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# The Exit and Survival Patterns of Immigrant Entrepreneurs: The Case of Private Incorporated Companies

by Yuri Ostrovsky and Garnett Picot

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# **The Exit and Survival Patterns of Immigrant Entrepreneurs: The Case of Private Incorporated Companies**

by

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# Table of contents

<b>Abstract .....</b>	<b>5</b>
<b>Executive summary .....</b>	<b>6</b>
<b>1 Introduction.....</b>	<b>7</b>
<b>2 Data and methods.....</b>	<b>8</b>
2.1 Data source .....	8
2.2 Defining an ownership spell.....	9
2.3 Estimating hazard rates and survival paths .....	10
<b>3 Results: Exit rates and survival times .....</b>	<b>11</b>
3.1 Exit rates and survival times for immigrants and the Canadian-born.....	11
3.2 Exit rates and survival times by immigrant category and characteristics.....	12
<b>4 Results: Education, immigrant category, source region and industry .....</b>	<b>12</b>
4.1 Education.....	12
4.2 Immigrant category .....	13
4.3 Source region .....	14
4.4 Industry .....	14
<b>5 Conclusion .....</b>	<b>16</b>
<b>6 Tables and charts .....</b>	<b>17</b>
<b>References.....</b>	<b>26</b>

## Abstract

This paper addresses two questions. First, do duration and exit patterns of firm ownership differ between immigrant and Canadian-born entrepreneurs? Second, what immigrant characteristics are associated with lower exit rates and longer ownership spells? The paper focuses on new spells of ownership of private incorporated companies that started between 2003 and 2009. On average, there was little difference in the duration of ownership between immigrants and the Canadian-born. Seven years after taking ownership, 56% of immigrants and 58% of the Canadian-born were still owners. In both cases, the exit rate from ownership was highest at the beginning of the ownership spell and declined rapidly with years of ownership. Exit rates were marginally higher among immigrant business owners during the first three years of ownership, but there was no difference between the two groups thereafter. However, recent immigrants (those in Canada for less than 10 years) had significantly shorter ownership spells than the Canadian-born or longer-term immigrants. Duration of ownership spells generally varied by age, source country and industry. Education had only a small effect on firm duration and exit rates. Among recent immigrants to Canada, business immigrants had the highest exit rates and shortest duration of ownership. However, among longer-term immigrants (those in Canada for 10 years or more), exit rates and the duration of ownership varied little across immigrant categories, which included refugees and family class, economic and business immigrants.

**Keywords:** immigrants, business ownership, entrepreneurship, firm survival

## Executive summary

This paper employs the Canadian Employer–Employee Dynamics Database (CEEDD) to address two questions. First, do duration and exit patterns of firm ownership differ between immigrant and Canadian-born entrepreneurs? Second, what immigrant characteristics are associated with lower exit rates and longer ownership spells? The paper focuses on new spells of ownership of private incorporated companies that started between 2003 and 2009.

The analysis indicates that, in the context of the ownership of private incorporated companies, exit rates from business ownership and the duration of ownership spells in Canada were about the same for immigrant and Canadian-born owners. The exit rate declined with years in business. Among all immigrants, 11.5% ended ownership after one year in business while the rate fell to 3.9% after seven years. This means that 80% of all immigrant business owners were still owners two years after the beginning of the ownership spell and 56% were still owners after seven years. Although the exit rates were somewhat lower among Canadian-born than immigrant business owners during the first three years of ownership, they were very similar thereafter, and the survival (duration) patterns of the Canadian-born closely resembled those of immigrants.

This result differs from those observed for some European countries and the United States, where immigrant entrepreneurs have higher exit rates and shorter durations of ownership than the native-born. However, the analysis also found that **recent** immigrants (those in Canada for less than 10 years) had higher exit rates from ownership and shorter durations than did the Canadian-born or longer-term immigrants.

The results reported above are for all immigrants. However, there is considerable variation by immigrants' characteristics. In general, characteristics such as being 30 to 49 years of age, owning a business in the health care sector, and being from Europe, Southeast Asia, India, or the English-speaking countries (a category comprising the United States, the United Kingdom, Ireland, Australia, New Zealand and South Africa) were associated with longer ownership spells. Education was found to have only a small effect on exit rates and duration once the analysis had accounted for the effect of other variables. The raw data suggest that, among longer-term immigrants, those with high school or less at landing had exit rates roughly 1.3 times higher than those of their counterparts with a postgraduate degree. Some of this difference may not be related directly to education but rather may be the result of differences in other characteristics among education groups, such as source region, age, immigrant category, and industry. Accounting for these differences resulted in the exit rate among the "high school or less" group being only 1.17 times the rate among the most educated, although the difference remained statistically significant. A similar analysis was carried out for other characteristics, including immigrant category, age, source region and industry.

Among longer-term immigrants (those in Canada for 10 years or more), there was little variation in exit rates and duration of ownership by immigrant category: refugees and family class, economic and business immigrants displayed about the same rates. However, this result did not hold for recent immigrants to Canada (in Canada for less than 10 years). While recent business immigrants had the highest ownership rates, they also had the highest exit rates and shortest duration of ownership.

Finally, the industry of ownership mattered. The health care sector stood out. Immigrant owners of private incorporated companies in this sector (e.g., laboratories, nursing companies, doctors' offices and chiropractic practices) had long durations of ownership and exit rates that were only one-third of those observed among immigrant owners of private incorporated companies in other industries. Owners in real estate, accommodation and food services, professional and technical services and wholesale trade generally had the shortest duration of ownership.

# 1 Introduction

It is well established that, in most Western countries, rates of small-business ownership tend to be higher among immigrants than among the native-born (for an international review see Fairlie and Lofstrom [2013] and OECD [2010]). In Canada, the overall shares of taxfilers who owned a private incorporated business in 2010 were similar for immigrants (4.6%) and the Canadian-born (4.8%). However, the rate of business ownership was substantially higher (5.8%) among immigrants who had been in Canada for 10 to 30 years (Green et al. 2016). Much less is known about exit and survival patterns of immigrant-owned businesses as there is only a small body of international literature on this topic and little Canadian evidence. This paper addresses this gap by answering two questions. First, do exit and survival patterns (durations) of firm ownership differ between immigrants and individuals born in Canada? Second, what characteristics are associated with lower (or higher) exit rates from business ownership and longer ownership spells among immigrants? The analysis is limited to ownership of private incorporated firms.

Results show that exit rates from ownership of private incorporated businesses and the duration of ownership were about the same for immigrants and the Canadian-born. Among all immigrant business owners, 11.5% ended ownership after one year in business while this rate was 3.9% after seven years. On average, 80% of immigrants were still owners of their private incorporated firm two years after the start of the ownership spell, and 56% were still owners after seven years. Although exit rates were somewhat lower among Canadian-born owners during the first three years, the exit rates for immigrant and Canadian-born owners were very similar thereafter, and survival (duration) patterns closely resembled those of immigrants. These results differ from those observed for some European nations and the United States, where immigrant business owners have higher exit rates and shorter durations of ownership than the native-born. However, this analysis also found that exit rates were higher and durations of ownership were shorter among recent immigrants who owned a private incorporated business than among Canadian-born and longer-term-immigrant business owners. The study also documents considerable variation in exit and survival patterns among immigrant business owners by characteristics such as age, industry and source country.

There is a small body of international literature on the exit and survival of immigrant entrepreneurship, usually referring to self-employment. A Swedish study (Joonas 2010) found that exit rates from self-employment were higher and spells of entrepreneurship were shorter among non-Western immigrants than among the native-born. Persson (2004) documented similar patterns. Joonas noted that exit to unemployment was particularly high among non-Western immigrants. This finding suggests that much of the exit from business ownership for this category of immigrants was not voluntary. A Norwegian study came to similar conclusions, observing that businesses founded by immigrants had shorter durations of survival than those started by the native-born (Vinogradov and Isaksen 2008). Fertala (2006) reported that survival spells for companies registered by immigrants in Germany were shorter than those for companies established by native-born Germans.

More so than in Europe, research in the United States has focused on outcomes of different types of immigrants, particularly as defined by ethnic group. Lofstrom and Wang (2006) focused on the dynamics of business ownership among the different generations of the Hispanic population in the United States. They found that those belonging to the Hispanic population of Mexican origin were twice as likely as whites to exit business ownership in any given year. They noted that differences in education and financial wealth were important explanatory factors.

Georgarakos and Tatsiramos (2007) focused on a number of ethnic groups, including the Hispanic population, but distinguished Hispanic immigrants (first-generation Americans) from the Hispanic population born in the United States (second and higher generations). Although exit rates from business ownership were not significantly different between immigrants of Asian and

European origin and non-Hispanic whites born in the United States, exit rates from business ownership were higher among Mexican and other Hispanic immigrants. However, these differences were not observed among the second and subsequent generations. Additional results suggested that being older, being married and especially being a college graduate reduced immigrants' exit rates. In an extensive international review of immigrant entrepreneurship, the OECD (2010) concluded that durations of ownership are generally shorter for immigrants than the native-born.

Although there seems to be some consensus regarding the relative duration of immigrant-owned businesses, it may still be that the results for Canada differ from those for Europe and the United States. This may be attributable in part to the characteristics of immigrants entering Canada. Specifically, the educational attainment of immigrants to Canada is generally higher than that of the Canadian population in general and substantially higher than the educational attainment of immigrants to most European countries and, to a lesser degree, to the United States. As well, immigrants to Canada come from different source countries than immigrants to Europe and the United States. A larger percentage of immigrants to Canada are from Asia, while smaller percentages are from Mexico or Latin America (compared with the United States) or from North Africa and the Middle East (compared with Europe). These differences could result in exit and survival rates of business ownership among immigrants to Canada that more closely resemble those of the Canadian-born than is the case with respect to those who immigrate to Europe or the United States.

The paper is organized as follows. Section 2 describes the data used in the study, provides details related to the construction of the study sample and explains the methodology used in the analysis. Section 3 presents the results related to immigrant business ownership duration and exit rates. Section 4 breaks down the main results by immigrant characteristics. Finally, Section 5 offers conclusions.

## 2 Data and methods

### 2.1 Data source

The paper utilizes the Canadian Employer–Employee Dynamics Database (CEEDD), an employer–employee matched file maintained by Statistics Canada that contains longitudinal information on firm ownership for the years from 2001 to 2011.<sup>1</sup> The CEEDD data used for this research draw on a number of linked input data files, including those listed below:

- data from the *Corporation Income Tax Return* (Form T2) for all incorporated businesses
- data from the *Income Tax and Benefit Return* (Form T1) for all individuals, including the unincorporated self-employed
- records of the *Statement of Remuneration Paid* (slip) (T4 slip) issued by all businesses to their employees
- the Longitudinal Employment Analysis Program (LEAP) dataset (a longitudinal file of all businesses with employees)
- the Longitudinal Immigration Database (IMDB) (immigrant “landing” records for those who entered Canada in 1980 or a subsequent year).

Detailed descriptions of these data sets are provided in Green et al. (2016). The key to the analysis is Schedule 50, which all private incorporated businesses owned by Canadian citizens or permanent residents are required to file with their Form T2 to identify all owners with at least

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1. The CEEDD is available to external researchers through the Canadian Centre for Data Development and Economic Research at Statistics Canada.



a 10% share in the business. The ownership list is linked to the IMDB to determine which owners are immigrants. As a result of data limitations, only immigrants who entered Canada in 1980 or a subsequent year are included in the analysis. These immigrants represented about 75% of all immigrants in Canada in 2011.<sup>2</sup>

Besides ownership status, a number of variables are available on the CEEDD file for immigrants, including immigrant category, source country, education, language, and family status at the time of arrival in Canada. Information on gender, age, geographic location, and industry are available for immigrant and Canadian-born business owners.

Private incorporated companies that have employees and are owned by Canadian citizens or permanent residents are included in the analysis. Exit and survival patterns are analyzed for both immigrants and a comparison group, which consists of the Canadian-born plus immigrants who came to Canada before 1980. Roughly 93% of the comparison group members were born in Canada, and this group will be referred to as “the Canadian-born” through the remainder of the paper.

Immigrants who buy shares in a publicly traded company and hence acquire some (typically small) ownership stake are excluded from this analysis as are unincorporated self-employed individuals. In short, the analysis focuses on individuals who own private incorporated businesses that employ paid workers.

## 2.2 Defining an ownership spell

The focus of this analysis is on individual’s spells of business ownership, and the unit of analysis is the individual, not the firm. A person—immigrant or Canadian-born—is an owner of a private incorporated company if he or she owns at least 10% of the shares or assets of the company. The CEEDD provides business ownership information on an annual basis (the month of entry into business ownership is not specified). A new spell of business ownership is said to begin in the year a person acquires at least a 10% ownership share; this must be preceded by a period of at least two years during which the individual was not a business owner. If there is a one-year interruption in the business ownership spell, the spell is considered to be continuous. This is because most ownership interruptions of one year are followed by the resumption of ownership in the following years. To end a spell on the basis of on a one-year interruption would result in a substantial number of false “deaths” and “births”. If there is an interruption of two years or more in the ownership spell, it is identified as ended. An individual may be the owner of more than one incorporated business in any given year, and business owners may own two or more private incorporated companies consecutively during the course of a single spell.

The CEEDD provides ownership data from 2001 to 2011. However, since two years of data are required at the beginning to determine the start of a spell, the analysis includes all new ownership spells starting between 2003 and 2009. Since the starting point of each ownership spell is known, there is no left truncation of spells in this analysis. Spells that end on or before 2009 are complete while all others are right-truncated (i.e., the last year of the spell cannot be determined). This is because two years of data are required to determine the end of a spell. Overall, the analysis includes completed spells of up to seven years in duration, as well as right-truncated spells. Only the first ownership spell for individual immigrant business owners is included in the analysis.

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2. This figure is from the 2011 National Household Survey, and refers to those aged 18 to 69.

## 2.3 Estimating hazard rates and survival paths

A hazard rate is the likelihood of exiting ownership in any given year conditional on having been an owner up to that year. Since the data are annual, a discrete proportional hazard model is employed. Let  $p(t)$  be a logistic discrete time hazard function, so that

$$\ln \left[ \frac{p(t)}{1-p(t)} \right] = z(t) \quad (1)$$

and

$$p(t) = [1 + \exp(-z(t))]^{-1}, \quad (2)$$

where  $z(t) = c(t) + \beta X'$ . The  $c(t)$  term is a non-parametric baseline hazard function that depends only on time. Equation (1) is simply a logit model in which  $c(t)$  can be estimated by using a set of dummy variables for each possible duration spell. Once the model is estimated, the hazard rates for each  $t$  can be obtained by using the estimates of  $c(t)$ . The discrete time survival function  $S(t)$  is given by

$$S(t) = [1 - p(1)][1 - p(2)][1 - p(3)] \dots = \exp \left( \sum_{s=1}^T \ln [1 - p(s)] \right). \quad (3)$$

For the comparison of the Canadian-born and immigrants, the logit model used to estimate (1) is

$$\Pr(\text{exit} = 1 | X_i, I_i, T_t) = \Phi \left( \alpha + \beta_1 G_i + \sum_{a=2}^{10} \beta_2 A_a + \sum_{r=1(\neq 3)}^5 \beta_3 R_r + \beta_4 I_i + \lambda_t \left( I_i \times \sum_{t=2}^7 T_t \right) + \sum_{t=2}^7 \gamma_t T_t \right), \quad (4)$$

where  $X_i$  is a set of explanatory variables that includes gender ( $G_i$ ), a set of age dummies ( $A_a$ ), and a set of dummy variables ( $R_r$ ) indicating the region of residence at the time of entry into ownership.  $T_t$  denotes dummy variables indicating the years since the beginning of the spell, and  $I_i$  is a dummy variable indicating an immigrant. This model is estimated separately for recent immigrants (in Canada for less than 10 years), mid-term immigrants (in Canada for 10 to 19 years) and longer-term immigrants (in Canada for 20 to 28 years). The immigrant dummy is interacted with years since the spell start; this allows the hazard profile to exhibit different slopes for immigrants and the Canadian-born (Table 1).

To determine the effect of various immigrant characteristics on the hazard rates, the following model is estimated only for immigrants, separately for those who had been in Canada for less than 10 years and those who had been in Canada for 10 years or more:

$$\Pr(\text{exit} = 1 | X_i, \Omega_i, I_i, T_t) = \Phi \left( \alpha + \varphi X_i + \theta \Omega_i + \tilde{\lambda}_t \left( I_i \times \sum_t T_t \right) + \sum_t \tilde{\gamma}_t T_t \right), \quad (5)$$

where  $X_i$ ,  $I_i$ , and  $T_t$  are the same as in (4) and  $\Omega_i$  includes industry at the beginning of the spell, education at landing (high school or less, some postsecondary, bachelor's degree, postgraduate degree), and language at landing (self-assessed ability to speak one of the official

languages). Also included are source regions<sup>3</sup> and dummy variables for five immigrant categories: family class immigrants (omitted category); skilled workers and provincial nominees; business immigrants; refugees; and other. Immigrant categories are interacted with years since the beginning of the spell to allow for variation in the slopes of the hazard curve (Table 2).

The estimation results from the model in (5) were used to estimate two types of hazard rates. The first type is referred to as the **unadjusted** hazard rate. When one is comparing hazard rates between two groups, for example, refugee and business immigrant owners, some of the observed difference in the rates may be related to differences in the composition of these groups in terms of characteristics (education, age, source region, etc.). The unadjusted hazard rates do not account for such compositional differences. They are similar to the hazard rates that would be produced by the raw data. For any given year since the beginning of the ownership spells, the unadjusted hazard rates are computed by averaging predicted hazards for each individual within each category of the variable of interest (in our example, refugee and business immigrant owners). In other words, if one wishes to compare hazard rates across different immigrant categories, predicted hazard rates (predicted probabilities of exit  $t$  years after entry conditional on remaining a business owner for  $t - 1$  years) are first computed for each individual and then averaged within each “immigrant category  $\times$  year since entry” cell.

The **adjusted** hazard rates account for differences in the composition of the groups of interest (in this example, refugee and business immigrant owners). The adjusted hazard rates thus represent the difference in hazard rates associated with being a refugee or a business immigrant, all other variables being equal. In our example, they are computed by assuming that everybody in the entire sample is, in a first calculation, a refugee, and then, in a second calculation, a business immigrant. In this way, both categories of immigrants (refugees and business immigrants) have exactly the same characteristics (education, age, etc.), the only difference being their immigrant category status.

### 3 Results: Exit rates and survival times

#### 3.1 Exit rates and survival times for immigrants and the Canadian-born

The probability of ending an ownership spell generally decreases with years since ownership began. Among all immigrants in the sample, 11.5% ended ownership after one year in business; that rate fell to 3.9% after seven years (Chart 1). Roughly 22% of immigrant business owners exited ownership during the first two years, and close to one-half (44%) exited ownership some time before the end of the seventh year (Chart 2). The rates were similar for the Canadian-born.

There are three possible reasons why the hazard rate declines with years of ownership. First, individuals lacking business acumen and managerial skills may go bankrupt in the initial years after start-up. As a result, a pool of more competent business owners endures over time. Second, the decline may be related to changes in individuals' abilities or their self-assessment of their entrepreneurial abilities. Individuals who survive as owners for five years may become better business owners and/or more confident in their abilities and, in turn, more likely to choose to remain business owners. Finally, individuals who are less committed to business ownership may drop out in the early years, so that those remaining over time may be more committed than those who started out.

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3. These include the English-speaking countries (the United States, the United Kingdom, Ireland, Australia, New Zealand and South Africa), Western Europe, Eastern and Central Europe, North Africa and the Middle East, Africa except North Africa, India and nearby countries, China and nearby countries, Latin America, Southeast Asia, and “unknown.”

On the basis of the regression results from the model defined by Equation (4), hazard rates were calculated for three groups: immigrants in Canada for less than 10 years, immigrants in Canada for 10 to 19 years, and immigrants in Canada for 20 years or more.<sup>4</sup> The model estimates are shown in Table 1. The estimated probability of exit was generally higher among recent immigrants than the Canadian-born although the gap narrowed and almost disappeared after seven years of ownership. In terms of survival, 51% of recent immigrants remained business owners to the seventh year while this was the case for 58% of the Canadian-born (Chart 3).<sup>5</sup>

During the first three years of business ownership, immigrants in Canada for 10 to 19 years also had exit rates that were somewhat higher than the Canadian-born, but the difference in the estimated survival profiles between these groups was small (Chart 4). Finally, immigrants in Canada for 20 years or more had business exit rates very similar to those of the Canadian-born, and their survival profile was virtually identical to that of the Canadian-born (Chart 5).

### **3.2 Exit rates and survival times by immigrant category and characteristics**

Using information available on immigrant landing files, it is possible to estimate differences in business exit rates and survival durations by immigrant category (skilled worker, business immigrant, family class immigrant, and refugee) and various background characteristics through a model defined by Equation (5). The estimated effects associated with each immigrant characteristic are discussed in this section.<sup>6</sup> The education and language of immigrants are recorded at the time of landing. These characteristics can change with time in Canada, particularly language skills. However, if the results are to be used to inform selection criteria, it is the characteristics at time of entry to Canada that are of interest. Other characteristics—age, region and industry—are defined at the beginning of the ownership spell.

Separate analyses are conducted for recent and longer-term immigrants.<sup>7</sup>

## **4 Results: Education, immigrant category, source region and industry**

### **4.1 Education**

Recent research found that a larger share of highly educated immigrants owned a private incorporated business than did their counterparts with less education. In 2010, 5.8% of immigrant taxfilers with a university degree owned a company while this was the case for 3.7% of those with high school or less (Green et al. 2016).

There were almost no differences in the estimated hazard and survival profiles across education categories among recent immigrants after adjusting for differences in other observed characteristics (Chart 6). The results in Table 2 also show that there was no statistically significant difference between education groups (Table 2, first three columns). However, among longer-term immigrants, business owners with higher education levels exhibited lower exit rates and longer survival times than the less educated. When controls for other observed characteristics were

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4. In this study, immigrants in Canada for 20 to 28 years are included under this category.

5. This observation is consistent with outcomes in a number of domains, such as labour market and health outcomes. For instance, the immigrant–Canadian-born wage gap declines with years in Canada, and immigrants' health more closely resembles that of the Canadian-born after a number of years in Canada.

6. Gender is also included in the regression that generates the hazard rates. In all cases, there was no difference in the hazard (exit) rates for men and women. Hence the effects of gender on exit hazard rates are not discussed.

7. Again, recent immigrants are those in Canada for less than 10 years while longer-term immigrants are those in Canada for 10 to 28 years.

applied, the estimated effect of having postsecondary education on the probability of exit was negative and significant (-0.035) compared to having only a high school diploma or less. Holding a bachelor's degree (-0.145) or a graduate degree (-0.191) reduced the probability of exit even further (Table 2, last three columns).<sup>8</sup>

Using estimation results in Table 2, adjusted and unadjusted hazard rates were computed for longer-term immigrants. The unadjusted hazard rates for the “high school or less” group fell from 11.5% in year one to 4.0% in year seven, while the rates for those with a graduate or professional degree were 9.2% and 3.0%. Two years after entry into ownership, estimated unadjusted exit rates were roughly 1.3 times higher among immigrants with high school or less than among immigrants with a graduate or professional degree. Roughly 57% of immigrants with high school or less still owned an incorporated company seven years after the beginning of the ownership spell, while 67% of immigrants with a graduate or professional degree did so.

In contrast to substantial differences in the unadjusted hazard and survival paths, the differences in the adjusted survival paths across education categories were not large; roughly 57% of the least educated survived to the seventh year whereas 63% of those with a graduate or professional degree did so (Chart 7). The adjusted second-year hazard rates among immigrant business owners in the “high school or less” group were 1.17 times the corresponding rate among the postgraduate degree group (compared with the 1.3 figure for the unadjusted rates). This suggests that about 43% of the difference in hazard rates between the most educated and the least educated was associated with differences in other characteristics.

In sum, education does not appear to play an important role with respect to determining differences in ownership survival profiles among relatively recent immigrants. However, among more established immigrants, there is a strong positive correlation between educational attainment and the probability of survival. More highly educated immigrant business owners are more likely to have longer ownership spells than those with less education. The observed differences between immigrant business owners with different educational attainment are consistent with published literature regarding immigrant earnings. Among immigrants who landed in Canada during the 2000s, earnings during the first few years varied little by educational attainment. However, the earnings advantage of the more highly educated increased steadily over time as immigrants acquired Canadian experience.

## 4.2 Immigrant category

Green et al. (2016) showed that ownership rates of private incorporated companies varied significantly by immigrant category in 2010: 9.1% of business immigrant taxfilers<sup>9</sup> were owners of a private incorporated company whereas this was the case for 5.0% of skilled workers, 4.3% of family class immigrants, and 3.5% of refugees. The higher rate of ownership among business immigrants was particularly evident among recent immigrants to Canada.

This study, however, suggests that although ownership rates among **recent immigrants** were highest among business immigrants, this group also had significantly higher exit rates and shorter durations of ownership than other immigrant categories. For example, 27.2% of recent business immigrants exited ownership after two years compared with 21.0% of family class immigrants and 22.4% of immigrants in the skilled category. Seven years after taking ownership, about 44% of recent business immigrants were still owners while this was the case for 57% of owners in the family class (Chart 8). These results changed little after adjusting for differences in other characteristics observed between immigrant categories.

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8. The figures in the brackets are estimated coefficients. Table 2 also shows average marginal effects.

9. Immigrants aged 18 to 64 who entered Canada in 1980 or a subsequent year and filed a tax return in 2010.

Estimation results for recent immigrants (Table 2) were used to compute predicted hazard rates for each immigrant category, and the differences were tested for statistical significance in each year since entry. The differences between the business immigrant and family class categories, and between the business immigrant and skilled worker categories were statistically significant at the 99% level in all years except the first and the seventh. The unadjusted results suggested that the second-year hazard rates were about 1.41 times higher among the business immigrant category than among the skilled worker category, while the adjusted results suggested rates about 1.34 times higher.

Among **longer-term immigrants**, the differences among immigrant categories were smaller. The unadjusted results indicate that hazard rates among business immigrants were only about 1.14 times those observed among skilled workers while the adjusted results fell to about 1.05 times. In terms of survival times, 56% of business immigrants and 61% of skilled workers were still owners after seven years while results for refugees and family class immigrants fell within this range (Chart 9). Overall, the immigrant category itself had relatively little effect on ownership exit rates and survival times after immigrants had been in Canada for a decade or more.

### 4.3 Source region

The study finds substantial differences across source regions in exit rates and duration of ownership among both recent and longer-term immigrants. A year after becoming business owners, recent immigrants from Africa and Latin America had higher probabilities of exit than recent immigrants from Southeast Asia, Europe, India and the English-speaking countries (the United States, the United Kingdom, Ireland, Australia, New Zealand and South Africa) (Table 2, first three columns). A similar pattern is observed for longer-term immigrants (Table 2, last three columns). Among this category of immigrants, between 53% and 63% were still business owners seven years after the beginning of the spell (Chart 10). Immigrant business owners from the regions with the highest exit rates were 1.3 to 1.4 times more likely to exit ownership than those from the regions with the lowest rates. After the results were adjusted for differences in other background characteristics, little change was observed in the results. This suggests that the source region itself had a significant effect on exit and survival patterns.

### 4.4 Industry

Immigrant owners of private incorporated companies tend to cluster in particular industries. Industries accounting for more than 2% of immigrant owners in 2010 included construction, manufacturing, wholesale trade, retail trade, transportation, real estate, professional and technical services, administration and support, health care, and accommodation and food services.<sup>10</sup> The analysis of exit rates and duration of ownership focuses on these industries.

The duration of immigrant ownership of incorporated private businesses is noticeably longer in the health care sector (e.g., laboratories, doctors' offices and private nursing services) than in other industries. Among longer-term immigrants, about 84% of those in the health care sector were still owners seven years after the start of the spell, while this was the case for 50% to 61% of longer-term-immigrant business owners in other industries (Chart 11). The estimated "health sector" effect in the hazard regression was also large, negative and statistically significant (Table 2; the reference group was manufacturing).

Other characteristics observed among immigrant business owners in different industries accounted for little of this difference. For example, the unadjusted exit rate from ownership among longer-term-immigrant business owners in the real estate sector (which had the highest exit rate)

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10. These industries are chosen on the basis of results in Green et al. (2016).

was 3.5 times that among immigrant business owners in health care. When other characteristics were taken into account, the adjusted exit rates between these groups was 3.0 times. For other industries, unadjusted exit rates were higher and survival times were shorter among longer-term immigrant business owners in real estate, wholesale trade, professional and technical services, and accommodation and food services. Adjusted results were very similar.<sup>11</sup> Among recent immigrant business owners, exit rates were also relatively high in these industries.

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11. Table 2, first and fourth column, shows significant differences between the manufacturing sector (reference group) and all other industries.

## 5 Conclusion

During the 2000s, the probability of exiting ownership of a private incorporated company was about the same for immigrant business owners who had been in Canada for 10 years or more and for Canadian-born owners. Recent immigrants (those in Canada for less than 10 years) displayed significantly higher exit rates from ownership and shorter durations than did the Canadian-born or longer-term immigrants. The higher exit rates and shorter durations among more recent immigrants are not surprising since recent immigrants may not have access to the same level of wealth, networks and knowledge of business practices in Canada as longer-term immigrants or the Canadian-born. After a number of years in Canada, immigrants' outcomes more closely resemble those of the Canadian-born, a result that also fits with observations in other domains, such as labour market and health outcomes.

The hazard rate, which is the likelihood of exiting an ownership spell conditional on having owned a company up to that year, declined with years in business among both immigrants and the Canadian-born. Among all immigrants in the study sample, 11.5% ended ownership after one year in business, while this was the case for 3.9% in the seventh year. The exit rate was marginally lower among the Canadian-born during the first three years of ownership, but after that time there was little difference between groups. This means that, on average, two years after the beginning of the ownership spell, about 80% of immigrant owners remained as owners; after seven years, slightly more than half were still owners (57%). The same was broadly true for the Canadian-born.

These results reflect general outcomes for all immigrants. However, there was some variation in outcomes across immigrant characteristics. For example, among longer-term immigrants, those with high school or less at landing had exit rates roughly 1.3 times higher than those of their counterparts with a postgraduate degree. As noted above, some of this difference may not be related directly to education but rather to differences among education groups in source region, age, immigrant category, industry of ownership, or other factors affecting exit rates. Adjusting for these differences accounted for about 43% of the difference in hazard (exit) rates between the least educated and the most educated. The difference in the estimated hazard rates associated with differences in educational attainment was not evident among recent immigrants. For them, education had no effect on exit rates and duration of ownership.

Among longer-term immigrants (in Canada for 10 years or more), the immigrant category had only a small effect on survival times of ownership. This was not the case among recent immigrants, however. Notably, although recent business immigrants had the highest ownership rates, they also had the shortest duration of ownership and the highest exit rates from ownership, at rates roughly 1.6 times higher than those observed for other immigrant categories.

Immigrants from source regions such as Southeast Asia, Europe, India and the English-speaking countries (the United States, the United Kingdom, Ireland, Australia, New Zealand and South Africa) generally had the lowest exit rates and the highest ownership durations. Those from Latin America, Africa and the Middle East had the highest exit rates, at roughly 1.3 to 1.4 times the rate observed for the highest group. This held for both unadjusted and adjusted results.

The longest ownership spells were found among those who were aged 30 and 49 when the ownership spell began. Younger and older entrepreneurs had shorter durations and higher exit rates from ownership. There was little difference in the unadjusted and adjusted results.

Finally, the industry of ownership mattered. The health care sector stood out. Immigrant owners of private incorporated companies in this sector (e.g., laboratories, nursing companies, doctors' offices and chiropractic practices) had long durations of ownership and low exit rates that were only one-third of those observed in other industries. Beyond that, owners in real estate, accommodation and food services, professional and technical services and wholesale trade generally had the shortest survival times.



## 6 Tables and charts

**Table 1**  
**Results from discrete time exit model defined by Equation (4), Canadian-born and immigrant business owners**

	Canadian-born and recent immigrants			Canadian-born and mid-term immigrants			Canadian-born and longer-term immigrants		
	coefficients	standard errors	marginal effects	coefficients	standard errors	marginal effects	coefficients	standard errors	marginal effects
Female	0.022 **	0.004	0.002	0.017 **	0.005	0.001	0.018 **	0.005	0.002
<b>Age group (omitted: 65 years and older)</b>									
Younger than 25 years	0.011	0.013	0.001	0.040 **	0.013	0.003	0.041 **	0.014	0.003
25 to 29 years	-0.054 **	0.012	-0.004	-0.035 **	0.012	-0.003	-0.032 *	0.013	-0.002
30 to 34 years	-0.065 **	0.012	-0.005	-0.053 **	0.012	-0.004	-0.041 **	0.013	-0.003
35 to 39 years	-0.065 **	0.012	-0.005	-0.053 **	0.012	-0.004	-0.040 **	0.013	-0.003
40 to 44 years	-0.056 **	0.012	-0.004	-0.044 **	0.012	-0.003	-0.031 *	0.013	-0.002
45 to 49 years	0.009	0.012	0.001	0.012	0.012	0.001	0.024	0.013	0.002
50 to 54 years	0.155 **	0.013	0.013	0.162 **	0.013	0.014	0.176 **	0.013	0.015
55 to 59 years	0.328 **	0.014	0.030	0.338 **	0.014	0.030	0.347 **	0.014	0.031
60 to 64 years	0.523 **	0.013	0.052	0.539 **	0.014	0.053	0.550 **	0.014	0.053
<b>Geographic region (omitted: Ontario)</b>									
Atlantic	0.009	0.011	0.001	0.023 *	0.011	0.002	0.027 *	0.011	0.002
Quebec	0.040 **	0.006	0.003	0.043 **	0.006	0.003	0.041 **	0.007	0.003
Prairies	0.128 **	0.006	0.011	0.151 **	0.006	0.012	0.162 **	0.006	0.013
British Columbia	0.068 **	0.006	0.005	0.075 **	0.007	0.006	0.084 **	0.007	0.007
Other	0.905 **	0.022	0.100	0.860 **	0.023	0.093	0.852 **	0.024	0.091
<b>Time since entry</b>									
2 years	-0.101 **	0.006	-0.008	-0.101 **	0.006	-0.009	-0.101 **	0.006	-0.009
3 years	-0.269 **	0.007	-0.023	-0.269 **	0.007	-0.024	-0.269 **	0.007	-0.024
4 years	-0.434 **	0.008	-0.035	-0.434 **	0.008	-0.036	-0.434 **	0.008	-0.036
5 years	-0.571 **	0.010	-0.045	-0.570 **	0.010	-0.045	-0.571 **	0.010	-0.045
6 years	-0.791 **	0.012	-0.058	-0.791 **	0.012	-0.058	-0.791 **	0.012	-0.057
7 years	-1.108 **	0.018	-0.072	-1.108 **	0.018	-0.071	-1.108 **	0.018	-0.071
Immigrant	0.165 **	0.011	0.021	0.081 **	0.013	0.006	-0.039	0.020	-0.002
Immigrant × 2 years since entry	0.168 **	0.017	...	0.058 **	0.020	...	0.059	0.032	...
Immigrant × 3 years since entry	0.138 **	0.019	...	-0.007	0.023	...	-0.012	0.038	...
Immigrant × 4 years since entry	0.090 **	0.024	...	-0.045	0.027	...	0.021	0.046	...
Immigrant × 5 years since entry	-0.015	0.030	...	-0.120 **	0.034	...	-0.058	0.059	...
Immigrant × 6 years since entry	-0.051	0.041	...	-0.119 **	0.046	...	-0.041	0.079	...
Immigrant × 7 years since entry	-0.061	0.062	...	-0.054	0.066	...	0.066	0.114	...
Constant	-2.189 **	0.011	...	-2.208 **	0.012	...	-2.223 **	0.012	...

... not applicable

\* significantly different from reference category ( $p < 0.05$ )

\*\* significantly different from reference category ( $p < 0.01$ )

**Note:** The number of observations is 2,644,232 for the Canadian-born and recent immigrants (immigrants who have lived in Canada for less than 10 years), 2,596,831 for the Canadian-born and mid-term immigrants (immigrants who have lived in Canada for 10 to 19 years) and 2,451,650 for the Canadian-born and longer-term immigrants (immigrants who have lived in Canada for 20 to 28 years).

**Source:** Statistics Canada, Canadian Employer–Employee Dynamics Database, 2001 to 2011.

**Table 2-1**  
**Results from discrete time exit model defined by Equation (5), immigrant**  
**business owners — Part 1**

	Recent immigrants			Longer-term immigrants		
	coefficients	standard errors	marginal effects	coefficients	standard errors	marginal effects
Female	0.050 **	0.014	0.005	0.006	0.014	0.000
<b>Age group (omitted: 65 years and older)</b>						
Younger than 25 years	-0.144 **	0.036	-0.015	0.015	0.043	0.001
25 to 29 years	-0.211 **	0.034	-0.021	-0.139 **	0.041	-0.012
30 to 34 years	-0.253 **	0.033	-0.025	-0.210 **	0.040	-0.018
35 to 39 years	-0.256 **	0.034	-0.025	-0.214 **	0.040	-0.018
40 to 44 years	-0.247 **	0.035	-0.025	-0.175 **	0.040	-0.015
45 to 49 years	-0.153 **	0.038	-0.016	-0.162 **	0.041	-0.014
50 to 54 years	-0.074	0.046	-0.008	-0.017	0.044	-0.002
55 to 59 years	0.049	0.062	0.005	0.057	0.051	0.005
60 to 64 years	0.066	0.070	0.007	0.257 **	0.057	0.026
<b>Geographic region (omitted: Ontario)</b>						
Atlantic	-0.107	0.061	-0.010	0.036	0.065	0.003
Quebec	0.134 **	0.022	0.013	0.085 **	0.021	0.007
Prairies	-0.107 **	0.019	-0.010	0.056 **	0.018	0.004
British Columbia	-0.021	0.017	-0.002	0.028	0.017	0.002
Other	1.316 **	0.060	0.190	1.024 **	0.073	0.120
<b>Industry<sup>1</sup> (omitted: manufacturing)</b>						
Unknown	0.108 *	0.044	0.010	0.077 *	0.035	0.006
Agriculture, forestry, fishing and hunting	-0.241 **	0.092	-0.019	-0.387 **	0.071	-0.026
Mining, quarrying, and oil and gas extraction	0.299	0.153	0.029	0.303 *	0.141	0.027
Utilities	0.123	0.354	0.011	-0.248	0.348	-0.018
Construction	0.068	0.049	0.006	0.092 *	0.038	0.008
Wholesale trade	0.218 **	0.047	0.021	0.172 **	0.041	0.014
Retail trade	0.073	0.045	0.007	0.104 **	0.036	0.008
Transportation and warehousing	-0.170 **	0.049	-0.014	-0.014	0.040	-0.001
Information and cultural industries	0.313 **	0.073	0.031	0.468 **	0.069	0.044
Finance and insurance	0.134	0.074	0.012	0.112	0.058	0.009
Real estate and rental and leasing	0.046	0.062	0.004	0.290 **	0.045	0.026
Professional, scientific and technical services	0.279 **	0.044	0.027	0.167 **	0.035	0.014
Management of companies and enterprises	-0.084	0.122	-0.007	0.245 **	0.083	0.021
Administration and support, waste management and remediation services	0.145 **	0.054	0.013	0.132 **	0.044	0.011
Educational services	0.266 **	0.070	0.026	0.150 *	0.068	0.012
Health care and social assistance	-0.951 **	0.063	-0.058	-1.083 **	0.051	-0.055
Arts, entertainment and recreation	0.387 **	0.095	0.039	0.375 **	0.083	0.034
Accommodation and food services	0.093 *	0.045	0.008	0.136 **	0.036	0.011
Other services (except public administration)	0.009	0.054	0.001	-0.044	0.042	-0.003
<b>Education at landing (omitted: high school or less)</b>						
Some postsecondary	0.008	0.019	0.001	-0.035 *	0.017	-0.003
Bachelor's degree	-0.028	0.019	-0.003	-0.145 **	0.021	-0.011
Postgraduate degree	-0.017	0.024	-0.002	-0.191 **	0.032	-0.015
Language at landing (French or English)	0.047 **	0.016	0.004	0.112 **	0.016	0.009

\* significantly different from reference category (p < 0.05)

\*\* significantly different from reference category (p < 0.01)

1. Industry is defined by the two-digit North American Industry Classification System (NAICS) 2007 code.

**Note:** The number of observations is 273,702 for recent immigrants (immigrants who have lived in Canada for less than 10 years) and 307,467 for longer-term immigrants (immigrants who have lived in Canada for 10 to 28 years).

**Source:** Statistics Canada, Canadian Employer–Employee Dynamics Database, 2001 to 2011.

**Table 2-2**  
**Results from discrete time exit model defined by Equation (5), immigrant**  
**business owners — Part 2**

	Recent immigrants			Longer-term immigrants		
	coefficients	standard errors	marginal effects	coefficients	standard errors	marginal effects
<b>Source country (omitted: English-speaking<sup>1</sup>)</b>						
Western Europe	0.002	0.042	0.000	0.041	0.036	...
Eastern Europe	0.061	0.034	0.005	0.023	0.031	0.002
North Africa and the Middle East	0.304 **	0.032	0.028	0.157 **	0.029	0.013
Africa, except North Africa	0.363 **	0.051	0.035	0.220 **	0.045	0.018
India and nearby countries	0.061	0.032	0.005	0.061 *	0.030	0.005
China and nearby countries	0.281 **	0.032	0.026	0.167 **	0.029	0.013
Latin America	0.323 **	0.042	0.030	0.275 **	0.035	0.023
Southeast Asia	-0.069	0.036	-0.006	0.053	0.031	0.004
Unknown	0.545	0.550	0.056	-0.029	0.531	-0.002
<b>Immigrant category (omitted: family)</b>						
Skilled workers and PNs	-0.018	0.028	0.002	-0.106 **	0.027	-0.006
Business immigrants	-0.033	0.038	0.028	-0.068	0.037	-0.002
Refugees	0.252 **	0.042	0.020	0.081 *	0.033	0.006
Other	0.056	0.064	0.008	-0.046	0.044	0.002
<b>Time since entry</b>						
2 years	-0.042	0.034	0.008	-0.046	0.028	-0.003
3 years	-0.213 **	0.039	-0.011	-0.302 **	0.033	-0.023
4 years	-0.434 **	0.049	-0.029	-0.492 **	0.040	-0.036
5 years	-0.672 **	0.065	-0.047	-0.720 **	0.052	-0.049
6 years	-0.905 **	0.088	-0.062	-0.951 **	0.070	-0.060
7 years	-1.051 **	0.124	-0.077	-1.158 **	0.100	-0.070
<b>Immigrant category × time since entry</b>						
Skilled workers and PNs × 2 years since entry	0.101 *	0.040	...	0.011	0.040	...
Skilled workers and PNs × 3 years since entry	0.039	0.047	...	0.085	0.047	...
Skilled workers and PNs × 4 years since entry	0.088	0.058	...	0.131 *	0.056	...
Skilled workers and PNs × 5 years since entry	0.046	0.076	...	-0.058	0.075	...
Skilled workers and PNs × 6 years since entry	-0.008	0.105	...	0.078	0.098	...
Skilled workers and PNs × 7 years since entry	-0.181	0.151	...	0.050	0.142	...
Business immigrants × 2 years since entry	0.446 **	0.053	...	0.032	0.054	...
Business immigrants × 3 years since entry	0.505 **	0.060	...	0.115	0.062	...
Business immigrants × 4 years since entry	0.506 **	0.072	...	0.028	0.076	...
Business immigrants × 5 years since entry	0.539 **	0.093	...	0.246 **	0.090	...
Business immigrants × 6 years since entry	0.499 **	0.124	...	0.147	0.123	...
Business immigrants × 7 years since entry	0.205	0.181	...	-0.024	0.181	...
Refugees × 2 years since entry	-0.050	0.065	...	-0.027	0.049	...
Refugees × 3 years since entry	-0.044	0.076	...	-0.069	0.058	...
Refugees × 4 years since entry	-0.155	0.098	...	-0.050	0.070	...
Refugees × 5 years since entry	-0.087	0.128	...	0.087	0.087	...
Refugees × 6 years since entry	0.032	0.171	...	0.155	0.115	...
Refugees × 7 years since entry	-0.656 *	0.310	...	0.103	0.165	...
Other × 2 years since entry	0.079	0.099	...	0.089	0.066	...
Other × 3 years since entry	0.083	0.117	...	0.084	0.077	...
Other × 4 years since entry	-0.065	0.154	...	0.103	0.091	...
Other × 5 years since entry	0.067	0.197	...	0.323 **	0.108	...
Other × 6 years since entry	-0.102	0.278	...	-0.004	0.158	...
Other × 7 years since entry	-0.041	0.369	...	0.059	0.215	...
Constant	-2.087 **	0.062	...	-2.137 **	0.057	...

... not applicable

\* significantly different from reference category ( $p < 0.05$ )

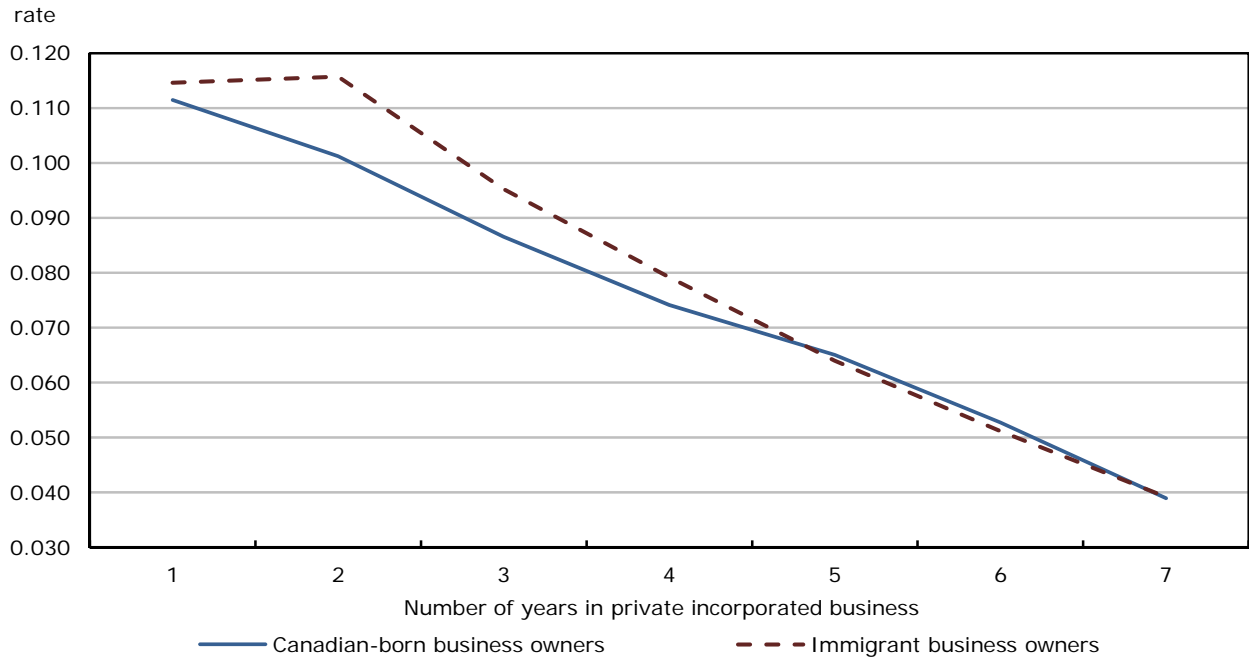
\*\* significantly different from reference category ( $p < 0.01$ )

1. English-speaking countries include the United States, the United Kingdom, Ireland, Australia, New Zealand and South Africa.

**Notes:** The number of observations is 273,702 for recent immigrants (immigrants who have lived in Canada for less than 10 years) and 307,467 for longer-term immigrants (immigrants who have lived in Canada for 10 to 28 years). PNs: Provincial nominees.

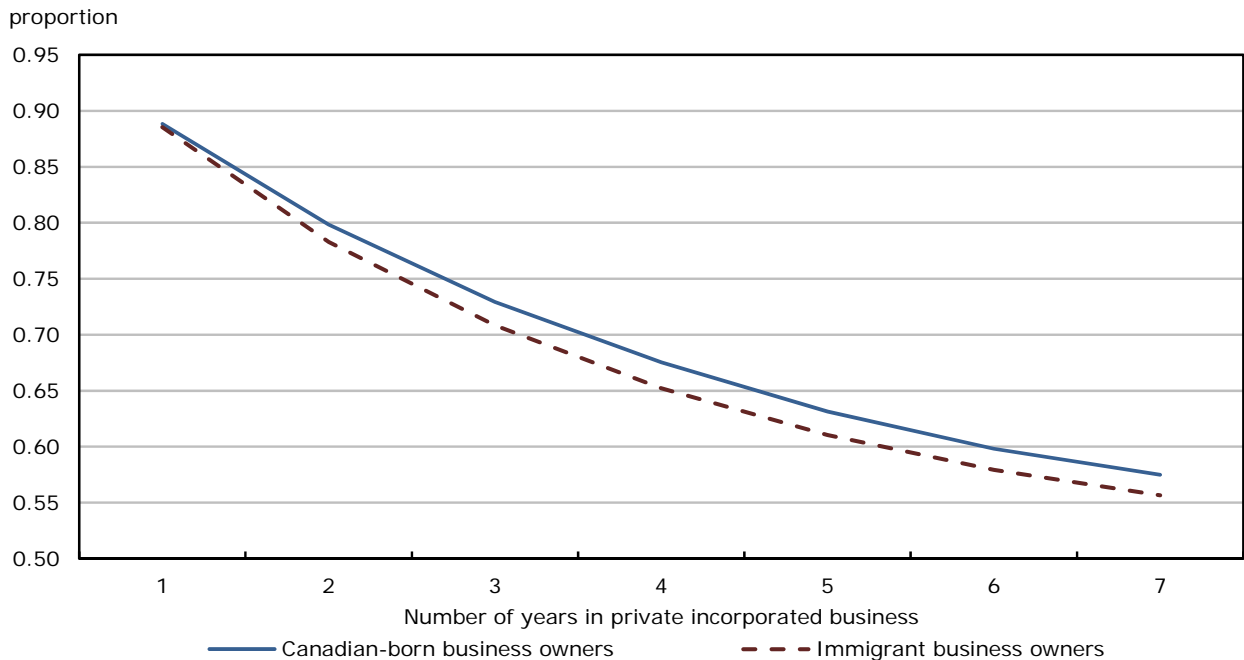
**Source:** Statistics Canada, Canadian Employer–Employee Dynamics Database, 2001 to 2011.

**Chart 1**  
**Hazard rate of exit from business ownership, immigrant and Canadian-born business owners**



**Note:** The analysis includes all new ownership spells starting between 2003 and 2009.  
**Source:** Statistics Canada, Canadian Employer–Employee Dynamics Database.

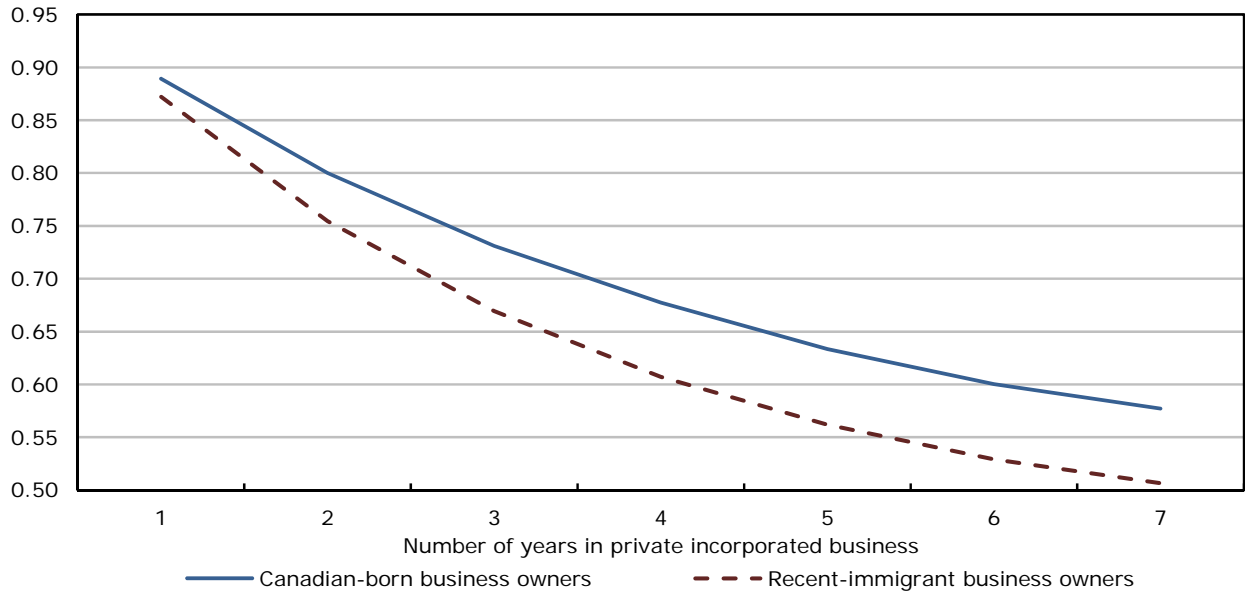
**Chart 2**  
**Survival rate of business ownership, immigrant and Canadian-born business owners**



**Note:** The analysis includes all new ownership spells starting between 2003 and 2009.  
**Source:** Statistics Canada, Canadian Employer–Employee Dynamics Database.

**Chart 3**  
**Survival rate of business ownership, recent-immigrant and Canadian-born business owners**

proportion

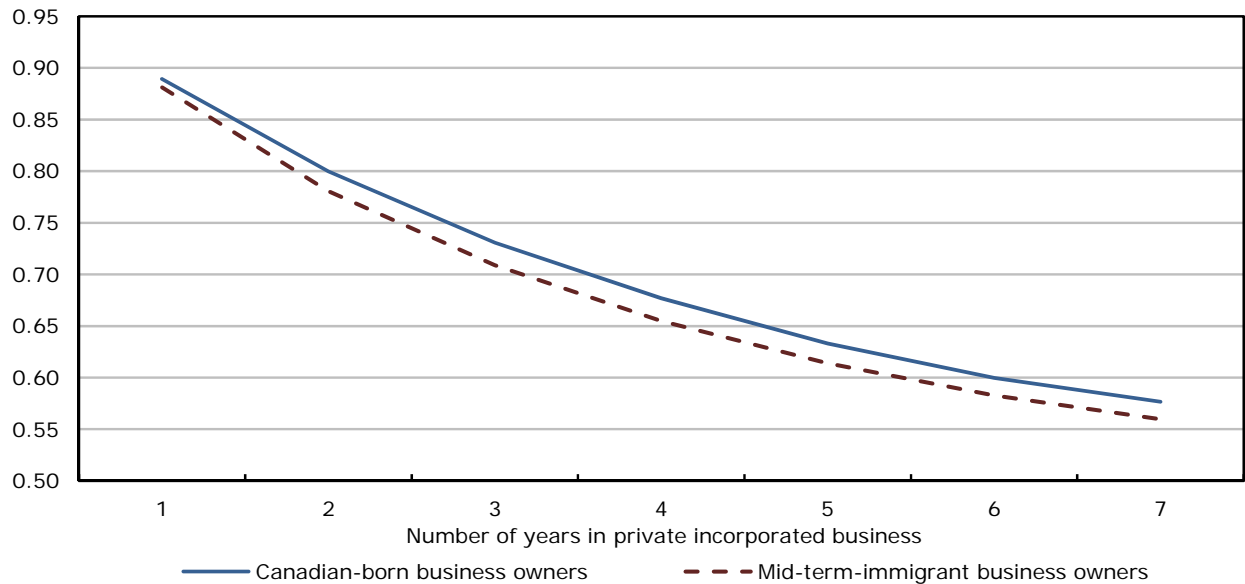


**Notes:** Recent immigrants have lived in Canada for less than 10 years. The analysis includes all new ownership spells starting between 2003 and 2009.

**Source:** Statistics Canada, Canadian Employer–Employee Dynamics Database.

**Chart 4**  
**Survival rate of business ownership, mid-term-immigrant and Canadian-born business owners**

proportion

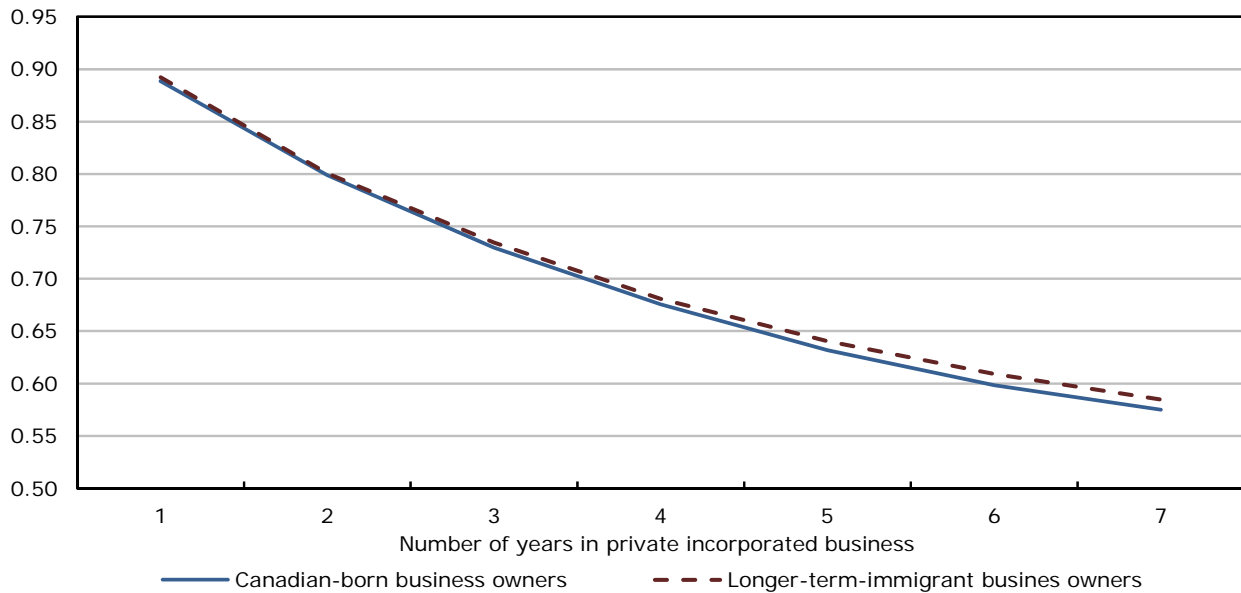


**Note:** Mid-term immigrants have lived in Canada for 10 to 19 years. The analysis includes all new ownership spells starting between 2003 and 2009.

**Source:** Statistics Canada, Canadian Employer–Employee Dynamics Database.

**Chart 5**  
**Survival rate of business ownership, longer-term-immigrant and Canadian-born business owners**

proportion

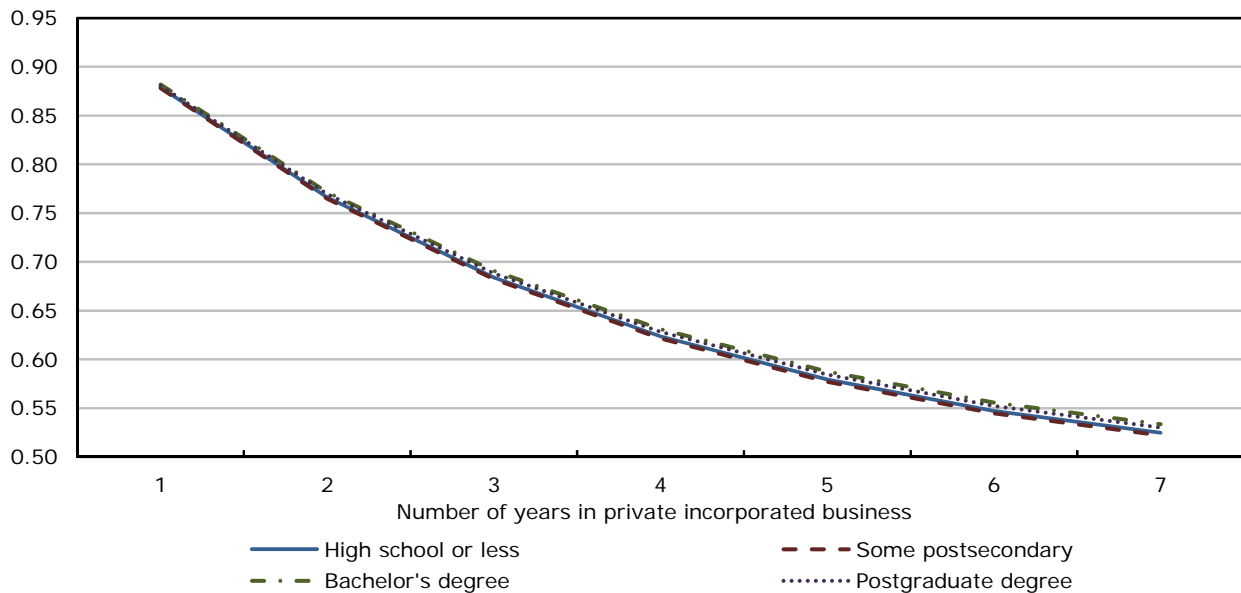


**Note:** Longer-term immigrants have lived in Canada for 20 to 28 years. The analysis includes all new ownership spells starting between 2003 and 2009.

**Source:** Statistics Canada, Canadian Employer–Employee Dynamics Database.

**Chart 6**  
**Estimated adjusted survival rate of business ownership of recent immigrants, by educational attainment**

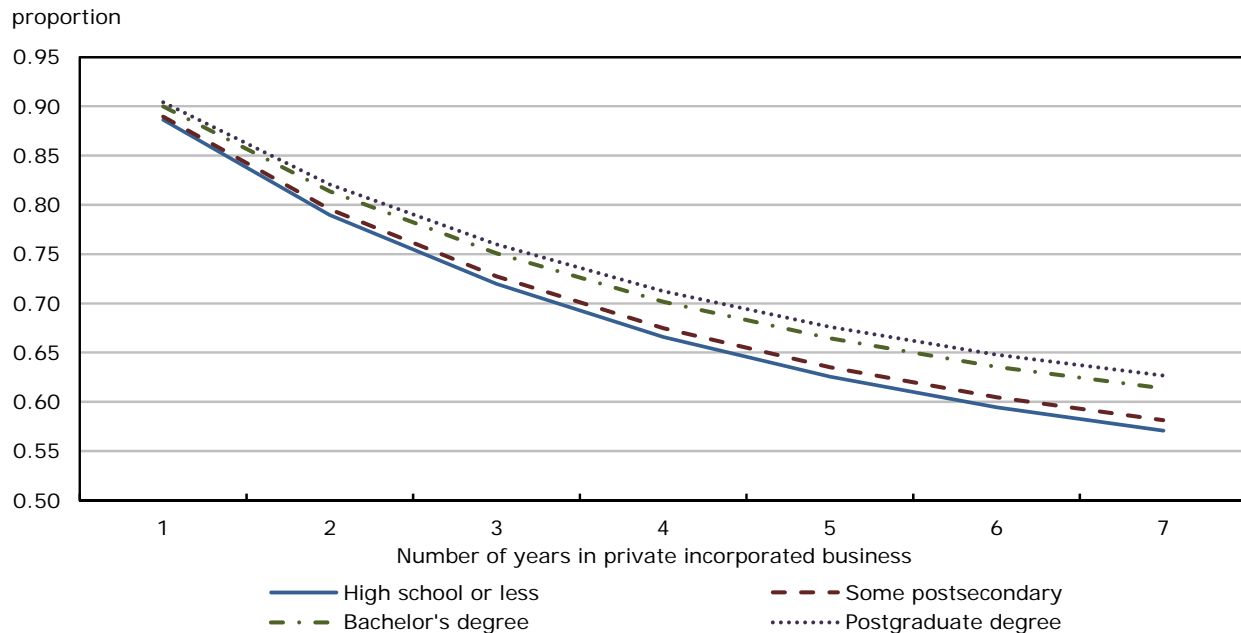
proportion



**Note:** Recent immigrants have lived in Canada from less than 10 years. The analysis includes all new ownership spells starting between 2003 and 2009.

**Source:** Statistics Canada, Canadian Employer–Employee Dynamics Database.

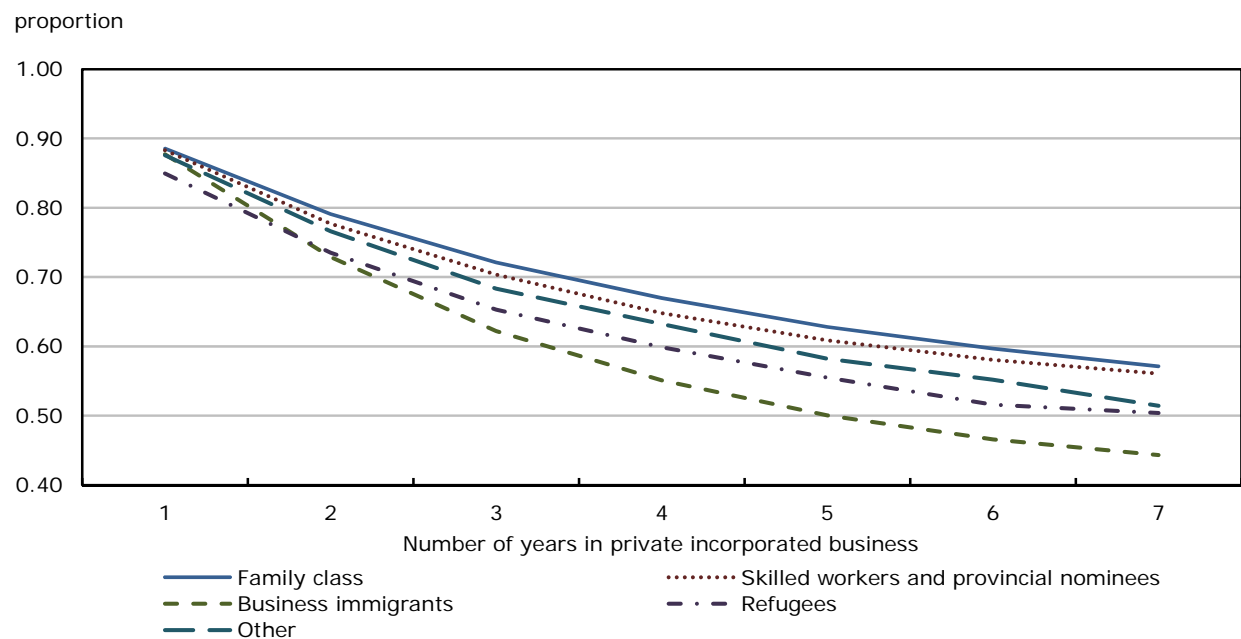
**Chart 7**  
**Estimated adjusted survival rate of business ownership of longer-term immigrants, by educational attainment**



**Note:** Longer-term immigrants have lived in Canada for 10 to 28 years. The analysis includes all new ownership spells starting between 2003 and 2009.

**Source:** Statistics Canada, Canadian Employer–Employee Dynamics Database.

**Chart 8**  
**Estimated unadjusted survival rate of business ownership of recent immigrants, by immigrant class**



**Note:** Recent immigrants have lived in Canada for less than 10 years. The analysis includes all new ownership spells starting between 2003 and 2009.

**Source:** Statistics Canada, Canadian Employer–Employee Dynamics Database.

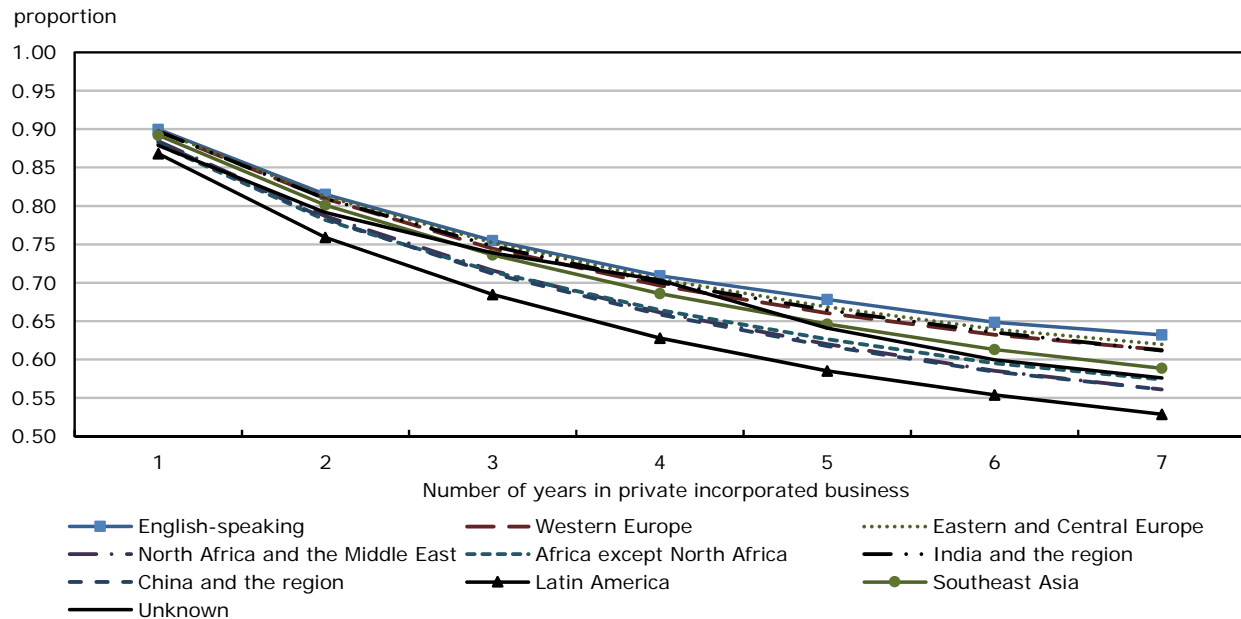
**Chart 9**  
**Estimated unadjusted survival rate of business ownership of longer-term immigrants, by immigrant class**



**Note:** Longer-term immigrants have lived in Canada for 10 to 28 years. The analysis includes all new ownership spells starting between 2003 and 2009.

**Source:** Statistics Canada, Canadian Employer–Employee Dynamics Database.

**Chart 10**  
**Estimated unadjusted survival rate of business ownership of longer-term immigrants, by source region**

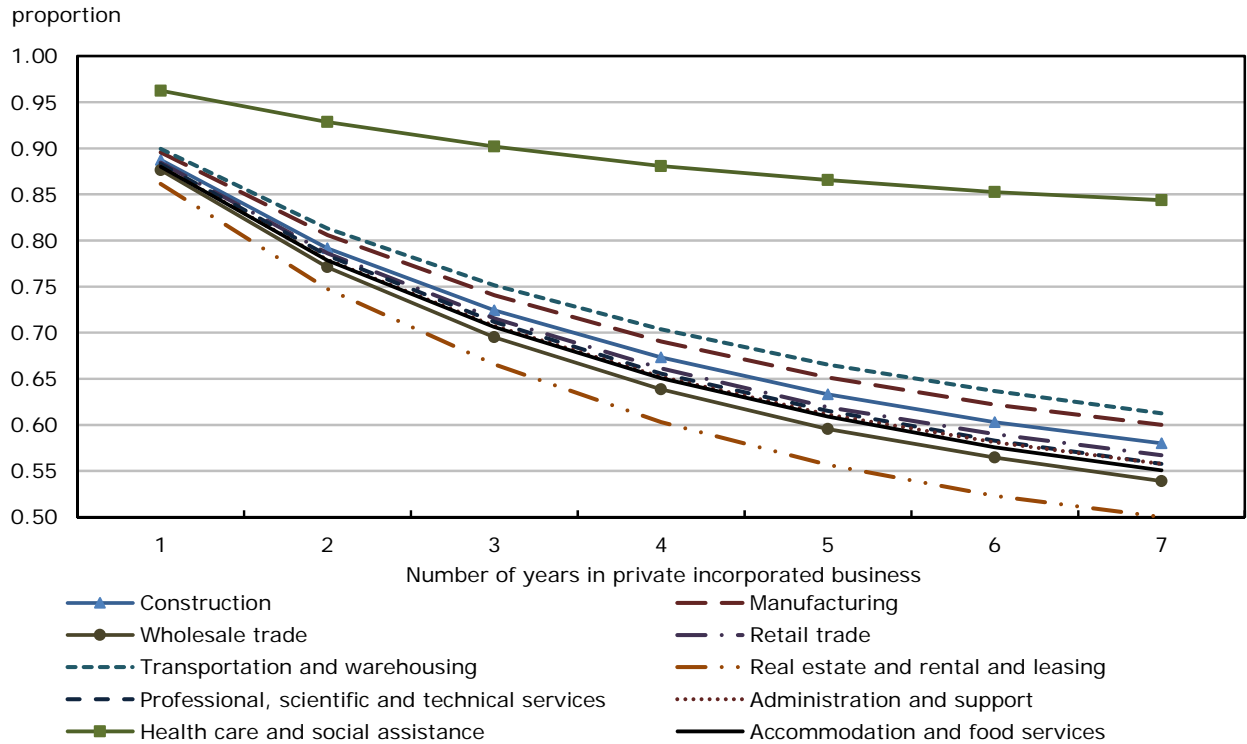


**Notes:** English-speaking source regions include the United States, the United Kingdom, Ireland, Australia, New Zealand and South Africa. Longer-term immigrants have lived in Canada for 10 to 28 years or more. The analysis includes all new ownership spells starting between 2003 and 2009.

**Source:** Statistics Canada, Canadian Employer–Employee Dynamics Database.



**Chart 11**  
**Estimated unadjusted survival rate of business ownership of**  
**longer-term immigrants, by industry**



**Notes:** The full name for "Administration and support" is "Administration and support, waste management and remediation services." Industry is defined by the two-digit North American Industry Classification System (NAICS) 2007 code. Longer-term immigrants have lived in Canada for 10 to 28 years. The analysis includes all new ownership spells starting between 2003 and 2009.

**Source:** Statistics Canada, Canadian Employer–Employee Dynamics Database.

## References

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