Contents

Executive Summary .................................................................................................................. 2
Section 1: Introduction ............................................................................................................. 3
Section 2: Methodology .......................................................................................................... 4
Section 3: Firm Birth and Survival Rates ................................................................................... 5
  3.1 Overall Performance (2002–2014) ................................................................................. 5
  3.2 Performance by Industrial Sector .................................................................................. 8
  3.3 Performance by Entrant Size ....................................................................................... 12
  3.4 Performance by Region ............................................................................................... 14
Section 4: Job Creation and Employment ................................................................................. 15
  4.1 Job Creation by Entrant Firms ..................................................................................... 15
  4.2 Average Employment by Entrant Firms and Survivors .................................................. 16
Section 5: Concluding Remarks .............................................................................................. 18
References ............................................................................................................................... 19
EXECUTIVE SUMMARY

This report studies the characteristics and performance of newly established Canadian firms – including new firms birth rates, survival rates and employment levels – at their year of entry into the Canadian economy and for up to ten subsequent years. It studies 13 cohorts of new firms – one cohort for each year between 2002 and 2014. The unique dataset used for this study was developed by Statistics Canada, in collaboration with the Small Business Branch (SBB) of Innovation, Science and Economic Development Canada (ISED).

Key findings from this study, covering the period from 2002–2014, are listed below.

**New firm birth rates**
- On average, 96,000 new firms entered the Canadian economy per year, representing about 9.4 percent (annual birth rate) of all Canadian firms.
- The highest birth rates were in accommodation and food services.
- Industries with higher birth rates tended to have lower five and ten year survival rates.

**New firm survival rates**
- Sixty three percent of new firms survived five years, and 43 percent survived 10 years.
- Firm entrant survival rates exhibited a steady and gradual increase from 2002 to 2014.
- The lowest survival rates were in the accommodation and food services sector.
- Firms have higher survival rates when they are born larger.
  - During the first three years 23 percent of entrants with 1–4 employees failed while only about 14 percent failed among those with 20–99 employees.
  - More than 57 percent of new firms with 1–4 employees failed after 10 years, but less than 50 percent of firms with over 20 employees failed after 10 years.

**New firm job creation and employment levels**
- Firm entrants created on average 256,000 new jobs in the first year, representing about 2 percent of total annual employment.
- The average annual number of jobs during the first year created by entrant firms with less than 5 employees was 118,000; 79,000 by entrants with 5–19 employees; 38,000 by entrants with 20–49 employees; and over 21,000 by entrants with 50–99 employees.
- Larger firm entrants exhibited significantly larger overall average employment growth over time, with firm entrants with 20 to 99 employees doubling in size in 5 years.
- The highest average levels of employment at the year of firm entry were those in the accommodation and food services sector, followed by those in manufacturing.
Policymakers seek to expedite structural changes in the Canadian economy. One way is to promote the creation and growth of firms. This study found that Canadian newly established businesses play an important role in the national economy, especially those firms that start larger. Policies that address access to capital for firms and enable firms to scale will help address these goals.

SECTION 1: INTRODUCTION

In his work Capitalism, Socialism and Democracy, first published at the height of World War Two, Joseph Schumpeter (1942; p. 83) introduced his concept of ‘creative destruction’ to describe innovative entry by entrepreneurs as the force that sustains long-term economic growth. Since then, firm creation and formation has been recognized to be an essential component of economic growth.

Research has shown the formation and growth of new firms to be beneficial for economic growth (OECD 2003; Audretsch and Keilbach 2004; Van Stel, Carree and Thurik 2005; Audretsch, Keilbach and Lehmann 2006), job creation (Thurik 2003; Acs and Audretsch 1989) and knowledge spillover (Audretsch and Feldman 1996; Varga and Schalk, 2004). Small entrepreneurial firms have also been shown to be more innovative and dynamic than more mature firms (Acs and Audretsch 1990; Baldwin et al. 1994; Baldwin and Johnson 1999; Acs and Audretsch 2003). As such, metrics on firm creation and growth can serve as an important indicator in assessing the dynamism of national economies.

The objective of this report is to compare, for the first time, new firms’ birth rates over the period 2002–2014. To this end, this report explores the characteristics of newly established Canadian firms, including their average survival rates and their employment levels – both at the year of entry and over time.

Previous research conducted by the Bank of Canada identified clear downward trends both in new firm creation and new entrepreneurship since the early 1980s, with the most rapid declines in new firm entry observed in the late 1980s through early 1990s and in the late 1990s period (Cao et al. 2015). A recent Statistics Canada study also reported a reduction in firm turnover activity over a similar period, viewed through both entry and exit rates (Macdonald 2014).

Viewed in an international context, Canada weathered the 2008–2009 recession relatively well (Hoffmann and Lemieux 2014; Dubé and Polèse 2016). Nevertheless, the Canadian economy has experienced a period of slow economic growth since the global financial crisis, though signs of economic strengthening have recently appeared. In response to prospects of a slow-growth future, researchers and policymakers at various levels of government have looked for ways to promote structural changes in the Canadian economy in order to promote advanced skills, high-value products, innovation and clean growth.
The more recent fall in energy prices and a potential slowing of the real estate market, which has underpinned recent growth, highlight the need to expedite this transition in a manner that drives the creation and growth of new firms. This study aims to contribute to that goal by examining the characteristics of Canadian newly established businesses, their formation and post entry performance, and their roles in the national economy.

The Small Business Branch of Innovation, Science and Economic Development Canada worked with the Economic Analysis Division (EAD) of Statistics Canada to prepare a set of tables that provide a perspective on the characteristics and performance of new firms in Canada, including cohorts of business entrants from 2002 to 2014. These tables were produced using the National Accounts Longitudinal Microdata File (NALMF), a dataset structured at the enterprise level.

This report is organized as follows: The data source and terminology used in this study are introduced in the next section. Descriptive statistics on the birth and survival rates of new firms are presented in Section 3. Jobs created by new firms are presented in Section 4. Section 5 concludes with key findings.

SECTION 2: METHODOLOGY

This study used data from the National Accounts Longitudinal Microdata File developed and maintained by the Economic Analysis Division of Statistics Canada. NALMF combines a number of data sources including administrative tax records (T2 and T4), data from the Business Register and from the Survey of Employment, Payrolls and Hours. This dataset allows the tracking of the life cycle of an individual firm from birth to exit and can be used to examine business activities and employment across industry, region and firm size.¹

EAD was engaged to prepare a set of descriptive statistics for this study based on NALMF. With its longitudinal structure, NALMF allowed the creation of this unique dataset of yearly cohorts of newly created firms and to track aspects of the development of firms in those cohorts over time. As a result, thirteen cohorts of new firms, created between 2002 and 2014, were generated for this study. Descriptive statistics for each of these cohorts were then collected and reported in this study. Definitions used in this study for firm births and employment, as well as other considerations, are described briefly below.

**Definition of firm birth**

The birth of a firm – sometimes referred to as a firm entrant – occurs in the year when a new business number (BN) in the Business Registry has associated with it positive employment for the first time.

¹ To create data longitudinality, NALMF uses a labour tracking methodology to correctly re-establish continuity in a firm’s business records when data issues in the Business Registry lead to “false” births and deaths. These data issues include BN churn that can occur following business mergers or acquisitions, or other business administrative actions.
Employment measurement

The measure for employment in this study is the Individual Labour Unit (ILU). ILU is calculated using T4 slips: it represents the count of T4 slips associated with a given firm. For cases where an individual was not with one firm for an entire year, a ratio is assigned to that individual based on his/her total earnings for a year. For example, if an individual worked in Firm A for six months of the year and earned $40,000 and worked in Firm B for the rest of the year earning $60,000, Firm A will be assigned an ILU of 0.40 for that employee. Based on ILU, the number of annual new jobs created (annual net new jobs) represents the annual change in the total number of employees.

Industry, region and size dimensions

The breakdown of new firm cohorts by industry, region and size is available in NALMF. In this study, only private sectors were considered and two industries (utilities, and management of companies and enterprises) were suppressed due to confidentiality concerns. In addition, with the number of new firms in the unclassified industry category increasing since 2006, a data adjustment was implemented by assigning new firms in the unclassified industry category to an industry sector based on the general sectorial distribution of firms.

SECTION 3: FIRM BIRTH AND SURVIVAL RATES

3.1 OVERALL PERFORMANCE (2002–2014)

3.1.1 FIRM BIRTHS

Between 2002 and 2014, on average, 96,000 new firms entered the Canadian economy per year. This represents about 9.4 percent (annual birth rate) of all Canadian firms in the market.

The volume of new firms was highest in 2004 with 101,000 entrants, while it was lowest, with 83,000 entrants, in 2002 during an economic slowdown (Figure 1). No significant drop in firm creation activity was

---

2. In this study, some businesses were observed to have started with more than 50 employees. While this study did not analyze why some companies are born with so many employees, there are possible explanations for such large births. For example, a large foreign company that sets up operations in Canada for the first time, and that has the resources and experience to do so, may start with one or more large establishments. There are some businesses that operate in sectors that need a critical mass of employees to launch successfully such as larger restaurants, retailers, or wholesalers.
observed during the 2008–2009 recession. The number of new firms reached over 99,000 in 2008, the highest level between 2006 and 2011.³

The annual birth rate of new firms exhibited a minor downward trend from 9.7 percent on average during the 2002–2008 period to 9.0 percent on average during the 2009–2014 period (Figure 2). The birth rate has remained relatively constant at 9.0 percent since 2009.

Figure 1: Number of New Firms in Canada (2002–2014)

![Figure 1: Number of New Firms in Canada (2002–2014)](image)

Source: National Account Longitudinal Microdata File.

Figure 2: Annual Birth Rate, Canada (2002–2014)

![Figure 2: Annual Birth Rate, Canada (2002–2014)](image)

Sources: National Account Longitudinal Microdata File; and ISED’s calculations.

³ A study by Leung and Liu (2018) reported that an increasing portion of individuals that declared themselves as self-employed for the first time during the 2008–2009 recession could be attributed to unemployed individuals transitioning to self-employment – likely seeking an alternate means to make a living. It would be interesting to investigate the extent to which this effect could explain some of the firm entrants during that period.
3.1.2 NEW FIRM SURVIVAL RATES

Firm survival rates can be taken as indicators of the overall health of firm competitiveness. For this study, survival rates were calculated for thirteen cohorts of new firms established between 2002 and 2014 inclusively. On average, 98 percent of new firms survived the first year, 63 percent survived after five years, and merely 43 percent survived after ten years (Figure 3). The pattern of survival rates was found to be broadly consistent among cohorts of new firms established between 2002 and 2014. New firm cohorts experienced the highest firm mortality rates within three years after their birth, and a slightly more gradual decline in survival rates in subsequent years.

Figure 3: Average Survival Rate, Canada

A cohort analysis suggests that firm entrant survival rates have exhibited a steady and gradual increase over the observation period, with the exception of a slight dip for the 2009 firm entrant cohort. The three-year survival rates for the 2002 and the 2011 cohorts were 75 percent and 82 percent, respectively. Similarly, the seven-year survival rates for the 2002 and the 2007 cohorts were 53 percent and 55 percent, respectively.

Sources: National Account Longitudinal Microdata File; and ISED’s calculations.
3.2 PERFORMANCE BY INDUSTRIAL SECTOR

3.2.1 BIRTH RATES BY INDUSTRY

Consistent with previous findings (Macdonald 2012), the Services sector exhibited higher birth rates compared with the Goods sector during the observation period from 2002 to 2014 (Figure 4). This might be explained by lower entry costs and fewer barriers to entry for the Services sector compared with the Goods sector.

The highest average birth rates were found in accommodation and food services (12.6 percent), followed by professional, scientific and technical services (11.3 percent), transportation and warehousing (11.3 percent), and information and cultural industries (11.1 percent) (Table 1).

The lowest average birth rates were in agriculture, forestry, fishing and hunting (4.7 percent), and manufacturing (5.2 percent).

Figure 4: Annual Birth Rate, by Goods and Services Sector (2002–2014)

Sources: National Account Longitudinal Microdata File; and ISED’s calculations.

Most industrial sectors experienced a decline in average birth rates during the 2009–2014 period compared with the 2002–2008 period. The biggest drop was recorded by the other services sector, from 11.7 percent during the 2002–2008 period to 7.4 percent during the 2009–2014 period, followed by the wholesale trade sector, from 6.5 percent to 4.4 percent (Table 1).

Cao et al. (2015; p. 7–8) found that shifts between sectors driven by structural changes in the economy – for example, the decline in the share of employment in manufacturing relative to the services and commodities sectors – could not explain the observed trends in firm entry and exit. Rather, the authors
observed that declines in entry and exit were primarily attributable to reductions within sectors. Indeed, the authors note that sectoral shifts, viewed in isolation, actually made a slightly positive contribution to entry and exit rates.

### Table 1: Average Birth Rate by Industry

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goods Sector</strong></td>
<td>8.1</td>
<td>8.1</td>
<td>8.1</td>
</tr>
<tr>
<td>Agriculture, forestry, fishing and hunting</td>
<td>4.7</td>
<td>4.4</td>
<td>5.1</td>
</tr>
<tr>
<td>Mining, quarrying, and oil and gas extraction</td>
<td>10.6</td>
<td>11.0</td>
<td>10.1</td>
</tr>
<tr>
<td>Construction</td>
<td>10.7</td>
<td>11.0</td>
<td>10.3</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>5.2</td>
<td>5.6</td>
<td>4.7</td>
</tr>
<tr>
<td><strong>Services Sector</strong></td>
<td>9.8</td>
<td>10.2</td>
<td>9.3</td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>5.5</td>
<td>6.5</td>
<td>4.4</td>
</tr>
<tr>
<td>Retail trade</td>
<td>8.8</td>
<td>9.1</td>
<td>8.4</td>
</tr>
<tr>
<td>Transportation and warehousing</td>
<td>11.3</td>
<td>11.1</td>
<td>11.6</td>
</tr>
<tr>
<td>Information and cultural industries</td>
<td>11.1</td>
<td>10.5</td>
<td>11.7</td>
</tr>
<tr>
<td>Finance and insurance</td>
<td>7.1</td>
<td>6.6</td>
<td>7.7</td>
</tr>
<tr>
<td>Real estate and rental and leasing</td>
<td>8.1</td>
<td>7.9</td>
<td>8.3</td>
</tr>
<tr>
<td>Professional, scientific and technical services</td>
<td>11.3</td>
<td>11.2</td>
<td>11.5</td>
</tr>
<tr>
<td>Administrative and support, waste management and remediation services</td>
<td>10.3</td>
<td>10.7</td>
<td>9.9</td>
</tr>
<tr>
<td>Arts, entertainment and recreation</td>
<td>7.3</td>
<td>7.9</td>
<td>6.5</td>
</tr>
<tr>
<td>Accommodation and food services</td>
<td>12.6</td>
<td>12.6</td>
<td>12.6</td>
</tr>
<tr>
<td>Other services (except public administration)</td>
<td>9.7</td>
<td>11.7</td>
<td>7.4</td>
</tr>
<tr>
<td><strong>All Sectors</strong></td>
<td>9.4</td>
<td>9.7</td>
<td>9.0</td>
</tr>
</tbody>
</table>

Sources: National Account Longitudinal Microdata File; and ISED’s calculations.

### 3.2.2 SURVIVAL RATES BY INDUSTRY

New firms in the Goods sector exhibited better survival rates after three years than those in the Services sector. In the Goods sector, 46 percent of firm entrants were still active after ten years compared with 42 percent in the Services sector (Figure 5).

The lowest survival rates were exhibited by firms in the accommodation and food services and other services sectors (Table 2). In these two industries, almost 30 percent of firm entrants failed during the first three years, and less than one third of them survived for ten years.

New firms were more likely to survive in the professional, scientific and technological services, and real estate and rental and leasing industries. In these two industries, only around 15 percent of firm entrants failed during the first three years and more than half of them survived for over 10 years.
Figure 5: Average Survival Rate, by Goods and Services Sector

![Graph showing average survival rates by sector over time.]

**Sources:** National Account Longitudinal Microdata File; and ISED’s calculations.

### Table 2: Average Survival Rate by Industry (percent)

<table>
<thead>
<tr>
<th>Industry</th>
<th>T0</th>
<th>T+1</th>
<th>T+2</th>
<th>T+3</th>
<th>T+4</th>
<th>T+5</th>
<th>T+6</th>
<th>T+7</th>
<th>T+8</th>
<th>T+9</th>
<th>T+10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goods Sector</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture, forestry, fishing and hunting</td>
<td>100</td>
<td>99</td>
<td>88</td>
<td>78</td>
<td>72</td>
<td>66</td>
<td>61</td>
<td>57</td>
<td>53</td>
<td>50</td>
<td>46</td>
</tr>
<tr>
<td>Mining, quarrying, and oil and gas extraction</td>
<td>100</td>
<td>99</td>
<td>94</td>
<td>86</td>
<td>80</td>
<td>74</td>
<td>69</td>
<td>64</td>
<td>59</td>
<td>55</td>
<td>51</td>
</tr>
<tr>
<td>Construction</td>
<td>100</td>
<td>98</td>
<td>87</td>
<td>76</td>
<td>69</td>
<td>64</td>
<td>59</td>
<td>55</td>
<td>51</td>
<td>48</td>
<td>45</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>100</td>
<td>99</td>
<td>91</td>
<td>82</td>
<td>75</td>
<td>69</td>
<td>64</td>
<td>58</td>
<td>54</td>
<td>49</td>
<td>45</td>
</tr>
<tr>
<td><strong>Services Sector</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>100</td>
<td>99</td>
<td>92</td>
<td>84</td>
<td>77</td>
<td>71</td>
<td>66</td>
<td>60</td>
<td>55</td>
<td>51</td>
<td>47</td>
</tr>
<tr>
<td>Retail trade</td>
<td>100</td>
<td>99</td>
<td>90</td>
<td>79</td>
<td>70</td>
<td>63</td>
<td>57</td>
<td>51</td>
<td>46</td>
<td>42</td>
<td>38</td>
</tr>
<tr>
<td>Transportation and warehousing</td>
<td>100</td>
<td>99</td>
<td>90</td>
<td>81</td>
<td>74</td>
<td>68</td>
<td>62</td>
<td>57</td>
<td>51</td>
<td>46</td>
<td>43</td>
</tr>
<tr>
<td>Information and cultural industries</td>
<td>100</td>
<td>99</td>
<td>93</td>
<td>84</td>
<td>77</td>
<td>69</td>
<td>63</td>
<td>58</td>
<td>55</td>
<td>52</td>
<td>49</td>
</tr>
<tr>
<td>Finance and insurance</td>
<td>100</td>
<td>90</td>
<td>76</td>
<td>71</td>
<td>67</td>
<td>65</td>
<td>62</td>
<td>59</td>
<td>56</td>
<td>53</td>
<td>50</td>
</tr>
<tr>
<td>Real estate and rental and leasing</td>
<td>100</td>
<td>99</td>
<td>93</td>
<td>86</td>
<td>80</td>
<td>75</td>
<td>72</td>
<td>67</td>
<td>63</td>
<td>60</td>
<td>57</td>
</tr>
<tr>
<td>Professional, scientific and technical services</td>
<td>100</td>
<td>99</td>
<td>93</td>
<td>86</td>
<td>80</td>
<td>76</td>
<td>71</td>
<td>67</td>
<td>63</td>
<td>59</td>
<td>56</td>
</tr>
<tr>
<td>Administrative and support, waste management and remediation services</td>
<td>100</td>
<td>98</td>
<td>87</td>
<td>75</td>
<td>67</td>
<td>61</td>
<td>56</td>
<td>52</td>
<td>48</td>
<td>45</td>
<td>41</td>
</tr>
<tr>
<td>Arts, entertainment and recreation</td>
<td>100</td>
<td>99</td>
<td>90</td>
<td>79</td>
<td>71</td>
<td>65</td>
<td>59</td>
<td>54</td>
<td>50</td>
<td>46</td>
<td>42</td>
</tr>
<tr>
<td>Accommodation and food services</td>
<td>100</td>
<td>98</td>
<td>87</td>
<td>73</td>
<td>63</td>
<td>55</td>
<td>49</td>
<td>43</td>
<td>39</td>
<td>34</td>
<td>31</td>
</tr>
<tr>
<td>Other services (except public administration)</td>
<td>100</td>
<td>97</td>
<td>85</td>
<td>71</td>
<td>59</td>
<td>49</td>
<td>44</td>
<td>40</td>
<td>37</td>
<td>34</td>
<td>31</td>
</tr>
</tbody>
</table>

**Sources:** National Account Longitudinal Microdata File; and ISED’s calculations.
In general, industries with higher birth rates tended to have lower five and ten year survival rates. By regressing five-year and ten-year survival rates on the average birth rates of 15 industrial cohorts, the two resulting trend lines showed a negative correlation between average birth rates and each of these average survival rates across industries (Figure 6). This negative relationship confirms the findings of Macdonald (2012), who used a different dataset on a 2002 cohort.

Figure 6: Average Birth and Survival Rates at 5 Years and at 10 Years by Industry

Sources: National Account Longitudinal Microdata File; and ISED’s calculations.
3.3 PERFORMANCE BY ENTRANT SIZE

3.3.1 BIRTH RATE BY ENTRANT SIZE

The birth rate was negatively correlated to business size at the year of birth. Firm entrants with 1 to 4 employees displayed a higher birth rate than those established with 50 employees and more (Figure 7). Not surprisingly, it is easier to start small than big – and thus large entrants are comparatively rare.

Birth rates remained somewhat stable for all size groups over the period from 2002 to 2014.

Figure 7: Annual Birth Rate by Firm Size (2002–2014)

Sources: National Account Longitudinal Microdata File; and ISED’s calculations.
3.3.2 SURVIVAL RATES BY ENTRANT SIZE

Research has shown that firms have higher survival rates when they are born larger (Mahmood 2000; Audretsch and Mahmood 1991, 1995; and, Mata et al. 1995). As shown in Figure 8, this was true over the ten year period.

During the first three years of formation, on average, 23 percent of entrants failed among those with an initial size of 1–4 employees, and about 14 percent among those with 20–99 employees. After 10 years, on average more than 57 percent of new firms that started with 1–4 employees failed. In contrast, more than half of new firms that started with over 20 employees were still in business after the same period.

Figure 8: Average Survival Rate by Initial Firm Size

Sources: National Account Longitudinal Microdata File; and ISED’s calculations.
3.4 PERFORMANCE BY REGION

3.4.1 FIRM BIRTH RATES BY REGION

Firm birth rates were generally higher in Ontario and Western Canada, averaging about 10 percent. Quebec and the Atlantic region had firm birth rates that averaged 8 percent (Figure 9).

Figure 9: Birth Rate by Region (2002–2014)

![Birth Rate by Region](image)

Sources: National Account Longitudinal Microdata File; and ISED’s calculations.

3.4.2 FIRM SURVIVAL RATES BY REGION

As shown in Figure 10, entrant firm survival rates were lowest in the Atlantic region.

The Prairies and Quebec experienced the highest three-year survival rates (averaging 78 percent) among all Canadian provinces, followed by Ontario (77 percent), British Columbia (76 percent) and the Atlantic region (71 percent).

About 63 percent of entrant firms failed after 10 years in the Atlantic region, 54 percent in British Columbia, 56 percent in Ontario and Quebec, and 54 percent in the Prairies.
SECTION 4: JOB CREATION AND EMPLOYMENT

4.1 JOB CREATION BY ENTRANT FIRMS

Entrant firms’ contribution to job creation was steady. Between 2002 and 2014, firm entrants created on average 256,000 new jobs per year, representing about 2 percent of total annual employment. The role of entrant firms in job creation is significant. According to Leung (2015), the average net employment growth rate for entrants and exit accounts for half of the overall net employment growth rate, which includes changes driven by entrants, exits and incumbents. More broadly, Leung also notes that employment growth from entrants is an important indicator of economic health.

Over the 2002–2014 period, of the average annual number of jobs created by entrant firms, just under 118,000 (46 percent) were from entrants with less than 5 employees, roughly 79,000 (31 percent) were from entrants with 5–19 employees, approximately 38,000 (15 percent) were from entrants with 20–49 employees, and just over 21,000 (8 percent) were from entrants with 50–99 employees (Figure 11).
4.2 AVERAGE EMPLOYMENT BY ENTRANT FIRMS AND SURVIVORS

Among firms that survive year-over-year, larger firm entrants exhibit significantly higher overall average employment growth over time (Figure 12). In contrast, entrants with 1–4 employees that survive display little growth in average employment (1.2 jobs) over time. Thus on average, if a business starts small, its potential for future growth is limited.

Sources: National Account Longitudinal Microdata File; and ISED’s calculations.

Figure 12: Average Employment by New Firms (T0) and Survivors (T+1 to T+10)
Firm entrants with 5–19 employees displayed slow but gradual growth over time. Those that survived for 10 years, on average grew from about nine employees to about 15 employees.

On average, firm entrants with 20–49 and 50–99 employees doubled in size in 5 years and continued to grow. Firm entrants with 50–99 employees demonstrated the highest average growth rates.

Aggregated average employment growth by new firms in the Goods sector demonstrated slightly better performance than those in the Services sector (Table 3).

Average employment growth rates increased the most in mining, quarrying, and oil and gas extraction, and in administrative and support, waste management and remediation services.

The lowest increases in average employment were recorded for firms in information and cultural industries.

The industries with the highest average levels of employment at the year of firm entry was the accommodation and food services sector (6.2), followed by those in manufacturing (4.4).

Table 3: Average Employment by New Firms (T0) and Survivors (T+1 to T+10)

<table>
<thead>
<tr>
<th>Industry Category</th>
<th>T0</th>
<th>T+1</th>
<th>T+2</th>
<th>T+3</th>
<th>T+4</th>
<th>T+5</th>
<th>T+6</th>
<th>T+7</th>
<th>T+8</th>
<th>T+9</th>
<th>T+10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goods Sector</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture, forestry, fishing and hunting</td>
<td>2.5</td>
<td>3.0</td>
<td>3.2</td>
<td>3.5</td>
<td>3.7</td>
<td>3.8</td>
<td>3.8</td>
<td>4.0</td>
<td>4.2</td>
<td>4.4</td>
<td>4.3</td>
</tr>
<tr>
<td>Mining, quarrying, and oil and gas extraction</td>
<td>2.1</td>
<td>4.5</td>
<td>4.1</td>
<td>4.9</td>
<td>6.3</td>
<td>6.9</td>
<td>7.8</td>
<td>9.1</td>
<td>10.4</td>
<td>12.7</td>
<td>9.0</td>
</tr>
<tr>
<td>Construction</td>
<td>2.3</td>
<td>3.1</td>
<td>3.4</td>
<td>3.8</td>
<td>4.1</td>
<td>4.3</td>
<td>4.5</td>
<td>4.8</td>
<td>5.2</td>
<td>5.6</td>
<td>5.9</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>4.4</td>
<td>7.6</td>
<td>8.0</td>
<td>8.3</td>
<td>8.7</td>
<td>9.1</td>
<td>9.5</td>
<td>9.9</td>
<td>10.1</td>
<td>10.3</td>
<td>11.0</td>
</tr>
<tr>
<td><strong>Services Sector</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>2.8</td>
<td>4.0</td>
<td>4.3</td>
<td>4.7</td>
<td>4.9</td>
<td>5.1</td>
<td>5.3</td>
<td>5.6</td>
<td>6.0</td>
<td>6.5</td>
<td>7.0</td>
</tr>
<tr>
<td>Retail trade</td>
<td>3.7</td>
<td>5.7</td>
<td>5.9</td>
<td>6.2</td>
<td>6.7</td>
<td>6.9</td>
<td>7.1</td>
<td>7.1</td>
<td>7.6</td>
<td>8.1</td>
<td>8.3</td>
</tr>
<tr>
<td>Transportation and warehousing</td>
<td>1.5</td>
<td>2.1</td>
<td>2.3</td>
<td>2.7</td>
<td>2.9</td>
<td>3.1</td>
<td>3.2</td>
<td>3.4</td>
<td>4.0</td>
<td>4.5</td>
<td>4.5</td>
</tr>
<tr>
<td>Information and cultural industries</td>
<td>2.9</td>
<td>3.4</td>
<td>3.4</td>
<td>3.8</td>
<td>4.1</td>
<td>4.6</td>
<td>4.5</td>
<td>4.8</td>
<td>5.2</td>
<td>5.6</td>
<td>4.4</td>
</tr>
<tr>
<td>Finance and insurance</td>
<td>1.6</td>
<td>2.0</td>
<td>2.6</td>
<td>2.9</td>
<td>3.2</td>
<td>3.3</td>
<td>3.5</td>
<td>3.6</td>
<td>3.9</td>
<td>3.9</td>
<td>4.1</td>
</tr>
<tr>
<td>Real estate and rental and leasing</td>
<td>1.8</td>
<td>2.6</td>
<td>2.6</td>
<td>3.0</td>
<td>3.3</td>
<td>3.7</td>
<td>4.0</td>
<td>4.3</td>
<td>4.0</td>
<td>4.3</td>
<td>4.6</td>
</tr>
<tr>
<td>Professional, scientific and technical services</td>
<td>1.6</td>
<td>2.1</td>
<td>2.3</td>
<td>2.6</td>
<td>2.8</td>
<td>3.0</td>
<td>3.1</td>
<td>3.3</td>
<td>3.5</td>
<td>3.8</td>
<td>4.2</td>
</tr>
<tr>
<td>Administrative and support, waste management and remediation services</td>
<td>2.9</td>
<td>4.3</td>
<td>4.9</td>
<td>5.7</td>
<td>6.3</td>
<td>6.6</td>
<td>6.9</td>
<td>7.2</td>
<td>7.6</td>
<td>8.3</td>
<td>9.6</td>
</tr>
<tr>
<td>Arts, entertainment and recreation</td>
<td>3.2</td>
<td>4.6</td>
<td>4.9</td>
<td>5.3</td>
<td>5.5</td>
<td>5.7</td>
<td>5.7</td>
<td>6.0</td>
<td>6.3</td>
<td>6.3</td>
<td>6.9</td>
</tr>
<tr>
<td>Accommodation and food services</td>
<td>6.2</td>
<td>8.7</td>
<td>8.6</td>
<td>9.1</td>
<td>9.7</td>
<td>10.2</td>
<td>10.5</td>
<td>11.0</td>
<td>11.3</td>
<td>11.8</td>
<td>12.6</td>
</tr>
<tr>
<td>Other services (except public administration)</td>
<td>1.4</td>
<td>1.8</td>
<td>1.9</td>
<td>2.1</td>
<td>2.2</td>
<td>2.4</td>
<td>2.7</td>
<td>2.9</td>
<td>3.2</td>
<td>3.5</td>
<td>3.7</td>
</tr>
</tbody>
</table>

Sources: National Account Longitudinal Microdata File; and ISED’s calculations.
SECTION 5: CONCLUDING REMARKS

As noted above, firm birth and survival rates represent an important indicator of economic performance. In this context, this study has examined the characteristics and performance of firm entrants into the Canadian economy over the period for 2002–2014. Performance indicators examined in this study included: entry rates, survival rates, post entry performance, job creation, and employment growth rates by sector and business size.

Overall, the creation and formation of new firms in Canada remained fairly stable between 2002 and 2014. On average, 96,000 new firms entered the Canadian economy per year. Since 2007 the overall business birth rate has fluctuated around 9.0 percent. Ninety-eight percent of entrants survived the first year, 63 percent for 5 years and 43 percent for 10 years.

Birth rates seem to be associated with business size, cost of industrial entry and competition intensity. A negative relationship seemingly exists between birth and survival rate: a lower birth rate appears to be associated with a higher survival rate, while higher birth rate appears to be associated with a lower survival rate.

Provided they survive, new firms entrants with 1–4 employees do not display any increase in their average employment (1.2 jobs) from the year of entry up to 10 years after. This suggests that if a business starts small, its potential for future growth is very limited. On the other hand, new firms that entered with more than 4 employees and survive exhibit a significant increase at T+1, the year that follows their entry. After five years, survivors that entered with 20–49 and 50–99 employees had doubled their average employment.

Given the economic and policy relevance of these indicators, Innovation, Science and Economic Development plans to update the statistics produced by the Economic Analysis Division of Statistics Canada periodically, so as to track the evolution of birth and survival rates in Canada by business size and industry.
REFERENCES


