

## Service bulletin

# Surveying and Mapping Services

2008



### Highlights

- Operating revenues for the Surveying and Mapping industry increased by 5% in 2008 to reach \$2.9 billion. This growth is slightly higher compared to the 1.6% increase registered in 2007. However, the industry has been unable to match the rapid growth rates of 16.8% and 18.2% recorded in 2005 and 2006 respectively.
- Revenue increases were recorded in all regions of Canada in 2008. The most significant increases were recorded in Manitoba (14.4%), Saskatchewan (13.9%), and each of the Atlantic provinces. The least significant growth was registered in Alberta (3%), while moderate increases were registered in Quebec (6.1%), Ontario (6.9%) and British Columbia (6.4%).
- Alberta continued to dominate the Surveying and Mapping industry, generating 58.7% of national operating revenues. Nevertheless, after two consecutive years of lower than average growth, Alberta's share has declined from a high of 64.5% in 2006. Over the same period, Quebec, (from 8.2% to 9.9%), Ontario (from 12.5% to 14.1%) and Saskatchewan (from 2.3% to 3.4%) have all seen their shares increase.
- The growth of operating expenses (5.1%) was slightly higher than the growth of operating revenues (5.0%); therefore the operating profit margin ratio of the industry declined slightly in 2008, from 14.4% in 2007 to 14.3%. This has flattened out compared to previous years where there was an increase of the profit margin ratio every year from 2002 (8.5%) to 2007 (14.4%).

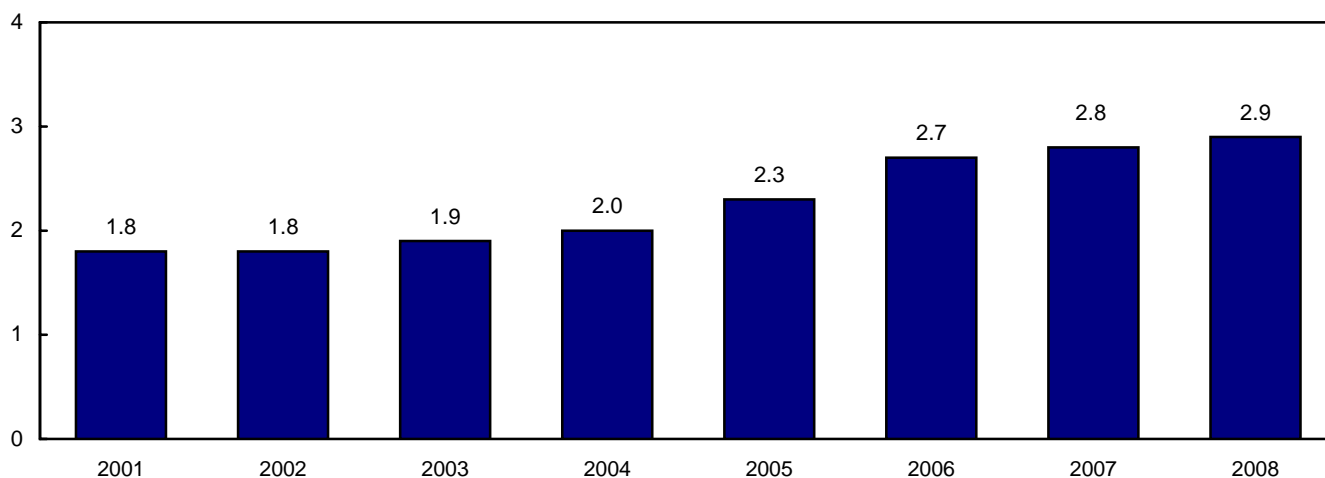
### 2008 Survey Detailed Results

#### Total Operating Revenues

Operating revenues for the Surveying and Mapping industry increased by 5% in 2008 to reach \$2.9 billion.

**Chart 1**  
**Operating revenue of the surveying and mapping services industry**

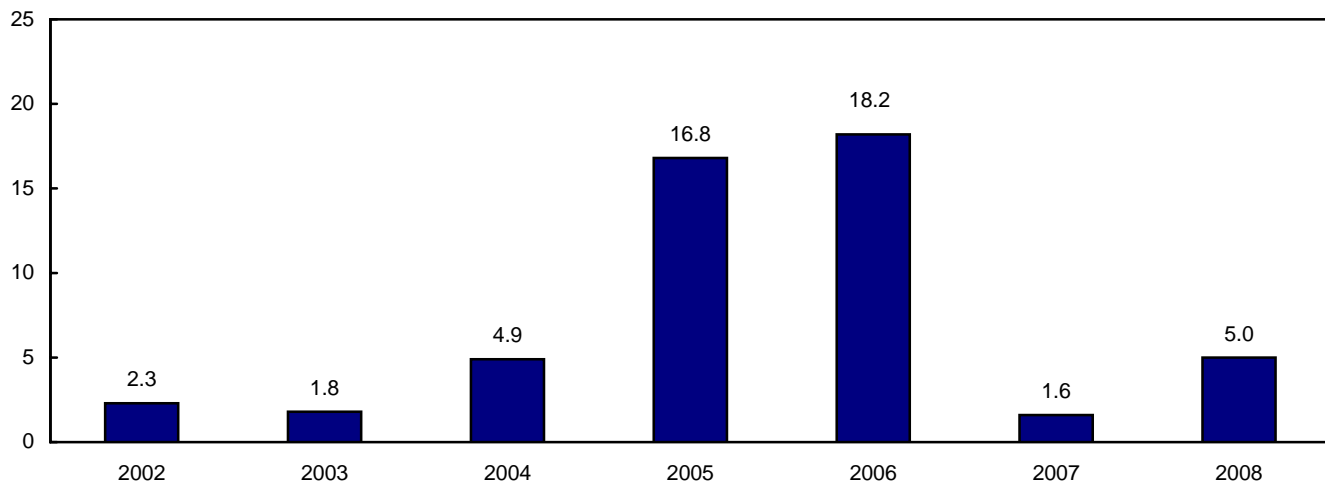
billions of dollars



This growth is slightly higher compared to the 1.6% increase registered in 2007. However, the industry has been unable to match the rapid growth rates of 16.8% and 18.2% recorded in 2005 and 2006 respectively.

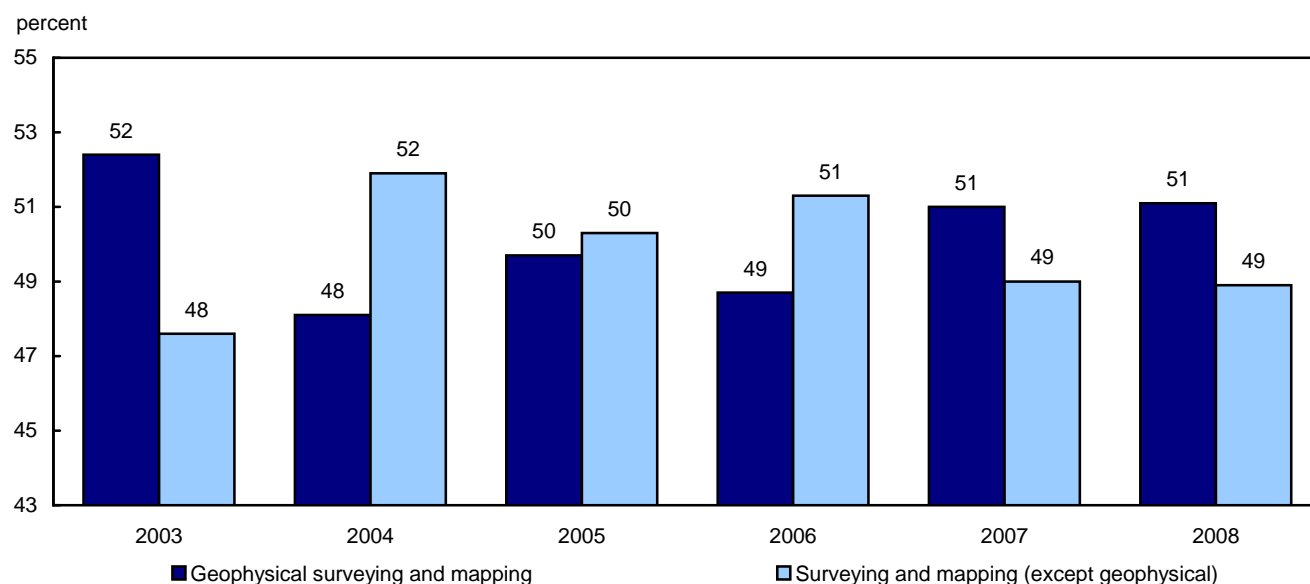
**Chart 2**  
**Growth rate of operating revenue of the surveying and mapping services industry**

percent



The distribution of operating revenues between the geophysical surveying and mapping (NAICS 541360) and surveying and mapping (except geophysical) (NAICS 541370) shows roughly an even split year after year since 2003.

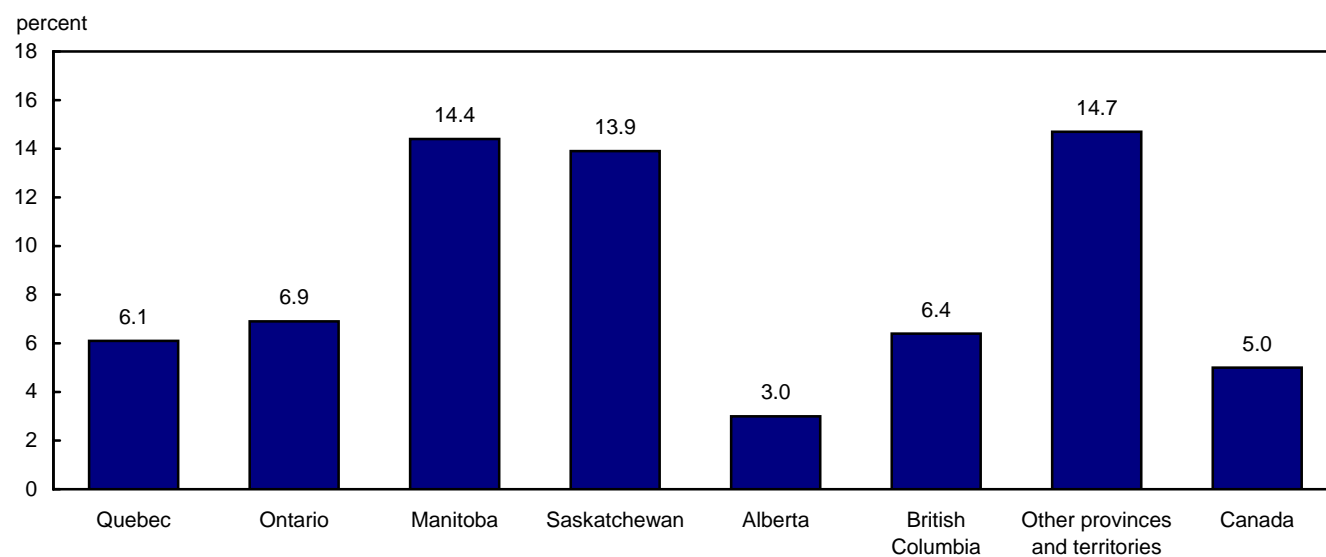
**Chart 3**  
Industry distribution according to operating revenue of the surveying and mapping services industry



### Total Operating Revenues by Province

Revenue increases were recorded in all regions of Canada in 2008. The most significant increases were recorded in Manitoba (14.4%), Saskatchewan (13.9%), and each of the Atlantic provinces. The least significant growth was registered in Alberta (3%) while moderate increases were registered in Quebec (6.1%), Ontario (6.9%) and British Columbia (6.4%).

**Chart 4**  
Growth rate of operating revenues by province of the surveying and mapping services industry, 2008

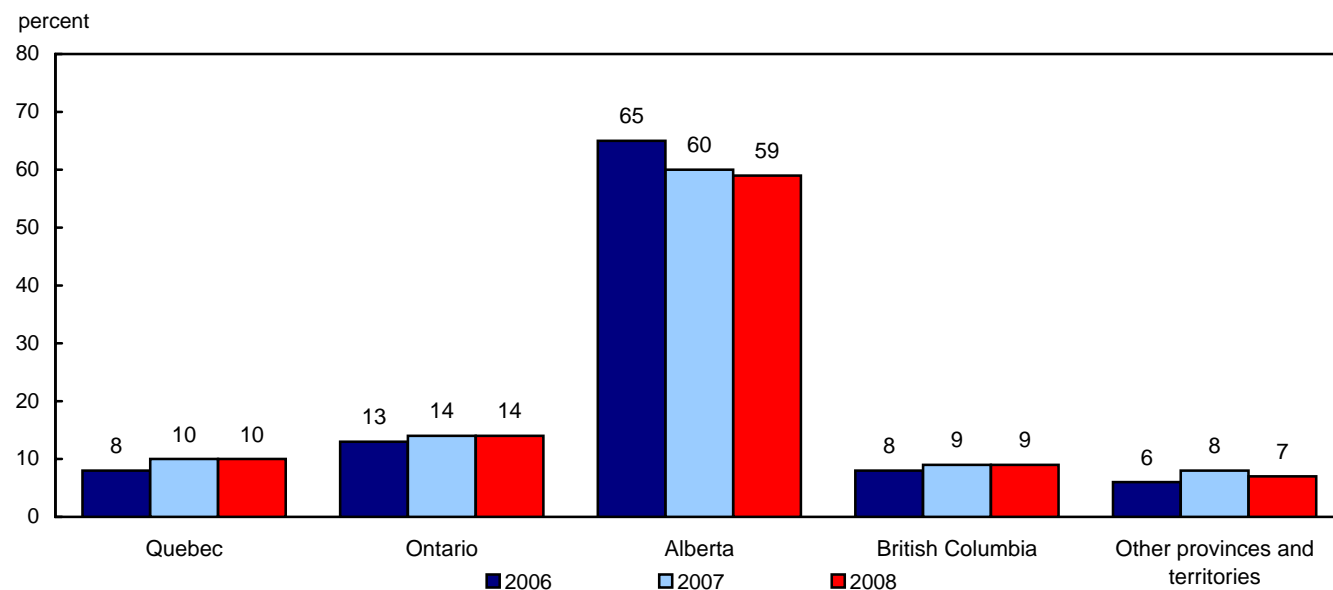


Alberta continued to dominate the Surveying and Mapping industry, generating 58.7% of national operating revenues. Nevertheless, after two consecutive years of lower than average growth, Alberta's share has declined

from a high of 64.5% in 2006. Over the same period, Quebec, (from 8.2% to 9.9%), Ontario (from 12.5% to 14.1%) and Saskatchewan (from 2.3% to 3.4%) have all seen their shares increase.

**Chart 5**

**Distribution of operating revenues by province of the surveying and mapping services industry**



**Note(s):** Due to rounding, components may not add to total.

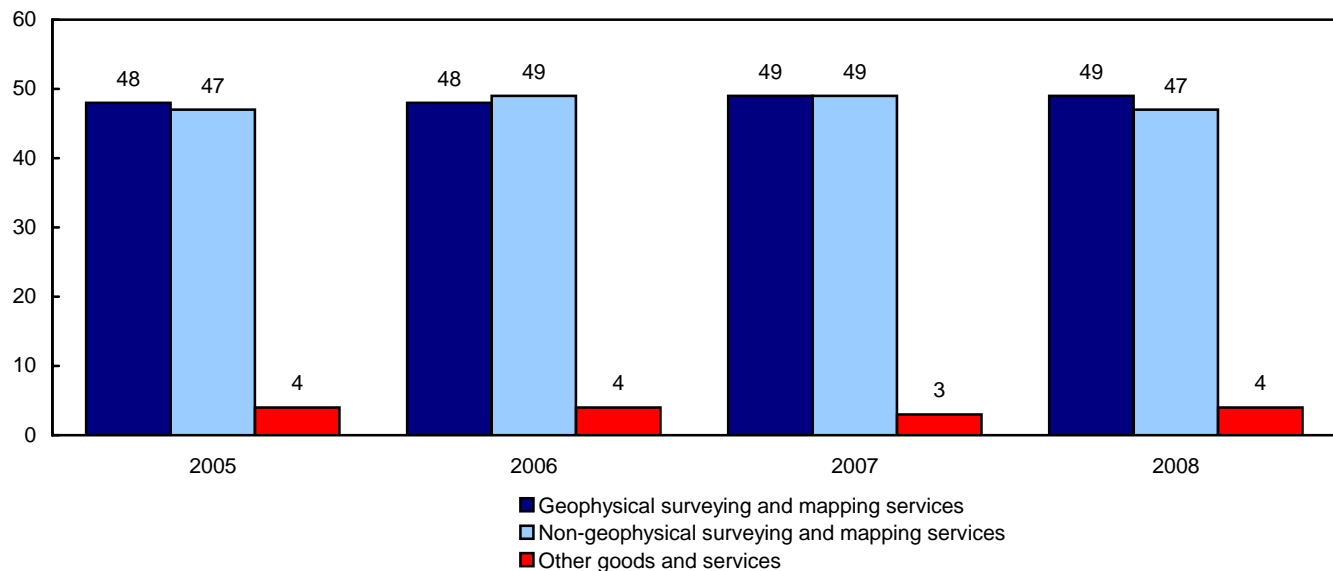
**Sales by Type of Product or Service**

In 2008, estimates from the “sampled”<sup>1</sup> portion show that sales of geophysical surveying and mapping services represented 49% of industry total sales, non-geophysical surveying and mapping services represented 47% and the remaining 4% were for sales of all other goods and services. These values have remained stable year over year.

1. The smallest firms, in terms of revenues earned, are not included in these estimates. These firms account for a relatively small portion of total industry revenues.

**Chart 6**  
Sales by type of goods and services of the surveying and mapping services industry

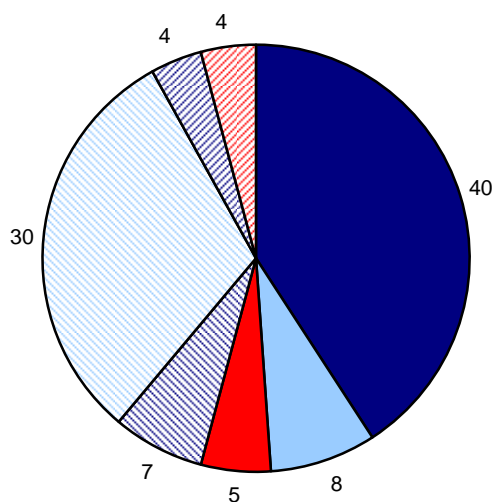
percent



**Note(s):** Due to rounding, components may not add to total.

More precisely, (1) geophysical services and geophysical borehole logging surveys and (2) boundary, property line and cadastral surveying and mapping, subdivision layout and design and construction surveying were the service categories that generated the most sales, accounting for 40% and 30% respectively of the value of total sales.

**Chart 7**  
**Distribution in percentage of 2008 sales by type of goods or services**



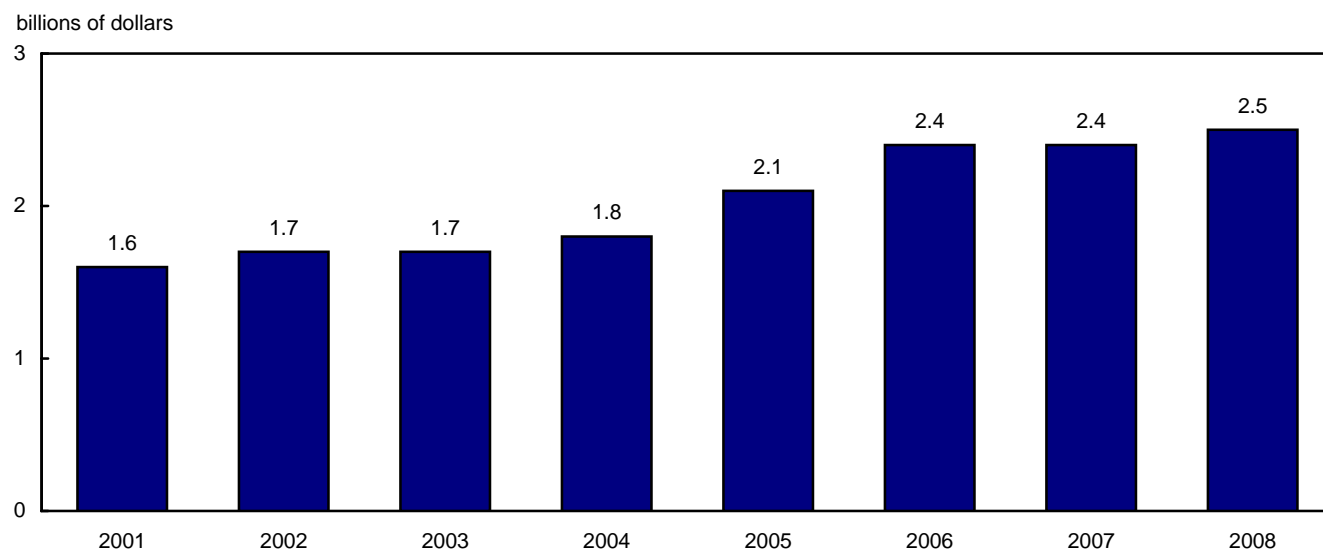
- Geophysical services and geophysical borehole logging surveys
- Geophysical data sales
- Geospatial photo, image and data acquisition, processing and interpretation
- Topographic, planimetric, hydrographic and bathymetric surveying and mapping services
- Boundary, property line and cadastral surveying and mapping, subdivision layout and design and construction surveying
- Geodetic surveying, ground control support, thematic and orthophoto mapping and aeronautical and nautical charting
- Other goods and services

**Note(s):** Due to rounding, components may not add to total.

## Industry Operating Expenses

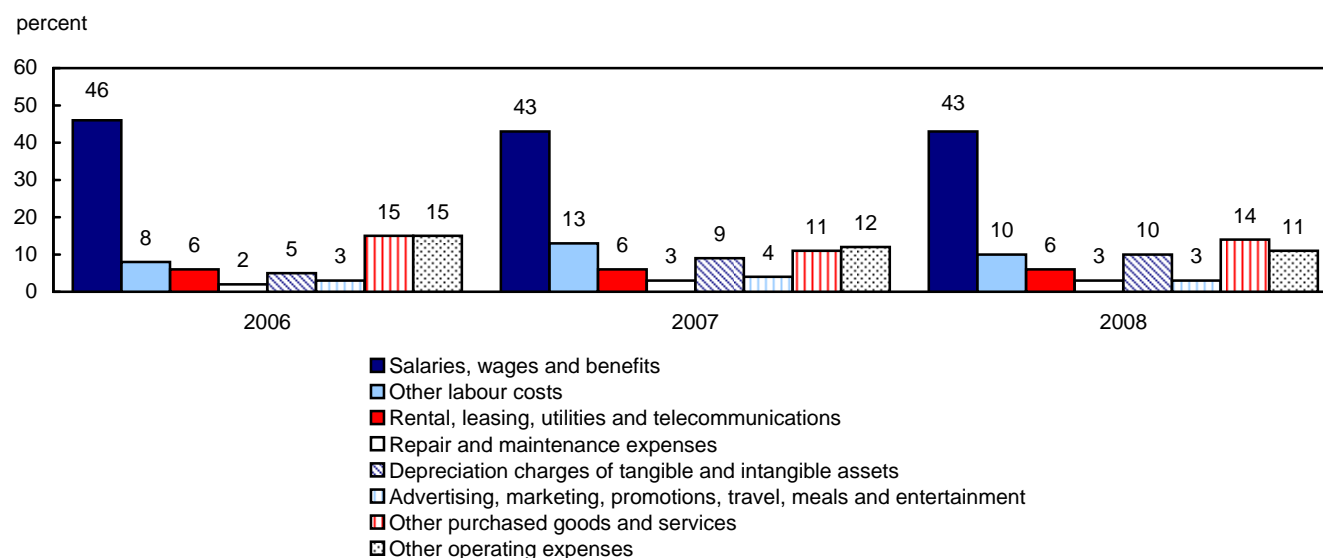
In 2008, the industry's operating expenses reached \$2.5 billion, which is comparable to the levels of 2006 and 2007.

**Chart 8**  
**Operating expenses of the surveying and mapping services industry**



There has not been much of a change in the distribution of operating expenses over the last three years. The data from the “sampled”<sup>2</sup> portion of the industry shows that salaries, wages and benefits of employees amount to 43% of total operating expenses. Combined with other labour costs (10%), these two categories make up more than half of the total operating expenses. The remaining 47% is distributed among various categories.

**Chart 9**  
**Expenses as a percentage of total operating expenses of the surveying and mapping services industry**



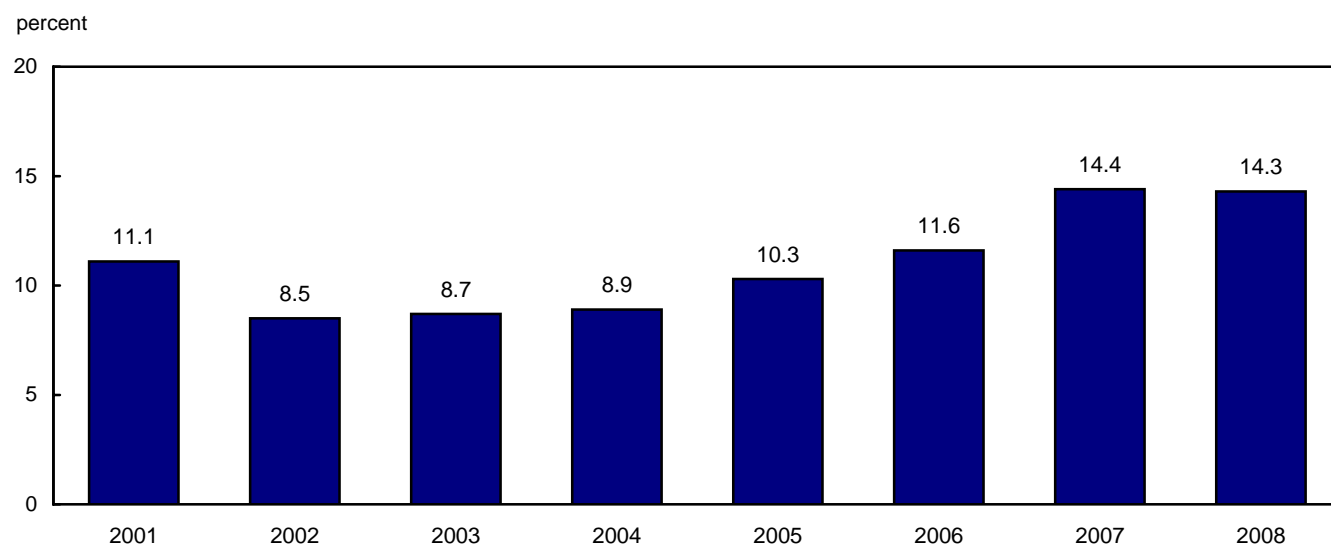
**Note(s):** Due to rounding, components may not add to total.

2. The smallest firms, in terms of revenues earned, are not included in these estimates. These firms account for a relatively small portion of total industry revenues.

## Operating Profit

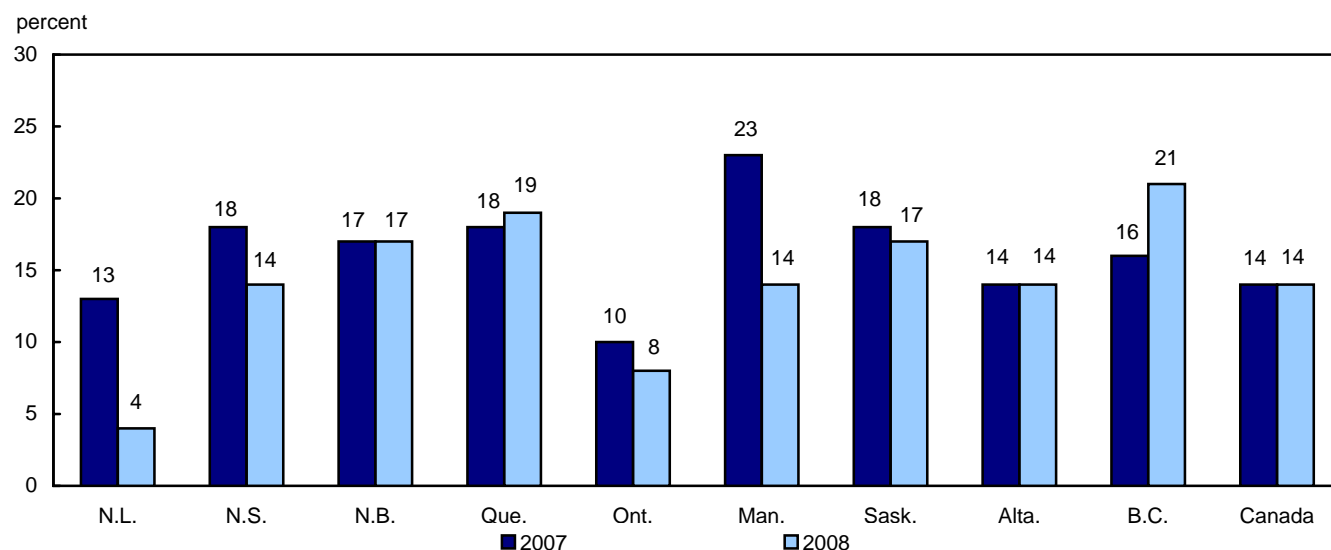
The growth of operating expenses (5.1%) was slightly higher than the growth of operating revenues (5.0%); therefore the operating profit margin ratio of the industry declined slightly in 2008, from 14.4% in 2007 to 14.3%. This has flattened out compared to previous years where there was an increase of the profit margin ratio every year from 2002 (8.5%) to 2007 (14.4%).

**Chart 10**  
**Operating Profit Margin of the surveying and mapping services industry**



The operating profit margin ratio does vary significantly from one province to another and can also vary significantly from one year to another.

**Chart 11**  
**Operating Profit Margin by province of the surveying and mapping services industry**



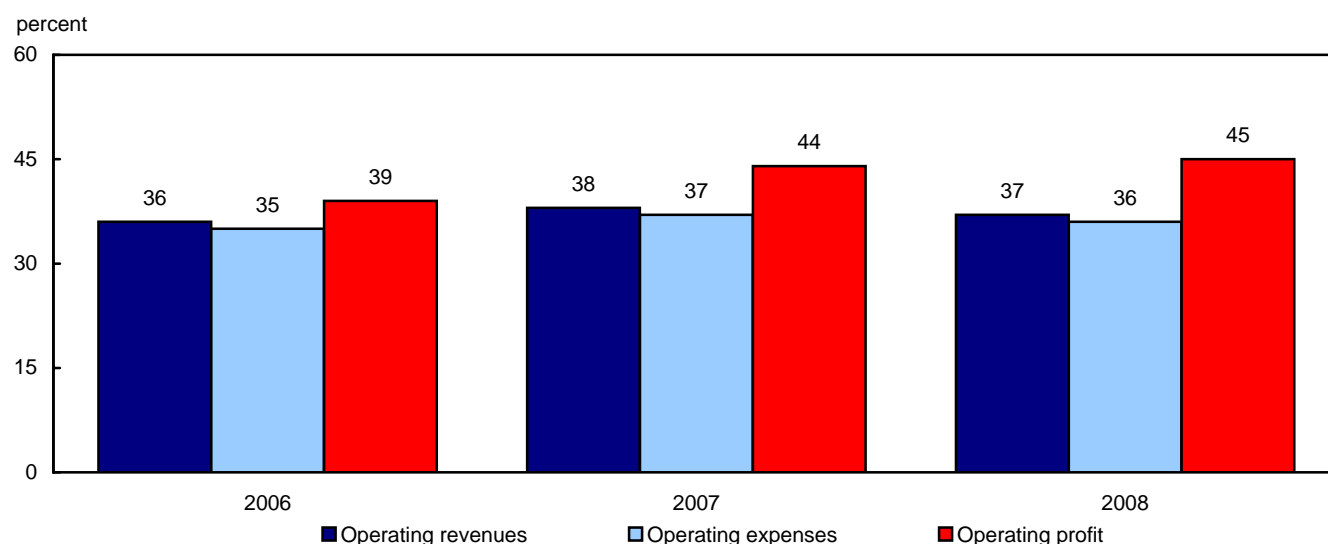


### The 20 Largest Firms in the Industry by Revenue

The Surveying and Mapping Services Industry is composed of a small number of firms with large revenues but the majority of firms generate more modest revenues. The 20 largest firms generated 37% of the industry operating revenues in 2008 and 36% of the industry operating expenses. These ratios are rather stable from year to year.

**Chart 12**

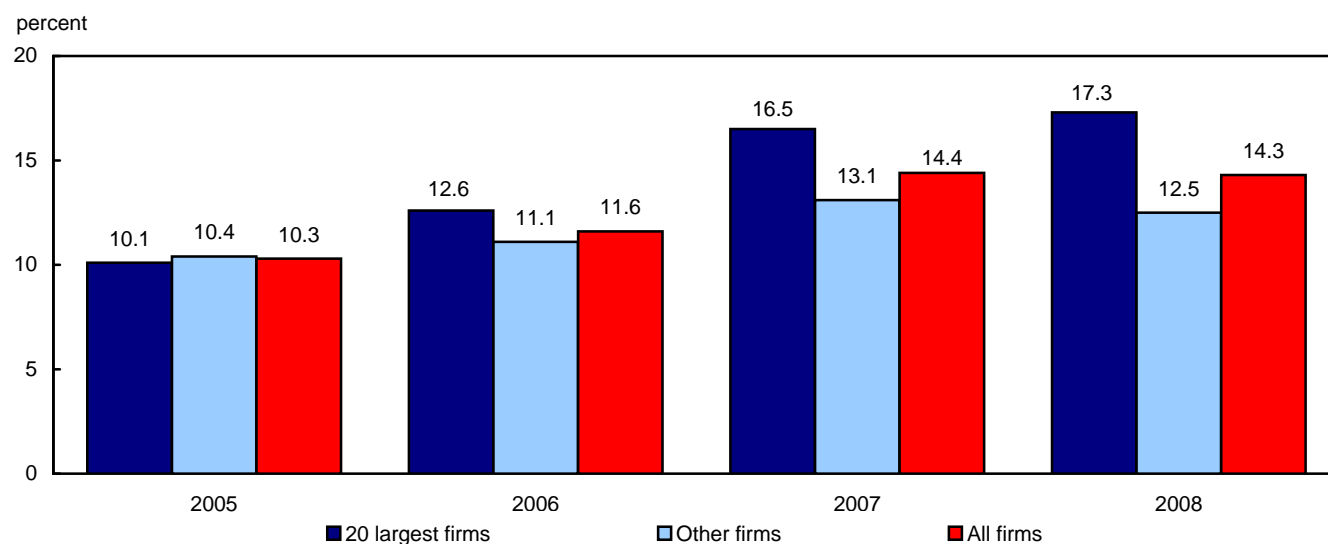
**Portion of the 20 largest firms of the surveying and mapping services industry**



In 2005, the operating profit margin ratio was similar for the 20 largest firms and for all other firms of the industry. However, from 2006 onward, the 20 largest firms increased their profitability significantly more than the other firms and as a result, the 20 largest firms now generate 45% of the industry operating profit.

**Chart 13**

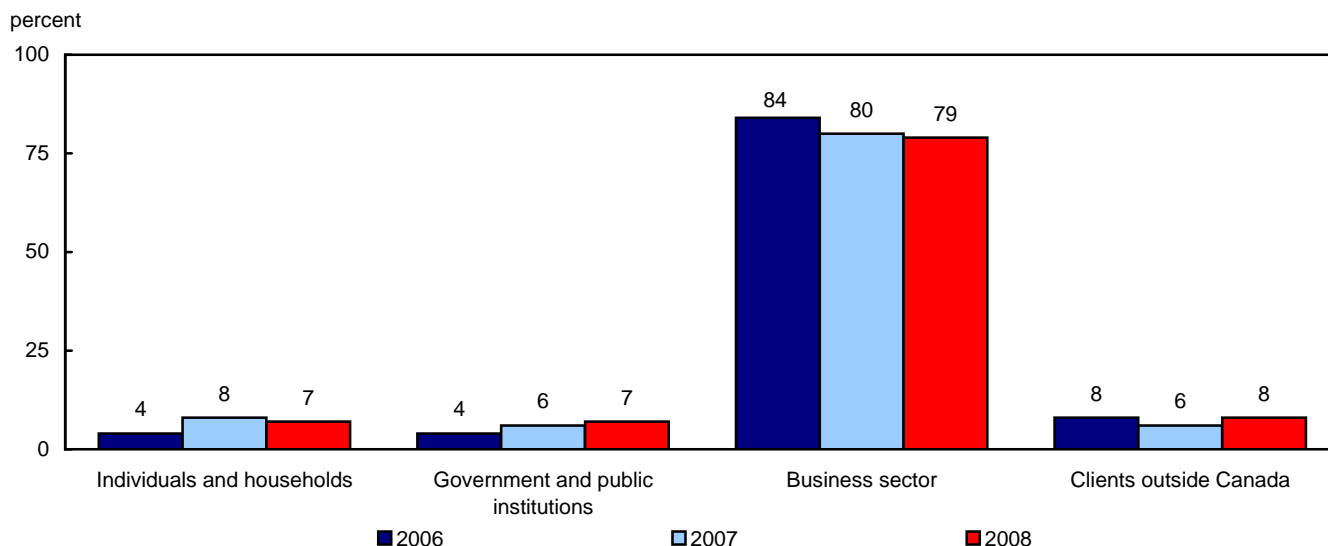
**Operating Profit Margin of the surveying and mapping services industry**



## Type of Client

From the 2008 “sampled”<sup>3</sup> portion, 79% of the industry sales were from the business sector while individuals and households (7%) and government and public institutions (7%) make up the remaining sales to clients in Canada. Gradually from 2006, the clients of the industry are less from the business sector and more from the other categories.

**Chart 14**  
Sales by type of client of the surveying and mapping services industry



**Note(s):** Due to rounding, components may not add to total.

3. The smallest firms, in terms of revenues earned, are not included in these estimates. These firms account for a relatively small portion of total industry revenues.

## Statistical tables

Table 1

Summary statistics for the surveying and mapping services industry, by province and territory, 2005 to 2008

	Operating revenue	Operating expenses	Salaries, wages and benefits	Operating profit margin
	millions of dollars			percent
<b>2008 p</b>				
Newfoundland and Labrador	30.1	28.9	13.9	4.1
Prince Edward Island	x	x	x	x
Nova Scotia	34.2	29.5	13.6	13.8
New Brunswick	20.9	17.3	10.2	17.4
Quebec	286.9	233.1	113.4	18.7
Ontario	406.5	374.2	178.1	8.0
Manitoba	30.5	26.2	9.2	14.0
Saskatchewan	97.4	80.5	34.1	17.4
Alberta	1,693.9	1,454.7	546.6	14.1
British Columbia	256.1	201.9	96.8	21.2
Territories <sup>1</sup>	x	x	x	x
<b>Canada</b>	<b>2,886.2</b>	<b>2,473.9</b>	<b>1,027.2</b>	<b>14.3</b>
<b>2007 r</b>				
Newfoundland and Labrador	25.2	22.1	13.7	12.5
Prince Edward Island	x	x	x	x
Nova Scotia	29.3	24.1	10.6	17.9
New Brunswick	14.0	11.6	7.3	17.4
Quebec	270.4	222.5	101.0	17.7
Ontario	380.3	344.2	163.9	9.5
Manitoba	26.7	20.4	8.7	23.4
Saskatchewan	85.5	70.5	33.1	17.6
Alberta	1,645.0	1,408.6	568.6	14.4
British Columbia	240.8	201.5	98.6	16.3
Territories <sup>1</sup>	x	x	x	x
<b>Canada</b>	<b>2,748.8</b>	<b>2,353.9</b>	<b>1,017.4</b>	<b>14.4</b>
<b>2006 r</b>				
Newfoundland and Labrador	16.8	14.7	8.1	12.6
Prince Edward Island	x	x	x	x
Nova Scotia	25.0	21.5	9.7	14.2
New Brunswick	12.3	10.4	6.5	15.5
Quebec	222.1	181.5	79.7	18.3
Ontario	337.2	311.0	163.6	7.8
Manitoba	21.8	19.2	7.7	12.1
Saskatchewan	61.0	52.2	24.6	14.4
Alberta	1,745.3	1,559.0	668.7	10.7
British Columbia	229.3	189.0	82.9	17.6
Territories <sup>1</sup>	x	x	x	x
<b>Canada</b>	<b>2,704.5</b>	<b>2,390.9</b>	<b>1,065.3</b>	<b>11.6</b>
<b>2005</b>				
Newfoundland and Labrador	14.4	12.5	6.3	12.8
Prince Edward Island	x	x	x	x
Nova Scotia	24.5	19.7	10.8	19.8
New Brunswick	12.1	9.9	5.4	17.8
Quebec	201.8	169.2	78.2	16.2
Ontario	325.5	288.6	143.7	11.3
Manitoba	14.7	13.1	4.3	10.8
Saskatchewan	49.0	41.9	21.3	14.6
Alberta	1,441.4	1,321.4	527.0	8.3
British Columbia	179.3	152.5	68.4	15.0
Territories <sup>1</sup>	x	x	x	x
<b>Canada</b>	<b>2,287.3</b>	<b>2,052.3</b>	<b>873.9</b>	<b>10.3</b>

1. Territories include: Yukon Territory, Northwest Territories and Nunavut.

**Note(s):** According to the North American Industry Classification System (NAICS 541360 + 541370). See "Data sources, definitions and methodology" at the end of tables for definition of terms.

**Table 2**  
**Expenditures as a percentage of total operating expenses for the surveying and mapping services industry,<sup>1</sup>**  
**Canada, 2005 to 2008**

	percent
<b>Salaries, wages and benefits</b>	
2008 p	42.7
2007 r	42.7
2006 r	45.5
2005	43.0
<b>Other labour costs</b>	
2008 p	10.4
2007 r	12.6
2006 r	8.2
2005	10.3
<b>Rental, leasing, utilities and telecommunications</b>	
2008 p	6.1
2007 r	6.1
2006 r	5.6
2005	6.2
<b>Repair and maintenance expenses</b>	
2008 p	3.4
2007 r	3.2
2006 r	2.1
2005	2.0
<b>Depreciation charges of tangible and intangible assets</b>	
2008 p	9.5
2007 r	9.2
2006 r	5.3
2005	5.6
<b>Advertising, marketing, promotions, travel, meals and entertainment</b>	
2008 p	3.5
2007 r	3.7
2006 r	3.3
2005	3.4
<b>Other purchased goods and services</b>	
2008 p	13.9
2007 r	10.7
2006 r	15.0
2005	10.2
<b>Other operating expenses</b>	
2008 p	10.5
2007 r	11.9
2006 r	14.9
2005	19.4

1. The smallest firms, in terms of revenues earned, are not included in the estimates of this table. These firms account for a relatively small portion of total industry revenues.

**Note(s):** According to the North American Industry Classification System (NAICS 541360 and 541370). See "Data sources, definitions and methodology" at the end of tables for definition of terms. Due to rounding, components may not add to total.

**Table 3**  
**Sales by type of client for the surveying and mapping services industry,<sup>1</sup> Canada, 2005 to 2008**

	percent
<b>Clients in Canada</b>	
2008 p	92.4
2007 r	94.5
2006 r	92.2
2005	95.1
Individuals and households	
2008 p	7.1
2007 r	7.7
2006 r	4.1
2005	2.8
Governments, not-for-profit organizations and public institutions	
2008 p	6.7
2007 r	6.3
2006 r	4.4
2005	2.9
Business sector	
2008 p	78.6
2007 r	80.4
2006 r	83.7
2005	89.4
<b>Clients outside Canada</b>	
2008 p	7.6
2007 r	5.5
2006 r	7.8
2005	4.9

1. The smallest firms, in terms of revenues earned, are not included in the estimates of this table. These firms account for a relatively small portion of total industry revenues.

**Note(s):** According to the North American Industry Classification System (NAICS 541360 and 541370). See "Data sources, definitions and methodology" at the end of tables for definition of terms. Due to rounding, components may not add to total.

**Table 4**  
**Sales by type of goods and services for the surveying and mapping services industry,<sup>1</sup> 2007 and 2008**

	2007	2008
	percent	
<b>Geophysical surveying and mapping services</b>	48.8	48.8
Geophysical services and geophysical borehole logging surveys	39.5	40.4
Geophysical data sales	9.3	8.4
<b>Non-geophysical surveying and mapping services</b>	48.7	46.8
Geospatial photo, image and data acquisition, processing and interpretation	3.0	5.4
Topographic, planimetric, hydrographic and bathymetric surveying and mapping services	7.2	7.4
Boundary, property line and cadastral surveying and mapping, subdivision layout and design and construction surveying	34.0	30.2
Geodetic surveying, ground control support, thematic and orthophoto mapping and aeronautical and nautical charting	4.4	3.9
<b>Other goods and services</b>	2.5	4.4
<b>Total</b>	100.0	100.0

1. The smallest firms, in terms of revenues earned, are not included in the estimates of this table. These firms account for a relatively small portion of total industry revenues.

**Note(s):** According to the North American Industry Classification System (NAICS 541360 and 541370). See "Data sources, definitions and methodology" at the end of tables for definition of terms. Due to rounding, components may not add to total.

## Data sources, definitions and methodology

### Description

This annual sample survey collects the financial and operating data needed to produce statistics on the Surveying and Mapping Services industry in Canada. The survey also collects detailed information on the characteristics of the businesses, such as type of revenue and type of client. These data are aggregated with information from other sources to produce official estimates of the national and provincial economic production of the Surveying and Mapping Services industry in Canada. The results from this survey provide data to businesses, governments, investors, and associations. These data allow these groups to monitor the growth of the industry, measure performance, allow comparison across similar businesses and to better understand this industry to react to trends and patterns.

### Target population

The target population consists of all establishments classified to the Surveying and Mapping Services industry (NAICS 541360 and 541370) according to the North American Industry Classification System (NAICS) during the reference year. This industry comprises establishments primarily engaged in gathering, interpreting and mapping geophysical data. These establishments often specialize in locating and measuring the extent of subsurface resources such as oil, gas and minerals. These establishments are also engaged in providing surveying and mapping services of the surface of the earth, including the sea floor.

### Industry structure

Under the North American Industrial Classification System (NAICS), the Surveying and Mapping Services industry consists of Geophysical Surveying and Mapping Services (541360) and Surveying and Mapping (except Geophysical) Services (541370).

### Geophysical surveying and mapping services – 541360

This industry group comprises establishments primarily engaged in gathering, interpreting and mapping geophysical data. These establishments often specialize in locating and measuring the extent of subsurface resources, such as oil, gas and minerals, but they may also conduct surveys for engineering purposes. A variety of surveying techniques are used, including seismic, magnetic, gravity, electrical and electromagnetic, radioactive and remote sensing, depending on the purpose of the survey.

### Surveying and mapping (except geophysical) services – 541370

This industry group comprises establishments primarily engaged in providing surveying and mapping services of the surface of the earth, including the sea floor. These services may include surveying and mapping of areas above or below the surface of the earth, such as the creation of view easements or segregating rights in parcels of land by creating underground utility easements. Examples of activities are: cadastral and topographic surveying and mapping services; control surveying services, such as geodesy and Global Positioning System (GPS) surveying; cartographic surveying services, including photogrammetric mapping; geographic information system (GIS) base mapping and quality control services; and geospatial mapping services.

Data users who wish to learn more about NAICS, its underlying principles, and many of the other statistical concepts discussed in this brief summary, are referred to the Introduction section of the Statistics Canada publication "North American Industry Classification System: Canada 2007" (catalogue no. 12-501-XPE).

## Sampling

This is a sample survey with a cross-sectional design.

The frame is the list of establishments from which the portion eligible for sampling is determined and the sample is taken. The frame provides basic information about each firm including address, industry classification, and information from administrative data sources. The frame is maintained by Statistics Canada's Business Register and is updated using administrative data. The basic objective of the survey is to produce estimates for the whole industry - incorporated and unincorporated businesses. The data come from two different sources: a sample of all businesses with revenue above or equal to a certain threshold (note: the threshold varies between surveys and sometimes between industries and provinces in the same survey) for which either survey or administrative data may be used; and administrative data only for businesses with revenue below the specified threshold. It should be noted that only financial information is available from businesses below the threshold; e.g., revenue, and expenses such as depreciation and salaries, wages and benefits. Detailed characteristics are collected only for surveyed establishments. Prior to the selection of a random sample, establishments are classified into homogeneous groups (i.e., groups with the same NAICS codes and same geography). Quality requirements are targeted, and then each group is divided into sub-groups called strata: take-all, must-take, and take-some. The take-all stratum represents the largest firms in terms of performance (based on revenue) in an industry. The must-take stratum is comprised of units selected based on complex structural characteristics (multi-establishment, multi-legal, multi-NAICS, or multi-province enterprises). All take-all and must-take firms are selected to the sample. Units in the take-some strata are subject to simple random sampling. The effective sample size for reference year 2008 was 535 collection entities.

## Definitions

Estimates for the most recent year are preliminary. Preliminary data are subject to revision.

**Operating revenue** excludes investment income, capital gains, extraordinary gains and other non-recurring items.

**Operating expenses** exclude write-offs, capital losses, extraordinary losses, interest on borrowing, and other non-recurring items.

**Operating profit margin** is derived as follows: operating revenue minus operating expenses, expressed as a percentage of operating revenue. The derived figure excludes corporation income tax paid by incorporated businesses and individual income tax paid by unincorporated businesses. For unincorporated businesses, operating profit margin includes unpaid remuneration to partners and proprietors, which is not recorded as salaries, wages and benefits. Therefore the profit estimate will be higher in industries where unincorporated proprietorships and partnerships are significant contributors.

**Salaries, wages and benefits** include vacation pay and commissions for all employees for whom a T4 slip was completed. This category also includes the employer portion of employee benefits for items such as Canada/Québec Pension Plan or Employment Insurance premiums. Salaries and wages do not include working owners' dividends nor do they include the remuneration of owners of unincorporated business. Therefore the relative level of salaries, wages and benefits will be lower in industries where unincorporated businesses are significant contributors.

## Quality evaluation

Prior to dissemination, combined survey results are analyzed for comparability; in general, this includes a detailed review of individual responses (especially for the largest companies), general economic conditions, historic trends, and comparisons with other data sources.

**Disclosure control**

Statistics Canada is prohibited by law from releasing any data which would divulge information obtained under the Statistics Act that relates to any identifiable person, business or organization without the prior knowledge or the consent in writing of that person, business or organization. Various confidentiality rules are applied to all data that are released or published to prevent the publication or disclosure of any information deemed confidential. If necessary, data are suppressed to prevent direct or residual disclosure of identifiable data.

**Data accuracy**

Of the units contributing to the estimate, the (weighted) response rate was 89.3%. CVs were calculated for each estimate and are available upon request.

**Related products****CANSIM**

Available on CANSIM: table 360-0006 - Summary statistics for surveying and mapping services (all establishments), by North American Industry Classification System (NAICS), annual (75 series)

**Survey(s)**

Definitions, data sources and methods: survey number 4715 - Annual Survey of Service Industries: Surveying and Mapping

**Publications**

Service Industries Newsletter, Catalogue no. 63-018-X.

Analytical paper series - Service Industries Division, Catalogue no. 63F0002X.



Release date: March 2010

### 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 <sup>s</sup>	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
p	preliminary
r	revised
x	suppressed to meet the confidentiality requirements of the <i>Statistics Act</i>
E	use with caution
F	too unreliable to be published

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