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Key Small Business Statistics

Special Edition: Growth Map of Canadian Firms

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Foreword

Key Small Business Statistics is a semi-annual publication that provides baseline data on the small business sector in Canada. This fourteenth edition includes five new sections on growth performance of Canadian firms.

The following section has been updated with new data:

- How many businesses are there in Canada?

The ***Growth Map of Canadian Firms*** has been added to this special edition of *Key Small Business Statistics* and presents information on the following:

- Background
- Data Sources and Methodology
- Distribution of Firms in Canada by Growth Rate
- Employment Generation and Revenue Performance across the Growth Distribution
- International Comparisons

The next edition of *Key Small Business Statistics* will update data on job creation, earnings by business size, numbers of self-employed workers, women entrepreneurs and innovation by business size.

This new edition and previous publications are available on the Small Business Research and Policy website at www.ic.gc.ca/sbresearch.

Highlights

Number of Businesses in Canada

- Industry Canada's definition of "small business" is firms that have fewer than 100 employees.
- There are just over one million small businesses in Canada that have employees (excludes self-employed entrepreneurs). Ninety-eight percent of businesses in Canada have fewer than 100 employees.

Growth Map of Canadian Firms

The Organisation for Economic Co-operation and Development (OECD) defines high-growth firms as those with an average annualized growth rate greater than 20 percent per annum, over a three-year period, and with 10 or more employees at the beginning of the period. Canadian data relate to enterprises with 10 to 249 employees, and with less than \$50 million in revenue.

Overview

This special article examines the growth distribution of firms across 11 intervals using both employment and revenue to define growth. Enterprises with 10 to 249 employees and between \$30 000 and less than \$50 million in revenue in the first year of study and that have been active throughout the entire reference period are included. Analyses by firm size and industry, as well as employment created and revenue generated, are provided.

Distribution of Canadian Firms by Growth Rate

- From 2001 to 2006, large percentages of firms exhibited negative or slightly positive growth: over 58 percent in terms of employment and 42 percent in terms of revenue experienced -20 percent to 1 percent growth.
- Revenue exhibited more positive growth rates compared with employment. Nearly 58 percent of firms grew their revenues by more than 1 percent per year compared with 41 percent of firms that increased their employment by more than 1 percent per year.
- High-growth firms — those with an average annualized growth rate greater than 20 percent over a three-year period, and with 10 or more employees at the beginning of the period — are more prevalent in terms of revenue growth than employment growth. Over the 2003–2006 period, only 4.7 percent of firms achieved high growth in employment, whereas 12 percent of firms grew revenues by 20 percent per year.

- The distribution of firms, by firm size, based on revenue growth suggests that growth is not necessarily linked to firm size.
- The most significant differences between employment and revenue distributions are evident at the industry level. In the management of companies and enterprises sector, nearly 60 percent of firms had positive revenue growth, whereas just over 30 percent of firms had positive employment growth.
- Industries with a high proportion of growth firms (on a revenue basis) were utilities (25 percent), mining, quarrying, and oil and gas extraction (23.5 percent), and management of companies and enterprises (13.5 percent).

Employment Creation and Revenue Generated

- Between 2001 and 2006, firms with more than 20 percent average annual employment growth recorded the highest number of jobs created over all growth intervals.
- Forty-three percent of the total change in employment is accounted for by high-growth firms and firms that experienced more than 20 percent reduction in employment growth per year. High-growth firms created 70 jobs per firm while those that experienced more than 20 percent reduction in employment growth shed 25 jobs per firm.
- Revenue generation reveals the exceptional performance of high-growth firms. From 2001 to 2006, high-growth firms increased total revenues by about \$80 billion or \$30 million per firm, more than offsetting the revenue reductions of declining firms (about \$67 billion).

International Comparisons

- Canada's growth distribution of firms is similar to that of other countries observed (Austria, Denmark, Italy, Netherlands, Spain and the United States), exhibiting a bimodal distribution of firm growth.
- In six of the seven countries examined, high-growth firms represented the smallest proportion of the total number of firms observed, but they contributed significantly to employment.
- Canada's performance in terms of the total change in employment differs from that of other industrial countries, exhibiting a smooth, continuous relationship between growth and employment change. Other countries exhibited more complex patterns.

Number of Businesses in Canada

When is a business “small”?

The size of a business can be defined in many ways, by the value of its annual sales or shipments, for example, or by its annual gross or net revenue, the size of its assets or the number of its employees.

Many institutions define small businesses according to their own needs — the Canadian Bankers Association classifies a company as “small” if it qualifies for a loan authorization of less than \$250 000, whereas the Export Development Corporation defines small or “emerging” exporters as firms with export sales under \$1 million. In some instances, Industry Canada has used a definition based on the number of employees, which varies according to the sector — goods-producing firms are considered “small” if they have fewer than 100 employees, whereas for service-producing firms the cut-off point is 50 employees. Above that size, and up to 499 employees, a firm is considered medium-sized. The smallest of small businesses are called micro-enterprises, most often defined as having fewer than five employees. The term “SME” (for small and medium-sized enterprise) refers to all businesses with fewer than 500 employees, whereas firms with 500 or more employees are classified as “large” businesses.

As will be seen, in practice, reporting on small businesses seldom adheres to any strict definition due to data limitations.

How many businesses are there in Canada?

Statistics Canada’s *Business Register* maintains a count of business establishments¹ and publishes results twice a year. Business establishments can belong to the same company; each company owns at least one business establishment. For an individual business establishment to be included in the *Business Register*, the company to which it belongs must meet at least one of the following minimum criteria: it must have at least one paid employee (with payroll deductions remitted to the Canada Revenue Agency (CRA)), it must have annual sales revenues of \$30 000, or it must be incorporated and have filed a federal corporate income tax return at least once in the previous three years.

1. Statistics Canada uses four standard business units for purposes of compiling statistics. Establishments are the smallest unit/grouping for which data are published. Establishments must:

- a) produce a homogeneous set of goods or services;
- b) not cross provincial boundaries; and
- c) provide data on the value of output together with the cost of principal intermediate inputs used, along with the cost and quantity of labour resources used to produce the output.

For example, a business unit of a larger enterprise that provides independent accounting information to the government on sales taxes and payroll deductions would be recognized as an individual business establishment.

As of June 2009, there were more than 2.3 million business establishments² in Canada, as shown in Table 1, which is very similar to the number of establishments in December 2008. About half of all business establishments are called “employer businesses” because they maintain a payroll of at least one person (possibly the owner). The other half are classified as “indeterminate” because they do not have any employees registered with the CRA. Such businesses may indeed have no workforce (they may simply be paper entities that nonetheless meet one of the criteria for recognition as a business establishment) or they may have contract workers, family members and/or only the owners working for them. The “indeterminate” category was created because information about their workforce is not available.

Table 1: Total Number of Business Establishments, and Number of Establishments Relative to Provincial/Territorial Population and Gross Domestic Product, June 2009

Provinces/Territories	No. of Business Establishments			No. of Establishments per 1000 Population	GDP per Business Establishment (\$ thousands)
	Total	Employer Businesses	Indeterminate ¹		
Newfoundland and Labrador	25 202	16 968	8 234	49.7	1 248
Prince Edward Island	9 985	5 805	4 180	71.2	472
Nova Scotia	52 518	29 947	22 571	56.0	651
New Brunswick	41 241	25 364	15 877	55.1	662
Quebec	456 948	236 150	220 798	58.5	660
Ontario	857 077	372 653	484 424	65.8	686
Manitoba	74 128	34 830	39 298	61.0	686
Saskatchewan	90 313	36 794	53 519	88.1	712
Alberta	327 194	149 475	177 719	89.2	891
British Columbia	348 688	168 206	180 482	78.6	571
Yukon Territory	2 742	1 556	1 186	81.7	729
Northwest Territories	2 495	1 561	934	57.6	2 172
Nunavut	798	585	213	25.0	1 876
Canada Total	2 289 329	1 079 894	1 209 435	68.1	700

Source: Statistics Canada, *Business Register*, June 2009; National Income and Expenditure Accounts 2008; Estimates of Population by Age and Gender for Canada, the Provinces and the Territories, June 2009.

Note 1: The “indeterminate” category consists of incorporated or unincorporated businesses that do not have a Canada Revenue Agency payroll deductions account. The workforce of such businesses may consist of contract workers, family members and/or owners.

2. This number includes both commercial and non-commercial business establishments.

Fifty-seven percent of all business establishments in Canada are located in Ontario and Quebec. Virtually all the rest are divided between the western provinces (37 percent) and the Atlantic provinces (6 percent). The Northwest Territories, Yukon and Nunavut represent only 0.3 percent of Canada's businesses.

Relative to population, the western provinces, Yukon and Prince Edward Island have more business establishments than elsewhere, with the highest rates in Alberta and Saskatchewan at 89.2 and 88.1 per 1000 population respectively. Nunavut, Newfoundland and Labrador, New Brunswick and Nova Scotia have the lowest ratios of business establishments per 1000 population. Ontario and Quebec are below the national average of 68.1, with 65.8 and 58.5 business establishments per 1000 population respectively.

In terms of gross domestic product (GDP) per business establishment by province, the Northwest Territories shows the highest ratio at \$2 172 000 per establishment. (This is likely due, in part, to the low number of establishments per 1000 residents; therefore, its GDP is spread over fewer establishments.) More broadly, there is a noticeable negative relationship between the number of establishments per 1000 inhabitants and contribution to GDP per establishment in that a higher number of establishments per 1000 population corresponds to a lower GDP per establishment. Alberta is an exception to this rule, with a relatively high GDP per establishment as well as a high number of establishments per 1000 residents.

Of the 1 079 894 employer businesses, 2991 or about 0.3 percent have 500 employees or more, 1 056 803 employer businesses (98 percent) have fewer than 100 employees, 75 percent have fewer than 10 employees and 55 percent have only 1 to 4 employees (see Table 2).

Table 2: Number of Business Establishments by Sector and Firm Size (Number of Employees), June 2009

Number of Employees	Cumulative percent of Employer Businesses	No. of Business Establishments		
		Total	Goods-Producing Sector ²	Service-Producing Sector ²
Indeterminate ¹		1 209 435	298 350	911 085
<i>Employer Business Total</i>	<i>100.0</i>	<i>1 079 894</i>	<i>238 092</i>	<i>841 802</i>
1–4	54.8	592 054	131 925	460 129
5–9	75.0	218 153	47 104	171 049
10–19	87.3	132 512	27 461	105 051
20–49	95.2	85 225	18 950	66 275
50–99	97.9	28 859	6 901	21 958
100–199	99.1	13 368	3 442	9 926
200–499	99.7	6 732	1 755	4 977
500+	100.0	2 991	554	2 437
Grand Total		2 289 329	536 442	1 752 887

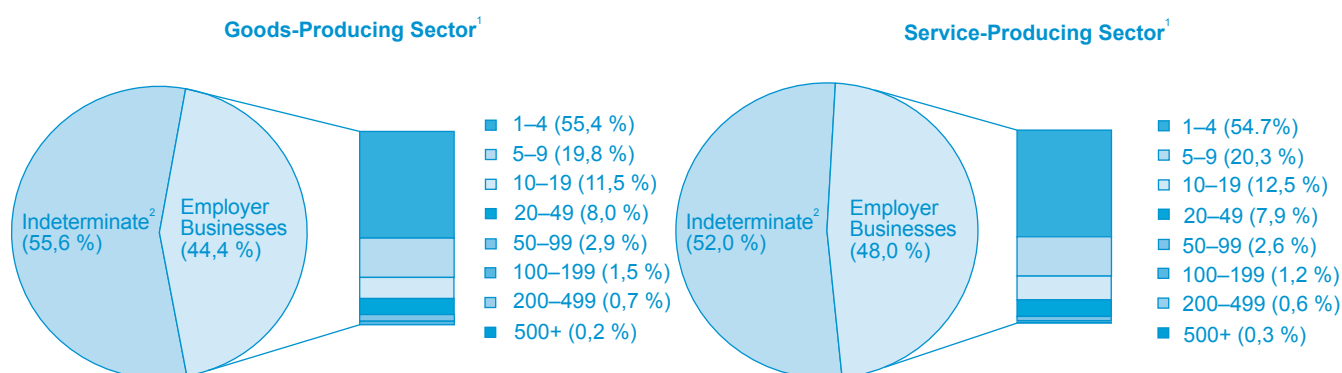
Source: Statistics Canada, *Business Register*, June 2009.

Note 1: The “indeterminate” category consists of incorporated or unincorporated businesses that do not have a Canada Revenue Agency payroll deductions account. The workforce of such businesses may consist of contract workers, family members and/or owners.

Note 2: By conventional Statistics Canada definition, the goods-producing sector consists of North American Industry Classification System (NAICS) codes 11 to 31–33, while NAICS codes 41 to 91 define the service-producing sector.

About one quarter of all business establishments (indeterminate and employer businesses alike) produce goods, whereas the remainder provide services. Small firms (those with fewer than 100 employees) make up 97 percent of goods-producing employer businesses and 98 percent of all service-producing employer businesses (Table 2 and Figure 1). Using an alternative definition of small businesses in the service-producing sector that defines small businesses as those with fewer than 50 employees, small firms account for 95 percent of all service-producing employer firms.

Figure 1: Distribution of Business Establishments in the Goods-Producing and Service-Producing Sectors by Firm Size (Number of Employees), June 2009



Source: Statistics Canada, *Business Register*, June 2009.

Note 1: By conventional Statistics Canada definition, the goods-producing sector consists of North American Industry Classification System (NAICS) codes 11 to 31-33, while NAICS codes 41 to 91 define the service-producing sector.

Note 2: The "indeterminate" category consists of incorporated or unincorporated businesses that do not have a Canada Revenue Agency payroll deductions account. The workforce of such businesses may consist of contract workers, family members and/or owners.

Table 3 shows the distribution of employer businesses by size of business establishment in each province and territory. Generally speaking, the distribution by size in the provinces is similar to the national average distribution by size. However, there is some variation among the provinces and territories; for example, there is a higher percentage of micro-enterprises (1 to 4 employees) in Alberta (59 percent) and British Columbia (57 percent) than in Ontario (55 percent), Quebec (51 percent) or the territories (from 24 percent to 49 percent).

Table 3: Employer Businesses by Firm Size (Number of Employees) in the Provinces and Territories, June 2009

Provinces/ Territories	Employer Businesses										
	Total	Percent of Total									
		1–4	5–9	10–19	20–49	50–99	Small (<100)	100–199	200–499	Medium (100–499)	Large (500+)
Newfoundland and Labrador	16 968	55.8	22.7	11.1	6.7	2.0	98.2	0.9	0.6	1.5	0.3
Prince Edward Island	5 805	52.0	22.4	13.1	8.4	2.4	98.3	0.9	0.5	1.4	0.2
Nova Scotia	29 947	55.0	20.5	12.0	7.8	2.5	97.8	1.3	0.6	1.9	0.3
New Brunswick	25 364	54.8	20.7	12.4	7.9	2.4	98.1	1.1	0.5	1.6	0.3
Quebec	236 150	51.1	22.2	13.1	8.8	2.8	97.9	1.2	0.6	1.8	0.3
Ontario	372 653	55.2	19.5	12.1	7.9	2.9	97.5	1.4	0.8	2.2	0.3
Manitoba	34 830	50.2	21.6	13.7	8.9	3.2	97.5	1.4	0.7	2.1	0.3
Saskatchewan	36 794	55.0	21.0	12.4	7.7	2.3	98.4	0.9	0.5	1.4	0.2
Alberta	149 475	59.2	18.0	11.2	7.1	2.5	98.0	1.2	0.6	1.7	0.2
British Columbia	168 206	56.6	20.0	12.1	7.3	2.4	98.3	1.0	0.5	1.5	0.2
Yukon Territory	1 556	49.2	23.3	13.5	9.6	1.9	97.6	1.4	0.8	2.2	0.2
Northwest Territories	1 561	34.7	23.8	20.1	13.8	4.5	96.7	2.4	0.7	3.1	0.2
Nunavut	585	24.1	25.0	22.9	18.6	6.5	97.1	2.1	0.7	2.7	0.2
Canada Total	1 079 894	54.8	20.2	12.3	7.9	2.7	97.9	1.2	0.6	1.9	0.3

Source: Statistics Canada, *Business Register*, June 2009.

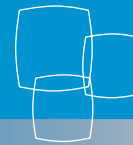
Table 4 presents the distribution of employer businesses by size of business establishment in each industry. The greatest variation across industries is found among micro-enterprises. The highest percentage of micro-industries is in professional, scientific and technical services (74.4 percent) and in agriculture, forestry, fishing and hunting (71.5 percent). The lowest percentages of micro-enterprises are found in public administration (20.7 percent), accommodation and food services (27.5 percent) and utilities (32.8 percent).

Table 4: Employer Businesses by Firm Size (Number of Employees) in Industries, June 2009

Industry (ranked by number of employer businesses)	Employer Businesses										
	Total	Percent of Total									
		1–4	5–9	10–19	20–49	50–99	Small (<100)	100– 199	200– 499	Medium (100–499)	Large (500+)
Retail Trade	131 993	38.8	30.3	16.9	8.5	3.1	97.6	1.7	0.6	2.3	0.1
Other Services	126 516	70.2	17.7	7.6	3.2	0.8	99.5	0.3	0.1	0.5	0.0
Construction	121 729	58.9	21.6	10.7	6.1	1.7	99.1	0.6	0.2	0.9	0.1
Professional, Scientific and Technical Services	120 284	74.4	12.5	7.1	4.0	1.2	99.1	0.5	0.3	0.8	0.1
Health Care and Social Assistance	86 942	54.9	21.1	12.0	6.7	2.5	97.2	1.5	0.9	2.4	0.4
Accommodation and Food Services	73 021	27.5	24.0	23.0	17.7	6.0	98.1	1.3	0.4	1.8	0.1
Wholesale Trade	62 409	45.5	23.0	16.4	10.4	3.0	98.2	1.2	0.5	1.6	0.1
Manufacturing	55 717	33.8	20.5	16.6	15.2	7.0	93.0	4.0	2.3	6.3	0.7
Administration, Waste Management	49 890	52.3	22.0	12.0	7.9	2.9	97.2	1.6	0.9	2.5	0.4
Transportation and Warehousing	49 775	65.0	14.6	9.4	6.7	2.3	98.1	1.0	0.7	1.7	0.3
Agriculture, Forestry, Fishing and Hunting	49 379	71.5	15.6	7.5	3.9	1.0	99.5	0.4	0.1	0.5	0.0
Real Estate and Rental and Leasing	40 198	66.2	17.8	9.0	4.9	1.3	99.1	0.5	0.2	0.7	0.1
Finance and Insurance	35 183	54.3	17.1	11.6	12.0	2.4	97.4	1.2	0.8	2.0	0.6
Arts, Entertainment and Recreation	17 170	45.3	21.6	14.5	11.4	4.2	97.0	2.0	0.7	2.7	0.4
Management of Companies and Enterprises	14 969	60.0	14.3	9.2	7.8	3.8	95.2	2.1	1.6	3.7	1.2
Information and Cultural Industries	13 274	50.4	17.5	12.6	11.5	4.0	96.0	2.2	1.1	3.3	0.7
Educational Services	12 269	42.8	19.6	15.1	11.2	4.1	92.8	2.0	1.7	3.7	3.5
Mining, Quarrying, and Oil and Gas Extraction	9 970	56.5	14.1	12.3	9.8	3.7	96.4	1.8	1.2	3.0	0.6
Public Administration	7 909	20.7	17.3	16.7	18.6	9.6	83.0	7.4	5.3	12.7	4.3
Utilities	1 297	32.8	20.9	18.0	11.6	7.2	90.5	3.9	3.0	6.9	2.5
Canada Total	1 079 894	54.8	20.2	12.3	7.9	2.7	97.9	1.2	0.6	1.9	0.3

Source: Statistics Canada, *Business Register*, June 2009.

Growth Map of Canadian Firms



By Chris Parsley and Sonja Djukic

A. Background

The Canadian economy is dynamic, involving a great deal of churning, i.e., entry and exit of firms. Within this ever-changing environment, start-ups and new firms are very important for creating jobs and wealth. Those firms that achieve high growth in a short period of time tend to make very large contributions in terms of employment and wealth creation. This is one of the reasons for the rising interest in growth firms over the past years among policy-makers and academics, and Industry Canada's research on growth firms.

Industry Canada's Research on Growth Firms

Since early 2003, Industry Canada has examined growth firms over a period extending from the early 1990s to the early 2000s and has produced a number of research reports. The findings of Industry Canada's research are summarized in *Profile of Growth Firms: A Summary of Industry Canada Research*,³ which indicated that 4 percent of hyper-growth firms were responsible for 45 percent of net jobs created over the period from 1993 to 2003. These firms were evenly distributed across Canada's regions and were found in all sectors of the economy. The rapidly growing firms were not concentrated in high-tech or high-knowledge industries. Moreover, they tended to be innovative, more export intensive and required a broader suite of financing instruments.

These rapidly growing firms create and sustain value for their customers; some deliver breakthrough products and services that create an entirely new customer base while others achieve efficiencies in new methods of production or distribution. Small businesses contributed the most to job creation over the period studied, but it was found that hyper and strong growth are not limited to small firms. The report also suggests that pursuing growth strategies can involve higher risk and not all firms are able to sustain growth in the long term.

3. Parsley, Chris and David Halabisky, 2008. *Profile of Growth Firms: A Summary of Industry Canada Research*. Industry Canada. www.ic.gc.ca/eic/site/sbrp-rppe.nsf/eng/h_rd02278.html

These results suggest that developing growth firms will have a significant impact on the performance of the economy. Other researchers have obtained similar findings. For example, a recent U.S. study on high-impact firms indicates that they represent between 2 percent and 3 percent of all firms and “account for almost all of the private sector employment and revenue growth in the economy.”⁴

Consensus Definition of Growth Firms

A variety of terms have been used to describe firms that achieve exceptional growth: “high-impact firms,” “strong-growth firms,” “high-growth firms” and “gazelles.” Definitions (see text box for more details) vary according to the growth measures used (e.g. employment, revenues) and the period over which growth is measured. Although Industry Canada has used its own definition in previous research, it has recently started using the Organisation for Economic Co-operation and Development (OECD) definition of high-growth firms as a result of an emerging consensus. As the data used and the findings in the following analysis will show, this consensus has allowed for further developments in research, including the opportunity to conduct better international comparisons.

Definitions of High-Growth Firms*

The Organisation for Economic Co-operation and Development (OECD) has developed the widely accepted definitions of high-growth firms and gazelles that are being used for most international comparisons.

- **High-Growth Enterprises** are all enterprises with average annualized growth rates greater than 20 percent per annum, over a three-year period, and with 10 or more employees at the beginning of the period. High-growth enterprises are defined in terms of employment (number of employees) and in terms of revenue.
- **Gazelles** are high-growth enterprises that are no more than five years old at the end of the observation period.

*Source: Ahmad, N. and D. Rude Petersen, 2007. *High-Growth Enterprises and Gazelles — Preliminary and Summary Sensitivity Analysis*. OECD-FORA, Paris.

4. Acs, Zoltan, William Parsons and Spencer Tracy, 2008. *High-Impact Firms: Gazelles Revisited*. Small Business Administration, Office of Advocacy.

Growth Map

Although there has been much research on high-growth firms, these firms usually involve a very small percentage of all firms within an economy. The following analysis concentrates on the growth map of all firms, using custom tabulations by Statistics Canada. Firms are distributed across 11 growth intervals for both employment and revenue growth. This allows for a number of interesting comparisons to be made between the two measures of growth, between different types of firms and between different countries.

The report begins with a description of the data and methodology used (Section B), followed by an analysis of the distribution of Canadian firms by growth rate, including breakdowns to examine the distribution by firm size and industrial sector (Section C). The data also permit an analysis of the employment generated by firms with different growth rates. Similarly, the change in revenues is also examined across the growth distribution (Section D). Finally, international comparisons are made in terms of the growth maps of different countries to pinpoint differences and similarities (Section E).

B. Data Sources and Methodology

Statistics Canada's Small and Medium-Sized Enterprises (SMEs) Data Warehouse provides information on general demographic statistics, including business counts, employment and revenue by industry, size and geography. Special tabulations by Statistics Canada have allowed looking more closely at one aspect of these data — distribution of firm growth. Enterprises are derived from Statistics Canada's *Business Register* and have a valid and active business number. Dead, amalgamated, bankrupt or dissolved businesses or those with no legal entity status have been removed from these tabulations. Enterprises included in this analysis have 10 to 249 employees, have between \$30 000 and less than \$50 million in revenue in the first year of the reference period, and have been active throughout the reference period.⁵

Revenue estimates are based on tax information obtained from the Canada Revenue Agency (CRA). Estimated counts of employment are based on a 12-month average from CRA's Payroll Account files. Breakdown by sector is derived from the North American Industry Classification System (NAICS) at the two-digit level. Two periods are examined: 2001 to 2006 (referred to as the five-year period) and 2003 to 2006 (referred to as the three-year period). Firms are distributed across 11 growth intervals ranging from less than -20 percent growth to more than 20 percent growth. About 120 000 enterprises met the criteria above over the three-year period and more than 105 000 enterprises over the five-year period. This corresponds to 10.9 percent and 9.5 percent, respectively, of the total number of employer businesses.

5. In terms of enterprise counts, firms with over 250 employees account for approximately 0.5 percent of all firms in the economy, whereas those with fewer than 10 employees account for about 75 percent. The latter were excluded from this analysis in order to allow for international comparisons.

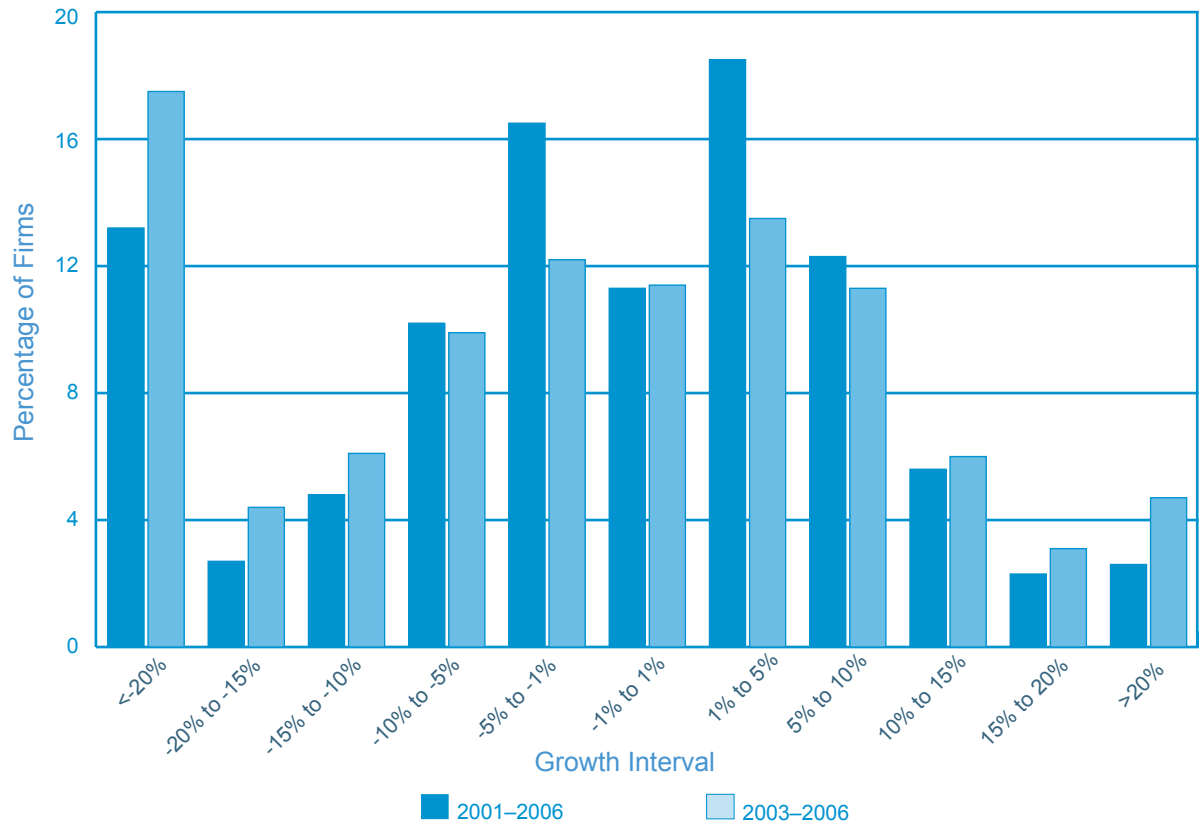
C. Distribution of Firms in Canada by Growth Rate

Distribution of Firms by Growth Rate

Figure 2 illustrates the distribution of all firms based on average annual employment growth between 2001 and 2006, and between 2003 and 2006. Over the five-year period, over 58 percent of firms experienced negative growth (-20 percent to -1 percent) or relatively little growth (-1 percent to 1 percent). Within this range, the highest percentage of firms (16.5 percent) fell within the -5 percent to -1 percent average annual employment growth interval, and 13.2 percent of firms experienced reductions of over 20 percent in their employment levels. Overall, the highest percentage of firms (18.5 percent) experienced average annual employment growth of 1 percent to 5 percent. Over the three-year period, over 60 percent of firms experienced -20 percent to 1 percent average annual employment growth. The highest percentage of firms (about 18 percent) experienced the lowest average annual employment growth (less than -20 percent).

In comparison with the five-year period, the distribution of firms for the three-year period was flatter in the middle growth intervals with more firms in the tails of the graph. Over the five-year period, for example, 13 percent of firms had more than a 20-percent reduction in employment growth compared with 18 percent of firms over the three-year period. In contrast, more firms had over 10 percent average annual employment growth during the three-year period than during the five-year period. In fact, the proportion of high-growth firms (those with average annual employment growth of more than 20 percent) was almost double during the three-year period compared with the five-year period (4.7 percent compared with 2.6 percent).

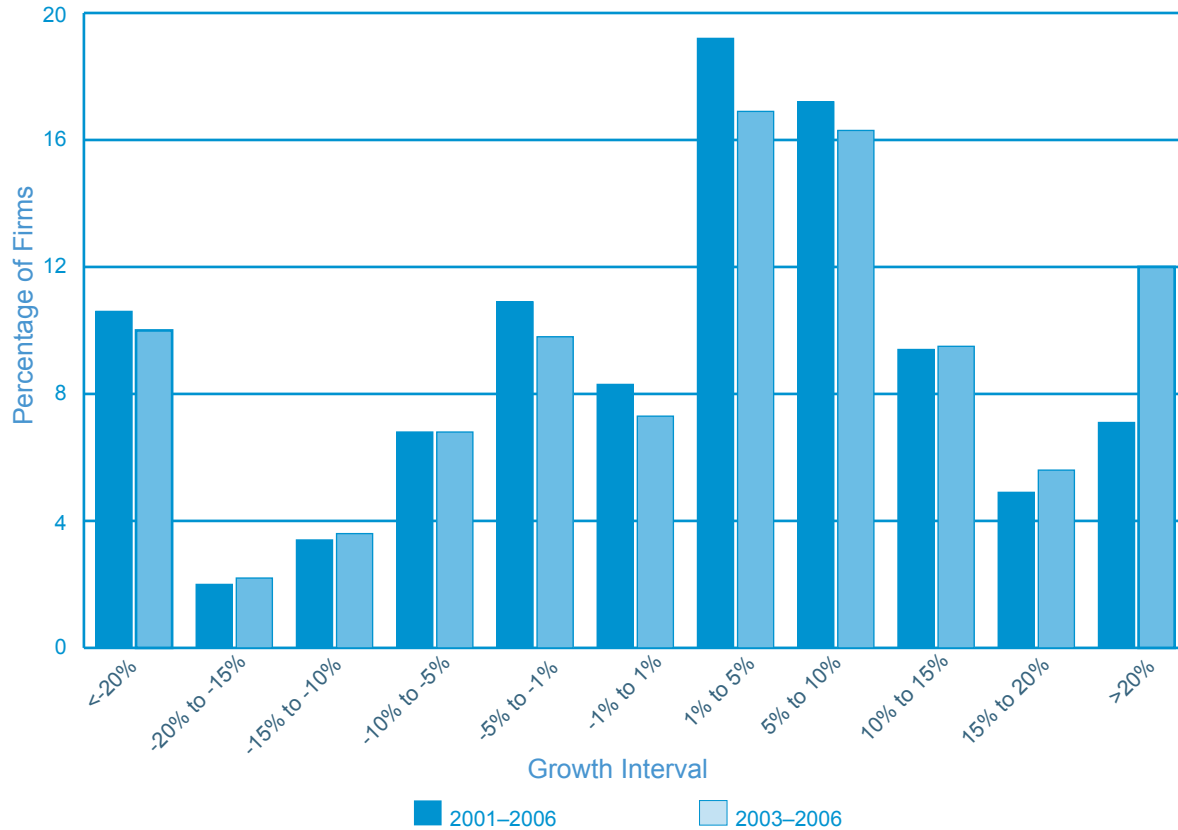
Figure 2: Distribution of all Firms Based on Average Annual Employment Growth, 2001–2006 and 2003–2006



Source: Statistics Canada, Small and Medium-Sized Enterprises Data Warehouse, February 2009; Industry Canada calculations.

Figure 3 illustrates the distribution of all firms based on average annual revenue growth for the five- and three-year periods. Compared with employment growth figures, the distribution by revenue growth is pushed further to the right of the graph, i.e., positive growth rates. Over 33 percent of firms experienced 1 percent to 10 percent revenue growth during the three-year period, whereas only 25 percent of firms experienced 1 percent to 10 percent employment growth during the same period.

Figure 3: Distribution of all Firms Based on Average Annual Revenue Growth, 2001–2006 and 2003–2006



Source: Statistics Canada, Small and Medium-Sized Enterprises Data Warehouse, February 2009; Industry Canada calculations.

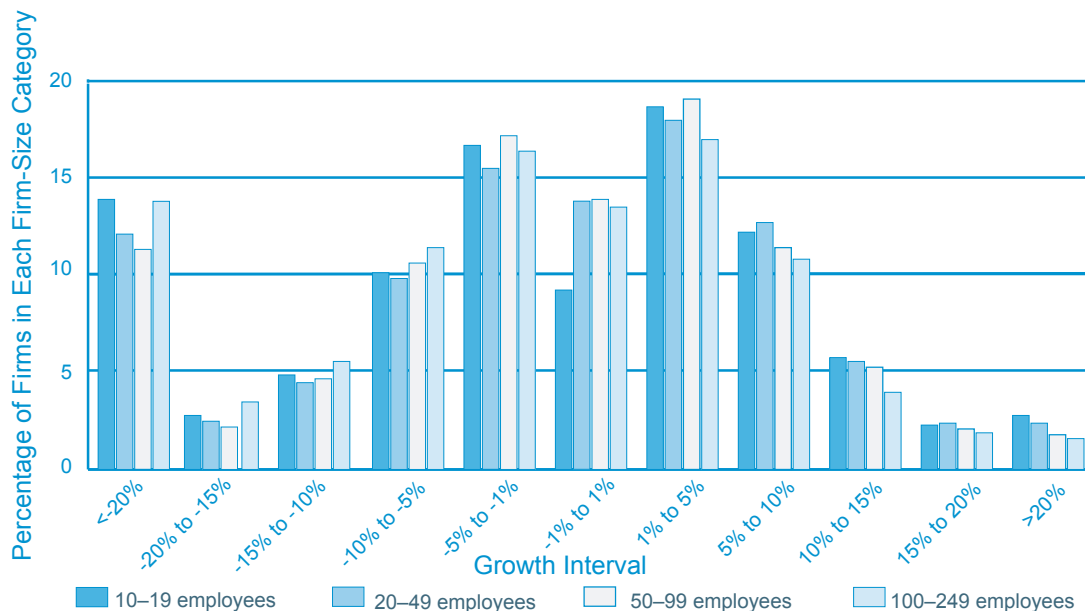
As illustrated in Figures 2 and 3, there is a considerable difference between employment and revenue growth distributions, especially in the tails of the graphs. Fewer firms experienced revenue reductions of more than 20 percent than firms that experienced reductions in employment of more than 20 percent. This suggests that a firm can survive a 20-percent decrease in employment, but probably not a similar reduction in revenue. More importantly, more firms grew their revenue by more than 20 percent annually than grew their employment by more than 20 percent per annum. This was most evident during the three-year period when only 4.7 percent of firms achieved high growth in employment compared with 12 percent of firms whose revenue grew by over 20 percent per year. The five-year period also showed there were twice as many high-growth firms based on revenue as high-growth firms based on employment.

Distribution of Firms' Growth Rates by Firm Size

Data were disaggregated by firm size and growth maps were created for the period 2001 to 2006 for four different size groups (Figures 4 and 5).⁶ A business is deemed to belong to a firm-size category depending on the number of employees it had at the beginning of the period. Size groups were defined based on numbers of employees: i) firms with 10–19 employees; ii) firms with 20–49 employees; iii) firms with 50–99 employees and iv) firms with 100–249 employees.

As illustrated in Figure 4, the largest concentration of firms for each size group occurs in the 1 percent to 5 percent average annual employment growth interval. For the four firm-size categories in this interval, 17 to 19 percent of firms experienced employment growth rates between 1 percent and 5 percent. This was a period of economic expansion with annualized employment growth of about 2 percent per year and annualized GDP growth of 3 percent per year. High concentrations of firms also occur in the -5 percent to -1 percent and less than -20 percent average annual employment growth intervals. In several of the negative growth intervals, firms with 100–249 employees are the highest concentrations. At higher average annual employment growth intervals, however, beginning with 10–15 percent employment growth and higher, firms with 10–19 employees had the highest concentrations.

Figure 4: Distribution of all Firms Based on Average Annual Employment Growth, by Firm Size, 2001–2006



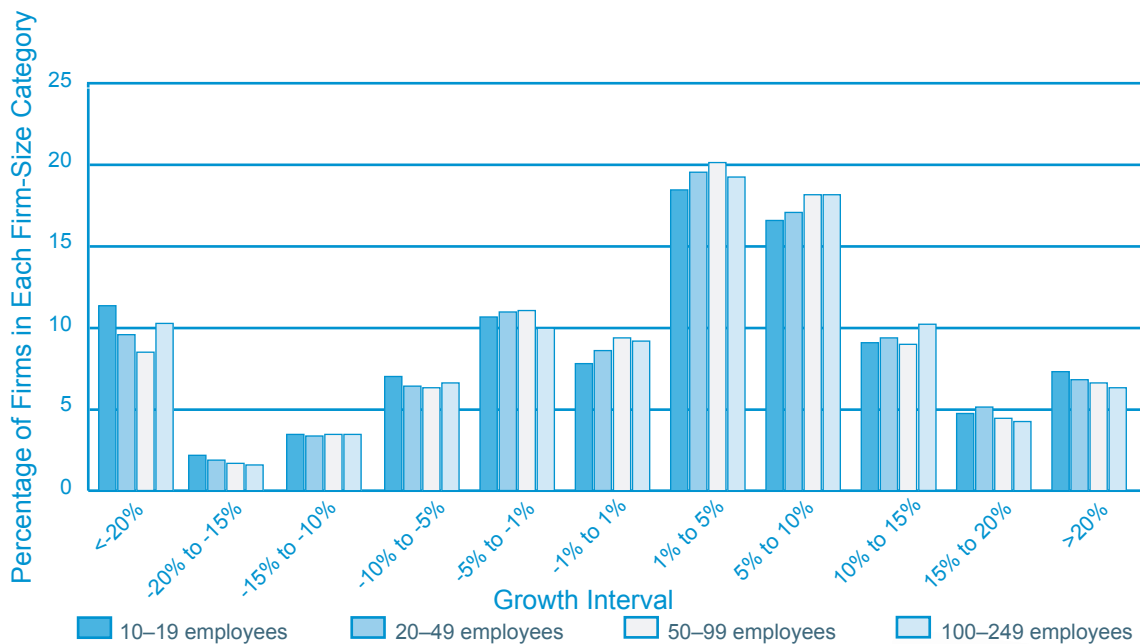
Source: Statistics Canada, Small and Medium-Sized Enterprises Data Warehouse, February 2009; Industry Canada calculations.

6. For ease of presentation, only five-year period graphs and tables are presented for firm-size and industry breakdowns. In general, differences between the three- and five-year periods are the same as those illustrated in Figures 2 and 3.

The percentage of high-growth firms in each firm-size category decreases as the firm size increases. However, these shares do not vary significantly across different firm sizes. For example, 2.8 percent of firms with 10–19 employees and 1.6 percent of firms with 100–249 employees were high growth.

Figure 5 illustrates the distribution of firms, by firm size, based on average annual revenue growth. The distribution is considerably different from that based on employment growth. The distributions for each firm-size category are very similar, however, and no major differences are discernible based on firm size. This suggests that growth is not necessarily linked to firm size. It is worth noting that in the tails of the graph the smallest firm-size category (10–19 employees) has the highest concentration of firms. In the little to moderate growth intervals (1 percent to 15 percent growth), firms with 10–19 employees have the lowest concentration of firms, suggesting that volatility in revenue performance is greater in smaller firms.

Figure 5: Distribution of all Firms Based on Average Annual Revenue Growth, by Firm Size, 2001–2006



Source: Statistics Canada, Small and Medium-Sized Enterprises Data Warehouse, February 2009; Industry Canada calculations.

Distribution of Firms' Growth Rates by Industry Sector

To determine if differences by industry exist, the data were disaggregated to create growth distributions for each sector. Table 5 presents the distribution of all firms based on average annual employment growth, by industry sector, for the period 2001–2006. As established earlier, high-growth firms represent a very small proportion of the firms within each industry. The highest concentrations of high-growth firms were found in the following sectors: administrative and support, waste management and remediation services (4.2 percent), professional, scientific and technical services (4.1 percent), construction (3.7 percent), and finance and insurance (3.7 percent).

The highest concentrations of firms achieved between -5 percent and 10 percent employment growth over this five-year period, with firms in the retail trade (65.8 percent), accommodation and food services (63.4 percent) and wholesale trade (62 percent) sectors achieving the highest growth.

Some industries had significantly higher percentages of firms in which employment fell by more than 20 percent, most notably management of companies and enterprises (30.6 percent), agriculture, forestry, fishing and hunting (21.2 percent), real estate and rental and leasing (19.4 percent), and professional, scientific and technical services (19.2 percent). The overall percentage of firms in which employment fell by more than 20 percent was 13.2 percent.

Table 5: Distribution of all Firms Based on Average Annual Employment Growth, by Industry, 2001–2006

Industry	Growth Interval											Total
	<-20%	-20% to -15%	-15% to -10%	-10% to -5%	-5% to -1%	-1% to 1%	1% to 5%	5% to 10%	10% to 15%	15% to 20%	>20%	
Agriculture, forestry, fishing and hunting	21.2	4.6	7.1	12.2	13.9	8.4	14.9	9.8	4.3	1.6	1.9	100
Mining and oil and gas extraction	16.5	X	X	7.1	9.4	9.4	16.5	X	X	X	X	100
Utilities	8.3	X	X	8.3	8.3	25.0	25.0	X	X	X	X	100
Construction	13.8	2.7	4.6	9.7	13.3	9.5	17.2	14.6	7.6	3.5	3.7	100
Manufacturing	9.5	2.8	5.8	12.5	18.1	10.8	17.9	12.2	5.7	2.4	2.4	100
Wholesale trade	10.3	2.2	4.1	10.0	16.4	11.4	20.1	14.1	6.3	2.4	2.7	100
Retail trade	10.0	2.3	4.0	9.3	18.1	12.7	21.5	13.5	5.3	1.7	1.6	100
Transportation and warehousing	11.0	2.6	5.3	9.4	15.3	10.6	18.7	14.1	7.1	2.9	3.3	100
Information and cultural industries	18.6	4.2	7.2	10.8	14.4	11.4	14.4	8.4	4.8	3.0	3.0	100
Finance and insurance	16.6	2.0	2.7	7.0	12.0	14.0	19.9	13.6	6.6	2.3	3.7	100
Real estate and rental and leasing	19.4	2.9	4.8	9.0	13.5	12.9	17.4	10.3	4.5	2.6	2.9	100
Professional, scientific and technical services	19.2	3.1	5.2	8.7	13.0	8.7	15.9	12.2	6.4	3.4	4.1	100
Management of companies and enterprises	30.6	3.6	4.5	6.3	12.6	11.7	13.5	9.0	4.5	1.8	2.7	100
Administrative and support, waste management and remediation services*	16.2	3.9	5.6	10.2	14.9	9.0	14.8	12.1	6.5	2.8	4.2	100
Accommodation and food services	13.2	2.1	4.5	10.9	20.1	13.5	19.9	9.9	3.6	1.4	1.1	100
Total for all industries	13.2	2.7	4.8	10.2	16.5	11.3	18.5	12.3	5.6	2.3	2.6	100

Source: Statistics Canada, Small and Medium-Sized Enterprises Data Warehouse, February 2009; Industry Canada calculations.

Note: X indicates figure suppressed due to confidentiality restrictions.

* The NAICS number for this sector is 56. The sector includes services such as employment placement agencies and business support services, such as telephone call centres and collection agencies. This sector also consists of travel agencies, investigation and security services, administrative services, and services to buildings and dwellings.

Table 6 presents the distribution of all firms based on average annual revenue growth by industry. Figures for revenue growth in excess of 20 percent indicate more variability than those for employment growth of more than 20 percent presented in Table 5. For example, almost 24 percent of firms in the mining and oil and gas extraction sector and 25 percent in the utilities sector grew revenues by more than 20 percent annually. The concentration for all industries in this growth interval was 7.1 percent. By contrast, 25.6 percent of firms in accommodation and food services grew revenues by only 1 percent to 5 percent per year as did 21.8 percent of firms in retail trade.

As revealed by the earlier profiles, the distribution of firms by industry based on revenue growth indicates greater positive growth than that based on employment growth. Thus the finance and insurance, and transportation and warehousing sectors had the highest concentrations of firms with positive revenue growth. In fact, 70 percent of firms in finance and insurance and 66 percent of firms in transportation and warehousing achieved more than 1 percent revenue growth.

By contrast, the highest concentrations of firms that experienced negative growth occurred in the information and cultural industries, and agriculture, forestry, fishing and hunting sectors (at almost 50 percent each). Industries in which revenues fell by more than 20 percent included utilities (16.7 percent), management of companies and enterprises (14.4 percent), professional, scientific and technical services (14.2 percent) and mining and oil and gas extraction (14.1 percent).

The most significant differences between employment and revenue distributions are evident at the industry level. For example, almost 70 percent of firms in management of companies and enterprises experienced reductions in employment growth, but only 42 percent experienced reductions in revenue growth. Moreover, 13.5 percent of firms in this industry were high growth based on revenue growth, but only 2.7 percent were high growth based on employment growth.

D. Employment Generation and Revenue Performance across the Growth Distribution

Job Creation by Firms at Different Stages of Growth

One of the key areas of interest in studying growth firms is their impact in terms of employment generation and revenue performance. The data from this analysis confirm results from previous studies on rapidly growing firms indicating that although high-growth firms represent a small component of the business population, they have a disproportional impact on employment and wealth creation.

Table 6: Distribution of all Firms Based on Average Annual Revenue Growth, by Industry, 2001–2006

Industry	Growth Interval											Total
	<-20%	-20% to -15%	-15% to -10%	-10% to -5%	-5% to -1%	-1% to 1%	1% to 5%	5% to 10%	10% to 15%	15% to 20%	>20%	
Agriculture, forestry, fishing and hunting	12.2	3.3	4.3	9.0	11.7	8.2	17.4	15.2	8.4	4.3	6.0	100
Mining and oil and gas extraction	14.1	X	X	X	5.9	4.7	9.4	12.9	X	X	23.5	100
Utilities	16.7	X	X	X	16.7	8.3	16.7	8.3	X	X	25.0	100
Construction	10.9	1.8	3.1	5.7	7.9	5.6	14.3	18.1	13.5	8.1	11.2	100
Manufacturing	8.5	2.3	4.4	9.2	12.8	8.4	17.7	16.2	9.7	4.8	6.0	100
Wholesale trade	9.0	1.8	3.7	7.8	11.7	8.1	18.6	17.6	10.0	5.3	6.3	100
Retail trade	9.8	1.6	2.8	6.8	12.0	9.6	21.8	19.1	8.2	3.8	4.6	100
Transportation and warehousing	7.9	1.8	3.1	5.1	8.4	7.7	19.1	21.0	12.0	6.5	7.3	100
Information and cultural industries	13.8	4.2	4.8	7.2	10.2	9.6	18.6	12.0	8.4	4.8	7.8	100
Finance and insurance	9.6	1.7	2.3	4.0	6.3	6.0	17.6	22.6	12.6	6.3	11.0	100
Real estate and rental and leasing	11.3	2.3	3.2	6.1	8.4	8.1	20.6	17.7	8.4	4.5	9.7	100
Professional, scientific and technical services	14.2	2.6	4.1	5.7	8.5	6.1	15.0	16.2	10.6	5.7	11.1	100
Management of companies and enterprises	14.4	3.6	3.6	6.3	8.1	6.3	16.2	16.2	8.1	4.5	13.5	100
Administrative and support, waste management and remediation services*	12.1	2.3	3.7	6.7	9.1	6.3	16.0	18.1	10.2	6.2	9.3	100
Accommodation and food services	11.9	1.7	3.0	6.1	13.3	11.3	25.6	14.9	5.6	2.6	4.1	100
Total for all industries	10.6	2.0	3.4	6.8	10.9	8.3	19.2	17.2	9.4	4.9	7.1	100

Source: Statistics Canada, Small and Medium-Sized Enterprises Data Warehouse, February 2009; Industry Canada calculations.

Note: X indicates figure suppressed due to confidentiality restrictions.

* The NAICS number for this sector is 56. The sector includes services such as employment placement agencies and business support services, such as telephone call centres and collection agencies. This sector also consists of travel agencies, investigation and security services, administrative services, and services to buildings and dwellings.

Table 7 presents the change in employment from 2001 to 2006, as well as the share of all jobs affected, by growth interval. In this table, firm growth is measured in terms of employment. As already mentioned, high-growth firms represented a small percentage (2.6 percent) of firms with 10 to 249 employees identified over the period 2001–2006. However, they employed 257 330 people, or 8.6 percent of overall employment in 2006.⁷ Employment for these high-growth firms increased by 190 720 from 2001 to 2006, representing the highest number of jobs created over all growth intervals and about 70 jobs per firm over the five-year period (Figure 5).

Table 7: Change in Employment, by Growth Interval, 2001–2006

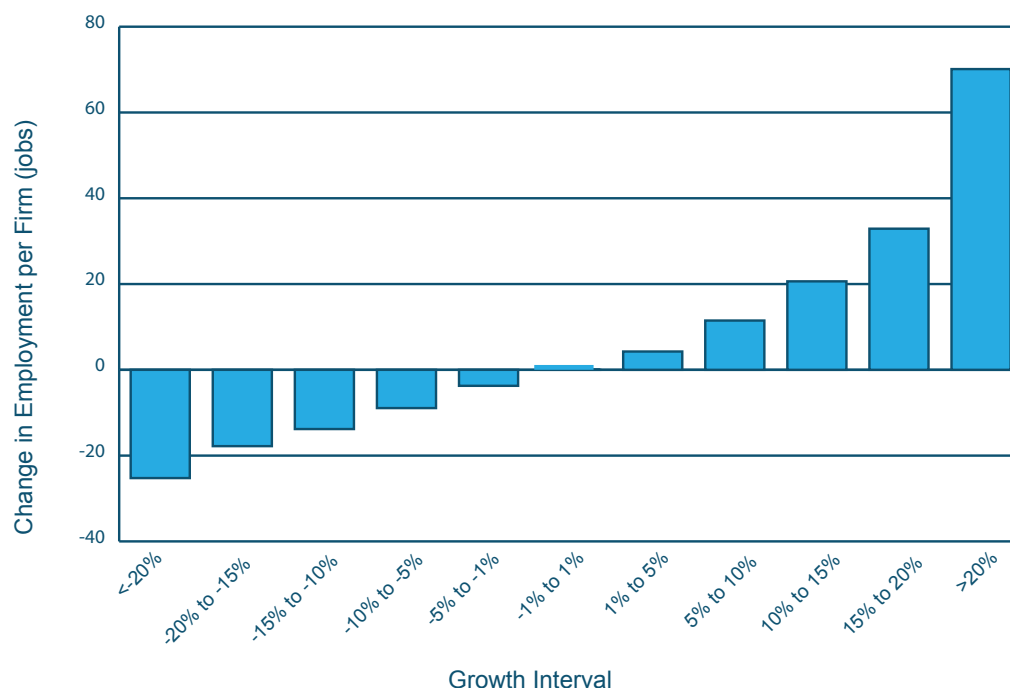
Growth Interval (average annual employment growth)	Number of Firms	Share of Firms (percent)	Employment 2001	Employment 2006	Net Employment Change	Share of all Jobs Affected (percent)
<-20%	14 090	13.2	385 320	29 680	-355 640	28.0
-20% to -15%	2 830	2.7	81 880	31 520	-50 360	4.0
-15% to -10%	5 100	4.8	147 170	76 750	-70 420	5.5
-10% to -5%	10 880	10.2	314 830	217 760	-97 070	7.6
-5% to -1%	17 550	16.5	497 870	432 430	-65 440	5.2
-1% to 1%	12 090	11.3	375 750	375 880	130	0.0
1% to 5%	19 770	18.5	556 460	640 860	84 400	6.6
5% to 10%	13 160	12.3	363 100	514 310	151 210	11.9
10% to 15%	5 990	5.6	158 830	282 400	123 570	9.7
15% to 20%	2 450	2.3	66 450	147 070	80 620	6.4
>20%	2 720	2.6	66 610	257 330	190 720	15.0
Total	106 630	100.0	3 014 270	3 005 990	-8 280	100.0

Source: Statistics Canada, Small and Medium-Sized Enterprises Data Warehouse, February 2009; Industry Canada calculations.

7. Overall employment is only that in this sample. As a share of employment in the entire private sector, employment in high-growth firms has increased four times from 2001 to 2006, from 0.6 percent to 2.4 percent. Estimates of total employment in the private sector come from Industry Canada calculations derived from Statistics Canada's Labour Force Survey.

As illustrated in Figure 6, the main impact on jobs is revealed in the tails of the graph. High-growth firms created 70 jobs per firm while those that experienced more than 20 percent reduction in employment growth shed 25 jobs per firm. Firms that increased employment by more than 10 percent but less than 20 percent per year also made noticeable contributions to job creation. However, although there were three times the number of firms in this category, compared with high-growth firms, their total job creation of 204 190 was only slightly higher than the overall number of jobs created by high-growth firms. Even more startling is the fact that 43 percent of the total change in employment is accounted for by high-growth firms and those firms that experienced more than 20 percent reduction in employment growth per year.

Figure 6: Change in Employment per Firm, by Growth Interval, 2001–2006



Source: Statistics Canada, Small and Medium-Sized Enterprises Data Warehouse, February 2009; Industry Canada calculations.

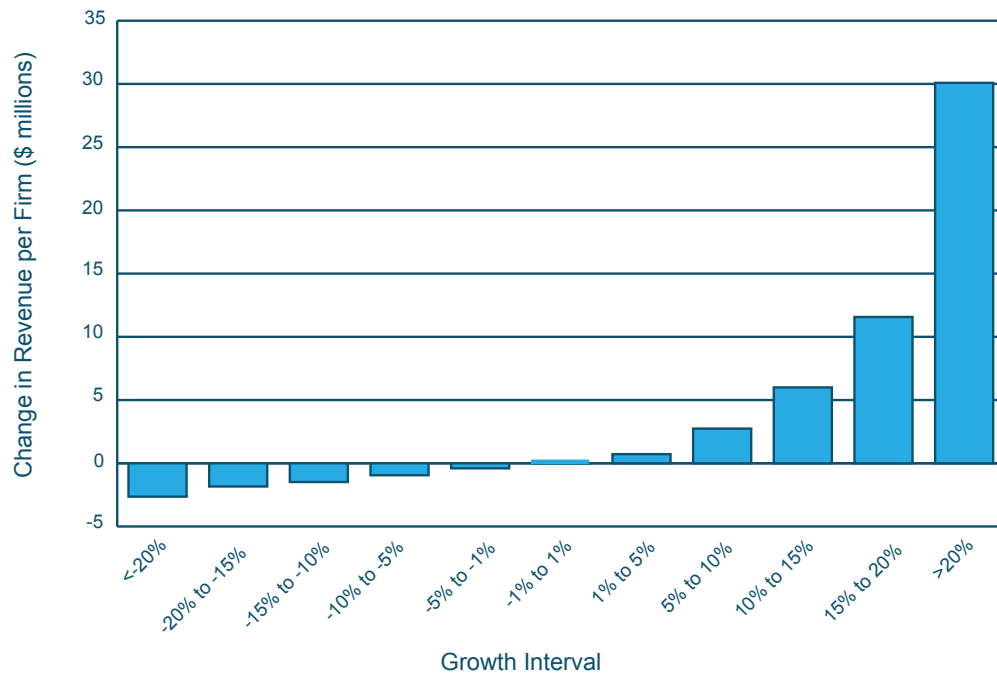
Revenue Performance by Firms at Different Stages of Growth

Revenue performance is examined in a slightly different manner than employment growth. Instead of looking at the share of revenue generated, figures on revenue growth per firm are calculated.

When the measure of growth is revenue, the exceptional performance of high-growth firms is even more obvious, as illustrated in Figure 7. From 2001 to 2006, firms generated an increase in revenues of about \$80 billion or \$30 million per firm. Together, firms that increased revenues between 1 percent and 19 percent accounted for a total revenue increase of \$114 billion. More importantly, these growing firms more than offset the revenue performance of declining firms, which lost about \$67 billion over the five-year period. As illustrated in Figure 7,

revenue increases among firms with more than 1 percent increase in revenue range from about \$720 000 to \$30 million per firm. Losses in firms with negative annual growth, however, do not seem very significant in comparison with revenue gains in high-growth firms.

Figure 7: Change in Revenue per Firm, by Growth Interval, 2001–2006



Source: Statistics Canada, Small and Medium-Sized Enterprises Data Warehouse, February 2009; Industry Canada calculations.

E. International Comparisons

Growth Performance of Canadian Firms Compared with Other Countries

The collection of data on the distribution of firms in Canada based on growth rates was part of a larger project carried out by the International Consortium on Entrepreneurship (ICE) to examine different growth maps across several countries. ICE received data on growth maps from seven countries: Canada, Austria, Denmark, Italy, Netherlands, Spain and the United States. Some of the results from this exercise are reported here, while a more complete report is to be released by ICE in 2010. The overall objective of the project was to develop relevant internationally comparable indicators to measure firm growth and to examine how growth distributions can vary across different economies.

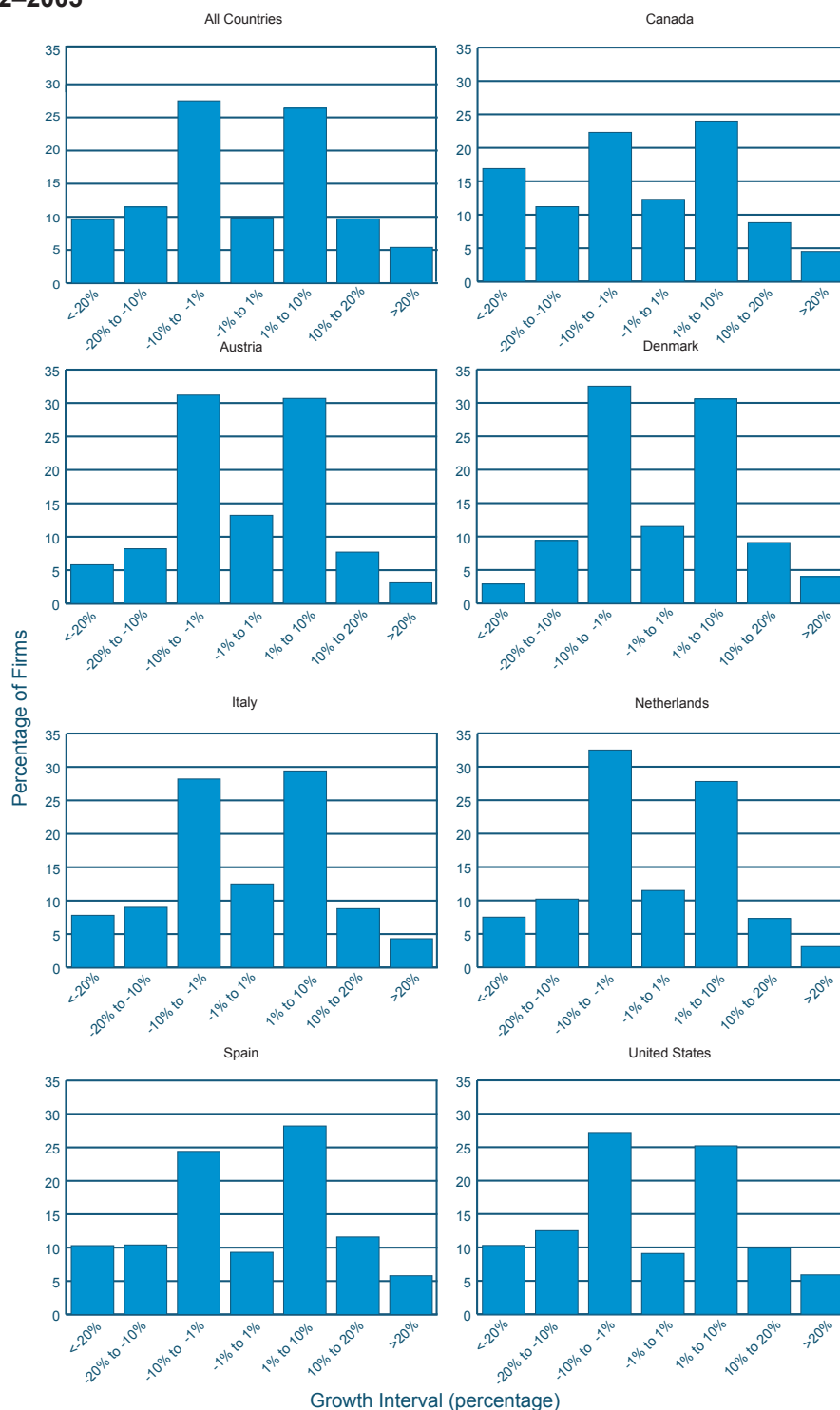
The graphs presented in this section use employment as the measure of growth. Furthermore, results are reported for seven growth intervals as opposed to 11 growth intervals in previous sections of this report, and cover the period 2002–2005 as opposed to 2001–2006.

When looking at the growth distribution of firms by country based on employment growth (Figure 8), Canada exhibits a similar bimodal distribution of firm growth as the six other countries examined.⁸ The largest growth intervals were for firms in which employment fell between 1 percent and 10 percent per year and those in which employment grew between 1 percent and 10 percent annually. Thus, firms with employment growth ranging from -10 percent to 10 percent represented about 60 percent of all firms in Canada and over 70 percent of firms in some of the other countries observed. The Canadian distribution also revealed a higher proportion of firms in which employment fell by more than 20 percent per year than in the other countries examined.

In terms of high-growth firms, it was a common finding among all countries examined (except Denmark) that high-growth firms represented the smallest proportion of firms within the respective economies. United States and Spain have the highest share of high-growth firms. Canada's share is comparable with that of Italy, while Netherlands has a lower share of high-growth firms.

8. The bimodal distribution arises from the smaller range of the middle employment growth interval (-1 percent to 1 percent) compared with the other growth intervals.

Figure 8: Growth Maps of Firms¹ Based on Average Annual Employment Growth, by Country, 2002–2005



Source: Statistics Canada, International Consortium on Entrepreneurship (ICE), 2009.

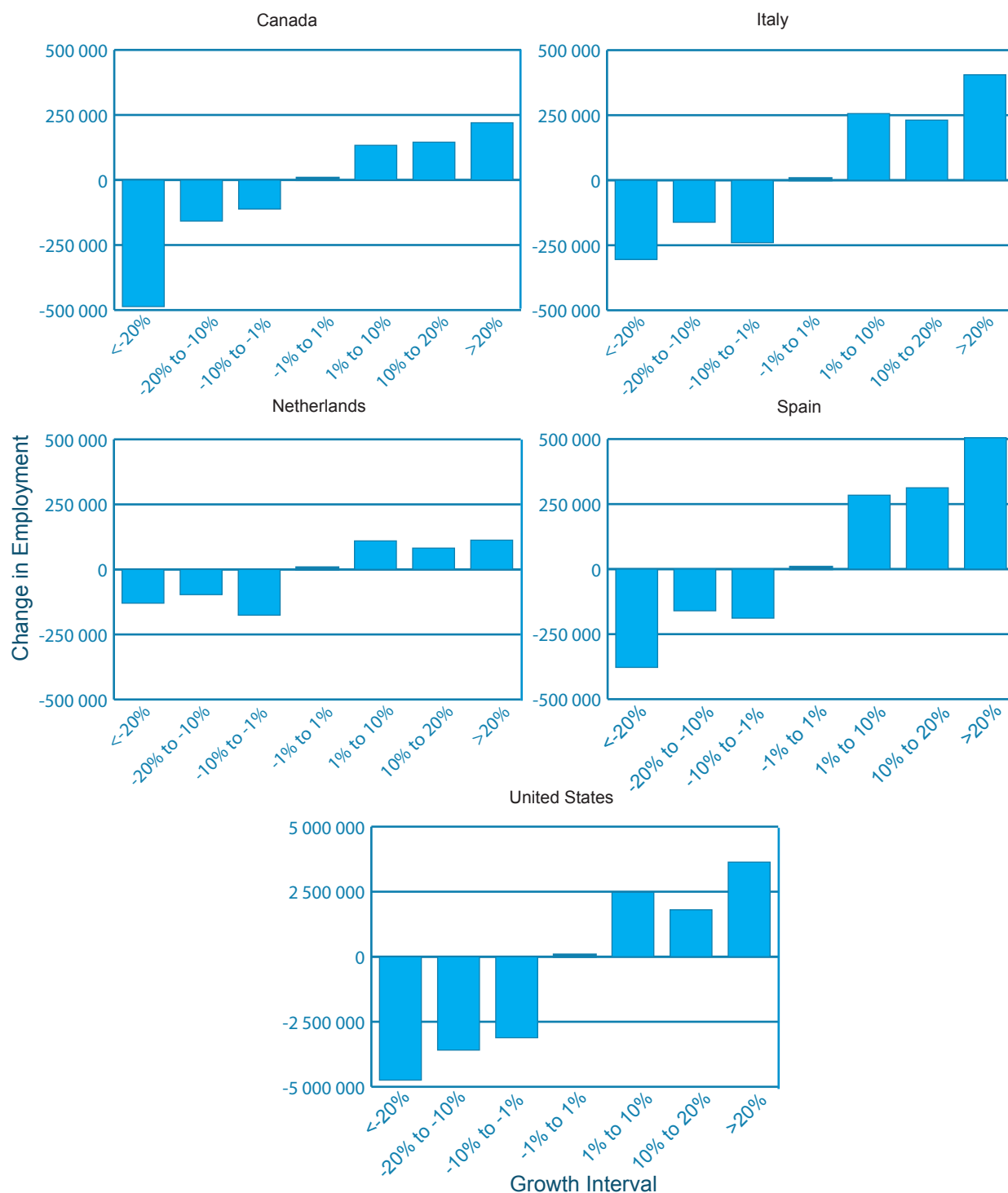
Note 1: Firms have 10 or more employees (except 10–249 employees for Canada).

At the other end of the spectrum and among firms with 10 to 249 employees, Canada has the highest share of firms that experienced employment reductions of more than 20 percent per year, followed by the United States and Spain. This suggests that there is a great deal of churning in these countries, which is not necessarily a problem because firm birth rates exceed firm death rates in Canada and the United States.

Despite the fact that high-growth firms account for a small proportion of all firms, their contribution to employment growth is significant. This was true in all the selected countries illustrated in Figure 9. However, the distribution of firms in terms of total employment change among the countries is not the same. The Canadian distribution exhibits a smooth pattern between the growth rate and the impact on employment, with the impact increasing as the growth rate increases, so that the change in employment growth increases gradually towards the tails of the graph. The largest overall impact affected companies that experienced employment reductions of more than 20 percent per year. Such a smooth distribution is not observed for Italy, Spain or Netherlands but can be seen in the negative employment growth intervals for the United States. In Netherlands, the greatest negative employment impact came from firms that experienced employment reductions between 1 percent and 10 percent per year. Furthermore, firms in Netherlands that grew between 1 percent and 10 percent per year created as many jobs as high-growth firms.

Consequently, in terms of the total change in employment, Canada's performance differs from that of other industrial countries.

Figure 9: Total Change in Employment, by Growth Interval, by Country, 2002–2005



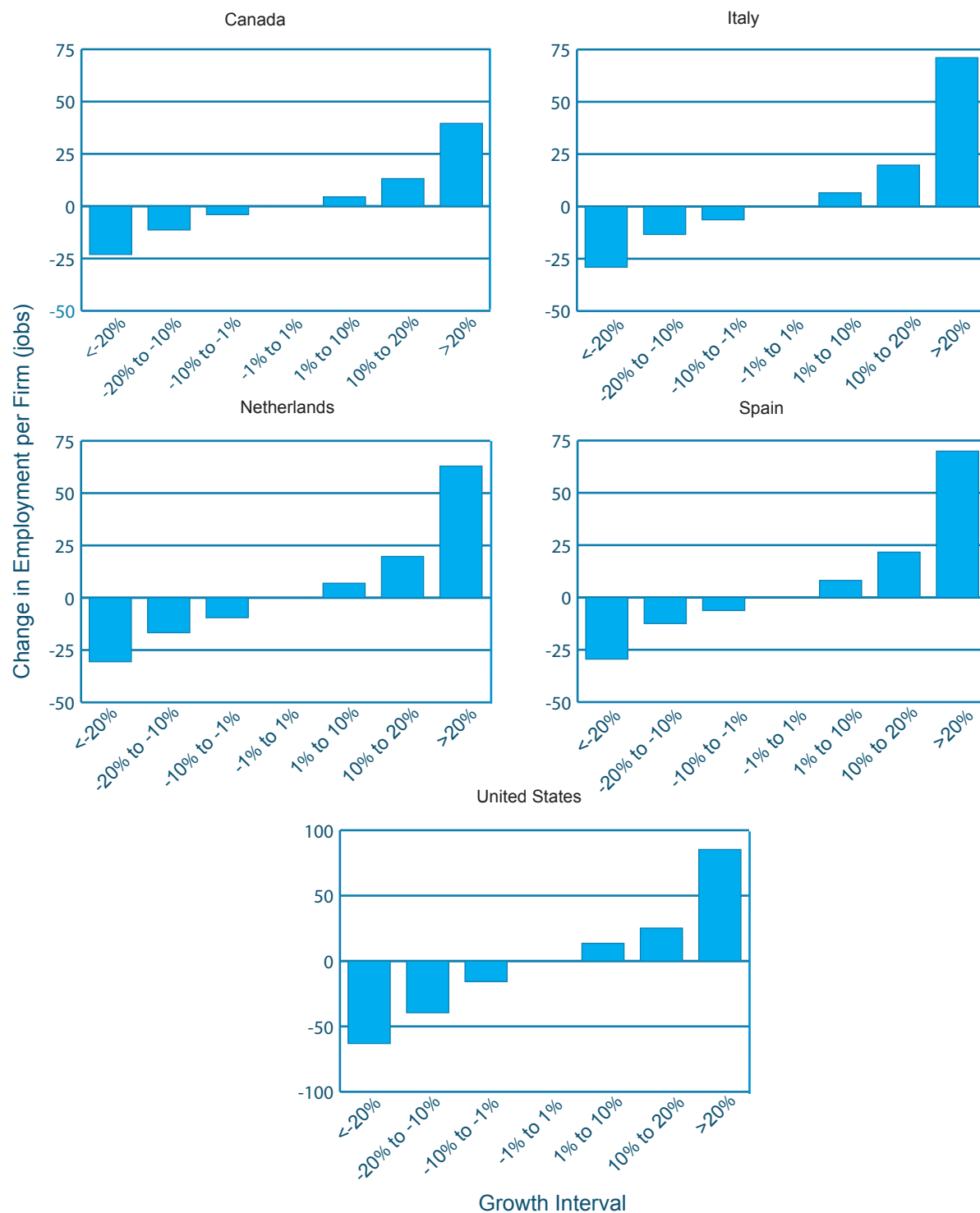
Source: Statistics Canada, International Consortium on Entrepreneurship (ICE), 2009.

When expressing the impact of the change in employment per firm, Canada's distribution per firm is similar to that of the other countries examined (Figure 10). Furthermore, in each country high-growth firms created the most jobs per firm, outweighing job losses per firm. Figure 10 also reveals that high-growth firms in Italy, Spain, Netherlands and the United States created more jobs than high-growth firms in Canada, with high-growth firms in each of those countries creating more than 50 jobs per firm compared with fewer than 50 jobs per firm created by Canadian high-growth firms. Conversely, firms that experienced employment reductions of more than 20 percent per year shed more jobs per firm in Italy, Spain, Netherlands and the United States than in Canada. Thus although Canadian high-growth firms are not as potent in creating jobs as the other three countries, Canadian firms that experience employment reductions do so more gradually than similar firms in the other four countries, suggesting that there would be less volatility in the impact of changes in employment among Canadian firms.

The growth distribution by industry sector for each country (not shown) indicates that in Canada and Spain the manufacturing sector had the highest share of firms experiencing growth of more than 10 percent and the construction sector had the highest share of firms that experienced growth reductions of more than 20 percent.⁹

9. Industry comparisons across countries are difficult to make because Canada uses the North American Industry Classification System (NAICS) of industrial classification whereas European countries are classified according to the International Standard Industrial Classification (ISIC) system.

Figure 10: Change in Employment per Firm, by Growth Interval, by Country, 2002–2005



Source: Statistics Canada, International Consortium on Entrepreneurship (ICE), 2009.

F. Concluding Remarks

This special article has provided information on the growth distribution of firms in Canada based on average annual employment and revenue growth. Such information permits analysis of where firms are located on the growth map, with some added detail on firm size and industry sector. Results indicate that:

- From 2001 to 2006, large percentages of firms exhibited negative or slightly positive growth: over 58 percent in terms of employment and 42 percent in terms of revenue experienced -20 percent to 1 percent growth.
- High-growth firms are more prevalent in terms of revenue growth than employment growth. Over the 2003–2006 period, only 4.7 percent of firms achieved high growth in employment, whereas 12 percent of firms grew revenues by 20 percent per year.
- Industries with a high proportion of growth firms (on a revenue basis) were utilities (25 percent), mining, quarrying, and oil and gas extraction (23.5 percent), and management of companies and enterprises (13.5 percent).

The impact of changing employment and revenue growth rates has also been calculated:

- Between 2001 and 2006, firms with more than 20 percent average annual employment growth recorded the highest number of jobs created over all growth intervals.
- Revenue generation reveals the exceptional performance of high-growth firms. From 2001 to 2006, high-growth firms increased total revenues by about \$80 billion or \$30 million per firm, more than offsetting the revenue reductions of declining firms (about \$67 billion).

Finally, as part of a larger project with the International Consortium on Entrepreneurship, some international comparisons of growth performance were made:

- Canada's growth distribution of firms is similar to that of other countries observed (Austria, Denmark, Italy, Netherlands, Spain and the United States).
- Canada's performance in terms of the total change in employment differs from that of other industrial countries, exhibiting a smooth, continuous relationship between growth and employment change. Other countries exhibited more complex patterns.