	...	45.0	20.0	...	25.2	5.0
Fuel consumed ¹	...	72.0	26.1	...	56.8	5.2
Total revenues	...	0.0	9.3	...	0.0	3.5
Alberta	73.8	...	...	70.0	...	...
Total employment	...	33.3	16.5	...	32.2	5.1
Fuel consumed ¹	...	71.6	13.6	...	60.0	5.6
Total revenues	...	0.4	9.4	...	0.4	3.3
British Columbia	67.4	...	...	64.3	...	...
Total employment	...	41.9	11.6	...	39.9	6.2
Fuel consumed ¹	...	76.5	10.2	...	63.4	6.6
Total revenues	...	0.0	6.0	...	0.0	4.9
Yukon	50.0	...	...	80.0	...	...
Total employment	...	41.3	22.6	...	25.7	16.2
Fuel consumed ¹	...	59.5	21.9	...	89.9	13.1
Total revenues	...	0.0	17.8	...	0.0	17.1
Northwest Territories	0.0	...	...	70.0	...	...
Total employment	...	100.0	0.0	...	25.4	16.0
Fuel consumed ¹	...	100.0	0.0	...	35.5	21.6
Total revenues	...	0.0	0.0	...	0.0	15.7
Nunavut	100.0	...	...	...	...	...
Total employment	...	86.8	0.0	...	...	...
Fuel consumed ¹	...	60.8	0.0	...	...	...
Total revenues	...	0.0	0.0	...	...	...
Canada	73.5	...	...	69.4	...	...
Total employment	...	31.3	5.4	...	32.8	2.6
Fuel consumed ¹	...	63.5	4.4	...	59.1	2.7
Total revenues	...	0.1	2.8	...	0.2	1.6

1. All the for-hire carriers in the AMCF sample (whether they had an actual annual operating revenue less or over than \$1 million) were used to calculate the response and imputation rates presented in this table. See Section on Comparability of Data for more details.

A total response rate is also provided. This rate is defined as the number of carriers that responded to the survey divided by the total number of in-scope units in the sample.

As a measure of the sampling error, estimated coefficients of variation (CV) for some variables are presented in **Table 22**. CVs for other estimates may be obtained from the Transportation Division upon request. Note that the provided CV estimates do not consider the fact that some of the data were imputed and thus may underestimate the true CVs. The CV and the relative imputation rate should be considered simultaneously to make an assessment of the reliability of an estimate.

The quality of the estimates is classified as follows:

- * Excellent : CV is 0,01% and 4,99%
- * Very good : CV is 5,00% and 9,99%
- * Good : CV is 10,00% and 14,99%
- * Acceptable : CV is 15,00% and 24,99%
- * Caution : CV is 25,00% and 34,99%
- * Unreliable CV is larger than 35,00%

Comparability of Data

For the 1999 reference year, changes were made to the derivation of certain financial variables from the administrative tax files. The variables for which historical comparison may be affected are transportation revenues, fuel expenses, Owner-operator expenses and miscellaneous expenses.

Effective for the 1998 reference year, the survey underwent a major redesign. The redesign involved major changes to the frame creation process, the sample design and the estimation strategy. The frame for 1998 was created from Statistics Canada's Business Register. The sample design at the second-phase has been optimized, and the estimation strategy now uses a calibration approach to make use of information that became available after the sample had been drawn (e.g. an updated frame is used in calculating the estimation weights to make use of updates to the Business Register since the sample was drawn). The overall effect of these changes is an improved reliability in the survey estimates. In particular, this improved reliability comes from i) an improved coverage of the target population (which results in an increase in the estimated number of in-scope companies), and ii) an improved precision in the survey estimates (i.e. lower coefficients of variation).

In order to improve the combined coverage of the trucking industry by the AMCF survey and its complement, the Quarterly Motor Carriers of Freight (QMCF) survey, a group of large companies will be included in the AMCF, effective for 1998. Since the QMCF uses the annual gross business income from the Business Register, which is not identical to the true annual operating revenues, to define the survey population, some companies in the QMCF target population (those with annual gross business income less than \$1 million, and actual annual operating revenue over \$1 million) are not included in the QMCF survey population. Although these companies do not fall into the target population for the AMCF, it was decided to include them in the AMCF survey population to improve the overall industry coverage of the two surveys. The effect of this is the addition of a small number of large companies to the AMCF survey population. Although the number of such companies is small, their large size leads to a noticeable increase in the survey estimates. In order to facilitate historical comparisons, separate domain estimates will be produced for i) companies with actual operating revenue less than \$1 million and ii) companies with actual operating revenue greater than or equal to \$1 million.

From 1995 to 1997, the survey covered for-hire carriers and owner operators with annual operating revenue greater than or equal to \$30 thousand and less than \$1 million. Starting with 1998, owner operators with annual operating revenue greater than or equal to \$1 million will also be covered.

From 1990 to 1995, the survey covered for-hire carriers and owner operators with annual operating revenue greater than or equal to \$25 thousand and less than \$1 million.

The survey data prior to the 1990 survey covered for-hire carriers with annual operating revenue of \$100 thousand or more. Owner operators were not included in the 1989 and preceding surveys.

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Symbols

The following standard symbols are used in Statistics Canada publications:

.	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 ^s	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 <i>Statistics Act</i>
E	use with caution
F	too unreliable to be published

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