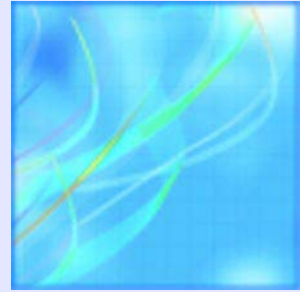


Service Bulletin - Surface and Marine Transport Results of the Annual Motor Carriers of Freight Survey of Small For-hire Carriers and Owner Operators



2007

Highlights

Small for-hire carriers:

- In 2007, there were 7,324 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 \$2.1 billion, for an average per carrier of \$283,000. 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 \$265,000 per carrier. Their main expenses were salaries, wages and benefits and fuel, which both represented 24% of total expenses, followed by other expenses (18%).
- Compared to the previous year, total operating revenue and total operating expenses were both up 4%.
- Intra-provincial movements were responsible for 66% of the total operating revenue (\$1.4 billion). These movements were followed by international movements, which represented 23% of total revenue (\$472 million). Interprovincial movements were responsible for 11% of total revenue (\$225 million).
- A little more than half (51%) of these carriers were specialized in long-distance transportation. This activity generated 53% of all operating revenue for small for-hire carriers.
- Quebec was home to the largest number of small for-hire carriers with 32% of the Canadian carriers, followed by Ontario with 25%, and Alberta with 19%.
- Small for-hire carriers reported an average of three employees of which 78% were full-time employees. In addition, they operated an average of one straight truck, two road tractors and two semi-trailers.

Owner operators :

- In 2007, there were 52,582 trucking firms who self-identified as owner operators. Of these carriers, 98% reported revenue less than \$1 million.
- Overall, owner operators generated \$10.6 billion in operating revenue, approximately \$201,900 per carrier.
- Compared to the previous year, total operating revenue improved 12%, while total operating expenses increased 14%.
- Operating expenses for these carriers totalled \$9.5 billion, or \$180,000 per carrier. The main operating expenses incurred by owner operators were fuel (29%), other expenses (20%) and salaries, wages and benefits (19%).



- Over three out of four owner operators offered their services exclusively to for-hire carriers, while 15% of them worked exclusively for private carriers.
- Intra-provincial movements accounted for 65% of the total operating revenue generated by owner operators (\$6.9 billion). These were followed by international movements with 23% (\$2.5 billion) of revenue. Interprovincial movements were the source of 12% (\$1.3 billion) of overall revenue.
- The majority of owner operators (58%) specialized in long distance transportation. This type of transportation service generated 63% of operating revenue.
- Ontario was home to the largest number of owner operators with 41% of all Canadian carriers, followed by Quebec (16%) and Alberta (15%).
- 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, 2007

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 2007. Thus, the estimates will likely include some owner operators who generated revenue of \$1 million or more in 2007.

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, 2007

	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.)	7,324	4,277	97	11,698
	millions of dollars			
Operating revenue	2,073	21,551	8,478	32,102
Operating expenses	1,941	20,344	8,079	30,364
Salaries and wages ¹	463	5,765	1,932	8,160
Fuel	459	2,760	706	3,925
Owner operator expenses	57	3,519	2,172	5,748
Purchased transport ²	255	2,194	1,429	3,878
Maintenance	192	1,601	424	2,217
Depreciation	174	1,175	392	1,741
Other expenses ³	341	3,331	1,024	4,696
Operating ratio (%)	...	0.94	0.95	...
Number of employees (No.)	25,079	121,387	38,544	185,010
Equipment operated (No.)				
Straight trucks	5,108	14,733	1,703	21,544
Road tractors	11,214	61,440	17,044	89,698

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, 2007

	Total	General freight	Household	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of carriers (No.)	7,323	2,641	224	393	1,647	833	1,585
	thousands of dollars						
Operating revenue	2,073,016	880,814	44,764	135,563	316,350	260,599	434,926
Operating expenses	1,941,489	816,884	39,113	130,273	299,843	246,634	408,742
Salaries and wages	456,404	176,494	14,787	28,697	66,316	63,318	106,792
Benefits	6,737	3,021	178	315	973	969	1,281
Fuel	458,902	200,013	11,837	22,481	52,050	58,450	114,071
Owner operator expenses	56,929	28,848	111	15,761	4,053	752	7,404
Purchased transport	255,239	148,204	1,143	14,947	30,130	21,663	39,152
Maintenance	192,334	68,633	1,247	11,839	47,544	29,541	33,530
Depreciation	173,904	54,893	774	14,043	43,717	20,940	39,537
Insurance	70,671	30,628	1,086	3,067	9,381	8,498	18,011
Rent	63,856	36,565	1,222	5,126	9,063	5,300	6,580
Other expenses	206,516	69,586	6,729	13,997	36,616	37,203	42,385
Full time employees (No.)	19,481	8,399	719	1,589	3,368	1,601	3,805
Equipment operated (No.)	34,410	16,342	297	1,999	5,047	3,194	7,531
Straight trucks (No.)	5,108	1,693	147	661	2,213	90	304
Distance travelled ('000 km)	270,476	102,690	7,809	29,222	107,759	7,608	15,388
Average distance ('000 km)	53	61	53	44	49	85	51
Road tractors (No.)	11,215	5,241	83	646	874	1,242	3,129
Distance travelled ('000 km)	1,373,355	612,150	10,410	107,255	100,809	172,229	370,502
Average distance ('000 km)	122	117	125	166	115	139	118
Semi-trailers (No.)	15,996	8,865	62	482	1,054	1,665	3,868
Other (No.)	2,093	544	5	210	907	197	230
Total distance ('000 km)	1,643,830	714,840	18,219	136,477	208,567	179,837	385,890
Fuel consumed ('000 L)	749,209	307,676	7,131	37,664	121,065	101,845	173,828

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

Table 3
Summary statistics by type of activity, local transport¹, small for-hire carriers, 2007

Local carriers	Total	General freight	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of carriers (No.)	3,394	903	208	1,395	256	632
	thousands of dollars					
Operating revenue	934,198	258,986	106,456	283,323	106,381	179,052
Operating expenses	871,636	231,492	102,264	268,726	98,946	170,208
Salaries and wages	218,736	66,360	20,710	58,669	23,637	49,360
Benefits	2,601	781	199	941	578	102
Fuel	173,898	46,388	16,641	47,601	26,383	36,885
Owner operator expenses	25,095	2,127	15,761	4,040	483	2,684
Purchased transport	104,113	34,061	14,790	26,816	10,630	17,816
Maintenance	109,049	25,225	9,923	42,891	16,141	14,869
Depreciation	86,081	12,694	10,047	39,412	7,714	16,214
Insurance	28,192	8,195	1,878	7,601	3,696	6,822
Rent	31,287	13,418	3,636	8,495	2,987	2,751
Other expenses	92,860	21,857	8,376	32,640	7,053	22,934
Full time employees (No.)	9,013	3,268	1,047	2,725	573	1,400
Equipment operated (No.)	13,620	4,758	1,092	3,916	1,022	2,832
Straight trucks (No.)	3,673	742	661	2,008	49	213
Distance travelled ('000 km)	192,844	51,660	29,222	98,179	4,587	9,196
Average distance ('000 km)	53	70	44	49	94	43
Road tractors (No.)	3,511	1,321	190	524	421	1,055
Distance travelled ('000 km)	377,082	135,416	28,960	68,825	44,423	99,458
Average distance ('000 km)	107	103	152	131	106	94
Semi-trailers (No.)	5,348	2,460	117	784	502	1,485
Other (No.)	1,086	234	125	598	50	79
Total distance ('000 km)	569,925	187,076	58,181	167,004	49,010	108,654
Fuel consumed ('000 L)	308,834	93,204	22,924	94,348	37,322	61,036

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, 2007

Long distance carriers	Total	General freight	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of carriers (No.)	3,706	1,738	185	253	576	954
	thousands of dollars					
Operating revenue	1,094,054	621,828	29,107	33,028	154,218	255,873
Operating expenses	1,030,772	585,988	28,315	30,931	147,124	238,414
Salaries and wages	222,879	110,134	7,986	7,647	39,680	57,432
Benefits	3,959	2,240	116	33	391	1,179
Fuel	273,166	153,625	5,840	4,449	32,067	77,185
Owner operator expenses	31,723	26,721	0	13	269	4,720
Purchased transport	149,981	114,143	157	3,314	11,032	21,335
Maintenance	82,038	43,408	1,916	4,653	13,400	18,661
Depreciation	87,048	42,199	3,996	4,304	13,226	23,323
Insurance	41,391	22,433	1,189	1,779	4,802	11,188
Rent	31,346	23,147	1,490	568	2,313	3,828
Other expenses	106,928	47,730	5,621	3,976	30,150	19,451
Full time employees (No.)	9,748	5,131	541	644	1,028	2,404
Equipment operated (No.)	20,493	11,584	907	1,131	2,172	4,699
Straight trucks	1,287	951	0	204	41	91
Distance travelled ('000 km)	69,824	51,030	0	9,580	3,022	6,192
Average distance ('000 km)	54	54	0	47	74	68
Road tractors (No.)	7,619	3,919	456	349	821	2,074
Distance travelled ('000 km)	985,863	476,734	78,296	31,984	127,805	271,044
Average distance ('000 km)	129	122	172	92	156	131
Semi-trailers (No.)	10,584	6,404	365	269	1,163	2,383
Other (No.)	1,003	310	86	308	148	151
Total distance ('000 km)	1,055,686	527,763	78,296	41,564	130,827	277,236
Fuel consumed ('000 L)	433,244	214,472	14,741	26,717	64,523	112,791

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, 2007

	Intraprovincial carriers	Extraprovincial carriers						
		Total	Intraprovincial	Interprovincial	International			
					Sub ¹ total	Into Canada	Out of Canada	
Estimated number of carriers (No.)	3,689	3,635	...	...	...	...	...
			thousands of dollars					
Operating revenue	956,945	1,116,070	419,470	224,700	471,900	222,022	249,878	
Operating expenses	907,352	1,034,136	392,739	203,916	437,481	204,495	232,986	
Transportation expenses	672,294	792,936	306,525	149,516	336,895	155,872	181,023	
Maintenance and garage expenses	103,773	88,562	31,058	23,063	34,441	16,283	18,158	
Administrative and general office expenses	131,285	152,639	55,157	31,337	66,145	32,341	33,804	
Full time employees (No.)	9,059	10,422	...	...	...	...	...
Salaries and wages (\$'000)	245,571	210,832	...	...	...	...	...
			number					
Equipment operated	14,272	20,137	...	...	...	...	...
Straight trucks	3,236	1,871	...	...	...	...	...
Road tractors	4,130	7,083	...	...	...	...	...
Semi-trailers	5,430	10,566	...	...	...	...	...
Other	1,476	617	...	...	...	...	...

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

Table 6
Summary statistics by province or territory of domicile, small for-hire carriers, 2007

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
Estimated number of carriers (No.)	7,324	53	28	151	244	2,348	1,854
	thousands of dollars						
Operating revenue	2,073,015	16,652	12,010	41,425	43,124	598,448	593,898
Operating expenses	1,941,489	15,849	11,816	38,318	39,363	556,229	566,780
Salaries and wages	456,403	4,120	3131	8,313	6,568	124,041	127,272
Benefits	6,738	x	0	118	95	2,366	2,116
Fuel	458,901	4,819	3802	9,461	12,082	129,587	130,938
Owner operator expenses	56,928	0	0	1,167	300	15,526	20,404
Purchased transport	255,238	2,087	569	7,225	2,408	44,889	119,716
Maintenance	192,334	1,415	916	3,478	4,727	75,565	38,970
Depreciation	173,904	899	1031	2,837	6,704	58,740	39,924
Insurance	70,671	538	568	1,101	1,843	14,041	22,476
Rent	63,856	x	192	326	919	22,406	19,759
Other expenses	206,516	1,279	1607	4,290	3,718	69,067	45,203
Full time employees (No.)	19,481	264	110	385	644	5,271	5,561
	Manitoba	Saskat- chewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
Estimated number of carriers (No.)	205	209	1,395	828	6	3	0
	thousands of dollars						
Operating revenue	88,514	83,464	323,824	267,578	x	x	0
Operating expenses	80,613	77,180	301,777	249,982	x	x	0
Salaries and wages	16,129	17,496	79,663	68,564	x	x	0
Benefits	338	383	498	794	x	x	0
Fuel	26,668	21,054	65,183	54,507	x	x	0
Owner operator expenses	3,871	1,285	6,766	7,558	x	x	0
Purchased transport	8,485	8,799	30,535	30,170	x	x	0
Maintenance	4,138	9,440	26,014	27,334	x	x	0
Depreciation	5,460	5,003	32,041	20,824	x	x	0
Insurance	2,480	3,023	12,467	12,049	x	x	0
Rent	2,614	3,156	8,365	5,304	x	x	0
Other expenses	10,429	7,540	40,245	22,878	x	x	0
Full time employees (No.)	535	564	3,732	2,383	x	x	0

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, 2007

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	number						
Estimated number of carriers	7,324	53	28	151	244	2,348	1,854
Employees							
Drivers							
Full time	15,158	F	F	260	460	3,901	4,362
Part time	2,775	F	F	112	146	740	785
Other employees							
Full time	4,323	F	F	125	184	1,370	1,199
Part time	2,823	F	F	52	56	741	719
Total - drivers and other employees							
Full time	19,481	264	110	385	644	5,271	5,561
Part time	5,598	62	22	165	201	1,481	1,504
	Manitoba	Saskat- chewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
	number						
Estimated number of carriers	205	209	1,395	828	6	3	0
Employees							
Drivers							
Full time	434	473	3,068	1,876	F	x	0
Part time	138	140	312	321	x	x	0
Other employees							
Full time	101	91	664	507	F	x	0
Part time	97	98	567	467	x	x	0
Total - drivers and other employees							
Full time	535	564	3,732	2,383	F	x	0
Part time	234	237	878	788	x	x	0

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

Table 8
Equipment operated by province or territory of domicile, small for-hire carriers, 2007

	Owned and leased				Total
	Straight trucks	Road tractors	Semi-trailers	Other equipment	
	number				
Newfoundland and Labrador	92	159	243	148	641
Prince Edward Island	F	67	344	F	449
Nova Scotia	103	252	304	33	692
New Brunswick	141	369	778	193	1,480
Québec	1,509	2,603	3,543	467	8,123
Ontario	1,254	3,601	5,261	571	10,687
Manitoba	F	481	532	F	1,133
Saskatchewan	F	369	463	F	967
Alberta	1,252	1,826	2,372	303	5,753
British Columbia	F	F	2,135	349	4,432
Yukon	x	F	F	x	F
Northwest Territories	x	x	x	x	x
Nunavut	0	0	0	0	0
Canada					
Owned and leased	5,108	11,214	15,995	2,093	34,410
Operated by owner operator	435	2,754	1,496	60	4,745

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, 2007

	Total	Straight trucks	Road tractors
	thousands kilometres		
Newfoundland and Labrador	19,920	5,458	14,462
Prince Edward Island	8,878	x	x
Nova Scotia	30,312	6,117	24,195
New Brunswick	46,903	9,541	37,362
Quebec	513,085	85,383	427,702
Ontario	411,225	65,135	346,090
Manitoba	52,608	F	F
Saskatchewan	68,435	F	F
Alberta	309,620	52,498	257,122
British Columbia	180,705	F	F
Yukon	1,620	x	x
Northwest Territories	520	x	x
Nunavut	0	0	0
Canada	1,643,830	270,476	1,373,354

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

Table 10
Summary statistics, owner operators, 2003 to 2007

	2007	2006	2005	2004	2003
Estimated number of owner operators (No.)	52,583	43,951	37,591	35,609	36,281
	thousands of dollars				
Operating revenue	10,616,282	9,451,122	7,769,747	7,443,278	7,397,099
Operating expenses	9,486,265	8,339,087	7,122,068	6,771,732	6,761,844
Salaries and wages	1,779,032	1,634,378	1,568,729	1,465,703	1,539,416
Benefits	31,697	25,874	35,379	27,790	25,105
Fuel	2,718,311	2,462,384	1,750,750	1,719,729	1,460,718
Owner operator expenses	0	0	0	0	0
Purchased transport	1,232,489	948,448	848,650	721,180	845,089
Maintenance	898,445	806,748	768,567	774,732	740,397
Depreciation	927,853	874,196	737,157	676,058	716,735
Insurance	371,844	311,365	291,962	296,424	252,684
Rent	276,493	240,918	236,837	240,164	223,703
Other expenses	1,250,101	1,034,776	884,038	849,953	957,998
Full time employees ¹(No.)	80,507	67,723	60,765	58,604	62,518
Equipment operated (No.)	109,463	96,577	86,949	84,125	87,925

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, 2007

	Owner operator working for			Total
	For-hire carriers	Private carriers	Both	
	number			
Atlantic	2,413	405	79	2,897
Quebec	6,902	1,144	290	8,336
Ontario	17,605	2,945	1,084	21,634
Prairies	9,144	2,556	612	12,312
British Columbia	6,053	723	595	7,371
Territories	23	5	4	32
Canada	42,140	7,778	2,664	52,582

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

Table 12
Summary statistics by size, owner operators, 2007

	Total	Small enterprises (\$30,000 to \$999,999)	Medium and large enterprises (\$1 million and over)
Estimated number of owner operators (No.)	52,582	51,700	882
	thousands of dollars		
Operating revenue	10,616,283	9,063,576	1,552,707
Operating expenses	9,486,263	7,999,490	1,486,773
Salaries and wages ¹	1,810,729	1,456,909	353,820
Fuel	2,718,312	2,481,019	237,293
Purchased transport ²	1,232,489	830,340	402,149
Maintenance	898,444	787,031	111,414
Depreciation	927,853	797,287	130,566
Other expenses ³	1,898,436	1,646,906	251,531
Number of employees ⁴(No.)	80,509	74,439	6,069
Equipment operated (No.)			
Straight trucks	17,256	16,787	469
Road tractors	52,111	48,870	3,241

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, 2007

Local carriers	Total	General freight	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number reporting (No.)	21,337	6,993	1,051	8,465	1,489	3,339
	thousands of dollars					
Operating revenue	3,866,533	1,044,919	370,245	1,405,195	399,353	646,821
Operating expenses	3,416,417	921,143	329,462	1,226,522	373,227	566,063
Salaries and wages	694,967	208,809	85,972	230,463	75,741	93,982
Benefits	9,871	3,035	1,035	3,335	1,077	1,389
Fuel	869,976	233,886	67,532	309,084	115,412	144,062
Owner operator expenses	0	0	0	0	0	0
Purchased transport	449,347	119,004	35,889	157,504	31,091	105,859
Maintenance	362,276	89,967	43,102	132,802	53,690	42,715
Depreciation	354,418	72,668	38,537	147,147	37,997	58,069
Insurance	135,505	37,585	12,753	46,242	16,226	22,699
Rent	110,078	26,962	12,556	43,344	7,758	19,458
Other expenses	429,979	129,227	32,086	156,601	34,234	77,831
Full time employees ²(No.)	30,157	9,718	2,264	11,127	2,334	4,714
Equipment operated (No.)	40,424	11,087	2,055	16,993	4,141	6,148
Straight trucks (No.)	11,823	2,142	588	7,056	681	1,356
Distance travelled ('000 km)	627,736	125,147	40,488	333,225	51,718	77,158
Average distance ('000 km)	53	58	69	47	76	57
Road tractors (No.)	15,485	6,291	966	3,801	1,682	2,745
Distance travelled ('000 km)	1,433,356	476,672	137,509	303,071	189,512	326,592
Average distance ('000 km)	93	76	142	80	113	119
Semi-trailers (No.)	10,629	2,112	458	4881	1,417	1,761
Other (No.)	2,488	542	43	1254	362	287
Total distance ('000 km)	2,061,089	601,818	177,997	636,295	241,230	403,749
Fuel consumed ('000 L)	1,189,978	346,793	72,721	420,631	149,056	200,777

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, 2007

Long distance carriers	Total	General freight	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of owner operators (No.)	30,614	15,259	1,982	2,636	1,813	8,924
	thousands of dollars					
Operating revenue	6,640,973	2,992,939	496,254	407,330	590,443	2,154,007
Operating expenses	5,970,644	2,688,189	442,092	342,528	560,711	1,937,124
Salaries and wages	1,050,124	424,496	95,493	51,200	111,519	367,416
Benefits	21,102	8,861	1,005	2,764	2,858	5,614
Fuel	1,829,562	824,720	116,885	141,675	158,814	587,468
Owner operator expenses	0	0	0	0	0	0
Purchased transport	769,784	357,735	54,125	21,544	71,609	264,771
Maintenance	531,240	238,497	43,160	32,014	59,088	158,481
Depreciation	566,782	252,976	34,200	33,070	63,250	183,286
Insurance	233,608	101,515	23,833	12,745	22,006	73,509
Rent	161,597	82,226	11,620	7,072	13,160	47,519
Other expenses	806,844	397,162	61,770	40,446	58,406	249,060
Full time employees ²(No.)	48,999	24,580	3,029	3,501	4,397	13,492
Equipment operated (No.)	68,016	30,306	4,235	4,615	7,168	21,692
Straight trucks (No.)	5,026	2,173	685	1,274	48	846
Distance travelled ('000 km)	349,659	184,878	49,489	59,705	2,294	53,293
Average distance ('000 km)	70	85	72	47	48	63
Road tractors (No.)	36,222	18,107	2,298	1,872	2,934	11,011
Distance travelled ('000 km)	5,456,431	2,627,883	397,861	288,913	425,915	1,715,859
Average distance ('000 km)	151	145	173	154	145	156
Semi-trailers (No.)	23,139	8,113	1,138	1,288	3,950	8,650
Other (No.)	3,629	1,913	114	180	236	1,186
Total distance ('000 km)	5,806,091	2,812,761	447,351	348,618	428,209	1,769,152
Fuel consumed ('000 L)	3,037,956	1,478,615	190,528	231,699	248,989	888,125

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, 2007

	Total	General freight	Household	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of owner operators (No.)	52,583	22,252	632	3,033	11,101	3,302	12,263
	thousands of dollars						
Operating revenue	10,616,282	4,037,857	108,775	866,500	1,812,526	989,796	2,800,828
Operating expenses	9,486,265	3,609,332	99,202	771,554	1,569,051	933,938	2,503,188
Salaries and wages	1,779,032	633,305	33,940	181,465	281,663	187,260	461,399
Benefits	31,697	11,896	722	2,041	6,099	3,935	7,004
Fuel	2,718,311	1,058,606	18,776	184,416	450,758	274,226	731,529
Owner operator expenses	0	0	0	0	0	0	0
Purchased transport	1,232,489	476,739	13,358	90,014	179,048	102,700	370,630
Maintenance	898,445	328,465	4,928	86,262	164,816	112,779	201,195
Depreciation	927,853	325,644	6,652	72,738	180,217	101,247	241,355
Insurance	371,844	139,100	2,731	36,586	58,987	38,232	96,208
Rent	276,493	109,188	4,819	24,175	50,416	20,918	66,977
Other expenses	1,250,101	526,389	13,277	93,856	197,047	92,641	326,891
Full time employees ¹ (No.)	80,507	34,297	1,353	5,293	14,628	6,730	18,206
Equipment operated (No.)	109,463	41,393	1,022	6,291	21,607	11,309	27,841
Straight trucks (No.)	17,257	4,315	407	1,273	8,331	729	2,202
Distance travelled ('000 km)	996,808	310,025	19,412	89,977	392,930	54,013	130,451
Average distance ('000 km)	58	72	48	71	47	74	59
Road tractors (No.)	52,110	24,398	404	3,264	5,673	4,615	13,756
Distance travelled ('000 km)	6,926,265	3,104,555	36,479	535,371	591,983	615,427	2,042,450
Average distance ('000 km)	133	127	90	164	104	133	148
Semi-trailers (No.)	33,966	10,225	198	1,596	6,169	5,367	10,411
Other (No.)	6,131	2,455	14	158	1,434	598	1,472
Total distance ('000 km)	7,923,072	3,414,579	55,891	625,348	984,913	669,440	2,172,901
Fuel consumed ('000 L)	4,259,541	1,825,408	31,607	263,249	652,330	398,045	1,088,902

1. Working owner included.

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

Table 16
Summary statistics by type of movement, owner operators, 2007

	Intraprovincial carriers	Extraprovincial carriers						
		Total	Intraprovincial	Interprovincial	International			
					Sub total	Into Canada	Out of Canada	
Estimated number of carriers (No.)	28,031	24,551	...	...	...	...	...
			thousands of dollars					
Operating revenue	4,989,651	5,626,632	1,894,771	1,267,114	2,464,747	1,211,320	1,253,427	
Operating expenses	4,400,482	5,085,781	1,748,415	1,129,389	2,207,977	1,102,486	1,105,491	
Transportation expenses	3,170,761	3,763,418	1,305,671	816,381	1,641,366	833,706	807,660	
Maintenance and garage expenses	444,659	453,785	170,848	103,230	179,707	86,282	93,425	
Administrative and general office expenses	785,062	868,578	271,896	209,778	386,904	182,497	204,407	
Full time employees (No.)	40,001	40,507	...	...	...	...	...
Salaries and wages (\$'000)	876,451	902,581	...	...	...	...	...
			number					
Equipment operated	53,000	56,463	...	...	...	...	...
Straight trucks	15,008	2,248	...	...	...	...	...
Road tractors	21,679	30,432	...	...	...	...	...
Semi-trailers	12,786	21,179	...	...	...	...	...
Other	3,527	2,603	...	...	...	...	...

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

Table 17
Summary statistics by province or territory of domicile, owner operators, 2007

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
Estimated number of owner operators (No.)	52,582	365	152	843	1,537	8,336	21,633
	thousands of dollars						
Operating revenue	10,616,283	90,871	31,225	178,030	337,280	2,040,688	3,505,741
Operating expenses	9,486,263	83,319	29,116	157,429	301,442	1,888,012	3,172,523
Salaries and wages	1,779,032	18,299	5,773	25,307	49,070	411,808	520,585
Benefits	31,697	171	x	391	806	7,481	10,007
Fuel	2,718,312	25,350	10,377	58,232	116,671	400,080	993,833
Owner operator expenses	0	0	0	0	0	0	0
Purchased transport	1,232,489	9,081	2,767	12,385	18,467	284,342	511,438
Maintenance	898,444	6,971	2,351	12,617	28,439	222,774	238,415
Depreciation	927,853	7,353	3,104	17,452	31,220	190,204	271,590
Insurance	371,843	3,120	1,092	4,959	12,641	64,174	117,481
Rent	276,493	2,573	x	2,156	6,787	66,325	81,375
Other expenses	1,250,100	10,401	3,433	23,929	37,341	240,824	427,799
Full time employees (No.)	80,509	702	250	1,440	2,491	15,616	29,535
	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
Estimated number of owner operators (No.)	2,329	2,078	7,904	7,371	16	14	2
	thousands of dollars						
Operating revenue	470,330	504,195	1,982,632	1,468,459	3,712	x	x
Operating expenses	400,179	438,940	1,747,512	1,261,456	3,453	x	x
Salaries and wages	65,875	81,569	365,885	233,587	586	x	x
Benefits	402	2,708	6,183	3,510	x	x	x
Fuel	159,071	134,424	443,977	374,587	1103	x	x
Owner operator expenses	0	0	0	0	0	x	x
Purchased transport	23,960	41,394	176,152	151,863	176	x	x
Maintenance	35,430	56,095	181,381	113,003	667	x	x
Depreciation	34,175	43,698	190,533	138,035	193	x	x
Insurance	13,557	14,926	84,679	54,888	178	x	x
Rent	9,300	13,994	66,994	26,615	x	x	x
Other expenses	58,410	50,134	231,729	165,368	395	x	x
Full time employees (No.)	3,409	3,418	12,863	10,729	31	x	x

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, 2007

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	number						
Estimated number of owner operators	52,582	365	152	843	1,537	8,336	21,633
Employees							
Drivers							
Full time	68,469	560	F	1,219	2,067	12,424	26,103
Part time	9,925	146	F	225	433	2,331	2,442
Other Employees							
Full time	12,040	142	F	221	424	3,193	3,432
Part time	10,896	118	F	168	549	1,989	3,840
Total							
Full time	80,509	702	250	1,440	2,491	15,616	29,535
Part time	20,821	263	44	392	982	4,320	6,282
	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
	number						
Estimated number of owner operators	2,329	2,078	7,904	7,371	16	14	2
Employees							
Drivers							
Full time	2,855	2,867	10,665	9,444	x	x	x
Part time	750	370	1,819	1,378	x	x	x
Other Employees							
Full time	554	551	2,198	1,285	x	x	x
Part time	492	548	1,651	1,520	x	x	x
Total							
Full time	3,409	3,418	12,863	10,729	31	x	x
Part time	1,242	918	3,470	2,898	F	x	x

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

Table 19
Equipment operated by province or territory of domicile¹, owner operators, 2007

	Straight trucks	Road tractors	Semi-trailers	Other equipment	Total
	number				
Newfoundland and Labrador	91	477	318	84	970
Prince Edward Island	F	F	F	F	473
Nova Scotia	333	897	561	101	1,891
New Brunswick	218	1,879	1,273	205	3,576
Quebec	3,795	8,367	8,481	1,205	21,848
Ontario	6,529	20,440	9,706	1,884	38,559
Manitoba	315	2,689	1,653	194	4,851
Saskatchewan	422	2,410	1,594	291	4,716
Alberta	3,029	7,275	5,734	1,198	17,237
British Columbia	2,457	7,461	4,398	943	15,259
Yukon	x	x	x	x	57
Northwest Territories	x	x	x	x	F
Nunavut	x	x	x	x	F
Canada	17,256	52,111	33,966	6,131	109,463

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, 2007

	Total distance	Straight trucks	Road tractors
	thousands kilometres		
Newfoundland and Labrador	62,884	3,340	59,543
Prince Edward Island	25,266	F	F
Nova Scotia	135,569	11,474	124,095
New Brunswick	276,736	7,603	269,133
Quebec	1,284,498	202,797	1,081,701
Ontario	3,069,493	398,846	2,670,646
Manitoba	441,084	17,501	423,583
Saskatchewan	387,873	26,137	361,736
Alberta	1,114,565	180,687	933,879
British Columbia	1,121,572	145,864	975,708
Yukon	1,855	x	x
Northwest Territories	x	x	x
Nunavut	x	x	x
Canada	7,923,071	996,807	6,926,265

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 2007 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 2007 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, 2007

	Estimated carriers in survey population	Carriers selected		In-scope carriers selected
		Phase 1	Phase 2	
	number			
Newfoundland and Labrador	425	399		114
Prince Edward Island	182	184		65
Nova Scotia	1,008	891		196
New Brunswick	1,805	1,563		254
Quebec	10,795	10,634		613
Ontario	23,790	20,450		769
Manitoba	2,565	2,219		319
Saskatchewan	2,316	2,196		330
Alberta	9,412	8,646		590
British Columbia	8,383	7,068		550
Yukon	22	25		18
Northwest Territories	17	22		13
Nunavut	2	3		2
Canada	60,722	54,300		3,833

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, 2007 to March 31, 2008, 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, 2007

	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	43.3	...	...	29.8	...	...
Total employment	...	58.9	18.7	...	71.1	8.5
Fuel consumed ¹	...	53.2	16.6	...	71.8	7.0
Total revenues	...	0.0	6.8	...	0.0	4.5
Prince Edward Island	61.9	...	...	40.9	...	...
Total employment	...	40.3	12.6	...	61.2	11.4
Fuel consumed ¹	...	41.8	11.3	...	80.1	12.3
Total revenues	...	0.0	10.7	...	0.6	10.0
Nova Scotia	31.0	...	...	37.7	...	...
Total employment	...	77.3	13.3	...	65.6	5.7
Fuel consumed ¹	...	75.6	12.5	...	63.4	6.0
Total revenues	...	1.9	11.0	...	0.0	4.1
New Brunswick	30.2	...	...	37.8	...	...
Total employment	...	85.9	11.0	...	59.0	5.1
Fuel consumed ¹	...	80.8	15.2	...	65.0	4.8
Total revenues	...	0.0	10.2	...	1.6	3.2
Québec	38.7	...	...	55.6	...	...
Total employment	...	57.4	10.1	...	45.7	6.0
Fuel consumed ¹	...	64.4	11.7	...	55.0	5.4
Total revenues	...	0.2	8.0	...	1.1	3.8
Ontario	39.7	...	...	31.7	...	...
Total employment	...	59.0	11.3	...	69.1	3.8
Fuel consumed ¹	...	74.6	10.8	...	70.0	4.9
Total revenues	...	0.8	7.6	...	0.1	2.8
Manitoba	33.3	...	...	28.3	...	...
Total employment	...	57.3	12.9	...	72.6	6.2
Fuel consumed ¹	...	43.2	14.3	...	73.6	5.1
Total revenues	...	0.0	9.6	...	0.8	3.0
Saskatchewan	33.8	...	...	34.0	...	...
Total employment	...	64.7	18.5	...	63.2	4.8
Fuel consumed ¹	...	84.7	13.8	...	67.1	6.3
Total revenues	...	0.0	8.8	...	1.1	3.2
Alberta	41.2	...	...	36.2	...	...
Total employment	...	72.3	15.8	...	67.9	5.3
Fuel consumed ¹	...	80.0	13.4	...	65.9	4.5
Total revenues	...	1.9	9.3	...	0.4	3.2
British Columbia	35.2	...	...	29.7	...	...
Total employment	...	66.4	22.0	...	74.2	5.0
Fuel consumed ¹	...	76.1	12.8	...	72.7	4.7
Total revenues	...	0.8	5.8	...	0.0	3.0
Yukon	60.0	...	...	30.8	...	...
Total employment	...	24.4	24.6	...	65.6	4.6
Fuel consumed ¹	...	68.2	18.0	...	73.6	2.8
Total revenues	...	0.0	23.6	...	0.0	5.2
Northwest Territories	66.7	...	...	10.0	...	...
Total employment	...	23.5	11.5	...	96.2	11.4
Fuel consumed ¹	...	72.2	26.3	...	100.0	13.1
Total revenues	...	0.0	13.1	...	0.0	11.7
Nunavut	...	...	...	50	...	...
Total employment	...	...	...	...	43.5	0
Fuel consumed ¹	...	...	...	...	100	0
Total revenues	...	...	...	...	0	0
Canada	37.8	...	...	36.8	...	...
Total employment	...	63.4	5.9	...	64.5	2.1
Fuel consumed ¹	...	71.7	5.2	...	67.3	2.3
Total revenues	...	0.8	3.4	...	0.5	1.3

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 revenue, 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 revenue, 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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