Service Bulletin - Surface and Marine Transport

Results of the Annual Motor Carriers of Freight Survey of Small For-hire Carriers and Owner Operators



2003

Highlights

Small for-hire carriers:

- In 2003, there were 6,496 small for-hire carriers with less than \$1 million in revenue. These represented 65% of carriers in the for-hire carriers segment.
- Small for-hire carriers generated total operating revenues of \$1.84 billion, for a \$283,000 per carrier average. Overall, small for-hire carriers generated 7% of total revenue for the sector.
- Small for-hire carriers operating expenses totalled \$1.7 billion or about \$262,000 per carrier. Their main operating expenditures were salaries, wages and benefits representing 26% of total expenses, fuel cost (21%) and other expenses (18%).
- Compared to the previous year, total operating revenues improved 16%, while total operating expenses increased 9%.
- Intra-provincial movements were responsible for 76% of the total operating revenue (\$1.39 billion). These movements were followed by international movements which represented 15% of total revenues (\$267 million). Interprovincial movements were responsible for 10% of total revenues (\$183 million).
- A little more than half (51%) of these carriers were specialized in local transportation. This activity generated 44% of all operating revenues for small for-hire carriers.
- Geographically, Ontario was home to the largest number of small for-hire carriers with the third of the Canadian carriers, followed by Quebec with 22% and Alberta with 16%.
- Small for-hire carriers reported an average of four employees of which 77% where full-time employees. In addition, they operated an average one straight truck, two road tractors and two semi-trailers.

Owner operators:

- In 2003, there were 36,281 trucking firms who self-identified as owner operators. Off these carriers, more than 98% reported revenues less than \$1 million.
- Overall, owner operators generated \$7.40 billion in operating revenues, about \$204,000 per carrier.
- Compared to the previous year, total operating revenues improved 5%, while total operating expenses increased 3%.





Results of the Annual Motor Carriers of Freight Survey of Small For-hire Carriers and Owner Operators

- Operating expenses for these carriers totalled \$6.76 billion, or \$186,000 per carrier. The main operating expenses incurred by owner operators were salaries, wages and benefits (23%), fuel expenses (22%) and other expenses (21%).
- Almost three out of four owner operators offered their services exclusively to for-hire carriers, while 18% of them
 worked exclusively for private carriers.
- Intra-provincial movements accounted for 68% of the total operating revenues generated by owner operators (\$5.00 billion). These were followed by international movements with 20% (\$1.46 billion) of revenues and interprovincial movements were the source of 13% (\$937 millions) of overall revenues.
- The majority of owner operators (54%) specialized in long distance transportation. This type of transportation service generated 55% of operating revenues.
- Ontario was home to the largest number of owner operators with 33% of all Canadian carriers, followed by Quebec (25%) and Alberta (16%).
- The average owner operators firm has 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, 2003

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 revenues between \$30,000 and \$1 million. Combined with AMCFS data on medium and large carriers with revenues 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 revenues of \$30,000 or more in 2003. Thus, the estimates will likely include some owner operators who generated revenues of \$1 million or more in 2003.

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.

 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, 2003

	Small carriers	Medium and large carriers	Top carriers	Total
_	\$30,000 ⁴ to \$999,999	\$1 million ⁵ to \$24,9 million	\$25 million and over	
Estimated number of carriers (No.)	6,496	3,473	90	10,059
		millions of dollars		
Operating revenues	1,838	15,819	7,226	24,883
Operating expenses	1,705	14,813	6,831	23,349
Salaries and wages 1	441	3,975	1,786	6,202
Fuel	350	1,778	568	2,696
Owner operator expenses	68	3,023	1,885	4,976
Purchased transport ²	203	1,743	1,017	2,963
Maintenance	149	1,014	358	1,522
Depreciation	180	831	308	1,318
Other expenses ³	314	2,449	909	3,672
Operating ratio (%)		0.94	0.95	
Number of employees (No.)	25,318	86,815	37,160	149,293
Equipment operated (No.)				
Straight trucks	4,190	8,528	1,181	13,899
Road tractors	11,484	48,314	16,734	76,532

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.

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 includes carriers from the Annual survey of small for-hire carriers and owner operators with annual operating revenues 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 2Summary statistics by type of activity, small for-hire carriers, 2003

	Total	General freight	Household	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of carriers (No.)	6,496	2,082	359	531	1,485	471	1,568
			tho	ousands of doll	ars		
Operating revenues	1,837,654	628,110	75,088	136,765	324,577	171,992	501,122
Operating expenses	1,705,325	585,432	69,928	126,614	289,811	162,212	471,328
Salaries and wages	432,585	149,033	27,592	41,234	73,571	36,334	104,821
Benefits	8,013	2,438	296	1,047	1,121	1,292	1,819
Fuel	350,015	118,133	13,921	14,335	68,249	39,872	95,505
Owner operator expenses	68,206	26,384	2,393	6,077	6,354	8,900	18,098
Purchased transport	203,461	65,108	4,363	15,668	26,908	13,838	77,576
Maintenance	149,054	50,445	1,944	12,607	28,965	17,971	37,122
Depreciation	179,825	59,263	2,742	16,571	36,696	19,192	45,361
Insurance	70,186	24,383	1,970	5,623	9,472	8,207	20,531
Rent	63,849	27,841	3,056	4,610	6,128	4,784	17,430
Other expenses	180,135	62,404	11,652	8,841	32,348	11,824	53,066
Full time employees (No).	19,561	7,775	1,839	1,843	2,549	1,366	4,189
Equipment operated (No.)	32,631	13,092	1,073	1,670	3,999	3,058	9,739
Straight trucks (No.)	4,191	973	713	335	1,100	166	904
Distance travelled ('000 km)	240,393	64,658	20,892	23,493	81,821	5,987	43,542
Average distance ('000 km)	57	66	29	70	74	36	48
Road tractors (No.)	11,483	4,846	136	865	1,480	1,051	3,105
Distance travelled ('000 km)	1,327,973	493,830	6,385	141,799	107,555	113,780	464,624
Average distance ('000 km)	116	102	47	164	73	108	150
Semi-trailers (No.)	14,991	6,499	195	384	1,236	1,669	5,008
Other (No.)	1,967	775	29	86	183	172	722
Total distance ('000 km)	1,568,365	558,488	27,277	165,292	189,375	119,767	508,166
Fuel consumed ('000 L)	635,071	231,092	15,345	59,208	85,911	52,138	191,377

Table 3 Summary statistics by type of activity, local transport¹, small for-hire carriers, 2003

Local carriers	Total	General freight	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of carriers (No.)	3,325	902	198	1,318	285	622
			thousan	ds of dollars		
Operating revenues	801,819	232,175	71,542	258,873	100,229	139,000
Operating expenses	737,495	214,701	65,610	224,491	97,127	135,566
Salaries and wages	208,792	72,126	16,588	60,977	22,744	36,357
Benefits	3,886	1,047	579	878	787	595
Fuel	148,760	39,822	5,472	57,513	22,607	23,346
Owner operator expenses	25,470	5,745	5,157	3,009	8,045	3,514
Purchased transport	73,031	19,441	10,264	17,744	8,928	16,654
Maintenance	56,388	9,990	6,435	22,036	9,141	8,786
Depreciation	79,381	13,609	9,991	29,438	10,436	15,907
Insurance	29,613	8,465	3,572	7,909	4,373	5,294
Rent	32,668	11,378	3,321	4,760	3,242	9,967
Other expenses	79,507	33,078	4,231	20,227	6,825	15,146
Full time employees (No.)	8,953	3,719	909	2,106	869	1,350
Equipment operated (No.)	15,512	5,309	736	3,242	2,171	4,054
Straight trucks (No.)	2,681	693	219	1,075	151	543
Distance travelled ('000 km)	168,256	38,575	14,377	80,465	4,333	30,506
Average distance ('000 km)	63	56	66	75	29	56
Road tractors (No.)	4,937	2,036	237	1,053	649	962
Distance travelled ('000 km)	340,530	97,815	23,989	37,676	52,758	128,292
Average distance ('000 km)	69	48	101	36	81	133
Semi-trailers (No.)	7,153	2,348	269	986	1,281	2,269
Other (No.)	744	233	11	129	90	281
Total distance ('000 km)	508,786	136,390	38,367	118,140	57,091	158,798
Fuel consumed ('000 L)	226,889	61,928	17,025	60,812	23,407	63,717

1. Excludes household goods movers.

Summary statistics by type of activity, long-distance transport¹, small for-hire carriers, 2003

Long- distance carriers	Total	General freight	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of carriers (No.)	2,811	1,180	333	167	186	945
			thousands	of dollars		
Operating revenues	960,747	395,935	65,223	65,704	71,763	362,122
Operating expenses	897,903	370,731	61,004	65,321	65,085	335,762
Salaries and wages	196,201	76,907	24,646	12,594	13,590	68,464
Benefits	3,829	1,390	468	242	505	1,224
Fuel	187,335	78,311	8,864	10,737	17,265	72,158
Owner operator expenses	40,345	20,640	920	3,346	855	14,584
Purchased transport	126,067	45,667	5,403	9,164	4,910	60,923
Maintenance	90,723	40,455	6,172	6,930	8,830	28,336
Depreciation	97,701	45,654	6,579	7,258	8,756	29,454
Insurance	38,603	15,918	2,051	1,563	3,834	15,237
Rent	28,123	16,463	1,289	1,367	1,542	7,462
Other expenses	88,975	29,326	4,610	12,120	4,999	37,920
Full time employees (No.)	8,768	4,056	933	443	497	2,839
Equipment operated (No.)	16,047	7,783	934	757	888	5,685
Straight trucks	797	280	116	25	15	361
Distance travelled ('000 km)	51,244	26,083	9,115	1,356	1,654	13,036
Average distance ('000 km)	64	93	79	54	110	36
Road tractors (No.)	6,413	2,811	628	427	403	2,144
Distance travelled ('000 km)	981,058	396,015	117,810	69,879	61,022	336,332
Average distance ('000 km)	153	141	188	164	151	157
Semi-trailers (No.)	7,642	4,150	115	250	388	2,739
Other (No.)	1,195	542	75	55	82	441
Total distance ('000 km)	1,032,302	422,098	126,925	71,235	62,676	349,368
Fuel consumed ('000 L)	392,837	169,163	42,183	25,099	28,731	127,661

1. Excludes household goods movers.

Summary statistics by type of movement, small for-hire carriers, 2003

	Intraprovincial		Extr	aprovincial carriers	ers		
	carriers	carriers Total Intraprovincial		Interprovincial	International		
					Sub ¹ total	¹ Into Canada	Out of Canada
Estimated number of carriers (No.)	4,153	2,343					
			thousands of	dollars			
Operating revenues	1,018,190	819,464	370,119	182,616	266,729	108,922	157,807
Operating expenses Transportation expenses Maintenance and garage expenses Administrative and general office expenses	933,711 705,150 84,999 143,563	771,615 592,789 64,055 114,770	349,170 264,719 30,383 54,068	167,475 125,152 16,022 26,300	254,970 202,918 17,650 34,402	103,163 80,822 6,912 15,429	151,807 122,096 10,738 18,973
Full time employees (No.)	10,151	9,410					
Salaries and wages (\$'000)	254,584	177,999					
			numbe	r			
Equipment operated Straight trucks Road tractors Semi-trailers Other	15,337 2,924 5,368 6,171 873	17,295 1,266 6,116 8,819 1,094	··· ··· ···		··· ··· ···		···· ··· ···

Table 6Summary statistics by province or territory of domicile, small for-hire carriers, 2003

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
Estimated number of carriers (No.)	6,496	91	42	112	187	1,399	2,243
			thous	sands of dollars			
Operating revenues	1,837,654	29,323	12,548	36,674	57,491	391,749	712,745
Operating expenses	1,705,326	28,329	12,406	34,815	54,003	364,091	643,635
Salaries and wages	432,584	7,710	Х	9,459	13,360	100,464	148,922
Benefits	8,011	142	х	333	129	2,329	2,335
Fuel	350,016	9,176	х	11,522	14,522	74,748	130,593
Owner operator expenses	68,207	0	х	407	1,198	8,484	31,204
Purchased transport	203,461	2,819	х	1,936	6,702	22,262	104,325
Maintenance	149,054	1,680	х	2,468	4,741	39,169	50,259
Depreciation	179,824	2,225	х	3,841	4,980	50,651	56,037
Insurance	70,187	1,311	х	1,107	3,028	16,434	25,969
Rent	63,848	478	х	627	1,155	14,911	22,853
Other expenses	180,134	2,787	х	3,113	4,189	34,640	71,137
Full time employees (No.)	19,561	258	83	344	643	4,289	6,948
	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
Estimated number of carriers (No.)	160	297	1,029	925	7	4	0
			thou	dands of dollars			
Operating revenues	40,249	68,591	284,347	201,938	602	1,398	0
Operating expenses	39,525	66,795	275,671	183,771	718	1,566	0
Salaries and wages	8,427	15,668	74,254	50,359	х	X	0
Benefits	187	151	1,221	1,154	х	х	0
Fuel	12,546	16,352	42,329	34,263	х	х	0
Owner operator expenses	485	258	12,207	13,736	х	х	0
Purchased transport	2,002	6,980	35,433	20,133	х	х	0
Maintenance	4,182	6,201	24,508	14,395	х	х	0
Depreciation	3,539	5,862	29,755	21,341	х	х	0
Insurance	1,769	1,920	10,888	7,250	х	х	0
Rent	1,326	2,409	15,069	4,714	х	х	0
Other expenses	5,062	10,994	30,007	16,427	х	х	0
Full time employees (No.)	407	817	3,359	2,372	7	35	0

Number of employees by owned and leased vehicle and by province or territory of domicile, small for-hire carriers, 2003

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
				number			
Estimated number of carriers	6,496	91	42	112	187	1,399	2,243
Employees Drivers							
Full time Part time	14,303 2,661	192 96	x x	268 59	525 89	3,310 766	4,965 785
Other employees Full time Part time	5,258 3,097	66 43	x x	77 49	118 74	978 455	1,983 1,394
Total - drivers and other employees Full time Part time	19,561 5,757	258 139	83 79	344 108	643 163	4,289 1,221	6,948 2,179
	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
				number			
Estimated number of carriers	160	297	1,029	925	7	4	0
Employees Drivers Full time Part time	309 109	592 135	2,364 358	1,675 202	x x	x x	0 0
Other employees Full time Part time	98 44	225 117	994 315	697 576	x x	x x	0 0
Total - drivers and other employees Full time Part time	407 153	817 251	3,359 673	2,372 777	7 9	35 5	0 0

Equipment operated by province or territory of domicile, small for-hire carriers, 2003

	Owned and leased							
	Straight trucks	Road tractors	Semi- trailers	Other equipment	Total			
			number					
Newfoundland and Labrador	101	212	190	7	510			
Prince Edward Island	х	х	х	х	217			
Nova Scotia	87	222	491	41	840			
New Brunswick	120	509	426	56	1,112			
Québec	1,154	2,423	4,173	167	7,916			
Ontario	1,261	3,704	3,934	618	9,518			
Manitoba	44	289	1,025	48	1,406			
Saskatchewan	106	580	603	24	1,313			
Alberta	826	1,834	2,220	724	5,604			
British Columbia	435	1,593	1,854	251	4,134			
Yukon	х	x	x	х	23			
Northwest Territories	х	х	х	х	38			
Nunavut	0	0	0	0	0			
Canada								
Owned and leased	4,190	11,484	14,990	1,967	32,631			
Operated by owner operator	481	3,927	2,099	123	6,631			

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, 2003

	Total	Straight trucks	Road tractors
	thou	sands kilometres	
Newfoundland and Labrador	28,259	3,715	24,544
Prince Edward Island	11,113	X	x
Nova Scotia	32,566	5,244	27,322
New Brunswick	74,768	7,884	66,884
Quebec	361,387	58,914	302,473
Ontario	460,358	89,750	370,608
Manitoba	42,076	2,955	39,121
Saskatchewan	76,895	5,097	71,798
Alberta	304,193	42,282	261,911
British Columbia	171,605	22,867	148,738
<u> Yukon</u>	875	x	x
Northwest Territories	4,270	х	х
Nunavut	0	0	0
Canada	1,568,365	240,392	1,327,973

Summary statistics, owner operators, 1999 to 2003

	2003	2002	2001	2000	1999
Estimated number of owner operators (No.)	36,281	35,085	35,931	35,979	37,196
-		thou	isands of dollars		
Operating revenues	7,397,099	7,023,352	6,598,667	6,329,018	5,896,757
Operating expenses	6,761,844	6,566,395	5,935,630	5,709,523	5,074,337
Salaries and wages	1,539,416	1,511,473	1,339,347	1,171,309	1,117,913
Benefits	25,105	32,455	22,420	20,526	20,957
Fuel	1,460,718	1,595,854	1,539,092	1,661,371	1,188,111
Owner operator expenses	0	0	0	0	0
Purchased transport	845,089	744,175	571,852	499,409	274,178
Maintenance	740,397	618,103	601,029	522,049	436,904
Depreciation	716,735	789,964	769,132	768,629	671,622
Insurance	252.684	248,801	217,338	186.451	196,305
Rent	223,703	246,777	172,929	171,084	165,432
Other expenses	957,998	778,792	702,491	708,696	1,002,916
Full time employees ¹ (No.)	62,518	62,400	60,799	58,990	60,488
Equipment operated (No.)	87,925	90,048	83,744	85,118	89,495

1. Working owner included.

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

Table 11Distribution of owner operators by carrier types and by region of domicile, owner operators, 2003

	Owner operat	Total		
	For-hire carriers	Private carriers	Both	
		number		
Atlantic	1,801	373	213	2,387
Quebec	7,569	1,401	236	9,206
Ontario	8,175	3,322	383	11,880
Prairies	7,698	880	404	8,982
British Columbia	2,856	408	522	3,786
Territories	29	4	5	38
Canada	28,128	6,388	1,763	36,279

Summary statistics by size, owner operators, 2003

	Total	Small enterprises	Medium and large enterprises
		(\$30,000 to \$999,999)	(\$1 million and over)
Estimated number of owner operators (No.)	36,281	35,719	562
	th	ousands of dollars	
Operating revenues	7,397,099	6,392,333	1,004,766
Operating expenses Salaries and wages 1 Fuel Purchased transport 2 Maintenance Depreciation Other expenses 3	6,761,844 1,564,521 1,460,718 845,089 740,397 716,735 1,434,385	5,802,693 1,347,870 1,341,654 541,892 679,311 620,278 1,271,688	959,151 216,651 119,063 303,197 61,086 96,457 162,697
Number of employees ⁴ (No.)	78,633	73,265	5,367
Equipment operated (No.) Straight trucks Road tractors	10,471 42,723	9,890 39,633	581 3,090

1. Includes employee benefits.

Includes employee benefits.
 Includes driver services, vehicule lease or rent, total purchased transportation and load broker services.
 Includes terminal and insurance expenses.
 Working owners, full and part time employees are included.

Table 13 Summary statistics by type of activity, local transport¹, owner operators, 2003

Local carriers	Total	General freight	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number reporting (No.)	16,257	4,487	1,102	6,190	2,081	2,397
			thousands	of dollars		
Operating revenues	3,254,877	787,303	320,549	991,166	562,987	592,872
Operating expenses	2,924,735	716,627	294,158	874,325	503,323	536,302
Salaries and wages	731,661	195,528	92,625	177,895	133,326	132,287
Benefits	12,206	3,530	2,627	2,375	2,011	1,663
Fuel	548,182	132,520	45,715	186,500	108,916	74,531
Owner operator expenses	0	0	0	0	0	0
Purchased transport	386,673	84,653	33,528	124,349	50,165	93,978
Maintenance	344,325	66,968	34,856	106,035	73,819	62,647
Depreciation	326,054	68,193	37,692	104,513	60,913	54,743
Insurance	110,427	25,237	11,078	35,275	16,811	22,026
Rent	94,809	36,460	7,595	24,856	8,981	16,917
Other expenses	370,396	103,537	28,441	112,527	48,382	77,509
Full time employees ² (No.)	28,741	7,931	2,906	9,192	4,509	4,203
Equipment operated (No.)	43,939	11,836	2,746	17,609	5,013	6,735
Straight trucks (No.)	8,513	1,803	492	5,561	154	503
Distance travelled ('000 km)	487,970	73,486	37,583	339,785	12,387	24,729
Average distance ('000 km)	57	41	76	61	80	49
Road tractors (No.)	17,737	5,087	1,522	5,772	2,527	2,829
Distance travelled ('000 km)	1,655,265	469,684	139,376	482,248	276,477	287,480
Average distance ('000 km)	93	92	92	84	109	102
Semi-trailers (No.)	11,466	4,490	х	х	1,661	2,559
Other (No.)	6,223	456	х	х	671	844
Total distance ('000 km)	2,143,235	543,170	176,959	822,033	288,864	312,209
Fuel consumed ('000 L)	891,737	219,468	83,517	285,868	158,730	144,154

1. Excludes household goods movers.

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

Summary statistics by type of activity, long-distance transport¹, owner operators, 2003

Long- distance carriers	Total	General freight	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of owner operators (No.)	19,514	9,381	1,194	1,542	1,586	5,811
			thousands	of dollars		
Operating revenues	4,035,611	1,961,136	309,269	336,977	406,769	1,021,460
Operating expenses	3,736,508	1,773,531	304,498	284,174	393,975	980,330
Salaries and wages	770,925	358,171	73,728	54,096	92,437	192,493
Benefits	12,104	5,371	1,842	596	1,492	2,803
Fuel	901,858	430,937	81,618	76,588	94,401	218,314
Owner operator expenses	0	0	0	0	0	0
Purchased transport	437,416	231,648	20,306	34,251	31,214	119,997
Maintenance	392,421	188,743	29,956	24,097	61,422	88,203
Depreciation	385,386	139,748	34,375	40,100	37,274	133,889
Insurance	139,753	63,737	13,042	7,744	16,252	38,978
Rent	122,408	64,455	6,511	9,106	16,497	25,839
Other expenses	574,234	290,721	43,120	37,594	42,985	159,814
Full time employees ² (No.)	31,318	14,489	2,450	2,097	3,205	9,077
Equipment operated (No.)	42,725	19,461	2,276	3,094	4,631	13,263
Straight trucks (No.)	1,395	674	169	204	59	289
Distance travelled ('000 km)	109,976	54,216	11,490	9,050	3,181	32,039
Average distance ('000 km)	79	80	68	44	54	111
Road tractors (No.)	24,540	10,997	1,583	1,910	2,499	7,551
Distance travelled ('000 km)	4,343,995	2,023,358	283,547	227,947	380,241	1,428,902
Average distance ('000 km)	177	184	179	119	152	189
Semi-trailers (No.)	12,258	6,743	х	х	1,627	2,586
Other (No.)	4,530	1,046	х	х	446	2,838
Total distance ('000 km)	4,453,972	2,077,574	295,038	236,997	383,422	1,460,941
Fuel consumed ('000 L)	1,847,596	796,532	119,845	108,778	174,841	647,600

1. Excludes household goods movers.

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

Table 15Summary statistics by type of activity, owner operators, 2003

	Total	General freight	Household	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of owner operators (No.)	36,281	13,868	509	2,297	7,732	3,667	8,208
			thou	sands of dolla	ars		
Operating revenues	7,397,098	2,748,439	106,610	629,818	1,328,143	969,756	1,614,332
Operating expenses	6,761,844	2,490,157	100,603	598,656	1,158,498	897,298	1,516,632
Salaries and wages	1,539,416	553,699	36,829	166,354	231,991	225,763	324,780
Benefits	25,105	8,901	795	4,469	2,971	3,503	4,466
Fuel	1,460,717	563,456	10,678	127,333	263,088	203,317	292,845
Owner operator expenses	0	0	0	0	0	0	0
Purchased transport	845,088	316,301	20,999	53,834	158,600	81,379	213,975
Maintenance	740,396	255,710	3,651	64,812	130,132	135,241	150,850
Depreciation	716,735	207,941	5,294	72,067	144,613	98,188	188,632
Insurance	252,684	88,975	2,503	24,120	43,019	33,063	61,004
Rent	223,703	100,915	6,485	14,106	33,962	25,479	42,756
Other expenses	957,999	394,258	13,369	71,561	150,121	91,366	237,324
Full time employees ¹ (No.)	62,519	22,419	2,460	5,356	11,289	7,714	13,281
Equipment operated (No.)	87,924	31,297	1,262	5,022	20,702	9,643	19,998
Straight trucks (No.)	10,471	2,477	563	661	5,765	213	792
Distance travelled ('000 km)	619,790	127,702	21,845	49,073	348,835	15,567	56,768
Average distance ('000 km)	59	52	39	74	61	73	72
Road tractors (No.)	42,722	16,084	446	3,105	7,683	5,025	10,379
Distance travelled ('000 km)	6,022,524	2,493,042	23,263	422,924	710,195	656,718	1,716,382
Average distance ('000 km)	141	155	52	136	92	131	165
Semi-trailers (No.)	23,974	11,234	х	х	2,998	3,287	5,145
Other (No.)	10,758	1,502	х	х	4,257	1,118	3,682
Total distance ('000 km)	6,642,316	2,620,744	45,109	471,997	1,059,030	672,286	1,773,150
Fuel consumed ('000 L)	2,753,752	1,016,001	14,419	203,361	394,646	333,571	791,754

1. Working owner included.

Table 16Summary statistics by type of movement, owner operators, 2003

	Intraprovincial								
	carriers —	Total	Intraprovincial	Interprovincial	International				
				-	Sub total	Into Canada	Out of Canada		
Estimated number of carriers (No.)	19,356	16,925							
	thousands of dollars								
Operating revenues	3,881,183	3,515,833	1,120,115	936,592	1,459,126	644,237	814,889		
Operating expenses Transportation expenses Maintenance and garage expenses Administrative and general office expenses	3,523,376 2,530,288 404,072 589,016	3,238,390 2,255,327 336,317 646,746	1,037,321 736,475 114,559 186,288	851,764 597,298 90,459 164,007	1,349,305 921,554 131,299 296,451	602,470 396,827 56,647 148,995	746,835 524,727 74,652 147,456		
Full time employees (No.)	33,565	28,952							
Salaries and wages (\$'000)	872,004	667,391							
			number	r					
Equipment operated Straight trucks Road tractors Semi-trailers Other	47,521 9,263 20,839 10,638 6,781	40,404 1,207 21,884 13,336 3,976	 	••• ••• ••• •••	••• ••• ••• •••	···· ··· ···	···· ··· ···		

Table 17Summary statistics by province or territory of domicile, owner operators, 2003

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
Estimated number of owner operators (No.)	36,281	338	123	695	1,232	9,207	11,881
			thous	sands of dollars			
Operating revenues	7,397,099	69,861	22,808	135,186	281,765	2,083,981	1,852,529
Operating expenses	6,761,844	64,853	21,612	121,437	252,272	1,931,149	1,682,074
Salaries and wages	1,539,416	15,656	4,939	28,582	52,850	430,205	363,868
Benefits	25,105	148	14	369	419	7,595	6,391
Fuel	1,460,718	17,537	6,672	35,764	80,603	308,139	398,467
Owner operator expenses Purchased transport	0 845,089	0 7,690	0 938	0 12,351	0 11.747	0 302,988	0 235,393
Maintenance	740,397	6,143	1,935	10,789	31,076	270,242	133,831
Depreciation	716,735	6,837	2,255	13,572	26,396	202,804	172,810
Insurance	252,684	2,783	897	4,066	11,016	67,491	58,107
Rent	223,703	1,642	440	2,185	7,738	77.097	50,107
Other expenses	957,998	6,416	3,522	13,760	30,428	264,589	263,102
Full time employees (No.)	62,518	725	214	1,263	2,495	15,924	18,045
	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
Estimated number of owner operators (No.)	1,621	1,504	5,858	3,785	x	х	х
			thous	sands of dollars			
Operating revenues	343,161	337,683	1,302,033	962,467	x	x	x
Operating expenses	303,268	309,070	1,181,724	889,534	x	x	x
Salaries and wages	64,236	76,312	274,412	227,249	х	х	х
Benefits	507	2,018	4,617	3,013	х	х	х
Fuel	91,964	76,298	252,786	191,298	х	х	х
Owner operator expenses	0	0	0	0	X	x	x
Purchased transport	37,585 28,242	29,026 34,996	115,053 125,979	91,970 96,566	x	x	x
Maintenance Depreciation	28,242 23,896	26,821	148,083	96,566 92,861	x x	x x	X X
Insurance	9.032	11,404	55.339	32,373	x	x	x
Rent	5,949	13,336	41,254	23,819	x	x	x
Other expenses	41,857	38,859	164,201	130,386	x	x	x
Full time employees (No.)	2,740	3,405	9,657	7,991	x	x	x

Number of employees by type and by province or territory of domicile, owner operators, 2003

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
				number			
Estimated number of owner operators	36,281	338	123	695	1,232	9,207	11,881
Employees Drivers							
Full time Part time	51,152 7,633	551 83	178 49	1,082 251	2,184 283	13,889 1,599	14,789 2,739
Other Employees Full time Part time	11,366 8,481	175 174	37 20	181 77	311 354	2,035 2,130	3,256 2,933
Total Full time Part time	62,518 16,115	725 257	214 69	1,263 328	2,495 637	15,924 3,729	18,045 5,672
	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
				number			
Estimated number of owner operators	1,621	1,504	5,858	3,785	х	х	х
Employees Drivers Full time Part time	2,005 249	2,446 430	7,896 1,110	6,088 821	x x	x x	x x
Other Employees Full time Part time	735 379	960 284	1,761 1,031	1,904 1,090	x x	x x	x x
Total Full time Part time	2,740 628	3,405 714	9,657 2,141	7,991 1,911	x x	x x	X X

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

Table 19 Equipment operated by province or territory of domicile¹, owner operators, 2003

	Straight trucks	Road tractors	Semi-trailers	Other equipment	Total
			number		
Newfoundland and Labrador	90	474	226	48	838
Prince Edward Island	81	124	47	12	263
Nova Scotia	279	823	405	142	1,649
New Brunswick	168	2,031	723	174	3,097
Quebec	3,195	10,860	7,067	1,984	23,107
Ontario	3,932	12,952	5,968	6,760	29,612
Manitoba	150	1,943	1,148	87	3,329
Saskatchewan	293	1,931	953	152	3,328
Alberta	1,164	6,984	4,548	538	13,235
British Columbia	1,113	4,547	2,872	838	9,371
Yukon	Х	x	х	х	х
Northwest Territories	х	х	х	х	х
Nunavut	х	х	х	х	х
Canada	10,471	42,723	23,975	10,757	87,925

1. Owned and leased by a company.

Estimated annual distance travelled by type of vehicle and by province or territory of domicile, owner operators, 2003

	Total	Straight	Road		
	distance	trucks	tractors		
	thousands kilometres				
Newfoundland and Labrador	64,354	4,724	59,631		
Prince Edward Island	24,278	5,942	18,336		
Nova Scotia	113,899	9,201	104,698		
New Brunswick	316,072	8,381	307,691		
Quebec	1,628,603	179,544	1,449,059		
Ontario	2,299,468	240,881	2,058,587		
Manitoba	328,154	10,866	317,287		
Saskatchewan	285,404	13,739	271,665		
Alberta	949,554	85,240	864,314		
British Columbia	626,850	61,153	565,697		
ſukon	x	X	x		
Northwest Territories	х	х	х		
Nunavut	х	x	Х		
Canada	6,642,315	619,791	6,022,524		

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

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.

Populations

Target population

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

Survey population

The 2003 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 2003 tax filers, classified as trucking companies with annual operating revenues greater than or equal to \$30 thousand and less than \$1 million that are not yet found on the Business Register.

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.

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, 2003

	Estimated carriers in survey population	Carriers selected	In-scope carriers selected
		Phase 1	
	n	umber	
Newfoundland and Labrador	440	320	117
Prince Edward Island	168	117	55
Nova Scotia	815	553	191
New Brunswick	1,434	863	275
Quebec	10,754	7,316	608
Ontario	14,361	6,029	781
Manitoba	1,824	780	255
Saskatchewan	1,845	1,086	291
Alberta	6,975	5,023	539
British Columbia	4,831	2,881	457
Yukon	29	25	17
Northwest Territories	19	23	14
Nunavut	1	1	1
Canada	43,496	25,017	3,601

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.

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.

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 April1, 2003 to March 31, 2004, 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.

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.

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 revenues, then the resulting estimate of the total revenues 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.

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.

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.

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.

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.

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 revenues) 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.

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.

Quality measures by province or territory of domicile, annual motor carriers of freight survey: small for-hire carriers and owner operators, 2003

		For-hire carriers			Owner-operators	
	Response rate	Relative imputation	Coefficient of	Response rate	Relative imputation	Coefficient of
		rate	variation		rate	variation
			percen	t		
Newfoundland and Labrador Total employment	67.4 	 26.6	 13.4	68.9	 33.2	 9.7
Fuel consumed ¹ Total revenues		53.6 0.0	15.8 12.7		49.8 0.0	10.0 6.8
Prince Edward Island	100.0			70.7		
Total employment Fuel consumed ¹		0.0 6.5	23.0 22.5		18.4 42.3	11.6 14.3
Total revenues		0.0	17.8		0.0	10.4
Nova Scotia	68.6			75.7		
Total employment Fuel consumed ¹		26.9 35.5	16.1 20.5		21.4 41.2	8.4 7.4
Total revenues		0.0	13.2		0.4	5.5
New Brunswick	84.6			73.8		
Total employment Fuel consumed ¹		23.3 46.6	10.7 10.9		19.0 26.2	12.7 9.1
Total revenues		0.0	9.5		0.0	5.1
Québec	79.3			74.4		
Total employment Fuel consumed ¹		17.0 33.0	11.0 10.3		27.1 37.4	5.2 5.9
Total revenues		0.1	7.9		0.0	4.2
Ontario	72.6			64.7		
Total employment Fuel consumed ¹		17.4 33.8	25.8 12.0		28.1 32.0	6.4 9.5
Total revenues		0.1	10.4		0.1	6.3
Manitoba	72.4			62.0		
Total employment Fuel consumed ¹		26.6 31.5	10.6 10.0		30.3 42.1	7.2 7.1
Total revenues		0.0	9.2		0.1	5.4
Saskatchewan	73.2			63.2		
Total employment Fuel consumed ¹		28.8 30.5	23.1 27.8		26.8 35.8	19.1 9.2
Total revenues		0.0	25.2		0.0	5.9
Alberta	76.9			74.6		
Total employment Fuel consumed ¹		24.2 28.1	16.7 16.9		29.7 39.1	7.2 8.4
Total revenues		0.2	9.2		0.0	8.7
British Columbia	69.4			70.5		
Total employment Fuel consumed ¹		28.5 44.3	17.0 12.3		27.7 29.7	18.0 12.4
Total revenues		0.0	10.7		0.0	8.5
Yukon	66.7			42.9		
Total employment Fuel consumed ¹		53.6 66.8	32.7 30.9		50.3 75.8	14.4 13.6
Total revenues		0.0	14.7		1.5	16.5
Northwest Territories	100.0			72.7		
Total employment		0.0 0.2	8.4 4.0		9.9 17.6	20.0
Fuel consumed ¹ Total revenues		0.2	4.0 34.7		0.0	23.8 10.7
Nunavut				100.0		
Total employment					0.0	0.0 0.0
Fuel consumed ¹ Total revenues					100.0 0.0	0.0
Canada	74.9			69.5		
Total employment		21.1	9.2		27.6	3.6
Fuel consumed ¹ Total revenues		34.5 0.1	5.5 4.5		34.9 0.1	4.0 2.9

1. All the for-hire carriers in the AMCF sample (whether they had an actual annual operationg 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.

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 revenues 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 revenues greater than or equal to \$30 thousand and less than \$1 million. Starting with 1998, owner operators with annual operating revenues 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 revenues 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 revenues 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
- 0s value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
- р preliminary
- r revised
- suppressed to meet the confidentiality requirements of the Statistics Act X E
- use with caution
- F too unreliable to be published

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