Catalogue no. 36-28-0001
ISSN 2563-8955

Economic and Social Reports

New businesses since the beginning of the COVID-19 pandemic

by Amélie Lafrance-Cooke and Danny Leung

Release date: June 26, 2024

Statistics Canada Statistique Canada

Canada

How to obtain more information

For information about this product or the wide range of services and data available from Statistics Canada, visit our website, www.statcan.gc.ca.

You can also contact us by

Email at infostats@statcan.gc.ca

Telephone, from Monday to Friday, 8:30 a.m. to 4:30 p.m., at the following numbers:

- Statistical Information Service 1-800-263-1136
- National telecommunications device for the hearing impaired 1-800-363-7629
- Fax line 1-514-283-9350

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner. To this end, Statistics Canada has developed standards of service that its employees observe. To obtain a copy of these service standards, please contact Statistics Canada toll-free at 1-800-263-1136. The service standards are also published on www.statcan.gc.ca under "Contact us" > "Standards of service to the public."

Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued co-operation and goodwill.

New businesses since the beginning of the COVID-19 pandemic

by Amélie Lafrance-Cooke and Danny Leung

DOI: https://doi.org/10.25318/36280001202400600003-eng

Abstract

Early in the COVID-19 pandemic, it was shown that there were fewer new firms in 2020 and that these new firms were smaller than previous entrants. It would be problematic if the situation continued into 2021 and 2022 because new firms are seen as important conduits of innovation and economic renewal. This is particularly pertinent in the current context of weak productivity growth. This article finds that despite starting smaller in employment size and being fewer in number, the entrants in 2020 carried less debt, had more liquidity, were more profitable and were more productive in their year of entry than previous entry cohorts. In addition, perhaps as a result of these characteristics, the 2020 entry cohort, who could not qualify for COVID-19 support programs, had higher survival rates in the first two years of their existence compared with previous cohorts in the same point in their lifecycle and were able to catch up in average employment size in their second year after entry. Furthermore, the rate of entry and the average size of entrants in 2021 and 2022 have mostly recovered to their pre-pandemic levels. The characteristics of the 2021 entrants are also closer to those of 2020 entrants than to those of entrants in the pre-pandemic years. This suggests that weak firm entry or weak entrants are likely not the source of the current lack of productivity growth in the Canadian economy. However, more conclusive evidence will be available when more recent microdata become available.

Authors

Amélie Lafrance-Cooke is with the Economic Analysis Division at Statistics Canada. Danny Leung is with the Economic Studies and Policy Analysis Division at Finance Canada.

Acknowledgments

The authors would like to thank Lyming Huang of Innovation, Science and Economic Development Canada and Robert Petrunia of Lakehead University for their helpful comments.

Disclaimer

The views expressed in the paper do not reflect, in any way, the views of the Department of Finance Canada.

Introduction

Businesses have faced numerous challenges since the beginning of the COVID-19 pandemic. Public health restrictions on business and personal activities aimed at stopping the spread of the virus were associated with a slowing of economic activity (Clarke et al., 2022). By the time most restrictions were lifted in 2022, businesses faced labour shortages (Statistics Canada, 2022), inflation at a 40-year high (Statistics Canada, 2023a) and supply chain issues (Tam et al., 2022).

To support businesses, the Government of Canada introduced wage and rent subsidies and interest-free loans to help businesses pay for non-deferrable expenses.[1] To access these supports, businesses needed to demonstrate a loss of revenue or the existence of non-deferrable expenses. Therefore, only businesses that existed before the pandemic were in scope—that is, eligible to apply. Despite the challenging environment and without access to these supports, on average, 15,583 businesses entered the economy per month from March 2020 to June 2023, which is comparable to the number of entrants observed over the pre-pandemic period (from January 2015 to December 2019) (Statistics Canada, 2023b).

This article examines how new businesses that entered after the beginning of the pandemic fared compared with previous entry cohorts. This is an important question because new firms are contributors to the renewal of an economy. They bring new ideas, inventions and technologies and displace older, less productive firms (Schumpeter, 1934). Studies have shown that more small businesses and startups are associated with higher economic growth. For example, Audretsch and Thurik (2001) show the relationship between gross domestic product growth and the relative growth of small versus large firms in European countries, and Erken et al. (2018) present cross-country evidence showing the positive association between total factor productivity growth and the rate of business ownership. Almodovar-Gonzalez et al. (2020) find a positive relationship between entrepreneurship and economic growth in their analysis of 74 economies, but the results depend on whether entrepreneurship is driven by opportunity or necessity. In the current Canadian context, where labour productivity in the second quarter of 2023 was 2.1% below that of the last quarter of 2019, understanding the possible drivers of economic growth, such as the contributions of new businesses, is important (Statistics Canada, 2023c).

At the beginning of the pandemic, Lafrance-Cooke (2021) found that there were fewer entrants in 2020 compared with previous years. The entrants were smaller on average and more likely to be concentrated in professional, scientific and technical services and in information and cultural industries, where the impact of physical distancing was smaller than it was for all industries.[2] A smaller starting size may matter for later growth since Dixon and Rollin (2012) find that employment growth is positively related to size for firms with fewer than 20 employees. However, for Canada, little evidence exists on how entrants during economic downturns have fared historically. Using a less timely data source than the one used in this article, Brown and Fan (2022) find that for the 1985-to-2019 period, business entry is procyclical and that businesses that entered during slower economic growth periods did tend to catch up to peers that entered in better economic times. However, this result varies across industries. In contrast, in the United States, Moreira (2017) and Sedlacek and Sterk (2017) find that firm size at entry is procyclical and that the size differences at entry across cohorts are persistent. That is, entrants in a downturn are smaller, and these

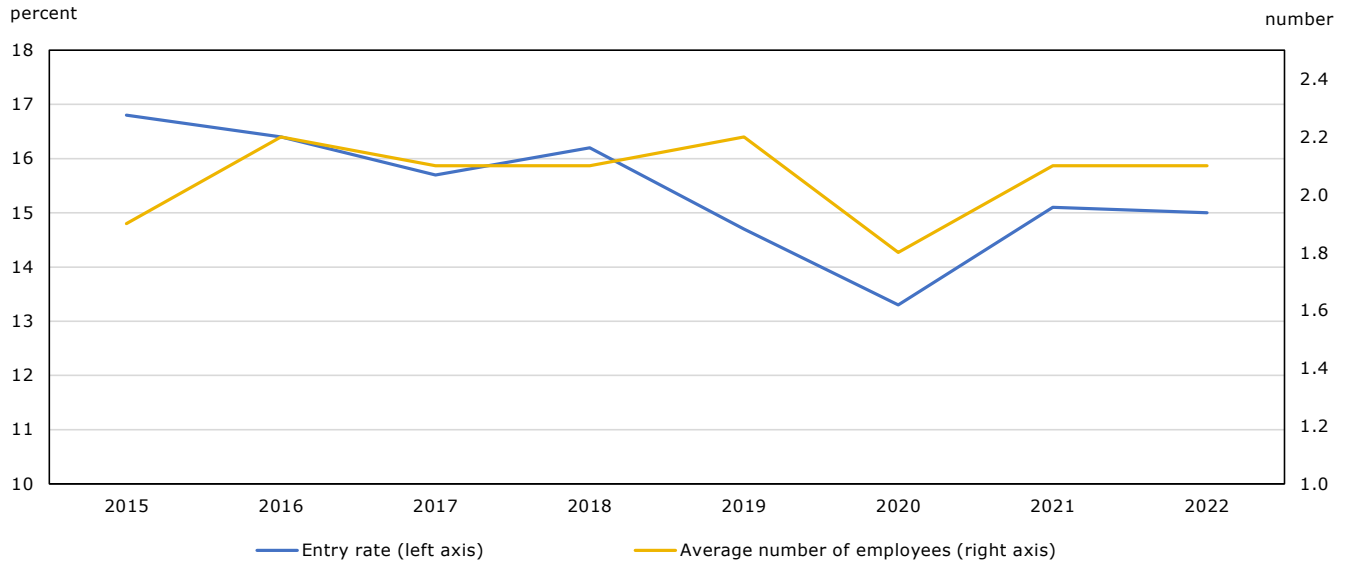
1. The main programs were the Canada Emergency Wage Subsidy, Canada Emergency Business Account, Canada Emergency Commercial Rent Assistance, Canada Emergency Rent Subsidy, Tourism and Hospitality Recovery Program, Hardest-Hit Business Recovery Program and Canada Recovery Hiring Program.
2. In April 2020, the Canadian Survey on Business Conditions found that 63.4% of businesses in professional, scientific and technical services and 65.6% of businesses in information and cultural industries reported being negatively impacted by physical distancing measures. This was comparable to 64.3% for public administration, lower than the 72.3% for all industries, and much lower than the 90.3% for arts, entertainment and recreation and 90.8% for accommodation and food services.

differences persist into the future, permanently impacting aggregate employment. Moreover, Lee and Mukoyama (2015) and Huynh et al. (2010) find further evidence for the United States and Canada, respectively, that the entry rate in manufacturing is procyclical and that selection at entry is important. This article will examine how the 2020 Canadian entry cohort has fared and compare its experiences with those of previous cohorts and entrants in 2021 and 2022. The 2020 cohort is of particular interest because 2020 marks the onset of the pandemic and prolonged closures of non-essential businesses and created unique conditions for business entry.

The rate of business entry and the average size of entrants recovered in 2021 and 2022

Chart 1 shows the annual entry rate of businesses and the average employment size of entrants. Although Statistics Canada's monthly business openings and closures data are used,[3] the article defines entrants on an annual basis to avoid dealing with seasonality.[4] An entrant is a business that had employment in at least one month of the year and no employment in any month in the previous year. The employment size of the entrant is its average employment across all 12 months in its year of entry.

Chart 1
Entry rate of businesses and average size of entrants



Source: Statistics Canada, Monthly business openings and closures, authors' calculations.

As in the work of Lafrance-Cooke (2021), the entry rate in 2020 was found to be lower than in the years before the pandemic. It was 13.3% in 2020, compared with an average of 16.0% in all previous years from 2015 to 2019. In 2021 and 2022, the entry rate recovered to 15.1% and 15.0%, respectively. The rates in 2021 and 2022 were both higher than the rate of 14.7% in 2019, just before the pandemic.

3. See Lafrance-Cooke et al. (2020) for more details about the monthly openings and closures data.
4. In addition, Lafrance-Cooke (2021) notes that there were more entrants in the second half of 2020 than in the first half. Using this definition of annual entry also avoids this phenomenon, in addition to seasonality. Seasonality may lead to a larger number of entrants in certain months (e.g., summer months), which may skew the results.

Not only did the entry rate recover, but so did the size of entrants. In 2020, the average employment size of an entrant was 1.8 employees.[5] This is compared with an average of 2.1 employees before the pandemic and an average of 2.1 employees in 2021 and 2022.

Despite starting smaller, the entrants in 2020 are now the same size as previous entry cohorts

Table 1 shows the average employment size by entry year and in the years after entry. For example, the average employment size of a firm that entered in 2020 was 1.8 employees. In 2021, one year after entry, the average employment size of firms that entered in 2020 was 4.0 employees. In 2022, two years after entry, the average employment size of firms that entered in 2020 was 5.3 employees. In comparison, the average employment size of entry cohorts before 2020 in their first year after entry ranged from 3.8 to 4.5, with an average of 4.2. In their second year after entry, their size ranged from 4.8 to 5.7, with an average of 5.2. Therefore, despite starting smaller, the 2020 entry cohort caught up in size to previous entry cohorts at similar points in their lifecycle.

Table 1
Average employment size of firm by year of entry and years after entry

	Years after entry							
Year of entry	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
				number				
2015	1.9	3.8	4.8	5.5	6.2	5.9	7.0	8.0
2016	2.2	4.6	5.7	6.6	6.7	7.6	8.6	…
2017	2.1	4.1	5.1	5.2	6.5	7.7	…	…
2018	2.1	4.5	4.9	6.2	7.3	…	…	…
2019	2.2	4.0	5.6	6.4	…	…	…	…
2020	1.8	4.0	5.3	…	…	…	…	…
2021	2.1	4.4	…	…	…	…	…	…
2022	2.1	…	…	…	…	…	…	…

… not applicable

Source: Statistics Canada, Monthly business openings and closures, authors' calculations.

Businesses that entered in 2021 can be followed only until 2022, one year after entry. Table 1 shows that the average employment size of an entrant in 2021, at 2.1 employees, was similar to that in years before the pandemic. Furthermore, the average employment size of a 2021 entrant one year after entry, 4.4 employees, was also close to that before the pandemic.

In summary, not only have the entry rate and average size of entrants recovered since 2020, the 2020 entry cohort has caught up to its pre-pandemic counterparts in size, and the 2021 entry cohort employment began and is growing in line with the experiences of previous cohorts. Unlike in the United States, there does not appear to be evidence that the downturns will have persistent effects.

5. Lafrance-Cooke (2021) also notes more entrants in the last quarter of 2020 compared with previous years and fewer entrants in the first three quarters of 2020 compared with previous years. Since employment size is determined by employment in all months of the year divided by 12, the average employment size of entrants in 2020 could be because the entrants were active for fewer months in the year. All 12 months are used to calculate the contribution of entry cohorts to aggregate job creation and employment growth. Employment size at entry was also calculated using only the months the businesses were active, and it is still found that entrants in 2020 were smaller.

Despite starting small, entrants in 2020 were stronger than previous cohorts in other dimensions

The lower entry rate and smaller size of entrants in 2020 reflect the poor economic conditions firms faced. However, the entrants in 2020 may not be weak in other respects. If an entrepreneur was willing to start a firm during these difficult times, they must have expected high returns or have been confident that they had the financial means to weather the uncertainty at the beginning of the pandemic. Table 2 shows that despite being smaller, entrants in 2020 had, at the median,[6] lower debt, more working capital (current assets minus current liabilities) and higher return on assets (net income divided by total assets), and they were more productive.[7] Interestingly, the entrants in 2021 are even stronger than those in 2020.[8]

Table 2
Characteristics of entrants by year of entry

	Year of entry		
	2015 to 2019	2020	2021
	ratio		
Median debt-to-asset ratio	0.858	0.821	0.767
Median working capital	0.111	0.229	0.232
Median return on assets	0.095	0.119	0.165
	dollars		
Median labour productivity	83,000	91,000	84,000

Notes: The statistics for the 2015 to 2019 entrants are the average of the statistics across those years. Labour productivity is deflated using the implicit price index for the business sector from Common Output Data Repository Table 36-10-0206-01, with 2015 set as the base year.
Source: Statistics Canada, Monthly business openings and closures, Indexes of business sector labour productivity, unit labour cost and related measures, seasonally adjusted, authors' calculations.

Entrants in 2020 and in 2021 exhibit higher survival rates than pre-pandemic entrants

The increase in the average employment of entry cohorts in Table 1 could have occurred because smaller firms were more likely to exit or because the surviving firms grew.

Table 3 presents the survival rate of businesses by year of entry and years after entry. Consistent with their characteristics in the year of entry, the 2020 and 2021 cohorts have higher survival rates than previous cohorts in their lifecycle. Of the 2020 entrants, 73.1% survived into their first year, and 50.5% survived into their second year. This is higher than the survival rates exhibited by any of the previous cohorts in 2015 to 2019. The first-year survival rate for the 2021 entry cohort, at 71.2%, is also higher than in the past. This suggests that the catchup in average size of the 2020 cohort was attributable to stronger growth among surviving firms, rather than the greater exit of weaker firms. A decomposition of the two-year growth in average employment by entry cohort shows that growing entrants (or survivors) accounted for 43.2% of the increase in average employment for the 2020 cohort; 56.8% of the increase was attributable to exits. In contrast, on average, growing entrants that entered from 2015 to 2019 accounted for 36.8% of the two-year increase in average employment, while exits accounted for the

6. The median is used because the mean is sensitive to extreme values. However, using the mean leads to the same finding that entrants in 2021 were stronger than previous cohorts.
7. All firms in a particular year and North American Industry Classification System two-digit industry were assigned to a quintile. Table 2 shows the distribution of entrants across those quintiles.
8. The data needed to calculate the characteristics for the entrants in 2022 are currently not available.

remaining 63.2%. In other words, a larger share of the growth in average employment was attributable to the growth of survivors for the 2020 entrants. This is consistent with the 2020 cohort being less indebted, more liquid and more productive at entry.

Table 3

Survival rate of businesses by year of entry and years after entry

	Years after entry						
Year of entry	**1**	**2**	**3**	**4**	**5**	**6**	**7**
				percent			
2015	70.1	48.5	39.1	32.8	28.4	24.8	22.5
2016	69.2	49.1	39.3	33.4	28.9	26.2	…
2017	69.9	47.0	37.8	32.0	28.6	…	…
2018	69.8	48.9	40.0	35.2	…	…	…
2019	69.0	46.9	38.9	…	…	…	…
2020	73.1	50.5	…	…	…	…	…
2021	71.2	…	…	…	…	…	…

… not applicable

Source: Statistics Canada, Monthly business openings and closures, authors' calculations.

Conclusion

The decline in Canadian productivity since the beginning of the pandemic demands a review of the factors that drive productivity. One contributor to growth is the entry of new firms and their role in renewing the economy. Earlier work showed that there were fewer and smaller entrants at the beginning of the pandemic in 2020. This could have been a cause for concern because U.S. evidence suggests that the impact of starting a business during a downturn is negative and persistent. Furthermore, because only incumbent firms were offered supports, new firms may have found the competition for market share and inputs more difficult. However, newly available data show that despite being smaller, entrants in 2020 carried less debt, had more working capital, were more profitable and were more productive than pre-pandemic cohorts. These characteristics allowed them to survive at a higher rate in their first years and catch up in employment size to previous cohorts at the same point in their lifecycles.

Future work could examine the role not only of entry but also of exits and reallocation among incumbents to draw a full picture of the role of business dynamics in driving productivity growth.

References

Almodovar-Gonzalez, M., Fernandez-Portillo, A., & Diaz-Casero, J. (2020). Entrepreneurial activity and economic growth. A multi-country analysis. *European Research on Management and Business Economics*. 26(1): 9-17.

Audretsch, D.B., & Thurik, R. (2001). Linking Entrepreneurship to Growth. *OECD Science, Technology and Industry Working Papers*. OECD publishing. https://doi.org/10.1787/736170038056

Brown, M., & Fan, A. (2022*). Business cycle effects on entrant size before the pandemic and implications for a post-pandemic Canadian economy*. [Unpublished manuscript]. Analytical Studies Branch, Statistics Canada.

Clarke, S., Dekker, J., Habli, N., Macdonald, R., & McCormack, C. (2022). *Measuring the correlation between the COVID-19 restrictions and economic activity*. (Analytical Studies: Methods and References, No. 40). Statistics Canada. https://www150.statcan.gc.ca/n1/en/pub/11-633-x/11-633-x2022003-eng.pdf

Dixon, J., & Rollin, A. (2012). *Firm dynamics: employment growth rates of small versus large firms in Canada.* (The Canadian Economy in Transition, No. 25). Statistics Canada. https://www150.statcan.gc.ca/n1/pub/11-622-m/11-622-m2012025-eng.pdf

Erken, H., Donselaar, P., & Thurik, R. (2018). Total factor productivity and the role of entrepreneurship. *Journal of Technology Transfer.* 43: 1493-1521.

Huynh, K.P., Petrunia, R.J., & Voia, M. (2010). The impact of initial financial state on firm duration across entry cohorts. *The Journal of Industrial Economics*. 58(3): 661-689. http://www.jstor.org/stable/40985904

Lafrance-Cooke, A., Macdonald, R., & Willox, M. (2020). Monthly business openings and closures: experimental series for Canada, the provinces and territories, and census metropolitan areas*. Economic Insights* 116.

Lafrance-Cooke, A. (2021). Starting a business in a pandemic: The experience of businesses created during COVID-19. *Economic and Social Reports*. 1(7).

Lee, Y., & Mukoyama, T. (2015). Entry and exit of manufacturing plants over the business cycle. *European Economic Review*. 77: 20-27. https://doi.org/10.1016/j.euroecorev.2015.03.011

Moreira, S. (2017). *Firm dynamics, persistent effects of entry conditions, and business cycles*. (Center for Economic Studies Working Papers). U.S. Census Bureau. https://www2.census.gov/ces/wp/2017/CES-WP-17-29.pdf

Schumpeter, J. (1934). *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle.* Harvard University Press, Cambridge MA.

Sedlacek, P., & Sterk, V. (2017). The growth potential of startups over the business cycle. *American Economic Review*. 107(10): 3182-3210.

Statistics Canada. (2022, November 18). Labour shortage trends in Canada. [Infographic]. https://www.statcan.gc.ca/en/subjects-start/labour /labour-shortage-trends-canada

Statistics Canada. (2023a, January 17). Consumer Price Index: Annual review, 2022. *The Daily*. https://www150.statcan.gc.ca/n1/daily-quotidien/230117/dq230117b-eng.htm

Statistics Canada. 2023b. Table 33-10-0270-01, Experimental estimates for business openings and closures for Canada, provinces and territories, census metropolitan areas, seasonally adjusted. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3310027001

Statistics Canada. 2023c. Table 36-10-0206-01. Indexes of business sector labour productivity, unit labour costs and related measures, seasonally adjusted. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610020601

Tam, S., Sood, S., & Johnston, C. (2022). Analysis on supply chains in Canada, first quarter of 2022. *Analysis in Brief*. https://www150.statcan.gc.ca/n1/pub/11-621-m/11-621-m2022006-eng.htm