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Firm Dynamics: Firm Entry and Exit in the Canadian Provinces, 2000 to 2009

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...	not applicable
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0^s	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
^{p}	preliminary
^{r}	revised
x	suppressed to meet the confidentiality requirements of the *Statistics Act*
^{E}	use with caution
F	too unreliable to be published
*	significantly different from reference category ($p < 0.05$)

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Abstract

This paper examines the patterns of firm entry and exit across provinces in Canada, the relationship of these patterns to differences in industrial structure and the response of firm entry and exit to changes in the economic environment, from 2000 to 2009. The results show that in many provinces the patterns of firm entry and exit are similar to those found at the national level. For example, the entry rate calculated using the number of firms was higher than the exit rate using the same measure. The entry and exit rates when calculated using the number of firms were negatively correlated with each other.

This paper also finds that the entry rate when calculated using the number of firms varies considerably across provinces and was generally higher where the provincial economy grew more rapidly, such as Alberta. The variations in the exit rate were much smaller across provinces.

In addition, net entry (the differences between entry and exit) makes positive contributions to the growth in the business population and Alberta had the largest net entry rate over the period from 2000 to 2009, 3.1% per year on average, and Atlantic Canada, the smallest. Net entry contributes significantly more to employment growth than it does to growth in the number of firms. In all provinces except Atlantic Canada, almost one out of every five jobs created (or lost) over the period from 2000 to 2009 was due to the entry and exit process.

Differences in entry and exit rates across industries for each province are similar. The firm-number-based entry and exit rates were generally higher across the sectors where Canadian restructuring was leading to an increased importance of industries: mining, oil and gas, construction, transportation, and finance. Despite similarities in the cross-industry patterns within provinces, the levels of entry activity for particular industries are not the same. The Western provinces often outpaced the rest of the country in entry and exit activities for most industries.

Executive summary

This paper describes the patterns of firm entry and exit across provinces in Canada, the relationship of these patterns to differences in industrial structure and the response of firm entry and exit to changes in the economic environment.

Firm entry and exit play an important role in shaping industrial structure and dynamics. Although entry and exit are ubiquitous, new firms are often associated with new ideas and the provision of innovative goods and services that enhance competition and force incumbents to become more innovative and efficient. Studies have shown the considerable role played by entry and exit in resource reallocation and productivity improvement.

Empirical studies on firm entry and exit are usually restricted to specific industries, often manufacturing or retail, or to simple cross-country comparisons, due to the scarcity and quality of firm-level longitudinal datasets. Statistics Canada has developed a database from its Longitudinal Employment Analysis Program (LEAP) which makes it possible to derive statistics on firm dynamics for all industries in the business sector at the provincial level. The labour-tracking feature in the LEAP dataset allows us to distinguish 'organic' entry and exit from merger and acquisition activities.

Entry and exit patterns across provinces may be similar in some aspects and different in others because provincial economic conditions are important determinants of firm entry and exit and provincial circumstances differ. By providing an overview of entry and exit patterns in the Canadian provinces, this paper examines similarities and differences and links these to provincial industrial structure and economic development.

This paper finds that entry and exit patterns in many provinces are similar to those at the national level in a number of ways. First, the number of entering firms generally outpaced the number of exiting firms in all provinces over the period from 2000 to 2009. Second, the entry and exit rates calculated using number of firms appeared to be stationary, except in Manitoba, Quebec, and the Atlantic provinces, where both rates trended downward. Third, the entry and exit rates when calculated by employment declined over time in all provinces. Last, the entry and exit rates when calculated using the number of firms were negatively correlated with each other. Negative correlations are to be expected when cyclical effects on entry and exit predominate; positive correlations are expected when cyclical effects are relatively unimportant—because then the normal operation of creative destruction occurs

Economic growth increases demand for goods and services and hence corporate profits, which in turn encourages entry and protects against exit; therefore, it is expected that gross domestic product (GDP) growth would be positively related to entry and negatively related to exit.

In Alberta, British Columbia, and Quebec, the signs of both correlations are as expected. Over the period from 2000 to 2009, the correlation coefficient between GDP growth and the entry rate calculated using the number of firms was 0.67 for Alberta, 0.83 for British Columbia, and 0.17 for Quebec, and that between GDP growth and the exit rate calculated using the number of

firms was -0.72, -0.54, and -0.17 for the three provinces, respectively. Both correlations for Quebec, although possessing expected signs, are relatively weak.

In all other provinces, either one or both of the expected signs are not present. GDP growth was found to be negatively correlated with entry in Manitoba and the Atlantic provinces, and positively correlated with exit in Ontario, Saskatchewan, and the Atlantic provinces.

The level of entry and exit is expected to be province-specific when local economic conditions and other regional factors such as industrial structure and public policies play a major role in firms' entry and exit decisions.

This paper finds that the entry rate when calculated using the number of firms varies considerably across provinces and was generally higher where the provincial economy grew more rapidly. The average entry rate over 2000 to 2009 ranged from a high of 12.5% in Alberta to a low of 9.2% in Quebec. The variations in the exit rate were much smaller. The exit rate was highest at 9.6% in British Columbia and lowest at 8.5% in Quebec during the study period. These differences in the two rates confirm other work (Baldwin 1995) that suggests the exit rate tends to be relatively more stable across time and jurisdictions (when not influenced by major macro events or industrial restructuring) because the underlying probability of failure is invariant to minor differences in economic climate while entry rates respond to growth opportunities and these can vary more across jurisdictions or over time.

The entry rate and the turnover rate (the sum of entry and exit rates) are positively correlated. Alberta and British Columbia are the top two provinces with the highest entry and turnover rates, while Quebec ranked at the bottom for both rates. Provinces with higher entry rates on average tend also to have higher exit rates on average, and therefore a higher overall turnover rate because entry involves experimentation and new entrants are prone to higher failure rates.

Net entry (the differences between entry and exit) makes positive contributions to the growth in the business population. The contribution to the increase in number of firms was largest in Alberta over the period from 2000 to 2009, with an annual growth rate of 3.1% on average. It was the second-highest in Ontario and British Columbia, 2.4% and 2.3% on average per year, respectively. Net entry contributed less to the business population in Saskatchewan and Quebec. Atlantic Canada was last, with only 0.3% per year on average over the same time period.

Net entry contributes significantly more to employment growth than it does to growth in the number of firms. Despite the small shares of entrants and exits in total employment in all provinces, net entry contributes significantly to overall employment growth, except in the Atlantic provinces as a whole. Over 2000 to 2009, the contribution of net entry to overall employment growth averaged more than 21% in Ontario and Saskatchewan, 19% in British Columbia, and around 16% in Alberta, Manitoba, and Quebec. It was negligible in the Atlantic provinces.

Differences in entry and exit rates across industries for each province are similar. In Alberta, firm-number-based entry and exit rates were highest across the sectors where Canadian restructuring was leading to an increased importance of industries—mining, oil and gas, construction, transportation, and finance. The same is true for the other Western provinces—Saskatchewan, British Columbia, and Manitoba—which also experienced the effects of the post-2000 resource boom in varying degrees. It holds to a lesser, but still notable, degree in the Eastern provinces of Ontario and Quebec. This is in accord with the pattern reported in Brown and Gellatly (forthcoming) that growth in these industries was generally spread across most provinces.

Despite similarities in the cross-industry patterns within provinces, the levels of entry activity for particular industries (i.e., mining, oil and gas) are not the same. The growth of the mining, oil and gas industry in Western Canada was associated with the highest gross and net entry rates;

however, rates were quite high in this industry even in Ontario and Atlantic Canada, which demonstrates the strength of this industry across the country. Quebec had the lowest entry rate in this sector.

Construction also saw growth across the country. But once again, the Western provinces outpaced the rest of the country in net entry and in the contribution that net entry made to the total business population. As was the case with the resource sector, Quebec lagged the other provinces.

All provinces except Quebec experienced a growing or slightly growing finance industry. This industry growth was reflected in high gross entry rates across Ontario and the Western provinces.

For most provinces, manufacturing declined or was flat over the period. Ontario, Quebec, and Atlantic Canada saw a higher exit rate than entry rate. Alberta and Saskatchewan were the only provinces where manufacturing grew slightly over the period.

While the retail sector generally increased its relative size over the period (Brown and Gellatly forthcoming), Alberta and British Columbia were the only two provinces that experienced more entry than exit in this sector.

1 Introduction

Entry and exit is one of the most important components of turnover in industries. Firm entry and exit is important in shaping industrial structure.

Since entry involves the emergence of new firms, it is often associated with renewal and entrepreneurship. Entrants offer consumers innovative goods and services, often by developing new, or by responding to existing, market niches. They bring competitive pressure to bear on older businesses, forcing them to be more innovative and efficient and to respond more quickly to changes in consumer demand. Studies have shown the considerable role played by entry and exit in resource reallocation and productivity improvement.

But turnover is not always taken as a sign of success. Since exit involves the disappearance of entities, it is sometimes seen as the harbinger of obsolescence. The high exit rate associated with new entrants is sometimes seen as an unfortunate cost associated with immature entrepreneurs.

Nevertheless, entry and exit are ubiquitous. While new entrants generally accompany a rapidly growing industry, they are also found in mature or declining industries. While exits may be more numerous in industries that are in their sunset phase of life, they are also present in growing industries where there are large numbers of new entrants. A large proportion of these entrants will fail within their first ten years of life.

In order to provide an overview of the importance of the process, this paper examines the patterns of entry and exit in various industries across the Canadian provinces post-2000. It is meant to complement other work that asks how industrial structure has changed and to examine the part played by the entry and exit process.

This paper is not intended primarily to evaluate whether some industries or provincial economies were more vibrant as evidenced by differences in entry and exit intensity—though differences in provincial entry and exit patterns may follow from the analysis. It may be that inherent differences in flexibility as measured by net entry turnover statistics are an explanation of differences in the entrepreneurial capabilities of different provincial economies. But it is equally likely that basic differences in the economic structure and general economic developments of provincial economies generate these differences.

Both similarities and differences exist across the Canadian provinces in terms of industrial structure and changes that have taken place post-2000. For example, the finance industry is broadly based and has been steadily increasing in importance in various provincial economies. Over the period of 2000 to 2008, the finance industry accounted for, on average, more than 10% of provincial gross domestic product (GDP) for all 10 provinces (Table 8). On the other hand, the mining, oil and gas industry are relatively more important for Alberta, Saskatchewan, and Atlantic provinces. In 2008, the mining, oil and gas industry accounted for 34% of the provincial GDP for Alberta and for 21% for Atlantic provinces. However, this industry accounted for about 1% of the Ontario and Quebec economies. Manufacturing is

relatively more important in Ontario and Quebec than in the other provinces. In 2008, the manufacturing industry accounted for about 15-17% of provincial GDP for those two provinces, being the second most-important industry for Quebec and Ontario. These structural characteristics, along with differences in land size, population, abundance of natural resources, personal income, and business environment (taxes and regulation), across provinces may lead to different trends or cross-industry patterns in entry and exit by province.

There were also significant differences in the changes that the economies of different provinces experienced in the first decade after 2000 when energy and resource prices increased significantly. At the same time, manufacturing was negatively affected by the appreciating Canadian dollar vis-à-vis its U.S. counterpart. Entry and exit patterns might be expected to reflect these differences at both the provincial and industry levels.

While much has been learned from the literature on entry and exit, most of the research has focused on specific industries, often manufacturing and retail, and on the national level (Baldwin 1995; Baldwin and Lafrance 2011; Baldwin and Gu 2008). Ciobanu and Wang (2012) document empirical evidence on patterns of firm entry and exit in the aggregate Canadian business sector using the Longitudinal Employment Analysis Program (LEAP) database at the national level. This paper extends this work to examine the pattern of firm entry and exit for a variety of industries at the provincial level post-2000 and relates it to differences in provincial economic conditions.

The rest of the paper is organized as follows. Section 2 describes the data and the methodology used to measure entry and exit. Section 3 examines the trend in aggregate entry and exit rates by province. Section 4 first examines differences across industries for individual provinces to study whether there was a commonality in that pattern of differences at the industry level. Section 4 then compares industry differences across provinces to establish whether these differences were associated with differences in prosperity. Finally, Section 6 compares how net entry responded to both industry and provincial conditions and examines the contribution of net entry to the growth in the business population and to total employment. Section 7 concludes.

2 Data and measurement

2.1 Longitudinal Employment Analysis Program

This paper uses the LEAP dataset to document firm entry and exit at the provincial level in Canada over the period from 2000 to 2009. The LEAP is an administrative database that includes all firms in the Canadian economy with some payroll, that is, firms that issue at least one *Statement of Remuneration Paid* (T4 slip).[1] The LEAP currently covers the years 1983 to 2010; it includes incorporated and unincorporated businesses, but excludes self-employed individuals or partnerships where the participants do not draw salaries. It is a longitudinal file that provides information on total payroll, average earnings, employment, industry classification, province, and country of control at the firm level. Because the LEAP is created using a linkage of the Business Registry along with a summary of employee annual earnings from T4 slips and company payroll remittances, a measure of labour can be created that takes into account the nature of each job. This is the average labour unit (ALU), which is the payroll of the firm divided by the average annual earnings of the typical worker in the firm's industry (at the 4-digit level of the North American Industry Classification System [NAICS]), province, and business size.

The LEAP's labour-tracking mechanism allows changes in firm structure resulting from merger and acquisition (M&A) activity to be excluded from entry and exit counts. For example, two firms that merge to form a third would not be identified as two exits and one entry in the LEAP file. Rather, the structure in the final year of a particular vintage of the file would be used in previous years, and the employment history would be pushed back through time to maintain consistency. To keep track of these structural changes through time, the entire dataset consists of a sequence of different vintages. The last year of each vintage represents the firm structure that existed in that year. For this reason, entry and exit rates are calculated here based on the last three years of each LEAP vintage making use of all vintages. This ensures that the most up-to-date information is used in determining birth and death rates at a point in time, but, at the same time, M&A activity is excluded.

2.2 Measurement of entry and exit at the provincial level

In this paper, firm entry and exit is measured at the provincial level using annual provincial LEAP files from vintage 2001 to vintage 2010. As discussed in Ciobanu and Wang (2012), there are two methods that are generally used to develop measures of firm entry and exit on an annual basis.

The first one is based on a two-year observation period—using what is referred to as "the two-year rule."[2] The second is based on a three-year observation period—using a three-year rule. As is the case in Ciobanu and Wang (2012), the three-year rule is used here to measure firm

1. The "firm" herein is referred to as a "statistical enterprise," which is the lowest level associated with a complete set of financial statements.
2. The two-year rule is widely adopted in the literature on firm dynamics (Dunne et al. 1988; and Haltiwanger 2012).

entry and exit.[3] As a result, entry and exit rates over the period from 2000 to 2009 are derived using LEAP files from vintage 2001 to vintage 2010.

With the three-year rule, active firms are grouped into four categories: continuing firms (C), entrants (E), exits (X), and short-lived firms (S). In a particular reference year (t), all types of firms are active (A). A continuing firm is also active in the year before and after. An entrant is inactive in the year before t but active in the year after. An exit is active in the year before t but inactive one year after. A short-lived firm is inactive in both the year before and the year after reference year t.

For this study of provincial firm dynamics, entry and exit are defined at the provincial level. In other words, an entrant *A* for a province *B* at year *t* is inactive in $t\text{-}1$ only in province *B*. It is possible that *A* may already exist in other provinces in year $t\text{-}1$. This is also true for the definition of exit.[4]

Using the three-year rule ($3Y$), the total number of active firms ($N_{A,t}$) in a given province is equal to the sum of the number of firms in all categories, i.e.,

$$N_{A,t} = N_{C,t}^{3Y} + N_{E,t}^{3Y} + N_{X,t}^{3Y} + N_{S,t}^{3Y}. \tag{1}$$

The entry and exit rates measured by number of firms ($R_t(N)$) and employment share ($R_t(L)$) under the three-year rule are calculated from

$$\begin{aligned} R_t^E(N) &= \frac{N_{E,t}^{3Y}}{N_{A,t}}, \quad R_t^X(N) = \frac{N_{X,t}^{3Y}}{N_{A,t}}, \quad R_t^S(N) = \frac{N_{S,t}^{3Y}}{N_{A,t}} \\ R_t^E(L) &= \frac{L_t(N_{E,t}^{3Y})}{L_t(N_{A,t})}, \quad R_t^X(L) = \frac{L_t(N_{X,t}^{3Y})}{L_t(N_{A,t})}, \quad R_t^S(L) = \frac{L_t(N_{S,t}^{3Y})}{L_t(N_{A,t})}. \end{aligned} \tag{2}$$

To understand firm dynamics and the contribution of firm entry and exit to changes in the number of active firms and in the total employment, active firms are divided into two sub-groups in a two-year horizon ($2Y$): (1) firms that are active in both years, including the continuing firms in both years, the entrants in the first year, and the exiting firms in the second year; and (2) firms that are active in only one of the two years, including the short-lived firms in both years, the entrants in the second year, and the exiting firms in the first year. Then the change in the number of active firms between two consecutive years can be measured as the change in the number of firms in the second subgroup between the two years, i.e.,

$$N_{A,t} - N_{A,t-1} = (N_{E,t}^{3Y} + N_{S,t}^{3Y}) - (N_{X,t-1}^{3Y} + N_{S,t-1}^{3Y}) = N_{E,t}^{2Y} - N_{X,t-1}^{2Y}. \tag{3}$$

The second equality holds because of the connection between the two-year rule and the three-year rule.[5]

Similarly, the change in total employment can be decomposed into two effects: the growth effect and the net entry effect. The growth effect refers to the employment growth of firms that are active in both years, and the net entry effect refers to the change in employment caused by net entry. Specifically, the employment growth between two consecutive years can be written as

3. For a detailed comparison of the results produced by the two-year rule and the three-year rule, please refer to Ciobanu and Wang (2012).
4. This means that the total of provincial entry and exit rates will be larger than the national rates.
5. See Ciobanu and Wang (2012) for more detail.

$$
\begin{aligned}
& L_t(N_{A,t}) - L_{t-1}(N_{A,t}) \\
&= \underbrace{\left[L_t(N_{C,t}^{3Y} + N_{X,t}^{3Y}) - L_{t-1}(N_{C,t-1}^{3Y} + N_{E,t-1}^{3Y}) \right]}_{\text{The growth effect}} + \underbrace{\left[L_t(N_{E,t}^{3Y} + N_{S,t}^{3Y}) - L_{t-1}(N_{X,t-1}^{3Y} + N_{S,t-1}^{3Y}) \right]}_{\text{The net entry effect}} \qquad (4) \\
&= \left[L_t(N_{C,t}^{2Y}) - L_{t-1}(N_{C,t}^{2Y}) \right] + \left[L_t(N_{E,t}^{2Y}) - L_{t-1}(N_{X,t-1}^{2Y}) \right].
\end{aligned}
$$

All measures used to calculate growth between two consecutive years are generated from the same vintage file to ensure the same firm structure for the two years. For example, all measures required for calculating growth from 2008 to 2009 and from 2009 to 2010 are generated using the 2009 and 2010 vintage files, respectively.

3 Entry and exit at the provincial level

The aggregate firm entry and exit rates (calculated in terms of both number of firms and employment) at the provincial level are plotted in Charts 1 to 7 for the following provinces and regions: Alberta, British Columbia, Manitoba, Ontario, Quebec, Saskatchewan, and the Atlantic provinces (Newfoundland and Labrador, Prince Edward Island, Nova Scotia, and New Brunswick).[6] Each graph also includes the growth rate of provincial GDP in order to provide an overall perspective on economic conditions against which trends in entry and exit can be set.[7] The data can be found in Tables 16 to 22 of the Appendix (Section 6).

First, the entry rate as measured by the number of firms was generally higher than the exit rate. This is true for all provinces over the period from 2000 to 2009, except Saskatchewan and the Atlantic provinces. The business-sector population was generally growing as more firms entered than left. This echoes a similar finding on entry and exit rates at the national level in Ciobanu and Wang (2012). For Saskatchewan, the entry and exit rates were hardly distinguished from each other from 2000 to 2005. The entry rate began to exceed the exit rate starting from 2006 only. For Atlantic Canada, the entry rate was generally higher than the exit rate over time, but the reverse occurred in 2005 and 2006.[8]

Second, the entry and exit rates measured by employment (ALU) were less volatile and much smaller than those measured by the number of firms. For all provinces except Quebec, Saskatchewan, and the Atlantic provinces, the employment entry rate was also higher than the employment exit rate. Net entry (the difference between entry and exit) made a positive contribution to total employment in the business sector for most provinces. This is also consistent with a similar finding at the national level in Ciobanu and Wang (2012).

Third, for all provinces, the short-lived firms (where entry and exit occur in the same year) accounted for about only 2% to 5% of all active firms, with Quebec the lowest and Atlantic Canada the highest (see Tables 9 to 15 in Section 6, “Appendix”). Employment in the short-lived firms was quite small for all provinces, accounting for less than 1% of total employment.

Fourth, for most provinces over the period from 2000 to 2009, the movement in the entry rate calculated using number of firms reflected macroeconomic conditions prevailing over that time period. The years immediately after 2000, were generally a period of slower growth. This was followed by an expansion, and the subsequent 2008-2009 recession. Consistent with this, the entry rate for Alberta and British Columbia declined from 2000 to 2003 and then increased until 2007 and declined afterward. Ontario also was characterized by a declining entry rate early

6. The aggregation of the four Atlantic provinces into one region is done because the targeted population (number of firms and employment) is relatively small for Newfoundland and Labrador, and Prince Edward Island.
7. The provincial GDP is from CANSIM Table 379-0025, based on chained 2002 dollars. The GDP growth rate is calculated as the gross year-to-year rate of change. The GDPs for all provinces are normalized to 1 for the year 2000.
8. The entry or exit rate for the Atlantic provinces is defined as a weighted average of the entry rate or exit rate of the four provinces. It is possible that this weighted average of the entry or exit rate is different from the entry or exit rate if they are defined based on the region rather than the province.

in the period during the post-2000 slowdown, but saw a less than robust recovery in the rate as its GDP growth did the same, flattening in the middle of the decade. Quebec and the Atlantic provinces experienced a declining entry rate over the entire period, which accorded with the trend in their GDP growth. Saskatchewan experienced a flat entry rate from 2000 to 2006 before an increasing entry rate in 2007 and 2008. The one notable exception to the connection between the entry pattern and GDP growth was Manitoba, where the entry rate declined between 2000 and 2003 and remained relatively flat thereafter even though the province's economy expanded relatively rapidly from 2003 to 2007.

Generally GDP growth is positively related to entry and negatively related to exit. Over the period from 2000 to 2009, the correlation coefficient between GDP growth and the entry rate calculated using the number of firms was 0.67 for Alberta, 0.83 for British Columbia, and 0.17 for Quebec, and that between GDP growth and the exit rate when calculated by the number of firms was -0.72, -0.54, and -0.17 for the three provinces, respectively. Both correlations for Quebec were relatively weak.[9]

Differences in economic conditions at the provincial level are then generally reflected in entry and exit patterns over time. This is also the case when it comes to estimates of the contemporaneous correlations between entry and exit rates when measured by number of firms, between entry and exit rates when measured by employment, and between entry and short-lived firms when measured by number of firms (Table 1). These correlations are negative at the national level reflecting differences in the response of entry and exit to the business cycle—with the entry rate increasing during growth periods and declining during periods of slower growth, and the exit rate doing the reverse.

In Alberta, British Columbia, Ontario, and Saskatchewan, there was a negative correlation between entry and exit rates calculated using number of firms. The negative correlations for Alberta, British Columbia, and Ontario resulted from the rising entry rates from 2003 to 2007 and declining exit rates over the same period. The negative correlation for Saskatchewan, however, was due to the increasing entry rate from 2006 to 2008 and the declining exit rate over the same period. These negative correlations reflected more entry and fewer exits during economic expansion.

In contrast, a positive correlation between firm-based entry and exit rates existed for Manitoba, Quebec, and the Atlantic provinces. In both Quebec and the Atlantic provinces, this occurred because of generally declining firm-based entry and exit rates over time, which was accompanied by declines in the rates of GDP growth.

Negative correlations are to be expected when cyclical effects predominate; positive correlations are expected when they are relatively unimportant—because then the normal impact of creative destruction where higher entry leads to higher exit predominates over the cyclical effects where the two are inversely related to one another. Supporting this explanation, the correlation between the de-trended series of entry and exit became negative in Manitoba and the Atlantic provinces although it remained positive in Quebec.

In contrast to the correlations that use firm-based entry and exit rates, the correlation between entry and exit rates when measured by employment was positive for all provinces. This occurred because both entry and exit generally declined together over time (probably due to a lower entry rate and therefore concomitantly a lower exit rate), and this trend dominated cyclical effects. The size of entering and exiting firms also became smaller and smaller over time, and

9. These correlations suggest only that the provincial patterns of entry and exit are closely related to the local economic conditions. These correlations might have arisen either because positive (negative) economic growth facilitates entry (exit) and deters exit (entry) or because positive (negative) net entry contributes positively (negatively) to economic growth.

the contribution of the entry and exit process to total employment in the business sector did the same.

How much does the entry and exit process contribute to growth (in the number of firms and employment) in the business sector at the province level? The decomposition in equations (3) and (4) is used to answer this question. For all consecutive years starting from 2000 until 2009, the annual contribution of net entry to the growth of total numbers of businesses and to total employment growth is computed using the following:

$$R_t^{EX}(N) = \frac{N_{E,t}^{2Y} - N_{X,t-1}^{2Y}}{(N_{A,t} + N_{A,t-1})/2}, \quad R_t^{EX}(L) = \frac{L_t(N_{E,t}^{2Y}) - L_{t-1}(N_{X,t-1}^{2Y})}{L_t(N_{A,t}) - L_{t-1}(N_{A,t-1})}.$$

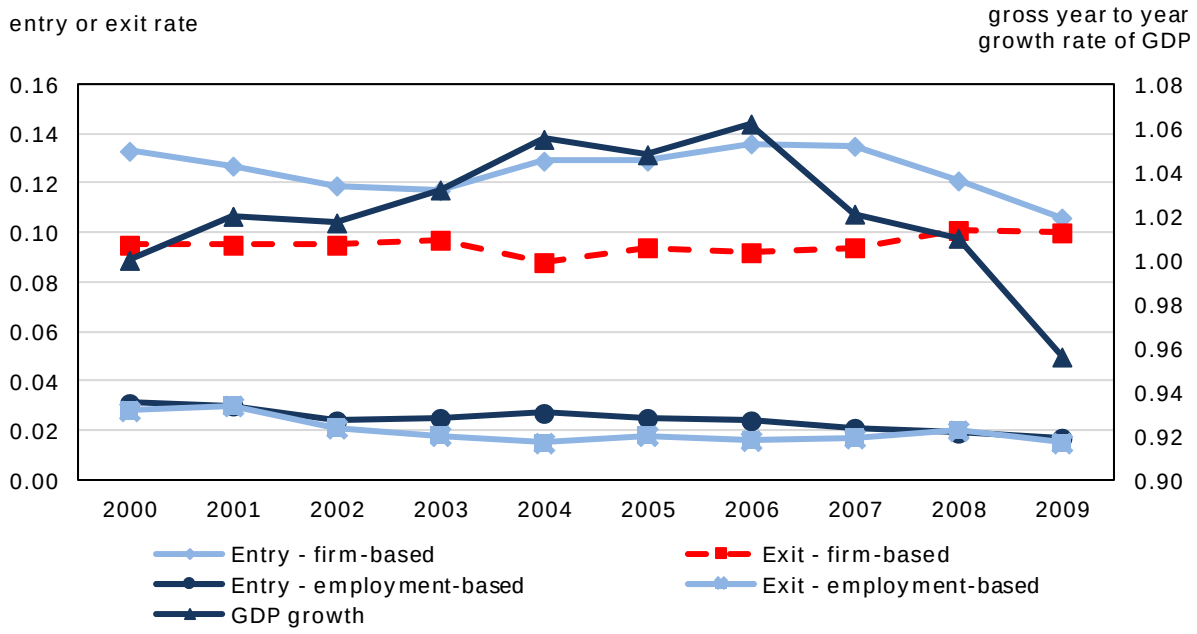
The weighted averages of the annual contribution of net entry to growth in the numbers of firms in the business population and to growth in business employment are shown in Table 2.[10] The contribution to the increase in number of firms was largest in Alberta over the period from 2000 to 2009, with an annual growth rate of 3.1% on average. It was the second-highest in Ontario and British Columbia, 2.4% and 2.3% on average per year, respectively. Net entry contributed less to growth in the business population in Saskatchewan and Quebec. Atlantic Canada was last, with 0.3% per year on average over the same time period.

The contribution of net entry to business employment growth is generally much higher than its contribution to the business population. This general finding occurs because large and small firms are at different points in the life-cycle. Large firms have generally reached the stage where efficiencies are being rung out of the production process and they are becoming less labour intensive by shedding labour per unit of output produced. New firms, however, are still at the stage where this has not yet occurred and they are highly labour intensive.

The one exception to this provincial pattern is Atlantic Canada, where net entry had a negative impact on employment. The provinces where entry contributed more to the firm population counts were generally those where a greater contribution was made to employment growth—though the cross-province ranking changed in some instances. Ontario and Saskatchewan had the highest contribution of net entry to business employment growth, with 21.4% and 21.3% per year on average, respectively. One out of every five jobs created (or lost) in those two provinces over the period from 2000 to 2009 was due to the entry and exit process. The contribution of net entry to business employment growth for most of the rest of the provinces was also significant, ranging from 16% to 19% per year on average. Quebec and Manitoba contributed relatively fewer firms via turnover to the business population and less to employment growth. The Atlantic provinces ranked last.

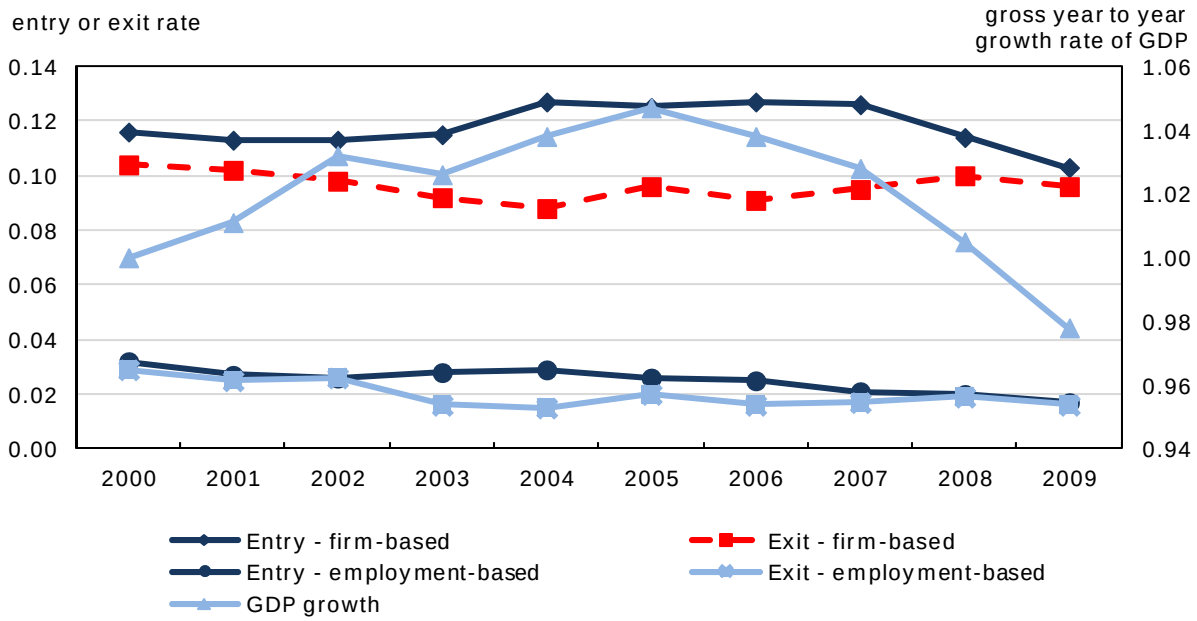
10. The weights used to compute the average contribution of net entry to business-size growth are calculated as the share of total active firms each year (average of total active firms for two consecutive years) among all active firms over the period from 2000 to 2009. The weights used to compute the average contribution of net entry to total employment growth are calculated as the share of the absolute change in employment each year of the sum of absolute change in employment of all years. The purpose of using these weights is to minimize the impact of large net entry from a particular year on the average.

Chart 1
Entry and exit rates in Alberta



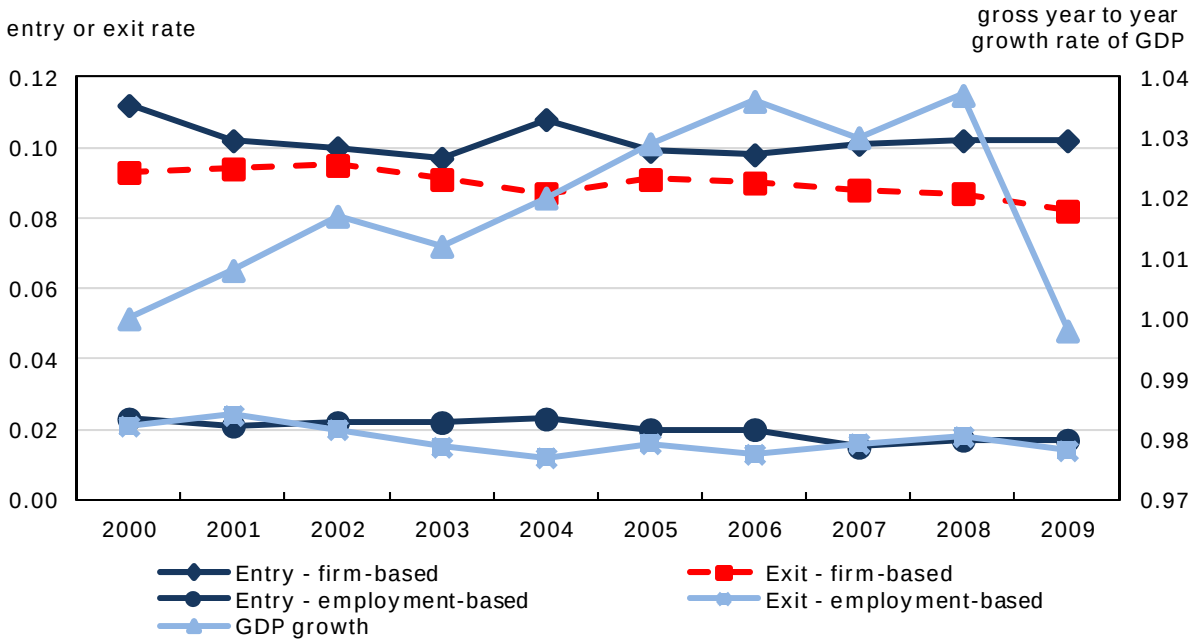
Note: GDP stands for "gross domestic product".
Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Chart 2
Entry and exit rates in British Columbia



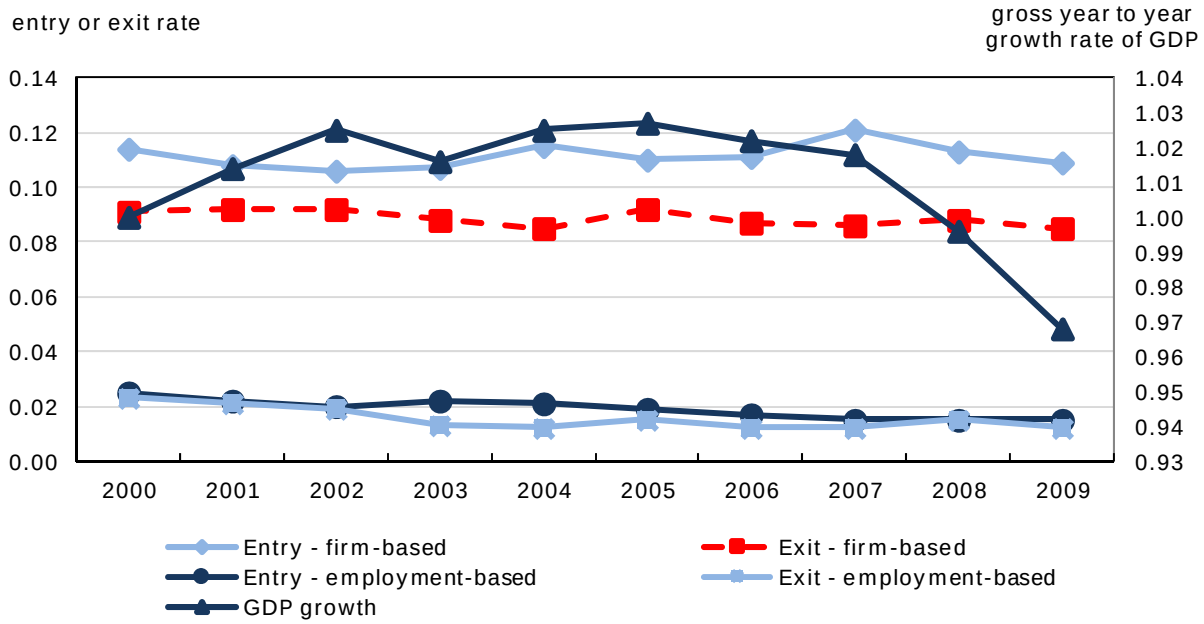
Note: GDP stands for "gross domestic product."
Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Chart 3
Entry and exit rates in Manitoba



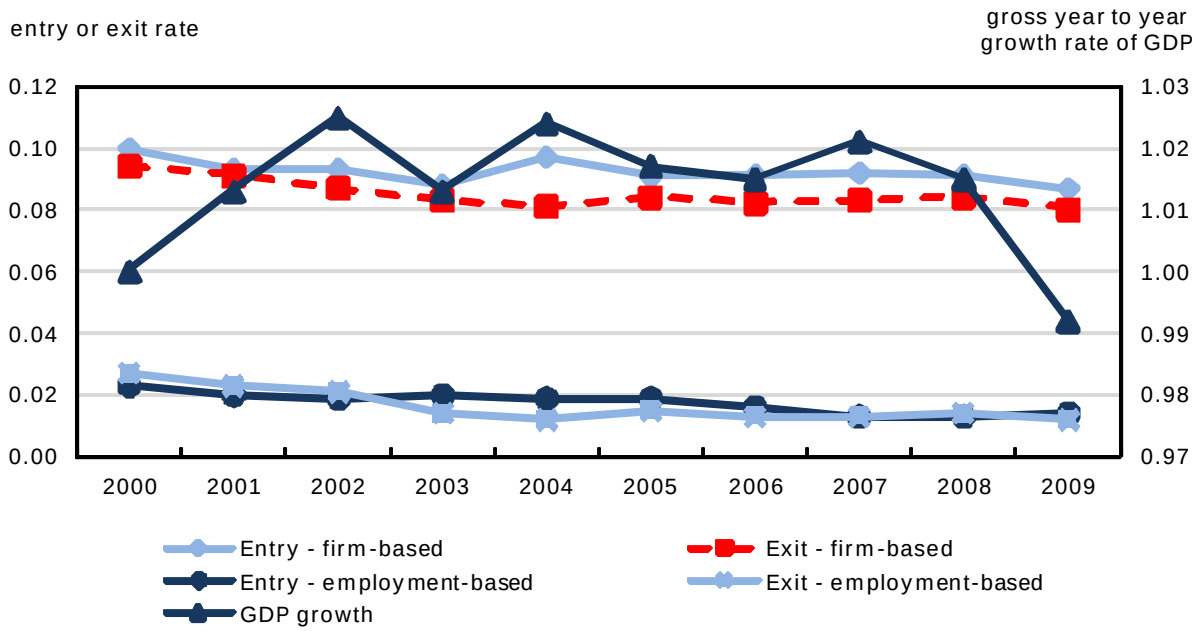
Note: GDP stands for "gross domestic product".
Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Chart 4
Entry and exit rates in Ontario



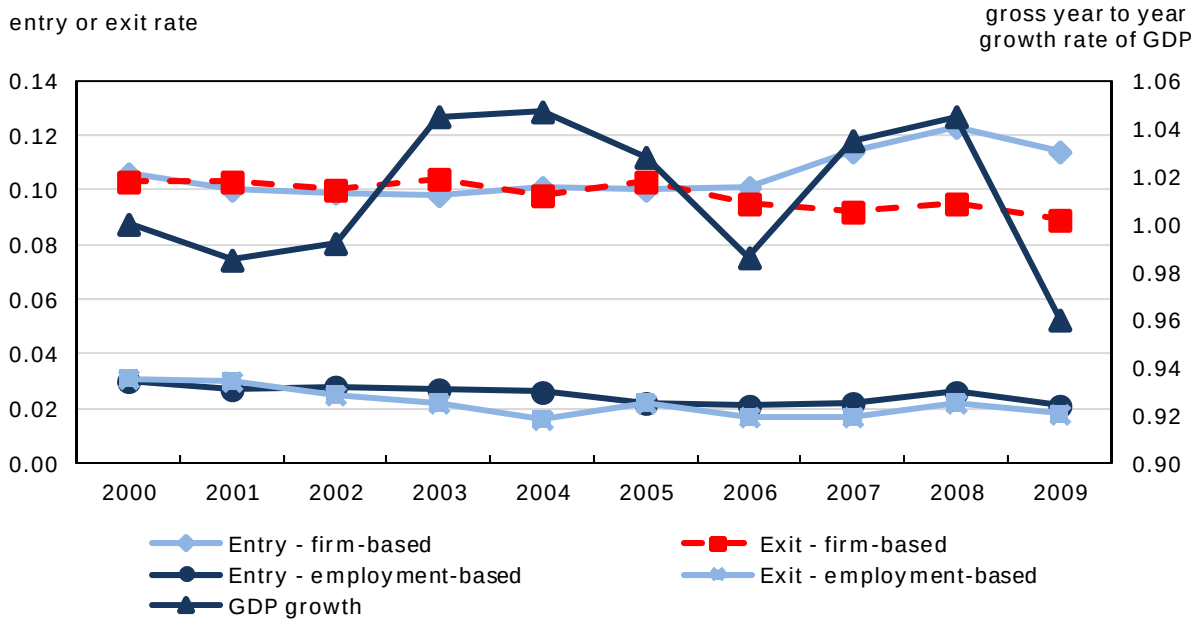
Note: GDP stands for "grosss domestic product".
Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Chart 5
Entry and exit rates in Quebec



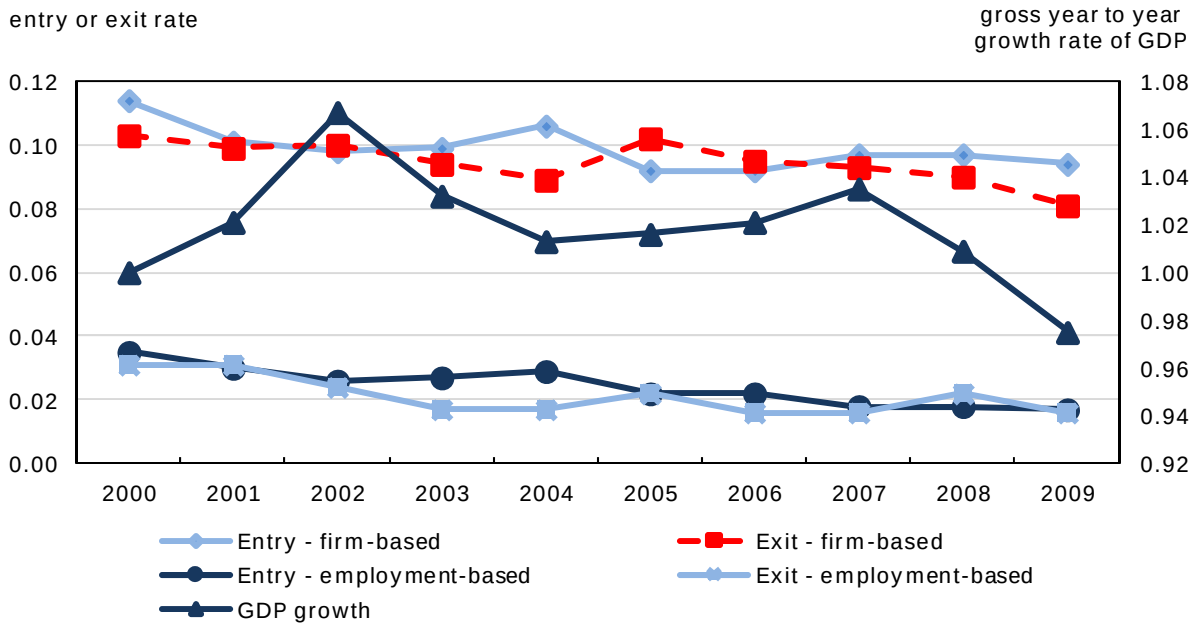
Note: GDP stands for "gross domestic product".
Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Chart 6
Entry and exit rates in Saskatchewan



Note: GDP stands for "gross domestic product".
Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Chart 7
Entry and exit rates in Atlantic Canada



Note: GDP stands for "gross domestic product".
Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 1
Correlations between entry and exit at the provincial and regional levels

	Firm-based entry/exit	Employment-based entry/exit	Firm-based/short-lived entry
	correlation coefficient		
Alberta	-0.65	0.66	0.68
British Columbia	-0.52	0.47	0.86
Manitoba	0.05	0.17	0.31
Ontario	-0.40	0.69	0.32
Quebec	0.64	0.70	0.65
Saskatchewan	-0.70	0.75	0.16
Atlantic Canada	0.31	0.65	0.53

Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 2
Average annual contribution of net entry to the growth of the number of firms and business employment from 2000 to 2009

Average annual contribution of net entry to	Alberta	British Columbia	Manitoba	Ontario	Quebec	Saskatchewan	Atlantic Canada
				percent			
Growth of number of firms	3.10	2.30	1.10	2.40	0.70	0.80	0.30
Growth of business employment	16.70	19.30	15.60	21.40	15.60	21.30	-0.20

Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

4 Entry and exit by province and industry

Industries within provinces experienced differences in their entry and exit profiles that reflected variations in the provincial economies. In this section, entry and exit rates are examined for a number of select industries within each province in order to illustrate this point. These selected industries include mining, quarrying, and oil and gas extraction (NAICS 21, hereinafter "mining and oil"), construction (NAICS 23), manufacturing (NAICS 31-33), retail trade (NAICS 44-45, hereinafter "retail"), transportation and warehousing (NAICS 48-49, hereinafter "transportation"), and finance, insurance, real estate, rental and leasing, and management of companies and enterprises (NAICS 52, 53, and 55, hereinafter "finance").

The selected industries correspond to those undergoing the most structural change over the period from 2000 to 2010 (Brown and Gellatly forthcoming). This was a period when mining and oil, construction, retail, and finance industries generally increased their importance while manufacturing generally declined.[11]

The provincial comparisons also focus on whether the similarities in the inter-industry turnover rates suggest that this process responded to the structural shifts taking place across the country.

4.1 Entry and exit rates by selected industry for each province

The average annual entry and exit rates over the period from 2000 to 2009 for those selected industries and each province are shown in Charts 8 to 14.

4.1.1 Overall turnover

In Alberta, firm-number-based entry and exit rates were highest across the sectors where Canadian restructuring was leading to an increased importance of industries—mining and oil, construction, transportation, and finance. The same was true for the other Western provinces—Saskatchewan, British Columbia, and Manitoba—which also experienced the effects of the resource boom in varying degrees. It holds to a lesser but still notable degree in the Eastern provinces of Ontario and Quebec. This is in accord with the pattern reported in Brown and Gellatly (forthcoming) that growth in these industries was generally spread across most provincial jurisdictions.

Manufacturing and retail generally had lower firm-number-based entry and exit rates over the period across all jurisdictions.

The similarities in the pattern of cross-industry differences across most provinces reflected either the fact that a general adjustment was taking place everywhere as a result of industrial change or there were similar differences in entry conditions.

11. The shifts of industry shares for provincial nominal GDP for 2000 and 2008 are shown in Table 8 in the Appendix (Section 6).

To differentiate between these hypotheses, correlations of the industry entry and exit rates between provinces were calculated for just the main industries undergoing restructuring (Tables 3 and 4) and for all industries (Tables 5 and 6). The correlations for the entry rates between Alberta and its western counterparts and those between Ontario and Quebec were generally positive when all industries were considered—but much higher when just the restructuring industries were considered. The correlations for the other provinces for the total industry dataset were even less likely to be positive though once again the correlations for the reduced industry set were higher. All this suggests that a good portion of the commonality in entry conditions stemmed not from inherent industry characteristics related to entry barriers but from commonalities in the restructuring that was taking place across the country.

The major notable exception was Atlantic Canada, where there was less of a differential in firm-turnover rate, and where, as seen above, entry and exit rates were following a different, downward, trajectory than in the other provinces. Atlantic Canada also differed from the rest in that more of the industries being examined here experienced a higher exit rate than entry rate. The differences in the correlations between its entry rate and those of the other provinces were striking. They tended to be smaller or the opposite in sign to most of the other interprovincial correlations.

4.1.2 Differences in the entry and exit rates

The net entry rate (the difference between the firm-numbers entry and exit rates) was generally positive across all provinces in the mining and oil, construction, and finance sectors, and the turnover process contributed to the growth in industry population.[12] The exception was manufacturing—in British Columbia, Saskatchewan, Manitoba, Ontario, Quebec, and Atlantic Canada—though Alberta's expansion was sufficiently robust that, even in manufacturing, its net entry rate was positive.

For Alberta, the firm-numbers entry rate was higher than the exit rate for all selected industries, especially mining and oil, transportation, and construction. This reflected the growth in these industries over this period, led by the expanding oil and gas industry in Alberta. In contrast, there were more negative firm-number based net entry rates in Quebec and Atlantic Canada than positive ones—reflective of the economic conditions in these provinces in the post-2000 decade. The net entry employment rates were also more often generally negative than positive for Quebec and Atlantic Canada.

When they are positive, net firm-numbers-based entry rates are generally accompanied by positive net employment entry rates; but there are exceptions that indicate unusual restructuring. In Alberta, the firm-numbers net entry rate for mining and oil industry was positive, but the employment net entry rate was negative. Larger-than-average firms were exiting the industry, and employment growth in this industry was due mainly to the continuing-firm segment rather than to the entry and exit process. The same was true of many of the industries examined in Saskatchewan.

Transportation and construction also led the firm-numbers net entry rate (the difference between the entry and exit rates) in Ontario, followed by mining and oil, and finance. Manufacturing was the only industry among the group selected with a negative net entry rate. This is consistent with the global decline in manufacturing post-2000.

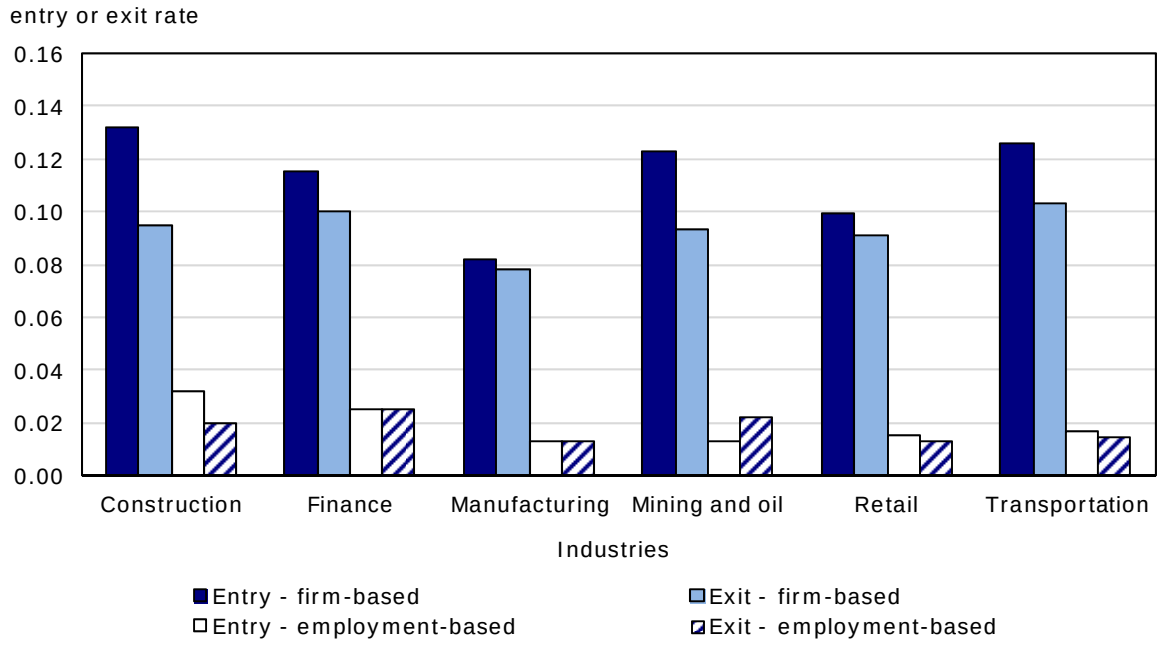
Quebec also saw growing mining and oil, and construction industries over the period from 2000 to 2009. However, the rest of the selected industries, including manufacturing, retail, transportation, and finance, experienced negative net entry over the same period.

12. The net entry rate herein is simply the difference between firm-based entry and exit rates defined in equation (2).

Atlantic Canada exhibited a pattern of entry and exit across industries similar to that of Quebec except for finance, which grew in Atlantic Canada while it declined in Quebec.

Chart 8

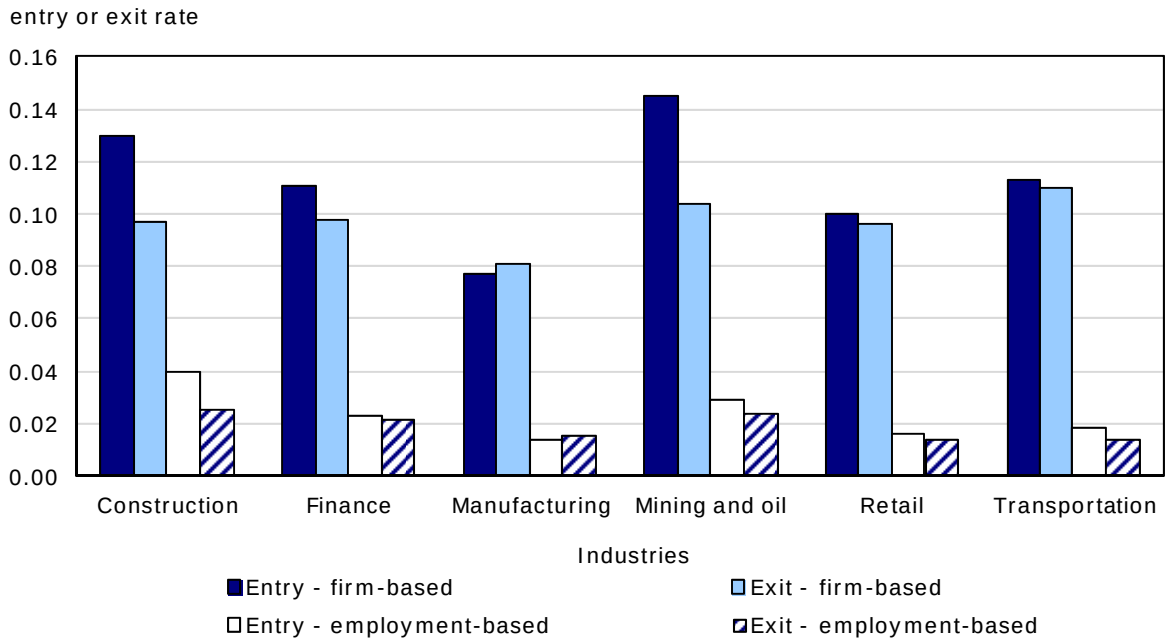
Average annual entry and exit rates (2000 to 2009) by industry in Alberta



Sources: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Chart 9

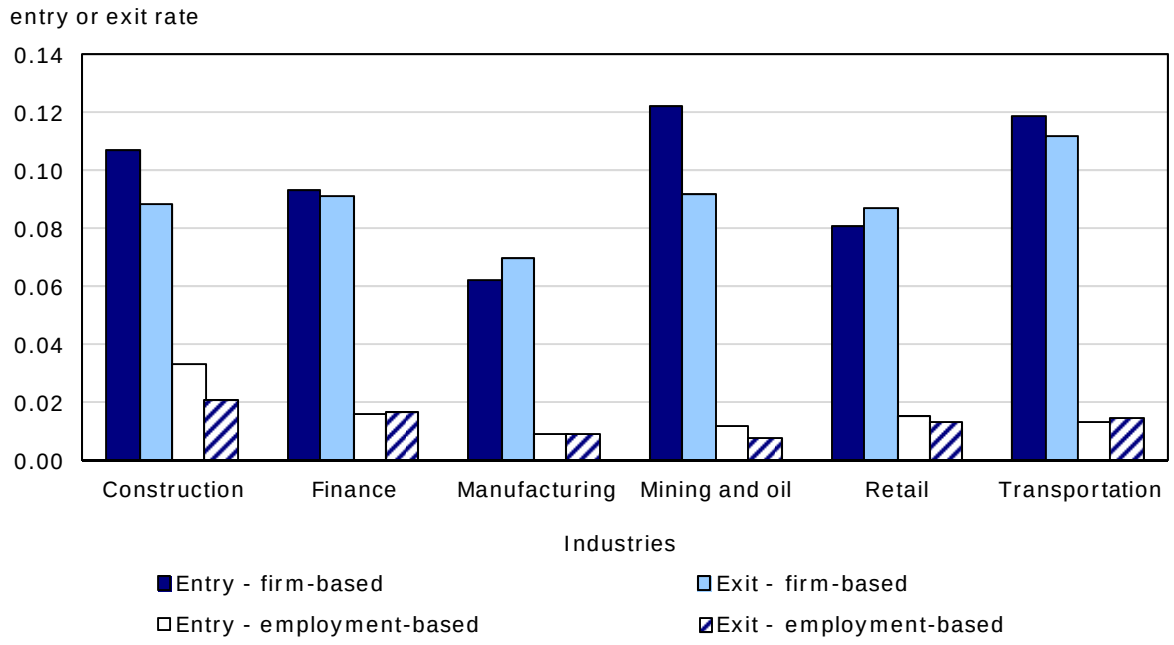
Average annual entry and exit rates (2000 to 2009) by industry in British Columbia



Sources: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Chart 10

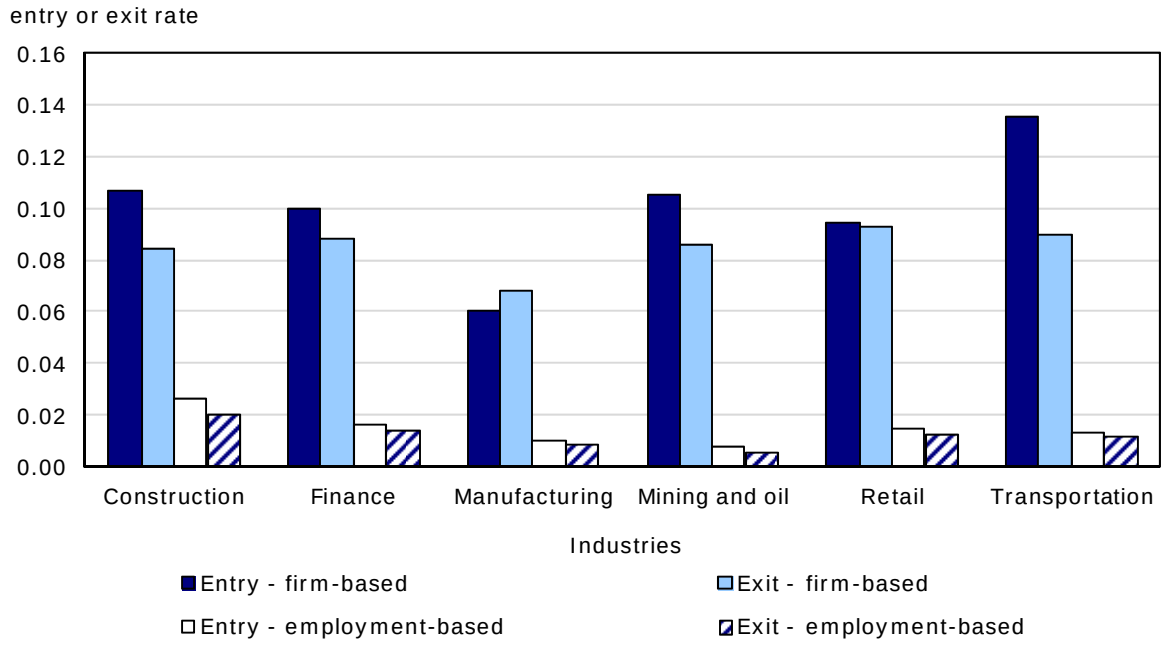
Average annual entry and exit rates (2000 to 2009) by industry in Manitoba



Sources: Statistics Canada, authors' caldulations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Chart 11

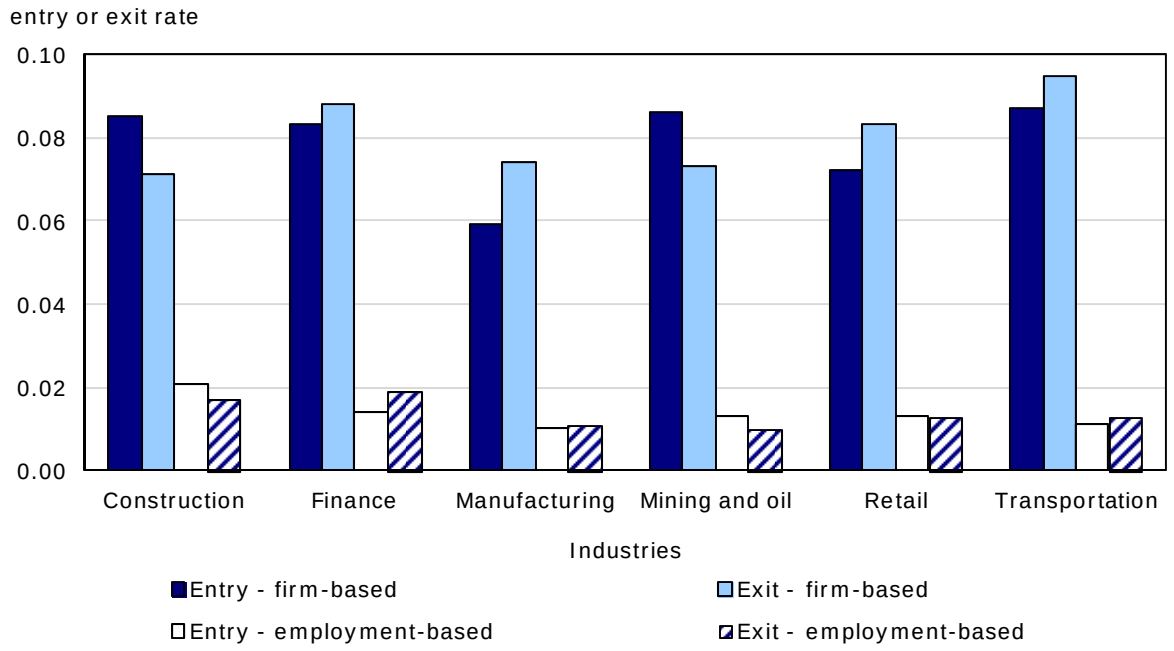
Average annual entry and exit rates (2000 to 2009) by industry in Ontario



Sources: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Chart 12

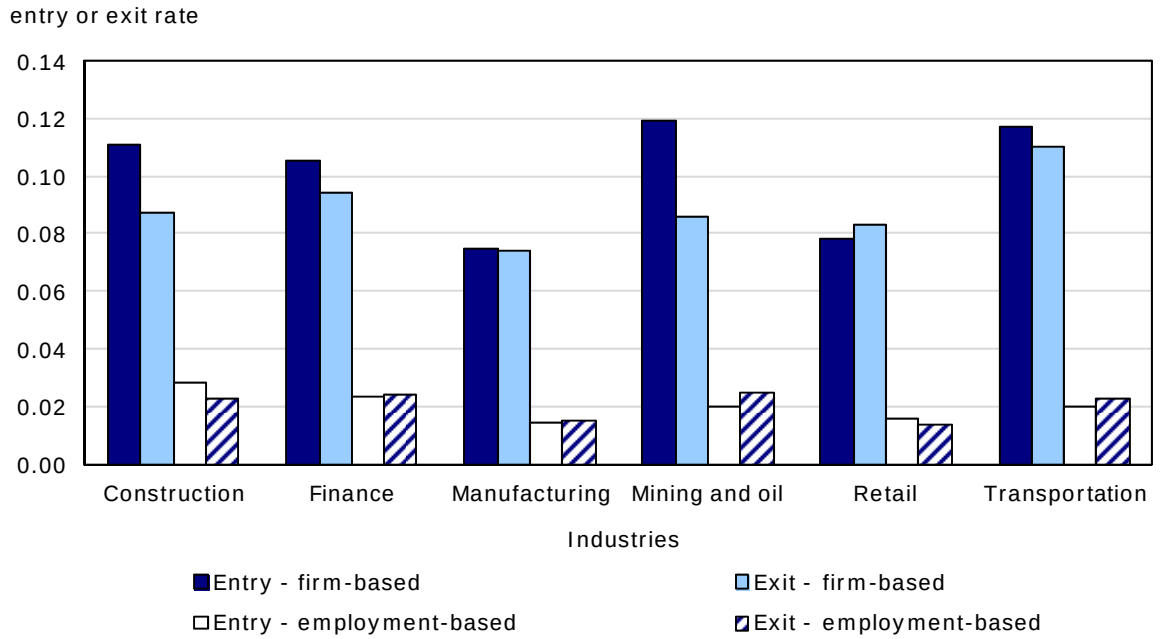
Average annual entry and exit rates (2000 to 2009) by industry in Quebec



Sources: Statistics Canada, authors' caldulations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Chart 13

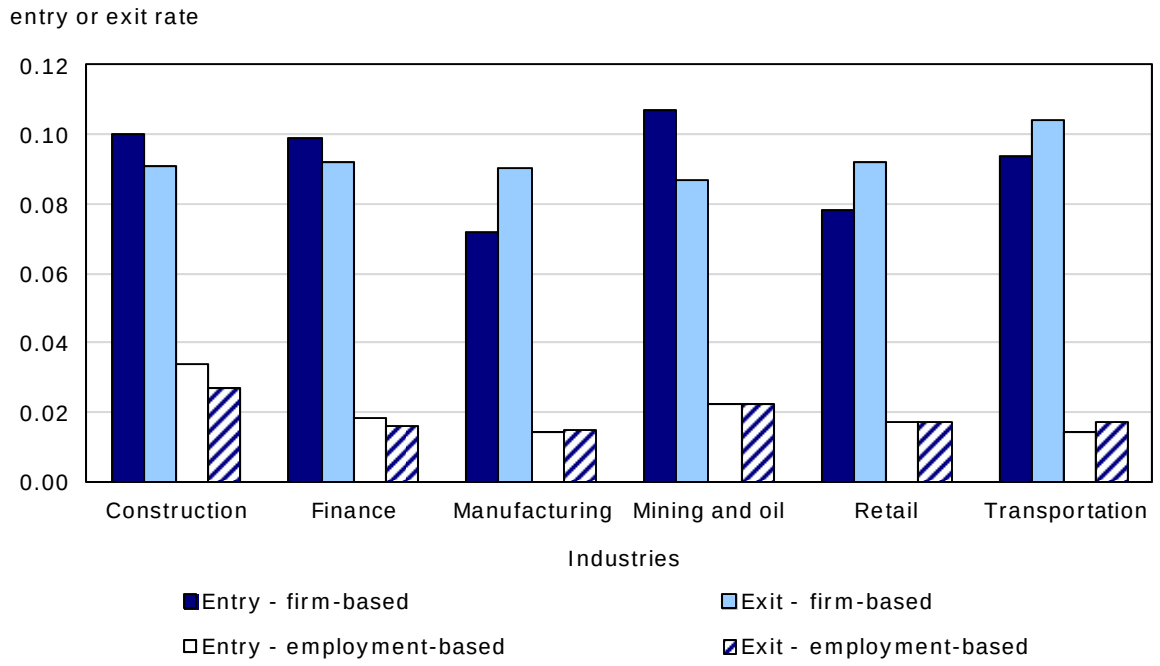
Average annual entry and exit rates (2000 to 2009) by industry in Saskatchewan



Sources: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Chart 14

Average annual entry and exit rates (2000 to 2009) by industry in Atlantic Canada



Sources: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 3

Correlation of the industry average firm-based entry rate across provinces (selected industries only)

	Alberta	British Columbia	Manitoba	Ontario	Quebec	Saskatchewan	Atlantic Canada
				correlation coefficient			
Alberta	1.00	0.76	0.82	0.77	0.20	0.84	-0.14
British Columbia	...	1.00	0.89	0.63	0.29	0.80	0.05
Manitoba	...	...	1.00	0.87	0.15	0.93	-0.16
Ontario	...	...	...	1.00	-0.22	0.79	-0.53
Quebec	...	...	...	...	1.00	0.42	0.93
Saskatchewan	...	...	...	...	...	1.00	0.09
Atlantic Canada	...	...	...	...	...	...	1.00

... not applicable

Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 4

Correlation of the industry average firm-based exit rate across provinces (selected industries only)

	Alberta	British Columbia	Manitoba	Ontario	Quebec	Saskatchewan	Atlantic Canada
				number			
Alberta	1.00	0.75	0.55	0.65	0.49	0.60	0.35
British Columbia	...	1.00	0.96	0.78	0.55	0.38	0.32
Manitoba	...	...	1.00	0.72	0.43	0.19	0.32
Ontario	...	...	...	1.00	0.30	-0.01	0.42
Quebec	...	...	...	...	1.00	0.84	0.51
Saskatchewan	...	...	...	...	...	1.00	0.31
Atlantic Canada	...	...	...	...	...	...	1.00

... not applicable
Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 5

Correlation of the industry average firm-based entry rate across provinces (all industries)

	Alberta	British Columbia	Manitoba	Ontario	Quebec	Saskatchewan	Atlantic Canada
				correlation coefficient			
Alberta	1.00	0.30	0.26	0.20	0.45	-0.01	-0.08
British Columbia	...	1.00	-0.01	-0.23	0.30	-0.07	0.37
Manitoba	...	...	1.00	-0.04	0.14	0.38	0.26
Ontario	...	...	...	1.00	0.06	-0.07	-0.20
Quebec	...	...	...	...	1.00	0.11	0.55
Saskatchewan	...	...	...	...	...	1.00	0.46
Atlantic Canada	...	...	...	...	...	...	1.00

... not applicable
Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 6

Correlation of the industry average firm-based exit rate across provinces (all industries)

	Alberta	British Columbia	Manitoba	Ontario	Quebec	Saskatchewan	Atlantic Canada
				correlation coefficient			
Alberta	1.00	-0.08	0.06	-0.12	0.42	0.17	0.02
British Columbia	...	1.00	0.19	-0.08	-0.06	-0.49	0.04
Manitoba	...	...	1.00	0.06	0.23	0.07	-0.01
Ontario	...	...	...	1.00	-0.25	0.22	-0.57
Quebec	...	...	...	...	1.00	0.12	0.28
Saskatchewan	...	...	...	...	...	1.00	0.20
Atlantic Canada	...	...	...	...	...	...	1.00

... not applicable
Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

4.2 Entry and exit rates by province for each selected industry

Comparisons of turnover for individual industries across provinces allow the effects of different provincial growth trajectories on entry and exit to be examined. The average annual firm-based entry and exit rates over the period from 2000 to 2009 by province and for the selected industries are presented in charts 15 to 20. Table 7 (Panel A) contains estimates of the impact of the entry and exit process on the growth in the size of the business population.

The growth of the mining and oil industry in Western Canada was associated with the highest gross and net entry rates; however, rates were quite high in this industry even in Ontario and Atlantic Canada, which demonstrated the strength of this industry across the country. Quebec had the lowest entry rate in this sector. This broad picture also held for the impact of entry on the growth in the population of firms (Table 7). The largest impact occurs in the Western provinces; the lowest occurs in Quebec.

Partly as a result of the resource boom, partly due to the rapidly expanding housing market, construction also saw growth across the country. But once again, the Western provinces outpaced the rest of the country in net entry and in the contribution that net entry made to the total business population. As was the case with the resource sector, Quebec lagged the other provinces.

All provinces except Quebec experienced an expansion in the finance industry. This was driven partially by rapid growth in the financial and housing markets between 2003 and 2007. This industry growth was reflected in high gross entry rates across Ontario and the Western provinces. Interestingly, Atlantic Canada experienced gross entry rates almost as high as those of Ontario. The decline of finance in Quebec (the lower gross entry rate and the negative net entry rate) was due to the decline of two subsegments of the finance sector—finance and insurance (NAICS 52) and management of companies and enterprises (NAICS 55)—but not the real estate and rental and leasing segment (NAICS 53).[13] The contributions that net entry made to the overall business population were the largest in the Western provinces and in Ontario and least in Quebec and Atlantic Canada.

For most provinces, manufacturing declined or was flat over the period. Alberta and Saskatchewan were the only provinces where manufacturing grew slightly over the period, showing a positive net entry rate. This was most likely attributable to the manufacturing industries in these two provinces that served mining and oil and gas. Entry's net contribution to the total number of firms was generally negative. The largest negative values occurred in Quebec and Atlantic Canada.

Ontario and Alberta saw an expanding transportation industry relative to the other provinces as evidenced by high gross and net entry rates and the higher contribution of net entry to growth in the business population. The transportation industry consists of air, rail, water, and truck transportation sub-industries as well as the pipeline transportation sub-industry. The booming oil and gas industry in Alberta generated demand for transportation of oil and natural gas products. Ontario had the highest net entry rate as measured by number of firms for transportation, but its net employment entry rate was almost zero (Table 19). This suggests that entrants in Ontario's transportation industry were much smaller than exits.

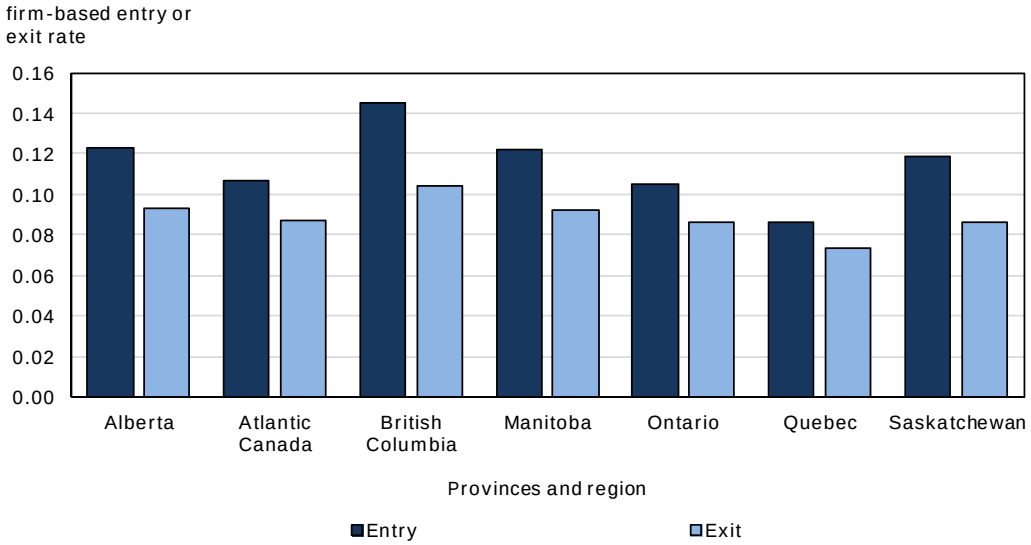
While the retail sector generally increased in size, (Brown and Gellatly forthcoming), Alberta and British Columbia were the only two provinces that experienced more entry than exit in this sector, and their contribution of net entry to the business population was the highest. These

13. The net entry rates for the former two subsectors are negative, -2.0% and -1.2%, respectively. The net entry rate for the latter subsector is positive, about 0.8%.

were the only two provinces that saw a positive net migration over most of period from 2000 to 2009, thereby boosting population and increasing the demand for retail services.[14]

Chart 15

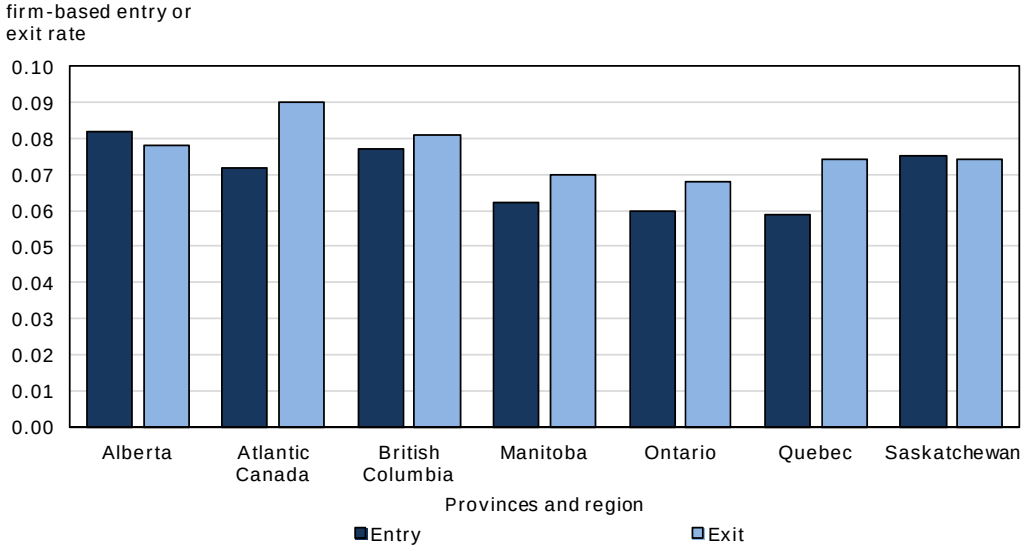
Average annual entry and exit rates (2000 to 2009) by province in the mining, oil and gas industry



Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Chart 16

Average annual entry and exit rates (2000 to 2009) by province in the manufacturing industry

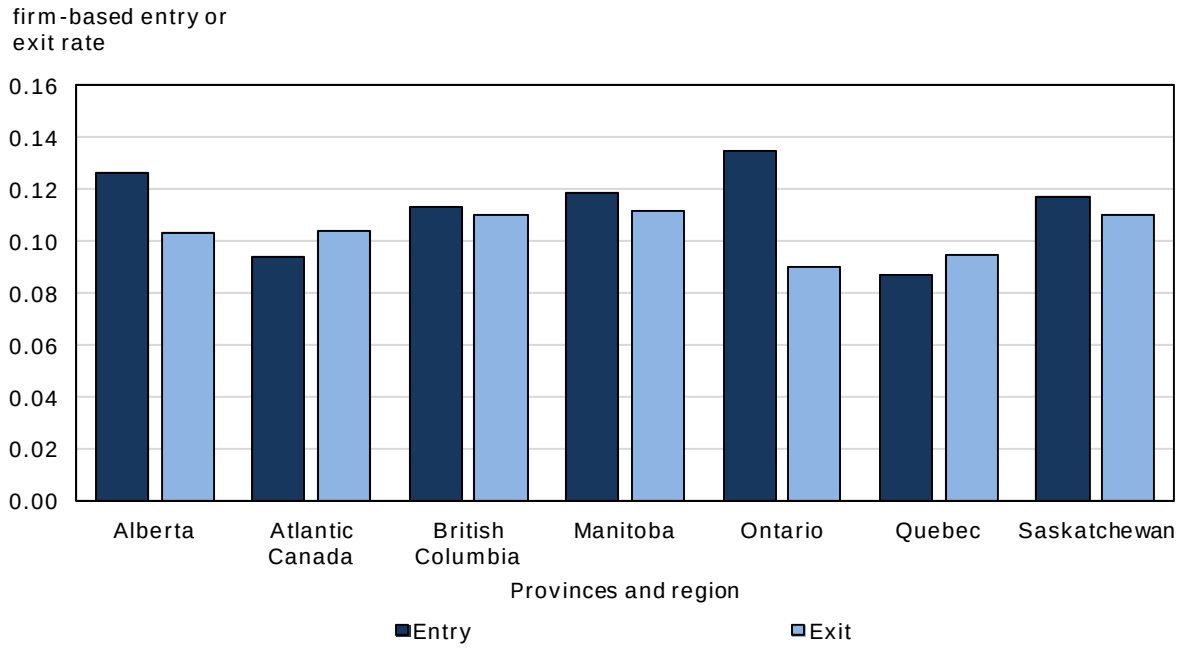


Source: Statistics Canada, authors' caldulations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

14. Ontario had a positive net migration (difference between inflow and outflow) from 2000 to 2003 and negative afterwards. Saskatchewan did not experience a positive net migration until 2006/2007. Source: CANSIM Table 051-0012.

Chart 17

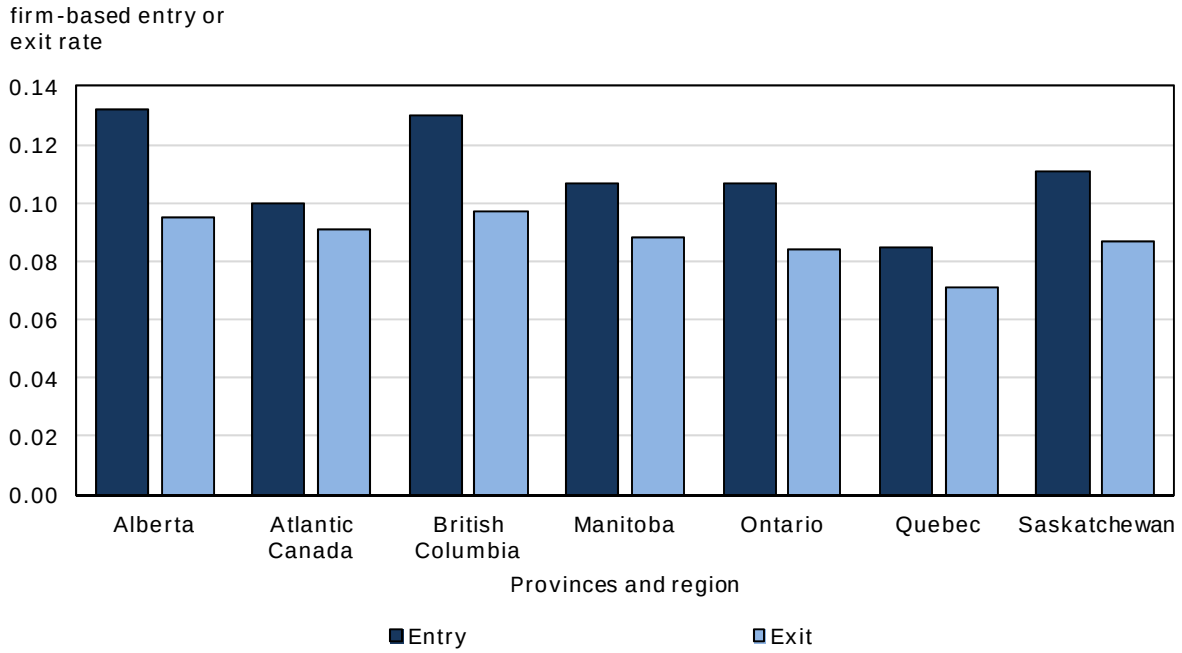
Average annual entry and exit rates (2000 to 2009) by province in the transportation industry



Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Chart 18

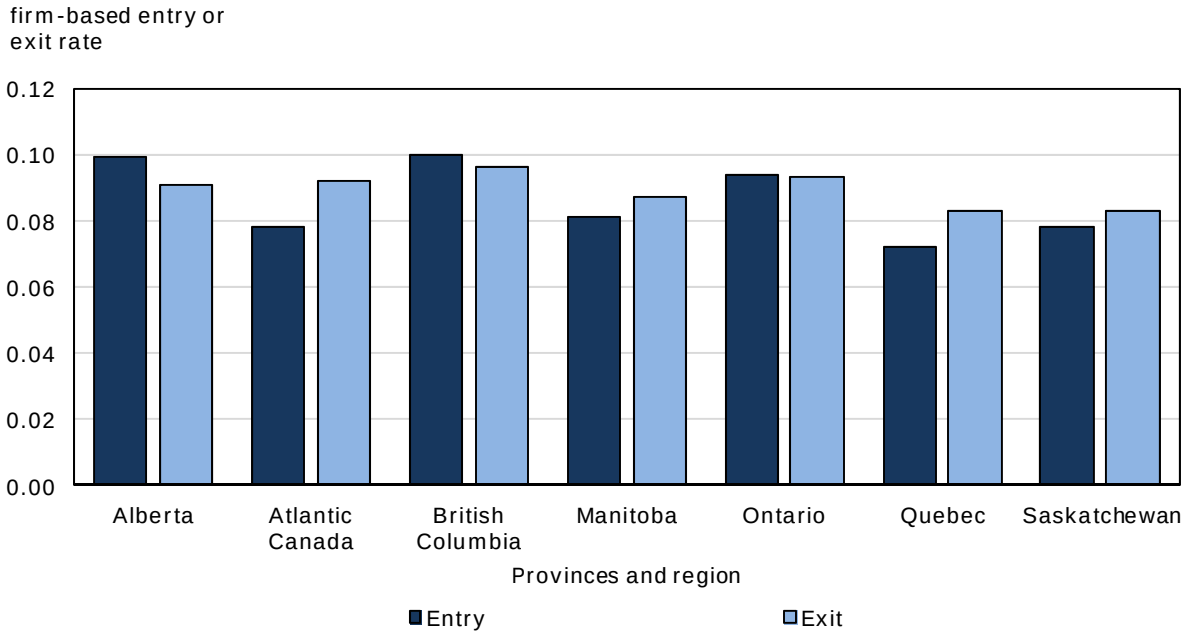
Average annual entry and exit rates (2000 to 2009) by province in the construction industry



Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Chart 19

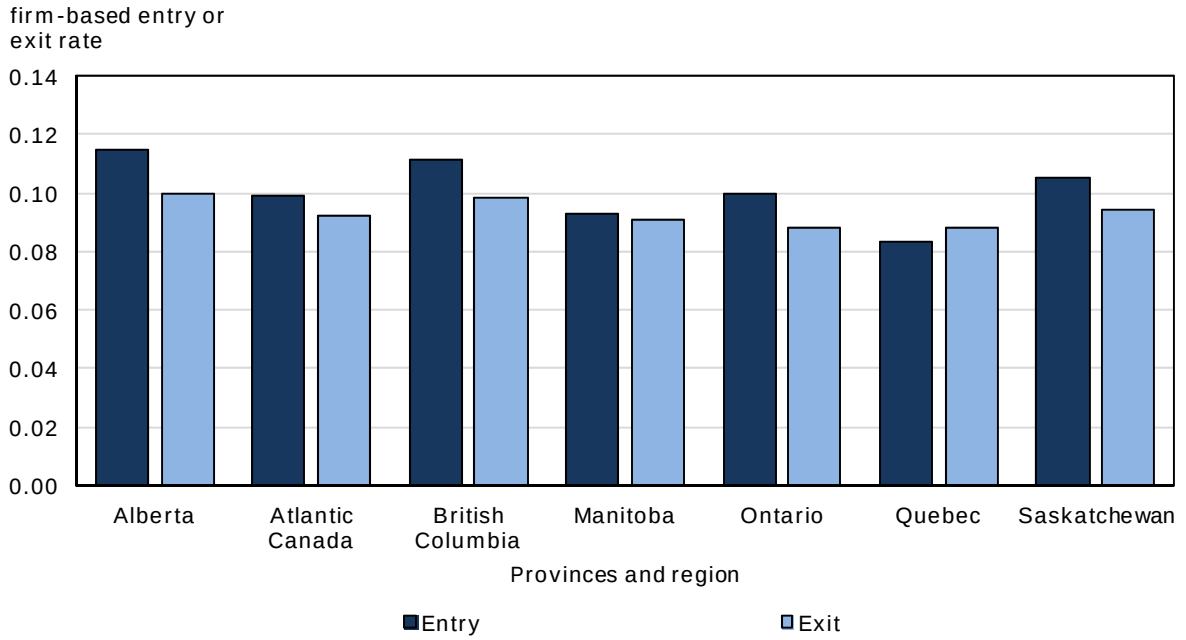
Average annual entry and exit rates (2000 to 2009) by province in the retail industry



Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Chart 20

Average annual entry and exit rates (2000 to 2009) by province in the finance industry



Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

4.3 The contribution of entry and exit to employment growth for selected industries and provinces

The contribution of net entry to employment growth for each of the selected industries and each province over the period from 2000 to 2009 is documented in Panel B of Table 7.[15] Differences between the impact of net entry on the total business population, which was discussed previously, and its impact on employment will occur if the entrant/exit populations are growing at differential rates from continuers.

Differences are evident in the mining and oil industry, where the average annual contribution of net entry to employment growth was negative in Alberta (-3.1%) and positive in Saskatchewan (13.2%). This suggests a different type of dynamic for the mining and oil industry in these two provinces. The employment growth in the booming oil industry in Alberta was driven mostly by continuing firms rather than by net employment growth due to net entry. This is consistent with evidence (Leung et al. 2012) that growth was greatest for this industry in the largest size classes, which tend to be continuing firms.

Contributions to total employment in mining and oil were also larger than contributions to total firm numbers in Ontario, and especially so in Saskatchewan and Atlantic Canada. In Saskatchewan's oil industry, firm turnover contributed more than 13% to the employment growth compared to only 3% to the growth in the number of firms. Firm turnover from entry and exit contributed almost 20% to employment growth in mining and oil in Atlantic Canada. Both of these results suggest that larger firms in these provinces were in relative decline.

Firm turnover had contributed positively to employment growth in construction across all provinces, but especially so for most of the Western provinces. The contribution ranged from 19% in British Columbia to about 6% in Saskatchewan. Construction was generally not an industry dominated by large firms, and therefore here entry made a disproportionate contribution to employment growth. In Manufacturing, firm turnover contributed about 7% on average per year to employment growth in Quebec, while only 0.5% in Ontario. This suggests that the continuing Manufacturing firms in Ontario accounted for a greater share of the job loss in this industry than in Quebec.

Net entry in many of the sectors—manufacturing, retail, transportation, and finance—generally had a larger impact on employment than on firm numbers. The relative size of the impact generally was higher in the Western provinces, thereby reflecting the overall provincial growth differences. One of the exceptions was Ontario, with one of the highest impacts on employment from net entry occurring in transportation. The growth in employment in Ontario in this sector was not coming from large continuing firms, but rather from new entrants.

Saskatchewan generated proportionately more employment growth relative to business-population growth in a number of industries—mining and oil, manufacturing, and finance. This suggests an industrial structure that was less reliant on large continuing firms. This was also true for Atlantic Canada in mining and oil, construction, and transportation.

15. The positive or negative contribution of net entry to industry employment growth occurs when employment change caused by net entry moves in the same or opposite direction as does total employment change.

Table 7

Contribution of net entry to the number of businesses and to employment growth for selected industries and provinces from 2000 to 2009

	Alberta	British Columbia	Manitoba	Ontario	Quebec	Saskatchewan	Atlantic Canada
				percent			
Panel A - Average annual contribution of net entry to the growth of industry size (firm count)							
Mining and oil	2.30	3.90	2.70	2.20	0.40	3.00	2.30
Construction	3.30	3.10	1.20	1.70	0.90	2.40	0.30
Manufacturing	-0.30	-1.00	-1.20	-1.30	-2.10	-0.50	-3.00
Retail	0.10	-0.20	-1.20	-0.60	-1.50	-1.10	-2.10
Transportation	1.50	-0.30	-0.50	4.20	-1.50	-0.20	-2.10
Finance	1.20	1.10	-0.10	0.90	-1.00	1.20	0.10
Panel B - Average annual contribution of net entry to industry employment growth							
Mining and oil	-3.10	1.40	-1.60	4.00	-0.60	13.20	19.10
Construction	14.60	19.40	8.20	12.70	9.00	5.50	11.70
Manufacturing	15.30	7.30	5.30	0.50	7.00	17.90	0.70
Retail	7.20	6.50	9.40	8.40	3.40	0.20	-1.10
Transportation	10.30	9.10	4.90	15.80	1.70	-5.00	23.50
Finance	-1.00	11.00	13.90	2.10	2.00	11.00	-2.90

Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

5 Conclusion

Finding that the patterns in entry and exit that existed at the national level also exist in many provinces confirms the generality of the patterns reported at the national level.

The number of entering firms outpaced the number of exiting firms in all provinces over the period from 2000 to 2009, thereby demonstrating the basic contribution that this aspect of turnover makes to most provincial economies.

The patterns of entry and exit rates over time responded positively to changes in GDP, thereby confirming the close relationship between turnover and the overall economic health of the economy across most provinces. Inter-industry differences also reflected overall structural change. The patterns of firm entry and exit within the sectors that were changing in importance—mining and oil, construction, manufacturing, transportation, and finance—were highly correlated with the underlying restructuring in these industries. The firm-based net entry rate was decreasing in all provinces for manufacturing, and increasing in all or most provinces for mining, construction, transportation, and finance.

The entry and exit rates when calculated by employment declined over time in all provinces, as they did at the national level, thereby confirming the downward trend in the importance of this aspect of turnover. Although the entering and exiting firms were getting smaller over time as measured by share of employment, they still accounted for a significant portion of provincial employment growth. About one out of five jobs created (lost) in the business sector in the last decade was generated by the entry and exit process in all provinces, except Atlantic Canada.

The entry and exit rates when calculated using the number of firms were negatively correlated with each other, thereby confirming that the opposite responses of entry and exit to cyclical effects that appeared at the national level also applied to most provincial economies.

This paper also finds that differences across provinces revealed the close connection between turnover and economic growth. Differences in turnover due to entry and exit at the provincial level reflected differences in the various provincial economies post-2000. Entry and exit rates varied over time with changes in economic activity at the provincial level. More importantly, the average level of entry and exit rates for the economies of the Western provinces were higher than for the economies of the East of Canada, with Quebec and the Atlantic provinces showing the least contributions from entry and exit. While the entry trends were more constant in the West, they trended downward in both Quebec and the Atlantic provinces, which also reflected differences in basic growth paths of the Western and Eastern provinces. The contributions to the aggregate business population from entry and exit were least in both Quebec and the Atlantic region. The contributions to employment growth were highest in Western Canada and lowest in Atlantic Canada. Examination of the entry profile in a select set of industries where structural shifts were largest revealed a more vibrant contribution from entry in the Western provinces than in Eastern Canada. In particular, while the financial sector was generally growing, it did not do so in Quebec. Construction also saw growth across the country. Once

again, the Western provinces outpaced the rest of the country in net entry and in the contribution that net entry made to the total business population.

These observations emphasize the close connection between entry and exit and economic growth. The provincial economies that grew during this period due for example to the resource boom experienced higher entry and exit rates. Favourable macroeconomic conditions were accompanied by the growth of new firms.

6 Appendix

Table 8

Provincial nominal gross domestic product industry share change between 2000 and 2008

	Alberta		British Columbia		Manitoba		Ontario		Quebec		Saskatchewan		Atlantic Canada	
	2000	2008	2000	2008	2000	2008	2000	2008	2000	2008	2000	2008	2000	2008
	percent													
Agriculture, forestry, fishing, and hunting	2.4	1.9	3.8	2.1	5.3	5.3	1.2	0.9	2.1	1.8	9.2	10.2	4.2	2.4
Mining and oil and gas extraction	29.6	33.7	4.1	7.5	2.7	4.2	0.8	1.3	0.8	1.1	20.8	31.2	7.4	20.9
Utilities	1.8	1.5	3.3	2.1	4.6	3.7	2.3	2.2	4.3	4.7	2.8	1.7	3.3	2.6
Construction	7.0	10.0	5.1	8.2	4.1	6.0	4.9	6.8	4.8	6.8	5.2	6.3	6.2	6.7
Manufacturing	10.4	6.5	13.8	8.5	14.8	14.7	24.5	14.9	25.2	17.4	7.9	6.8	13.5	8.2
Wholesale trade	4.6	3.9	4.7	4.6	6.3	6.8	6.0	6.6	5.2	5.9	5.3	5.8	4.6	3.8
Retail trade	4.0	4.2	6.1	6.5	6.2	6.5	5.3	6.1	6.0	6.9	4.9	4.1	6.8	6.6
Transportation and warehousing	5.0	4.4	6.6	5.8	7.4	6.1	4.2	4.4	4.7	4.6	6.2	4.2	4.9	3.8
Information and cultural industries	2.5	2.3	3.5	3.9	3.0	3.4	3.9	4.4	3.9	4.0	2.6	1.8	3.8	3.2
Finance and insurance, real estate and renting and leasing, and management of companies and enterprises	14.3	13.1	22.6	23.1	20.2	18.4	22.1	23.9	17.4	18.1	15.4	11.7	19.3	16.7
Professional, scientific, and technical services	4.1	4.6	4.4	5.3	2.8	2.9	5.7	6.4	4.1	5.0	2.0	1.7	2.9	3.1
Administrative and support, waste management, and remediation services	1.6	1.9	1.9	2.5	1.6	1.9	2.5	3.3	2.4	3.0	0.9	0.9	1.6	2.0
Arts, entertainment, and recreation	0.6	0.6	1.2	1.3	1.1	1.0	1.0	1.1	1.1	1.1	0.8	0.7	0.7	0.6
Accommodation and food services	2.3	1.9	3.4	3.2	2.8	2.2	2.4	2.3	2.2	2.5	2.3	1.5	2.7	2.3
Other private services	2.0	2.0	2.8	3.0	3.1	2.9	2.5	2.8	2.6	3.0	2.5	2.0	2.7	2.5

Source: Statistics Canada, authors' calculation using CANSIM Table 379-0025.

Table 9

Annual entry and exit rates in Alberta from 2000 to 2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
					rate					
Entry rate (number of firms)	13.3	12.7	11.9	11.7	12.9	12.9	13.6	13.5	12.1	10.6
Exit rate (number of firms)	9.5	9.5	9.5	9.7	8.8	9.4	9.2	9.4	10.1	10.0
Short entry/exit rate (number of firms)	4.5	4.5	4.4	4.5	4.8	5.0	4.8	5.1	5.0	4.1
Entry rate (employment)	3.1	3.0	2.4	2.5	2.7	2.5	2.4	2.1	1.9	1.7
Exit rate (employment)	2.8	3.0	2.1	1.8	1.5	1.8	1.6	1.7	2.0	1.5
Short entry/exit rate (employment)	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3
Net entry rate (number of firms)	3.8	3.1	2.4	2.0	4.0	3.6	4.3	4.0	2.0	0.7
Net entry rate (employment)	0.4	-0.1	0.3	0.7	1.2	0.7	0.8	0.4	-0.1	0.2
Turnover rate (number of firms)	27.3	26.7	25.9	26.0	26.5	27.4	27.6	28.1	27.2	24.7
Turnover rate (employment)	6.5	6.5	5.0	4.7	4.7	4.8	4.4	4.2	4.3	3.5

Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 10

Annual entry and exit rates in British Columbia from 2000 to 2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
					rate					
Entry rate (number of firms)	11.6	11.3	11.3	11.5	12.7	12.5	12.7	12.6	11.4	10.3
Exit rate (number of firms)	10.4	10.2	9.8	9.2	8.8	9.6	9.1	9.5	10.0	9.6
Short entry/exit rate (number of firms)	4.5	4.3	4.3	4.2	4.7	4.7	4.4	4.6	4.4	3.8
Entry rate (employment)	3.2	2.7	2.6	2.8	2.9	2.6	2.5	2.1	2.0	1.7
Exit rate (employment)	2.9	2.5	2.6	1.6	1.5	2.0	1.6	1.7	1.9	1.6
Short entry/exit rate (employment)	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3
Net entry rate (number of firms)	1.3	1.1	1.5	2.3	3.9	2.9	3.6	3.1	1.4	0.6
Net entry rate (employment)	0.3	0.1	0.0	1.2	1.4	0.6	0.9	0.4	0.1	0.1
Turnover rate (number of firms)	26.5	25.7	25.4	25.0	26.2	26.9	26.2	26.7	25.8	23.7
Turnover rate (employment)	6.7	5.7	5.6	4.8	4.8	5.0	4.5	4.2	4.2	3.7

Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 11

Annual entry and exit rates in Manitoba from 2000 to 2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
					rate					
Entry rate (number of firms)	11.2	10.2	10.0	9.7	10.8	9.9	9.8	10.1	10.2	10.2
Exit rate (number of firms)	9.3	9.4	9.5	9.1	8.7	9.1	9.0	8.8	8.7	8.2
Short entry/exit rate (number of firms)	5.0	4.6	4.8	4.7	4.7	5.0	4.4	4.5	4.6	3.9
Entry rate (employment)	2.3	2.1	2.2	2.2	2.3	2.0	2.0	1.5	1.7	1.7
Exit rate (employment)	2.1	2.4	2.0	1.5	1.2	1.6	1.3	1.6	1.8	1.4
Short entry/exit rate (employment)	0.5	0.3	0.5	0.3	0.4	0.4	0.3	0.3	0.3	0.2
Net entry rate (number of firms)	1.9	0.8	0.5	0.6	2.1	0.8	0.9	1.2	1.5	2.0
Net entry rate (employment)	0.2	-0.3	0.2	0.7	1.1	0.4	0.7	-0.1	-0.1	0.3
Turnover rate (number of firms)	25.5	24.3	24.3	23.4	24.2	24.0	23.2	23.4	23.5	22.2
Turnover rate (employment)	4.9	4.8	4.6	4.1	3.9	3.9	3.6	3.4	3.9	3.3

Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 12

Annual entry and exit rates in Ontario from 2000 to 2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
					reate					
Entry rate (number of firms)	11.4	10.8	10.6	10.7	11.5	11.0	11.1	12.1	11.3	10.9
Exit rate (number of firms)	9.1	9.2	9.2	8.8	8.5	9.2	8.7	8.6	8.8	8.5
Short entry/exit rate (number of firms)	4.1	4.0	3.8	4.0	4.5	4.4	3.8	4.0	3.8	3.5
Entry rate (employment)	2.5	2.2	2.0	2.2	2.1	1.9	1.7	1.5	1.5	1.5
Exit rate (employment)	2.3	2.1	1.9	1.3	1.2	1.5	1.2	1.2	1.5	1.2
Short entry/exit rate (employment)	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2
Net entry rate (number of firms)	2.3	1.6	1.4	2.0	2.9	1.9	2.4	3.5	2.5	2.4
Net entry rate (employment)	0.2	0.1	0.1	0.8	0.9	0.4	0.5	0.3	0.0	0.2
Turnover rate (number of firms)	24.6	24.0	23.7	23.5	24.5	24.7	23.6	24.7	24.0	22.8
Turnover rate (employment)	5.3	4.7	4.2	3.8	3.5	3.6	3.2	2.9	3.2	2.9

Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 13
Annual entry and exit rates in Quebec from 2000 to 2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
					rate					
Entry rate (number of firms)	10.0	9.3	9.3	8.8	9.7	9.1	9.1	9.2	9.1	8.7
Exit rate (number of firms)	9.4	9.1	8.7	8.3	8.1	8.4	8.2	8.3	8.4	8.0
Short entry/exit rate (number of firms)	3.0	2.8	2.7	2.9	2.9	2.8	2.5	2.5	2.3	2.2
Entry rate (employment)	2.3	2.0	1.9	2.0	1.9	1.9	1.6	1.3	1.3	1.4
Exit rate (employment)	2.7	2.3	2.1	1.4	1.2	1.5	1.3	1.3	1.4	1.2
Short entry/exit rate (employment)	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.1
Net entry rate (number of firms)	0.7	0.2	0.6	0.5	1.6	0.7	0.8	0.9	0.7	0.6
Net entry rate (employment)	-0.4	-0.3	-0.2	0.6	0.7	0.3	0.4	0.1	-0.1	0.3
Turnover rate (number of firms)	22.4	21.3	20.7	20.1	20.8	20.3	19.8	19.9	19.8	18.8
Turnover rate (employment)	5.4	4.6	4.3	3.6	3.3	3.7	3.1	2.7	2.9	2.7

Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 14
Annual entry and exit rates in Saskatchewan from 2000 to 2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
					rate					
Entry rate (number of firms)	10.6	10.0	9.9	9.8	10.1	10.0	10.1	11.4	12.3	11.4
Exit rate (number of firms)	10.3	10.3	10.0	10.4	9.8	10.3	9.5	9.2	9.5	8.9
Short entry/exit rate (number of firms)	4.6	4.5	4.6	4.6	5.2	4.9	4.6	4.8	5.0	4.4
Entry rate (employment)	3.0	2.7	2.8	2.7	2.6	2.2	2.1	2.2	2.6	2.1
Exit rate (employment)	3.1	3.0	2.5	2.2	1.6	2.2	1.7	1.7	2.2	1.8
Short entry/exit rate (employment)	0.6	0.4	0.6	0.4	0.5	0.4	0.4	0.4	0.4	0.3
Net entry rate (number of firms)	0.3	-0.4	-0.1	-0.6	0.3	-0.3	0.6	2.3	2.8	2.5
Net entry rate (employment)	-0.1	-0.3	0.2	0.5	1.0	0.0	0.3	0.6	0.4	0.3
Turnover rate (number of firms)	25.4	24.8	24.5	24.8	25.0	25.2	24.2	25.4	26.8	24.7
Turnover rate (employment)	6.6	6.2	5.9	5.3	4.7	4.9	4.2	4.3	5.2	4.2

Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 15

Annual entry and exit rates in Atlantic Canada from 2000 to 2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
					rate					
Entry rate (number of firms)	11.4	10.1	9.8	9.9	10.6	9.2	9.2	9.7	9.7	9.4
Exit rate (number of firms)	10.3	9.9	10.0	9.4	8.9	10.2	9.5	9.3	9.0	8.1
Short entry/exit rate (number of firms)	5.4	5.4	5.0	5.2	5.4	5.4	4.7	4.9	4.7	4.3
Entry rate (employment)	3.5	3.0	2.6	2.7	2.9	2.2	2.2	1.8	1.8	1.7
Exit rate (employment)	3.1	3.1	2.4	1.7	1.7	2.2	1.6	1.6	2.2	1.6
Short entry/exit rate (employment)	0.6	0.6	0.6	0.5	0.5	0.6	0.4	0.4	0.3	0.3
Net entry rate (number of firms)	1.1	0.2	-0.2	0.5	1.7	-0.9	-0.3	0.5	0.7	1.3
Net entry rate (employment)	0.4	-0.1	0.2	1.0	1.2	0.0	0.6	0.2	-0.5	0.0
Turnover rate (number of firms)	27.1	25.5	24.8	24.4	25.0	24.8	23.4	23.9	23.3	21.9
Turnover rate (employment)	7.2	6.8	5.5	4.8	5.0	5.0	4.1	3.7	4.3	3.6

Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 16
Average annual entry and exit rates over 2000 to 2009 in Alberta by industry

	Entry rate (number of firms)	Exit rate (number of firms)	Entry rate (employment)	Exit rate (employment)	Net entry rate (number of firms)	Net entry rate (employment)	Turnover rate (number of firms)	Turnover rate (employment)
					rate			
Agriculture	9.2	9.8	3.7	3.2	-0.6	0.4	23.3	7.9
Mining, and oil and gas extraction	12.3	9.3	1.3	2.2	3.0	-0.9	25.2	3.8
Utilities	9.5	7.1	1.1	0.5	2.3	0.5	20.9	1.7
Construction	13.2	9.5	3.2	2.0	3.7	1.1	28.2	5.8
Manufacturing	8.2	7.8	1.3	1.3	0.4	0.0	19.5	2.8
Wholesale trade	8.1	8.1	1.6	1.8	-0.1	-0.2	19.2	3.6
Retail trade	9.9	9.1	1.5	1.3	0.7	0.2	22.1	3.1
Transportation and warehousing	12.6	10.3	1.7	1.5	2.3	0.2	27.7	3.7
Information and cultural industries	11.5	9.6	2.1	1.6	1.9	0.5	25.9	4.0
Finance, insurance, real estate, and management of companies	11.5	10.0	2.5	2.5	1.4	0.0	26.3	5.6
Professional, scientific, and technical services	13.4	9.8	3.8	2.9	3.6	0.9	27.2	7.3
Administrative and support, waste management, and remediation services	13.1	10.0	3.2	2.1	3.1	1.1	28.0	5.8
Educational services	12.8	9.4	4.0	2.2	3.4	1.8	26.5	6.8
Health care and social assistance	8.4	5.9	2.1	1.5	2.5	0.7	16.2	4.0
Arts, entertainment, and recreation	9.1	8.5	2.0	1.4	0.6	0.6	21.9	3.8
Accommodation and food services	11.8	10.7	3.4	2.6	1.1	0.8	26.7	6.3
Other private services	11.9	9.4	3.5	2.9	2.5	0.6	24.8	7.0

Note: The results shown in this table are simple averages (the weight is equal to 1 for all years).
Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 17

Average annual entry and exit rates over 2000 to 2009 in British Columbia by industry

	Entry rate (number of firms)	Exit rate (number of firms)	Entry rate (employment)	Exit rate (employment)	Net entry rate (number of firms)	Net entry rate (employment)	Turnover rate (number of firms)	Turnover rate (employment)
					rate			
Agriculture	8.5	10.2	2.5	2.6	-1.7	-0.1	23.1	5.6
Mining, and oil and gas extraction	14.5	10.4	2.9	2.4	4.1	0.5	31.8	5.7
Utilities	14.2	11.3	0.5	0.4	2.9	0.1	29.9	1.0
Construction	13.0	9.7	4.0	2.5	3.3	1.5	28.1	7.3
Manufacturing	7.7	8.1	1.4	1.5	-0.4	-0.1	18.8	3.0
Wholesale trade	8.9	9.0	1.8	1.8	-0.1	-0.1	20.7	3.9
Retail trade	10.0	9.6	1.6	1.4	0.4	0.2	22.6	3.2
Transportation and warehousing	11.3	11.0	1.8	1.4	0.3	0.4	27.2	3.5
Information and cultural industries	12.5	10.3	2.0	1.6	2.2	0.4	27.1	3.9
Finance, insurance, real estate, and management of companies	11.1	9.8	2.3	2.1	1.2	0.1	25.1	4.9
Professional, scientific, and technical services	12.2	9.5	3.6	2.7	2.7	0.9	25.6	6.9
Administrative and support, waste management, and remediation services	11.6	9.9	3.0	1.9	1.7	1.1	25.7	5.3
Educational services	13.7	9.3	3.7	2.6	4.4	1.1	27.1	6.9
Health care and social assistance	7.2	5.4	2.3	1.8	1.8	0.5	14.2	4.5
Arts, entertainment, and recreation	9.8	8.4	2.0	1.6	1.4	0.3	22.0	4.0
Accommodation and food services	11.4	11.0	3.3	2.6	0.4	0.7	26.0	6.2
Other private services	10.3	9.6	3.1	2.9	0.7	0.2	23.3	6.5

Note: The results shown in this table are simple averages (the weight is equal to 1 for all years).
Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 18
Average annual entry and exit rates over 2000 to 2009 in Manitoba by industry

	Entry rate (number of firms)	Exit rate (number of firms)	Entry rate (employment)	Exit rate (employment)	Net entry rate (number of firms)	Net entry rate (employment)	Turnover rate (number of firms)	Turnover rate (employment)
					rate			
Agriculture	9.7	9.9	3.8	3.5	-0.2	0.3	24.3	8.1
Mining, and oil and gas extraction	12.2	9.2	1.2	0.8	3.0	0.4	30.5	2.3
Utilities	8.8	9.2	0.1	0.0	-0.4	0.0	22.1	0.1
Construction	10.7	8.8	3.3	2.1	1.9	1.2	25.0	6.0
Manufacturing	6.2	7.0	0.9	0.9	-0.8	0.0	16.4	2.0
Wholesale trade	6.9	7.2	1.5	2.0	-0.3	-0.5	16.9	3.8
Retail trade	8.1	8.7	1.5	1.3	-0.6	0.1	20.0	3.0
Transportation and warehousing	11.9	11.2	1.3	1.5	0.7	-0.2	28.9	3.0
Information and cultural industries	10.0	9.6	1.3	0.8	0.4	0.5	25.0	2.4
Finance, insurance, real estate, and management of companies	9.3	9.1	1.6	1.7	0.2	-0.1	22.6	3.7
Professional, scientific, and technical services	11.8	9.4	3.6	2.5	2.5	1.1	25.5	6.7
Administrative and support, waste management, and remediation services	10.4	9.4	2.7	2.0	1.0	0.7	24.5	5.0
Educational services	10.7	8.4	4.4	3.0	2.3	1.3	23.0	8.3
Health care and social assistance	8.2	6.2	2.9	2.0	2.0	0.8	15.9	5.1
Arts, entertainment, and recreation	7.7	7.5	1.3	0.9	0.2	0.4	19.1	2.6
Accommodation and food services	9.9	10.2	3.3	2.8	-0.3	0.5	24.7	6.4
Other private services	9.0	8.5	2.6	2.3	0.5	0.2	20.6	5.3

Note: The results shown in this table are simple averages (the weight is equal to 1 for all years).
Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 19
Average annual entry and exit rates over 2000 to 2009 in Ontario by industry

	Entry rate (number of firms)	Exit rate (number of firms)	Entry rate (employment)	Exit rate (employment)	Net entry rate (number of firms)	Net entry rate (employment)	Turnover rate (number of firms)	Turnover rate (employment)
					rate			
Agriculture	7.3	8.4	2.2	2.5	-1.1	-0.2	19.1	5.2
Mining, and oil and gas extraction	10.5	8.6	0.8	0.6	1.9	0.2	27.4	1.7
Utilities	10.8	11.3	0.9	1.0	-0.5	-0.1	25.2	2.1
Construction	10.7	8.4	2.6	2.0	2.2	0.6	23.5	5.2
Manufacturing	6.0	6.8	1.0	0.9	-0.9	0.0	15.0	2.0
Wholesale trade	7.5	7.6	1.2	1.2	-0.1	0.0	17.5	2.6
Retail trade	9.4	9.3	1.5	1.3	0.0	0.2	21.7	3.0
Transportation and warehousing	13.5	9.0	1.3	1.2	4.5	0.1	26.9	2.8
Information and cultural industries	11.7	9.5	1.5	1.1	2.2	0.4	25.3	2.9
Finance, insurance, real estate, and management of companies	10.0	8.8	1.6	1.4	1.2	0.2	22.8	3.4
Professional, scientific, and technical services	12.6	9.5	2.9	2.2	3.1	0.7	25.8	5.6
Administrative and support, waste management, and remediation services	10.6	8.8	2.3	1.8	1.9	0.5	23.3	4.3
Educational services	12.1	8.6	3.5	2.0	3.5	1.5	24.0	6.0
Health care and social assistance	8.6	6.1	2.6	1.8	2.4	0.8	16.0	4.7
Arts, entertainment, and recreation	9.6	8.3	1.7	1.4	1.3	0.4	21.6	3.4
Accommodation and food services	11.5	11.3	3.2	2.7	0.2	0.5	26.4	6.2
Other private services	9.6	8.7	2.7	2.4	0.8	0.3	21.3	5.6

Note: The results shown in this table are simple averages (the weight is equal to 1 for all years).
Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 20
Average annual entry and exit rates over 2000 to 2009 in Quebec by industry

	Entry rate (number of firms)	Exit rate (number of firms)	Entry rate (employment)	Exit rate (employment)	Net entry rate (number of firms)	Net entry rate (employment)	Turnover rate (number of firms)	Turnover rate (employment)
					rate			
Agriculture	6.6	7.5	2.1	2.0	-0.9	0.1	16.4	4.4
Mining, and oil and gas extraction	8.6	7.3	1.3	1.0	1.2	0.3	19.0	2.4
Utilities	8.2	10.5	0.2	0.2	-2.3	0.0	21.5	0.4
Construction	8.5	7.1	2.1	1.7	1.5	0.4	18.0	4.1
Manufacturing	5.9	7.4	1.0	1.1	-1.5	-0.2	14.8	2.2
Wholesale trade	6.5	7.4	1.2	1.4	-1.0	-0.2	15.6	2.8
Retail trade	7.2	8.3	1.3	1.3	-1.1	0.0	17.1	2.6
Transportation and warehousing	8.7	9.5	1.1	1.3	-0.8	-0.2	20.8	2.5
Information and cultural industries	10.2	10.0	2.3	1.4	0.1	0.9	23.7	4.2
Finance, insurance, real estate, and management of companies	8.3	8.8	1.4	1.9	-0.5	-0.5	19.5	3.5
Professional, scientific, and technical services	10.7	9.5	2.5	2.3	1.2	0.2	23.1	5.1
Administrative and support, waste management, and remediation services	10.0	9.2	2.5	1.8	0.8	0.7	22.3	4.6
Educational services	9.1	8.0	2.7	2.3	1.1	0.4	19.7	5.6
Health care and social assistance	5.2	5.2	1.8	1.7	0.0	0.1	11.1	3.7
Arts, entertainment, and recreation	8.4	7.6	1.9	1.6	0.8	0.3	18.5	3.7
Accommodation and food services	10.1	10.4	3.0	2.8	-0.4	0.2	23.2	6.2
Other private services	7.9	8.6	2.3	2.5	-0.7	-0.1	18.5	5.1

Note: The results shown in this table are simple averages (the weight is equal to 1 for all years).
Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 21

Average annual entry and exit rates over 2000 to 2009 in Saskatchewan by industry

	Entry rate (number of firms)	Exit rate (number of firms)	Entry rate (employment)	Exit rate (employment)	Net entry rate (number of firms)	Net entry rate (employment)	Turnover rate (number of firms)	Turnover rate (employment)
					rate			
Agriculture	9.7	11.8	5.2	5.2	-2.2	0.0	26.3	11.9
Mining, and oil and gas extraction	11.9	8.6	2.0	2.5	3.3	-0.4	25.3	4.8
Utilities	12.3	8.3	0.1	0.1	4.0	0.0	25.9	0.2
Construction	11.1	8.7	2.8	2.3	2.4	0.5	25.7	6.0
Manufacturing	7.5	7.4	1.4	1.5	0.1	-0.1	19.0	3.1
Wholesale trade	7.1	8.2	1.8	2.0	-1.1	-0.2	18.3	4.0
Retail trade	7.8	8.3	1.6	1.4	-0.6	0.2	18.9	3.1
Transportation and warehousing	11.7	11.0	2.0	2.3	0.8	-0.3	27.9	4.7
Information and cultural industries	10.0	11.0	1.7	1.8	-1.0	0.0	25.3	3.7
Finance, insurance, real estate, and management of companies	10.5	9.4	2.3	2.4	1.1	0.0	24.0	5.1
Professional, scientific, and technical services	12.6	9.8	3.7	2.6	2.8	1.1	27.0	6.9
Administrative and support, waste management, and remediation services	11.4	10.0	3.6	2.4	1.5	1.3	26.1	6.4
Educational services	10.5	9.6	3.3	2.1	1.0	1.3	24.2	5.9
Health care and social assistance	9.1	7.8	3.8	2.2	1.3	1.6	18.9	6.2
Arts, entertainment, and recreation	7.8	8.4	1.8	1.4	-0.6	0.4	20.2	3.5
Accommodation and food services	10.8	11.4	3.5	3.1	-0.6	0.3	26.6	7.2
Other private services	9.6	9.1	3.1	2.8	0.5	0.4	22.5	6.5

Note: The results shown in this table are simple averages (the weight is equal to 1 for all years).
Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

Table 22
Average annual entry and exit rates over 2000 to 2009 in Atlantic Canada by industry

	Entry rate (number of firms)	Exit rate (number of firms)	Entry rate (employment)	Exit rate (employment)	Net entry rate (number of firms)	Net entry rate (employment)	Turnover rate (number of firms)	Turnover rate (employment)
					rate			
Agriculture	6.9	8.9	3.0	3.0	-2.0	0.0	19.1	6.6
Mining, and oil and gas extraction	10.7	8.7	2.2	2.2	2.0	-0.1	27.9	4.6
Utilities	11.2	11.0	0.2	0.3	0.2	0.0	28.2	0.6
Construction	10.0	9.1	3.4	2.7	0.9	0.7	24.9	6.9
Manufacturing	7.2	9.0	1.4	1.5	-1.8	-0.2	21.2	3.1
Wholesale trade	7.6	8.2	2.1	2.2	-0.6	-0.1	19.3	4.7
Retail trade	7.8	9.2	1.7	1.7	-1.4	0.0	20.4	3.6
Transportation and warehousing	9.4	10.4	1.4	1.7	-1.1	-0.2	25.0	3.6
Information and cultural industries	12.0	12.4	3.2	2.9	-0.4	0.3	31.4	6.6
Finance, insurance, real estate, and management of companies	9.9	9.2	1.8	1.6	0.7	0.2	23.8	3.7
Professional, scientific, and technical services	12.0	9.8	3.8	3.1	2.1	0.7	27.0	7.6
Administrative and support, waste management, and remediation services	10.7	10.3	2.7	2.5	0.4	0.2	26.7	5.6
Educational services	10.9	10.5	3.1	2.3	0.4	0.9	26.3	6.3
Health care and social assistance	10.1	8.1	3.3	2.2	2.1	1.0	21.6	6.0
Arts, entertainment, and recreation	9.2	9.4	2.9	2.6	-0.1	0.3	23.5	5.9
Accommodation and food services	9.7	10.2	3.4	2.5	-0.5	0.9	25.0	6.3
Other private services	9.1	9.7	3.3	3.1	-0.6	0.3	22.8	7.1

Note: The results shown in this table are simple averages (the weight is equal to 1 for all years).
Source: Statistics Canada, authors' calculations based on the Longitudinal Employment Analysis Program, 2001 to 2010.

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