Unified Enterprise Survey
Data Quality Statement

Taxi and Limousine Services Industry
Reference Year 2002

Statistics Canada
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1.0 Concepts*

The 2002 Taxi and Limousine Services Industry results represent fiscal year estimates of financial statistics for the industry as a whole, and for companies / associations and self-employed drivers separately. *These 2002 results are based both on survey data and tax data*.

Classified under the North American Industrial Classification System (NAICS) code 4853, this industry comprises establishments primarily engaged in providing passenger transportation by taxi and limousine, not operated on regular schedules or routes. Taxicab fleet owners and organizations that provide dispatch services are included, regardless of whether drivers are hired, rent their cabs or are otherwise compensated. Owner-operated taxicabs (self-employed drivers) are also included.

2.0 Definitions

2.1 A business entity and an establishment

A business entity is an economic transactor having the responsibility and the authority to allocate resources in the production of goods and services.

A statistical establishment is one production entity or the smallest grouping of production entities which produces as homogeneous a set of goods and/or services as possible; which does not cross provincial boundaries; and for which records provide data on the value of output together with the cost of principal intermediate inputs used and cost and quantity of labor resources used to produce the output.

2.2 The population of interest

The population of interest is all statistical establishments classified to NAICS 4853 and operating for at least one day during the reference year 2002.

2.3 Financial variables

2.3.1 Revenue

- Revenue from sales of goods and services are generated from taxi, limousine and dispatch services as well as from the sales of auxiliary goods and services (ex: repair, fuel, communication equipment).

- Other operating revenue includes notably revenue from rental and leasing of motor vehicles, taxi stand, office space, as well as revenue from advertising and from local and provincial programs (ex: ambulance, para-transit or school services).

- Total operating revenue is the sum of revenue from sales of goods and services and other operating revenue.

- Non-operating revenue comprises income from interest and dividends.

* Changes in the concepts, definitions and methods from the 1998 survey are indicated in Italics.

- Total revenue is the sum of operating and non-operating revenues.

2.3.2 Expenses

- Salaries, wages and benefits refer first to salaries and wages payments, including notably vacation pay and commissions, for all employees for whom a T4 Supplementary Form were completed. This category also includes the employer portion of employee benefits for items such as Canada Pension Plan contributions or Employment Insurance premiums.

- Cost of energy and supplies includes the cost of office and other operating supplies together with the cost of electricity, gasoline, propane and other energy types.

- Rental and leasing expenses are those costs incurred to rent or lease office, motor vehicles, computers or any other machinery and equipment.

- Repair and maintenance expenses are payments made to purchase maintenance and repair services of buildings, motor vehicles or any other machinery and equipment.

- Licenses, property and business taxes include all types of property and business taxes together with expenses for taxi licenses. Provincial health and education payroll taxes are excluded from this category.

- Other purchased services includes items such as payments to owner-operators, goods transportation, telephone and other telecommunications costs, insurance premiums, advertising and sales promotion.

- Depreciation charges are charges related to depreciation and amortization of buildings, vehicles and other machinery and equipment.

- Other operating expenses includes items such as royalties and franchise fees, bad debts and inventory adjustments. Provincial health and education payroll taxes are included in this category.

- Total operating expenses is the sum of all operating expenses.

- Non-operating expenses relates to interest expenses on loans or the interest component of a capital lease.

- Total expenses are the sum of operating and non-operating expenses.

2.3.3 Net operating revenue

- Operating margin is the difference between operating revenue and operating expenses.

- Operating ratio is the ratio of operating expenses over operating revenue.

3.0 Methods

The data were produced as part of Statistics Canada's Unified Enterprise Survey (UES). The survey incorporates several annual business surveys into an integrated survey. It aims to ensure Statistics Canada receives consistent and integrated data from many types of surveys and sizes of businesses, with enough detail to produce accurate provincial statistics.

3.1 Target Population

The target population is all establishments classified to NAICS 4853 on the Business Register and operating for at least one day during the reference year 2002.

3.2 Frame and sample design

3.2.1 Frame

The frame for the selection of the probability sample is Statistics Canada's Business Register (BR).

On the BR, under NAICS code 4853, there were 12,280 establishments having operated for at least one day during the reference year 2002. Of this number, there were 9,330 establishments of unincorporated enterprises (self-employed drivers), 1,958 establishments of incorporated enterprises (companies and associations) and 992 other establishments (nonprofit corporation).

Because of the nature of the industry, 22,437 small establishments of unincorporated enterprises (self-employed drivers) operated during 2002 which were not on the BR. Those establishments were estimated using a mathematical model.

Note that slight modifications to the BR coverage and improvements to the methodology of the survey have occurred in 2002. To consistency purpose, revisions were made to years 2000 and 2001 in order to adjust the changes.

3.2.2 Sampling plan

Two sources of data were used to derive the estimates:

- a probability sample survey of taxi and limousine establishments with an annual gross business revenue above survey thresholds,

- taxation data to estimate for businesses with an annual gross business revenue below survey thresholds. To do so, a sampling design of the establishments of unincorporated enterprises (self-employed drivers) and a census of establishments of incorporated enterprises (companies and associations) is used.

The survey threshold stood at $30,000 for all provinces and territories. In total, 7,442 establishments reported on the BR had annual revenue above survey thresholds in

2002. Out of these, 5,844 were establishments of unincorporated enterprises (self-employed drivers), 1,140 were establishments of incorporated enterprises (companies and associations) and 458 other establishments (nonprofit corporation).

Overall, 3,486 establishments of unincorporated enterprises (self-employed drivers) and 818 establishments of incorporated enterprises (companies and associations) have been estimated using tax data. While all establishments of incorporated enterprises (census) have been selected in the estimation process, 341 (9.8%) of establishments of unincorporated enterprises have been selected in tax sample.

3.2.3 Survey Sampling Unit

The sampling unit used for the selection of unincorporated businesses is the grouping of all establishments of one enterprise that operate in the same industry and the same province. Therefore, the sampling unit can be called a “cluster of establishments”.

3.2.4 Survey Sampling rate

Out of 7,442 establishments, 323 were selected in the sample for an overall sampling rate of 4.3%. More precisely, a total of 170 establishments of unincorporated enterprises (self-employed drivers) were selected out of 5,844 (2.9%), 142 establishments of incorporated enterprises (companies and associations) were sampled out of 1,140 (12.5%) and 11 other establishments (nonprofit corporation) were sampled out of 458 (2.4%).

3.3 Data Collection and Processing

3.3.1 Data Collection

Questionnaires were mailed in the spring of 2003 to the 323 establishments selected in the sample. Respondents were asked to report information for their most recent 12-month fiscal period.

In addition to the mail-out / mail-back questionnaire approach, the survey was also conducted using Computer Assisted Telephone Interviews (CATI) for data collection, capture, edit and follow-up. The collection period ended in September 2003.

3.3.2 Data processing - Imputation

Reported data were examined for completeness and inconsistencies using automated edits coupled with analytical review. Another automated system was used to impute data for refusals, no response and unable to contact, partially with the assistance of taxation data. This imputation process was also coupled with a manual analytical review. In total, 24% of the records went through the imputation process in 2002. This is considered as fairly good for a business survey. With the use of taxation data, the quality of the data coming out of the imputation process is judged to be very good for the aggregate

variables, such as total revenue and total expenses, and to be good for more detailed variables.

3.3.3 Data processing - Allocation

In some cases, respondents reported data combining many sampling units, resulting in the need for data allocation. Auxiliary information, stemming mainly from the T4 Supplementary Form, was used to allocate the data reported on the combined report among the various sampling units. This source of information used for allocation purposes provides an adequate distribution of revenue and expenses by province and territory.

3.3.4 Data processing - Estimation

The sampling weights derived from the sample survey design were modified and improved using updated information. This was possible because, during the passage of time since the sample was selected, the Business Register was updated further with more complete information. The final set of weights reflects as closely as possible the changing characteristics of the population in this industry. The final estimates were derived by combining the survey estimates and the taxation data estimates. The standard output includes the following tables:

In Table 1, final industry estimates are provided by province and territory for **all carriers** in the Taxi and Limousine Services Industry (NAICS 4853) and for the financial variables listed in the *Definitions* section.

In Table 2, final industry estimates are provided by province and territory for **taxi and limousine companies and associations** and for the financial variables listed in the *Definitions* section.

In table 3, final industry estimates are provided by province and territory **for self-employed taxi and limousine drivers** and for the financial variables listed in the *Definitions* section.

4.0 Data Quality

All surveys are subject to sampling and non-sampling errors. Statistics Canada uses a variety of methods to minimize all types of errors. Efforts were taken for instance through regular frame (Business Register) analysis, appropriate respondent follow-up, adequate imputation model and detailed analysis of the estimates to minimize the non-sampling error of omission, duplication, reporting and processing.

4.1 Response rate

As depicted in **Table A** below, 51% of the 323 questionnaires sent in the sample survey were fully and partly completed in 2002. Another 9% were identified as out-of-scope to NAICS 4853. Finally, 40% of the respondents refused to complete the questionnaire, did not complete the questionnaire before collection cut-off, or were not found or were unable to contact. The response rate, measured as the proportion of completed questionnaires out of in-scope questionnaires, reached 56% in 2002.

Table A

Questionnaires	**2002**	
	Number	**%**
Fully/partially completed	165	51 %
Out-of-scope (inactive / out of business / duplicate)	28	9 %
Non-response (refusal / unable to contact / unable to locate)	130	40 %
Total	323	100 %

4.2 Coefficients of variation

Coefficients of variation (CV) of the final estimates are generally recognized as a good indicator of sampling error. Based on the calculated coefficients of variation, the quality of the final estimates is classified as follows:

- Census — No sampling error
- Excellent — CV is 0.01 to 4.99%
- Very good — CV is 5.00% to 9.99%
- Good — CV is 10.00% to 14.99%
- Acceptable — CV is 15.00% to 24.99%
- Use with caution — CV is 25.00% to 34.99%
- Unreliable — CV is larger than 35.00%

Based on these ratings and as depicted in **Table B** below, the total revenue estimates for the whole industry were judged to be very good at the national level and excellent to acceptable at the provincial/territorial level in 2002. The total revenue estimates for the taxi and limousine companies and associations separately were judged to be very good at the national level and very good to unreliable (Manitoba) at the provincial/territorial level. Finally, the total revenue estimates for the self-employed drivers separately were judged to be very good at the national level and very good to unreliable (NF and NB) at the provincial/territorial level.

Overall, the final estimates are viewed as providing a reliable portrait of the Taxi and Limousine Services Industry in Canada.

Table B: CVs – Total estimate, Total Revenue

	ALL	COMPANIES	DRIVERS
CAN	**Very Good**	**Very Good**	**Very Good**
NL	Acceptable	Acceptable	Unreliable
PE	Good	Census	Acceptable
NS	Very good	Very good	Acceptable
NB	Good	Acceptable	Unreliable
QC	Good	Acceptable	Acceptable
ON	Good	Acceptable	Acceptable
MB	Acceptable	Unreliable	Use with Caution
SK	Very good	Very good	Acceptable
AB	Very good	Acceptable	Good
BC	Very good	Acceptable	Acceptable
YK	Census	Census	Census
NT	Very Good	Census	Very good
NU	Excellent	Census	Very good