

The Effect of COVID-19 on Canadian small businesses' owners and their employees*

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Abstract

A large fraction of employers are small businesses. Using the Canadian Labour Force Survey (LFS), we document how the self-employed, which we interpret as small business owners, and employees of small businesses are being affected by COVID-19. We find large decreases in the number of small business owners, in aggregate hours worked, and number of employees in small firms from February to December 2020. Our research confirms increasing small business ownership and aggregate hours as provinces reopened their economies in the summer of 2020. Still, these increases often remain below pre-March 2020 levels with some demographic groups, such as less educated and immigrant small business owners, having considerably worse outcomes. We use occupational indexes to understand further why certain small business owners are more affected. We provide evidence that the impact of the pandemic was significantly less severe for self-employed workers that can work remotely and essential workers.

KEYWORDS: COVID-19, Self-employed workers, Entrepreneurship, Employment.

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1 Introduction

COVID-19 is affecting the way people do business and the structure of the economy. Reductions in demand have been widespread and are being exacerbated by policies aimed at closing non-essential businesses and forcing workplace adjustments to curtail spread and deaths associated with COVID-19. Revenue streams and employment continue to lag behind times prior to the pandemic as businesses operate in a new world: one with mandated physical and social distancing, mask wearing, and work-from-home arrangements. For small businesses and their owners – those especially likely to face credit constraints whilst having limited savings – the pandemic is particularly trying.

In this paper, we study how the COVID-19 pandemic is affecting small businesses in Canada. This research focuses on both the self-employed, who we view as small business owners, and the employees of small businesses. We use the Canadian Labour Force Survey (LFS), a representative survey to investigate labour market outcomes for Canadian employers and employees. We study the effect of the pandemic from February to December 2020.

Numerous programs aimed at helping businesses generally, and small businesses in particular, have been implemented by the government of Canada in response to COVID-19.¹ Despite these programs, we find large and persisting decreases in the number of small business owners, and in aggregate hours worked, from February to December 2020. Less educated and immigrant small business owners appear particularly affected. Our research suggests smaller businesses have flexible business practices as they released employees during the peak of the first wave while rehiring during the ensuing rebound. Still, firms have a total number of employees in December 2020 less than the 2019 levels.

The literature on how small business owners and their employees are weathering the pandemic is limited and motivates this research. [Fairlie \(2020\)](#) and [Beland et al. \(2020c\)](#) document the initial impact of the pandemic on self-employed workers in the US and Canada, respectively.. We extend these works by studying the effect of the pandemic until December 2020. We document the rebounds found in May through December, and any differences by owners' characteristics. We also document small businesses that are most affected by the pandemic by industries, occupations, and geographic location in Canada. We also study how the pandemic affects workers of small businesses who are likely to be affected by business closure decisions made by their owners. These workers are a good measure of how small business may be coping with the pandemic.

Importantly, to further understand why certain self-employed workers are more affected than others, we use occupational indexes for whether self-employed workers (1) are relatively more exposed to disease, (2) work in proximity to coworkers, (3) are essen-

¹See Section 2 for more detail.

tial, and (4) can work remotely.²

We provide evidence that the impact of the pandemic was significantly less important for self-employed workers that can work remotely and essential workers. In particular, we document a considerable smaller decrease in aggregate hours worked for small business owners that are categorized as essential or in occupation categorized as able to work remotely.

Our results contribute to the growing literature that studies the impact of the pandemic on economic outcomes in Canada (e.g. [Beland et al. \(2020b\)](#) and [Beland et al. \(2020c\)](#)) and other countries (e.g. [Beland et al. \(2020a\)](#); [Brodeur et al. \(2021\)](#); [Forsythe et al. \(2020\)](#); [Lewandowski \(2020\)](#)). We also contribute to the literature documenting small and medium enterprises (SMEs) and their response to crises and natural disasters (see [Eggers \(2020\)](#) for an extensive literature review).

The paper is structured as follows. Section 2 provides a background on COVID-19 in Canada, small business owners and their employees, and how they are being affected by the pandemic and policy responses. Section 3 describes the Labour Force Survey (LFS) and the empirical strategy used to answer our research question. Section 4 discusses our findings while Section 5 concludes.

2 Background on Small Businesses in Canada and COVID-19’s Impacts

COVID-19 reached Canada in early 2020, leading to the federal and provincial governments implementing several policies designed to mitigate the propagation of the disease. Appendix Table A1 provides a timeline of important events during the COVID-19 pandemic for Canada in order to decrease the spread of COVID-19. The table also presents information regarding the first case (January 25, 2020), the first death (March 8, 2020), when different provinces declared a public health emergency (March 14–22, 2020) and public school closures (March 13–23, 2020). Figure 1 shows cases and deaths for all provinces. Similarly, we present cases and deaths in Canada and in the largest and most affected provinces: Quebec, Ontario, Alberta, and British Columbia in Figure 2 from January to December 2020.

Numerous programs aimed at helping businesses in general and small businesses in particular have been implemented by the government of Canada in response to COVID-19. The Canada Emergency Business Account (CEBA) provide loans of up to \$40,000 to eligible small businesses and non-profits; up to 688,000 small businesses have received

²Our indexes are based on occupational survey data from O*NET adapted to the LFS. These indexes follow [Beland et al. \(2020b\)](#) that use those indexes to study the effects on workers. Our indexes are described in detail in the data section. In this paper, we refer to the term essential and critical interchangeably when describing workers. See Section 3 for more details on these indexes.

CEBA loans as of July 2020.³ The loans are interest-free and allow loan forgiveness if any outstanding balance is repaid by December 2022.⁴

Many other programs have been introduced to help businesses, such as the Canada Emergency Wage Subsidy (CEWS), a government program that subsidizes 75% of employee wages; a program that enables up to \$45 billion in funding by further guaranteeing loans through Export Development Canada and the Business Development Bank; and a business rent assistance program. Businesses with 5 to 99 employees were more likely to be approved for the CEWS compared to large businesses. Small businesses are also reported to have had a better chance of being approved for the temporary 10% wage subsidy that precludes businesses from remitting the full amount of payroll deductions to the Canada Revenue Agency.⁵

Provincial programs have also been created to help small business owners. Small businesses were more likely to be approved for funding when they applied to government programs developed during the pandemic (Tam et al., 2020). While some of the programs introduced eased pressure on cash-flow, others increase the availability of credit. This is important because the hardships smaller businesses face during crises are related to tightened lending constraints (Bartik et al., 2020; Eggers, 2020) since their smaller size make it harder to hedge against uncertain shocks, making them unattractive to lenders. Still, concerns remain that the impact of government policy on small businesses is not extensive enough. Jeon and Ostrovsky (2020) expressed concerns for “gig workers” (including the self-employed) most of whom are ineligible for unemployment insurance and Canada Emergency Response Benefits (CERB). Although the impacts of COVID-19 on businesses are ubiquitous, businesses with less than 100 employees were more likely to report a decrease in revenue by at least 40% in April 2020 (Statistics Canada, 2020a). Moreover, small businesses were less likely to have mortgage payment deferrals approved (Tam et al., 2020).

The long term effects of COVID-19 on the self-employed due to changes caused by COVID-19 remain ambiguous. Previous regional-level research on self-employment notes limited deviations from trend due to the Great Recession, a shock which was similarly large and unexpected Leonard et al. (2017). At the individual-level, many become self-employed for flexible work arrangements (Boden, 1999; Dawson et al., 2014) which may not be available to them as employees of larger companies (Cao et al., 2017; Yurdagul, 2017). However, larger companies have now implemented flexible work arrangements in response to COVID-19. These arrangements have worked well for some businesses and will likely remain in place after the pandemic Ozimek (2020). This may provide a disincentive for workers to become self-employed since non-pecuniary benefits of being

³See the following link: <https://www.canada.ca/content/dam/fin/publications/efs-peb/homepage/EF2020-eng.pdf>

⁴See also: <https://ceba-cuec.ca/>

⁵For a complete list, see [canada.ca/en/department-finance/economic-response-plan.html](https://www.canada.ca/en/department-finance/economic-response-plan.html)

self-employed are gained without additional risks. On the other hand, small businesses have, historically, been reported to increase during recessions as labour market conditions worsen (Fairlie, 2013). As individuals lose work and fail to find suitable alternatives, being a small business owner becomes a reasonable option, causing the number of self-employed individuals to increase during recovery. It is therefore important to characterize the opposing forces affecting small business ownership during this pandemic.⁶

The literature on how small business owners and their employees are weathering the pandemic is limited and motivates this research. Beland et al. (2020c) documented the initial impact (March to May 2020) of the pandemic on self-employed workers in Canada. They documented a large decrease for those that are immigrants, females and less educated. In the United States, similar results are obtained by Fairlie (2020) who note decreased counts of minority small business owners (African-American, Latinx, and Asian), females, and immigrants, between February and April 2020.

In this paper, we study the effect of the pandemic on self-employed workers until December 2020 and seek to make several contributions. First, we study heterogeneous impacts in the recovery. Second, we study workers of small businesses who are likely to be affected by business closure and reopening decisions made by owners. These workers are a good measure of how small business are coping with the pandemic. Third, we document how small businesses are most affected by the pandemic by industry, province, and occupation. Importantly, we use occupational indexes to try to shed light on mechanisms to understand which self-employed workers are the most affected.⁷

3 Data

3.1 Labour Force Survey

The Canadian Labour Force Survey (LFS) is a monthly survey representative of the Canadian population used to construct labour market indicators such as the unemployment rate and labour force participation. We use the public-use microdata file (PUMF) version made available by Statistics Canada for this analysis. Each cross-section of data is released in the first two weeks of every month and capture the previous month's labour market characteristics.

Observations are collected as an overlapping and rotating sample; every month approximately 10,000 household both enter and exit the survey. Each household will remain

⁶There is a large literature on the determinants of entrepreneurship such as individual characteristics and race (e.g., Hout et al. (2000); and Fairlie and Robb (2010)), immigration status (e.g., (Hunt and Gauthier-Loiselle, 2010)), financial constraints (e.g., Fairlie and Krashinsky (2012)), attitudes toward risks (e.g., Blanchflower and Oswald (1998); Skriabikova et al. (2014)) and economic conditions (e.g., Fairlie (2013)).

⁷We also compare our results with study on workers (e.g. Beland et al. (2020b))

in the survey for six consecutive months and respond to six surveys. Therefore, six cohorts (about 60,000 households) are surveyed per month. All members 15 years or older from a household are interviewed, yielding about 100,000 individuals per month. Respondent-level economic and demographic information are gathered from interviews and include variables such as sex, age, hourly earnings, and employment status. The LFS samples individuals who are Canadian citizens that are not living on aboriginal reserves and other aboriginal settlements, are not institutionalized, or full-time members of the military.

The LFS contains information regarding both the self-employed in Canada, which we interpret as small business owners, and about employees and the size of employees' workplaces. We investigate business creation and destruction, and associated employee losses, over the course of the COVID-19 pandemic. These two measures are important since firms may downsize in response to the negative demand shock generated by COVID-19. Downsizing may not result in a shut-down but may result in a reduction in workers or worker hours. Moreover, it seems likely that smaller firms are more vulnerable to large, uncertain shocks or crises (Eggers, 2020). Since we can differentiate employees who work for small firms from those who work for large firms, the LFS allows us to answer questions related to heterogeneous responses to the shock by firm sizes.

We restrict the LFS along the following dimensions. We include those between the ages of 25 and 64, inclusive, to better capture the working population. Finally, we omit those who earn hourly wages above the 99th percentile or who report working hours above the 99th percentile. Much of our analysis focuses on changes in raw counts of small business owners and aggregate hours worked conditional on socioeconomic characteristics. Finally, all calculations should be considered weighted unless otherwise specified. We use the LFS data until December 2020.

3.2 Descriptive Statistics

3.3 Occupational Measures of Remote Work, Essential Workers, Exposure and Proximity

We use four occupational indexes following Beland et al. (2020b) to aim to understand why certain self-employed workers are more affected: workers relatively more exposed to disease, workers that work in close proximity to coworkers, critical workers and workers who can easily work remotely. These indexes might summarize occupational informations and explain why certain self-employed workers are more affected by the pandemic.

We use the Occupational Information Network (O*NET) survey data to build these measures. O*NET is sponsored by the U.S. Department of Labor and aims to gather occupational data to help create and maintain a skilled labour force. O*NET gathers detailed information on occupation tasks and description and these tasks and descriptions

can be accessed and used by researchers.⁸

Our index for working remotely is defined as how frequently an occupation works from home. Critical workers are based on the LMI Institute index, which provides a list of essential occupations: medical and healthcare, telecommunications, information technology systems, defense, food and agriculture, transportation and logistics, energy, water and wastewater, law enforcement, and public works industries.⁹ Our exposure to disease index represents how often an occupation is exposed to infection or disease with responses ranging from “Never” to “Everyday”. Our index of proximity to coworkers represents the scope to which an occupation performs tasks in close proximity to other people. The answers are ranging from “more than 100 feet away” to “Nearly touching”.

We use a work from home index adapted from [Dingel and Neiman \(2020\)](#), an essential workers index adapted from the LMI Institute to the Canadian Labour Force Survey and indexes on exposure and proximity similarly to [Beland et al. \(2020a\)](#) and [Beland et al. \(2020b\)](#). To do so, we first convert O*NET and SOC codes to Canada’s National Occupation Classification (NOC) system. Second, we aggregate up to a level which allows us to merge with observations in the LFS. [Beland et al. \(2020b\)](#) present a thorough discussion on how these indexes are created. All indexes are standardized with a mean of zero and standard deviation of one. We use these indexes to classify if a self-employed worker is in an occupation above or below the median of the sample of workers and self-employed.

4 Results

In this section, we present results on how the self-employed and small businesses are being affected by COVID-19. The self-employed are the subject of the first subsection of our results. The second subsection presents results by occupational indexes and the workers of small businesses are the subject of our third subsection. For each sections, we analyse changes in the total employed and aggregate hours worked.

4.1 Small Business Owners

We first explore the relationship between the aggregate number of self-employed owners employed and the aggregate hours worked for small business owners in Tables 1 through 4. We present results by Canadian provinces in Appendix Tables A2 through A4.¹⁰

⁸Employment Social Development Canada’s classifications of essential skills does not contain the information required to construct these measures and as such we use the Occupational Information Network (O*NET) survey data.

⁹See this link for more details: <https://www.lmiontheweb.org/more-than-half-of-u-s-workers-in-critical-occupations-in-the-fight-against-covid-19/>.

¹⁰This analysis builds on [Fairlie \(2020\)](#) and [Beland et al. \(2020c\)](#) who study the initial labour market outcomes on self-employed workers in the United States and Canada, respectively.

Table 1 displays key characteristics of small business owners and their dynamics since the onset of the pandemic, with various statistics at different times in 2020. The table distinguishes between unincorporated and incorporated entities, and between owners with paid help and those without.¹¹ It also shows the fraction of owners in the labour force and aggregate hours worked for those working full-time and part-time.

Table 1 shows that Canadian small business owners are largely affected by the pandemic. The Table show a large decrease for the number of incorporated (-25.6%) and unincorporated (-19.8%) small business owners from February 2020 to December 2020. The largest decreased occurred between February and May 2020 (-17.3% for incorporated, and -14.0% for unincorporated), but decreases continued between May and December 2020 (-10.1% for incorporated, and -6.8% for unincorporated). These results suggest that self-employed workers experience a limited rebound, in contrast with the large rebound documented in the labour market in Canada and other countries, suggesting that several small business may have permanently disappeared.¹²

Table 1 also shows that the number of small business owners who had paid help decreased by -25.1% between February and December 2020, which is considerably more than the -21.5% decrease of owners without paid help. The table show once again a large decrease between February and May 2020 (-22.1% for those with paid help versus -12.8% for those without), and a smaller decrease between May and December 2020 (-3.8% for those with paid help versus -10.0 for those without). Table 1 also show a large decrease in annual hours worked for both those working full-time and part-time (-10.9% and -10.5 %, respectively). The table presents a large decrease from February to May 2020, followed by an increase in aggregate hours from May to December 2020 but below 2019 level. The table also show a large decrease of active small business owners that report being in the labour force from February 2020 to December 2020 (-21.85%), with the largest decrease happening from February to May 2020.¹³

Table 2 further categorizes the decrease in small business owners by their individual characteristics. It shows a large decrease across all individual characteristics. Table 2 shows a large decrease from February to May 2020. The table show that the decrease is often smaller between May to December 2020, than at the onset of the pandemic.

There are approximately the same reduction of female and male business owners of -22.0% and -22.9% from February 2020 to December 2020, respectively. There were about -4 percentage points fewer immigrant small business owners than non-immigrant business owners (-21.3% decrease for non immigrant versus -25.0% for immigrants), between

¹¹The distinction between unincorporated and incorporated entities is likely important as the literature argues that incorporated entities is a better proxy for entrepreneurship (e.g., [Levine and Rubinstein \(2017\)](#) and [Beland and Unel \(2019\)](#)).

¹²For example, see [Beland et al. \(2020b\)](#) and [Beland et al. \(2020a\)](#).

¹³The table also present double difference changes with 2019 and results are qualitatively the same. The double difference can be informative if one believe results might be due to long term trends and taking 2019 into account might reduce this concern.

February and December 2020. Not married business owners appears to be slightly more affected with decreases of -24.0% versus -21.7% for married individuals. Small business owners with and without kids are both largely affected. Having children who are aged 12 or younger impacts females and males differently. The number of female owners with (without) kids decreased by -21.4% (-20.6%). The number of male owners with (without) kids decreased by -29.6% (-20.7%).

Small business owners with less education appears to be more affected. Owners with less than a high school education were the most affected by the pandemic since the counts of business owners decreased by -30.46%. Owners who completed high school or some form of postsecondary education had decreases equal to -23.8% and -21.4%, respectively, between February 2020 and December 2020. There was a decrease in small business owners across all age groups between February 2020 and December 2020, with those aged 35 to 54 most affected (-25.3%). The number of owners aged 25 to 34 and aged 55 and 64 had percentage decreases by -23.16% and -17.13%, respectively, between February and December of 2020.¹⁴

Table 2 further documents the impact of COVID-19 on small business owners' aggregate hours worked, by individual characteristics. It once again shows a large decrease in aggregate hours worked across all owner characteristics categories. The table show a large decrease in aggregate hours from February to May 2020, and a partial rebound in aggregate hours from May to December 2020. The aggregate hours worked are often below pre-COVID-19 level.

Table 2 finds that females reduce their hours worked (-11.6%) more than their male counterparts (-10.5%) between February 2020 and December 2020. This difference is exacerbated if one consider the double-difference measure (-22.7% versus -14.5%).

The table shows that both males and females with kids reduced their hours worked less than those without kids. Women (men) with kids reduced their aggregate hours worked by -11.4% (-6.1%); Women (men) without kids reduced their aggregate hours worked by -11.9% (-19.4%). Across the same time period, immigrant business owners reduced their hours by nearly -14.3%; a number larger than non-immigrants (-9.2%).

Aggregate hours worked decreased more for small business owners with less education. Aggregate hours worked decreased for all education categories but saw a larger decrease for those with less than high school education (-22.4%), compared to those with a high school diploma or some college (-11.6%), and those with postsecondary education (-9.5%), between February and December of 2020. Small business owners aged 35 to 54 were the most affected age group between February 2020 and December 2020 where aggregate hours worked were reduced by -13.6%. Younger individuals (25 to 34) and older individuals (55 to 64) reduced their aggregate hours by -9.8% and -5.4% across the same period.

¹⁴Once again, Table 2 presents double difference changes with 2019 and the conclusions are similar.

Appendix Tables A2, A3 and A4 show the change in active small business owners when broken down by various geographic regions of Canada. Appendix Table A2 focuses on Atlantic Canada (Newfoundland and Labrador, Nova Scotia, Prince Edward Island, New Brunswick) and Quebec. Appendix Table A3 focuses on Ontario and Manitoba plus Saskatchewan (Grouped) while Appendix Table A4 focuses on Alberta and British Columbia. Generally, all of these tables show heterogeneity across Canada’s provinces and regions. Notably is the heterogeneity in terms of gender between Quebec and Ontario, Canada’s largest provinces. Quebec’s males small business owners appears more affected (-27.5% for males versus -16.5% for females), while females are more affected in Ontario (-25.5% for males versus -32.2% for females) from February 2020 to December 2020. The tables also show that less educated (below high school and high school and some college) business owners are largely more affected in most provinces.

Tables 3 and 4 show the changes in total number of small businesses owners and their aggregate hours by North American Industry Classification System (NAICS) and National Occupation Classification (NOC), respectively.

Tables 3 shows that owners in all industries experienced declines in their total number during February to December 2020. The largest decreases in the number of active small businesses were experienced by Accommodations and Food (-30.7%), Agriculture (-30.5%); Information, Culture and Recreation (-30.1%); and Wholesale Trade (-30.1%), between February and December 2020. The smallest decline is in educational services (-1.3%).¹⁵ Aggregate hours worked by small business owners decreased in several industries, with large decrease in Management, Administration and other support (-41.5%), Information, Culture and Recreation (-28.8%), and Wholesale Trade (-26.9%) from February to December 2020. Tables 3 highlights that some industries saw an increase in aggregate hours worked such as Nondurables Manufacturing (+26.8%), from February to December 2020.

Table 4 investigates how the self-employed are impacted based on occupational characteristics from the National Occupation Classification’s (NOC) broad categories. Table 4 show decreases in all NOC broad categories, with large decline in number of owners for health (-28.5%), Management (-27.6%) and Manufacturing and Utilities (-27.6%). Affected less are the number of individuals whose occupations in Education, Law and Social, Community and Government Services (Educ/LAW/Social) who declined by about -9.7% and Natural resources and Agriculture (-12.8%), between February and December 2020.¹⁶ In terms of hours, Table 4 present a large decrease in health (-19.0%) and in Natural and Applied Science (-20.5%), from February to December 2020.

¹⁵Our double-difference measures show similar results but highlight a large decrease also in Health Care and Social Assistance (-35.2%).

¹⁶It is worth mentioning that results using the double difference measure suggest that those in Education, Law and Social, Community and Government Services are most affected (-23.4 %) than the February to December 2020 measure indicate (-9.7 %).

4.2 Occupational Characteristics

We next use our four occupational indexes to investigate further why certain self-employed workers are more affected than others. Table 5 presents results for the count of small business owners and Table 6 presents results for the aggregate hours. The two tables are structured similarly, which classifies self-employed workers above or below the median index value for physical proximity, exposure to disease, critical worker, and ability to work from home, as described in the data section.¹⁷ Tables 5 and 6 show large negative effects for all self-employed workers (i.e. for workers below and above median index values for our four indexes).

Table 5 shows a smaller decrease in the count of small business owners for those above median index values for disease exposure (-9.4% versus -19.0%) and work from home (-17.8% versus -11.5%), from February 2020 to December 2020. The decrease in the number of workers is similar for small business owner above and below for critical workers and physical exposure.

Table 6 presents a similar analysis for aggregate hours worked. Table 6 shows that small business owners above the median index value for remote work saw a smaller decrease in aggregate hours from February to December 2020 (-20.8% versus -11.5%). Similarly, small business owners in occupation above median index score for critical workers saw a smaller decrease in hours (-15.8% versus -18.3%). The decrease in aggregate hours worked for small business owners below and above the median for physical proximity (-14.9% for above median and -19.6% for below the median) and exposure to disease (-18.0% for above the median versus -16.9%) was similar.¹⁸

The mechanisms why certain small business owners are more affected by the pandemic appears similar to those of workers. [Beland et al. \(2020b\)](#) uses these occupational indexes to study Canadian's workers and find that essential workers and those able to work remotely are less likely to see their labour market outcomes affected by the pandemic.

4.3 Employees of Varying Business Sizes

We next study how employees of different business size are affected following COVID-19. Appendix Table A5 effectively shows summary statistics of employees of varying business sizes. Generally, nearly half of the individuals work for firms greater than 500 individuals in size and indicated by the top most row labelled "Total". Specifically, Appendix Table A5 shows counts and percentages based on different characteristics and constructed by row. For example, 16.7% of males work in firms with less than 20 employees, 17.5%

¹⁷As mentioned previously, we use the median cut-off of both workers and self-employed in the calculations.

¹⁸It is worth noting that our double difference estimates suggest a larger decrease for small business workers in occupation above the median for physical proximity (-36.4% versus -34.1%).

of males work for firms with between 20 and 99 employees, 16.3% of males work for firms sized 100 to 500 employees, and the remainder work in firms with greater than 500 employees. Those working for firms with less than 500 individuals in size, about half the sample, are evenly distributed across smaller sized firms. The top row shows that 17.0% of individuals work for a firm with less than 20 employees, while 16.1% and 15.2% work for firms sized 20 to 99 employees and 100 to 500, respectively. Sex, marital status, age groups, and immigration status do not correspond to any major deviations from the unconditional distribution of workers in differently sized firms. Education proves to be an exception as 26.4% of those with less than high school work at very small firms (“Less than 20”) and 34.5% work at very large firms (“Greater than 500”). 54.5% of those with at least a postsecondary accreditation work at firms with over 500 employees while only 15.3% of those with at least a postsecondary education working for firms with fewer than 20 employees.

Tables 7 and 8 show the decrease in counts and aggregate hours, respectively, for individuals who work in differently sized firms or establishments. Firms are defined as the total number of workers at all locations of employment while establishments are the number of employees at the location of employment (Statistics Canada, 2020b).

Table 7 shows that across all business sizes, independent of using firm or establishment size, there were substantial decreases between February 2020 and December 2020 in the total number of employed, showing the wide extent to which COVID-19 is impacting businesses. Employees working for firms (establishments) with less than 20 or between 20 to 99 employees have -18.1% (-17.6%) and -24.7% (-21.7%) percentage decreases, respectively, from February to December 2020. Larger businesses such as those with between 100 to 499 employees and those with greater than 500 employees at their firm (establishment) had percentage decreases equal to -16.4% (-17.0%) and -19.7% (-23.4%), respectively, in the counts of employed.

Table 8 shows the aggregate hours worked broken down by business size. Similar to Table 7, we see a decrease across all columns between February and July 2020. Table 8 shows an increase in aggregate hours between May and December 2020, across all business sizes. Firms (establishments) with less than 20 workers and firms (establishments) with between 20 and 99 workers saw percentage decreases of -27.8% (-22.8%) and -22.2% (-17.5%), respectively, between February and December 2020. Larger firms (establishments) such as those with between 100 and 499 employees and those with greater than 500 employees had percentage changes of -13.5% (-8.8%) and -11.2% (-11.3%), respectively. Table 8 show a large rebound in aggregate hours for employee of firms (establishments) from May to December 2020. Table 8 suggest a limited net impact on aggregate hours worked from February to December 2020 for employees of firms (establishment).¹⁹

¹⁹Appendix Tables A7 and A6 present regression analysis to study the effect of COVID-19 on aggregate hours and wages for employees per firm sizes. It presents the coefficients associated with a variable

In summary, Tables 7 and 8 help convey a few crucial points about employees working for businesses of varying sizes. First, employees working for smaller businesses (less than 100 individuals) saw larger losses in the number employed, aggregate hours being worked, and individual hours being worked from February to May 2020. Second, while establishment and firm size show some variation in counts and aggregate hours, patterns are largely the same. Third, aggregate hours rebounded largely from May to December 2020.

5 Conclusion

The aim of this paper is to investigate how small business owners and their employees are being affected by the COVID-19 pandemic. Using the Canadian Labour Force Survey (LFS) we document how the self-employed, which we interpret as small business owners, and employees of small businesses, are being affected by COVID-19. In general, we see both a decline in hours worked, the number of small business owners, and the number of employed. As Canadian provinces began to reopen their economy summer 2020, our research confirms an increase in small business ownership and aggregate hours relative to February to May 2020. These improvements are often still below pre-March 2020 levels with some demographic groups, such as less educated and immigrant small business owners, seeing considerably worse rebounds than their respective counterparts.

To further understand why certain self-employed workers are more affected than others, we use occupational indexes for whether self-employed workers (1) are relatively more exposed to disease, (2) work in proximity to co-workers, (3) are essential, and (4) can work remotely. We provide evidence that the impact of the pandemic was significantly less severe for self-employed workers that can work remotely and essential workers. In particular, we document a considerable smaller decrease in aggregate hours worked for small business owners that are categorized as essential workers or in occupation categorized as able to work remotely.

Our results present important insight as to why certain self-employed workers have been doing better during the pandemic. A large fraction of Canadian employers are small businesses. Future research should seek to understand longer term effects of COVID-19 on business survival and job creation, and the effect of government policies on small business.

Post-COVID for months from March to December 2020. This analysis follows [Beland et al. \(2020b\)](#). Appendix Tables A7 shows that employees of small firms (establishments) had a larger decrease in actual hours worked than larger firms. Appendix Table A6 presents the effect on wages. The coefficient associated with Post-COVID is positive and significant across firm (establishment) sizes. This suggests large compositional effects and a decrease in the number of low wage workers in the labour force.

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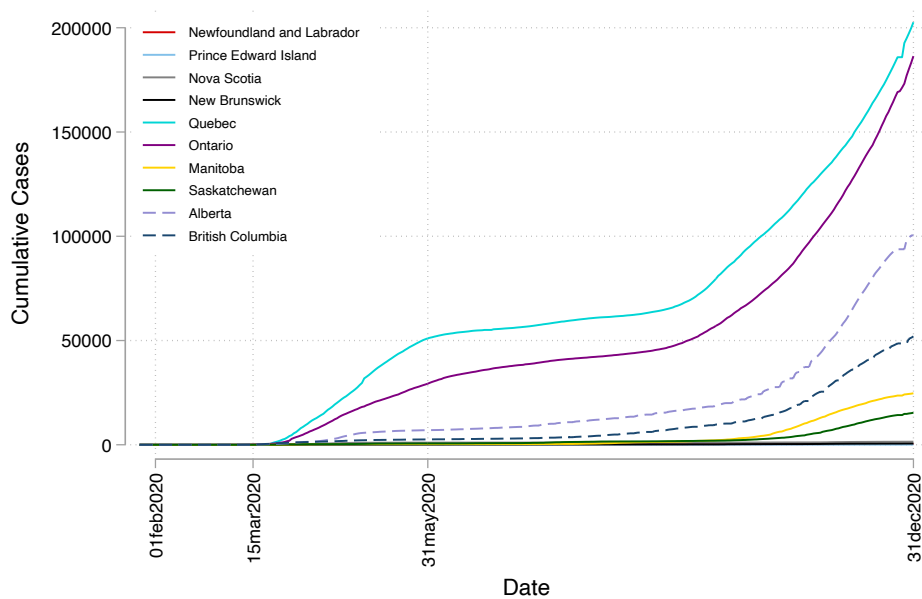
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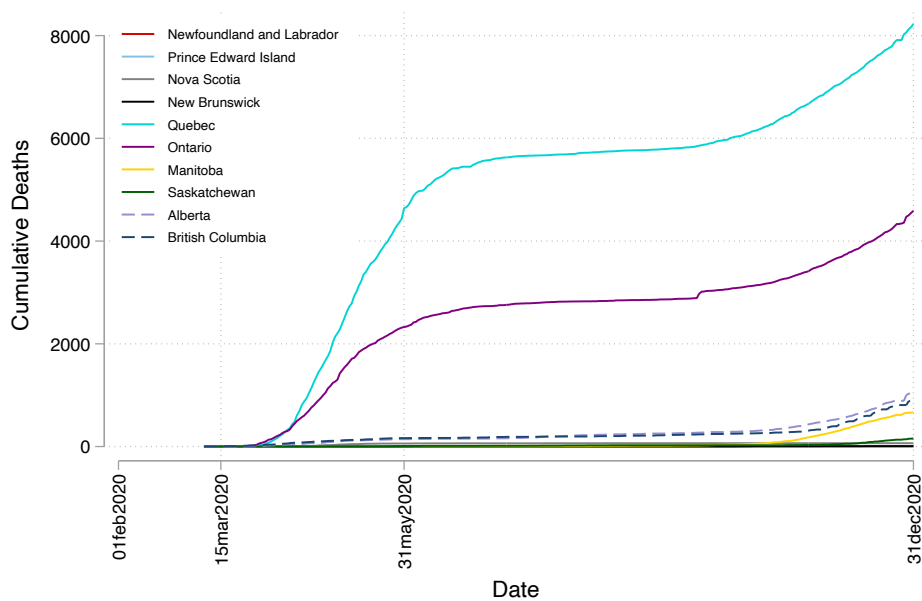
7 Figures

Figure 1: Cumulative Cases and Deaths for All Provinces.

(a) Cumulative cases



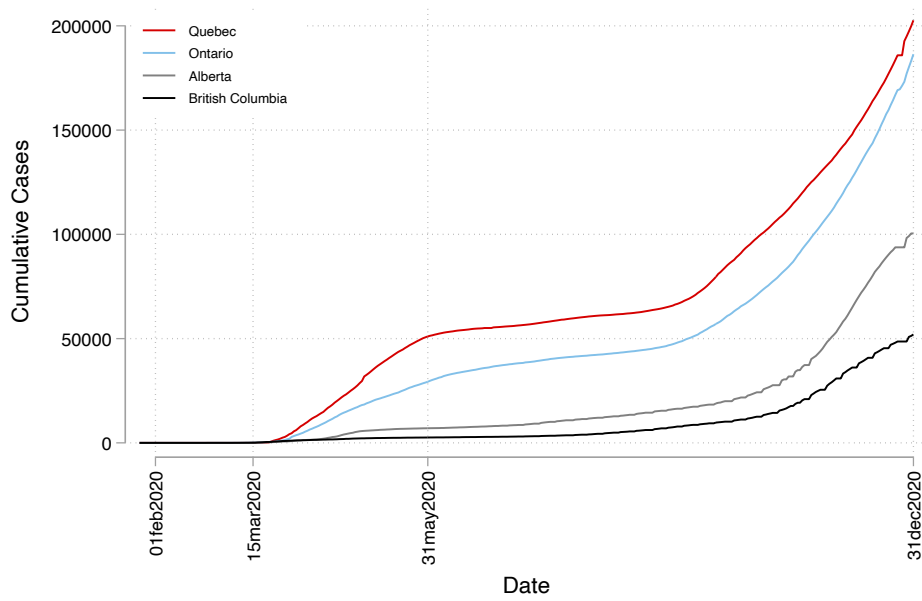
(b) Cumulative deaths



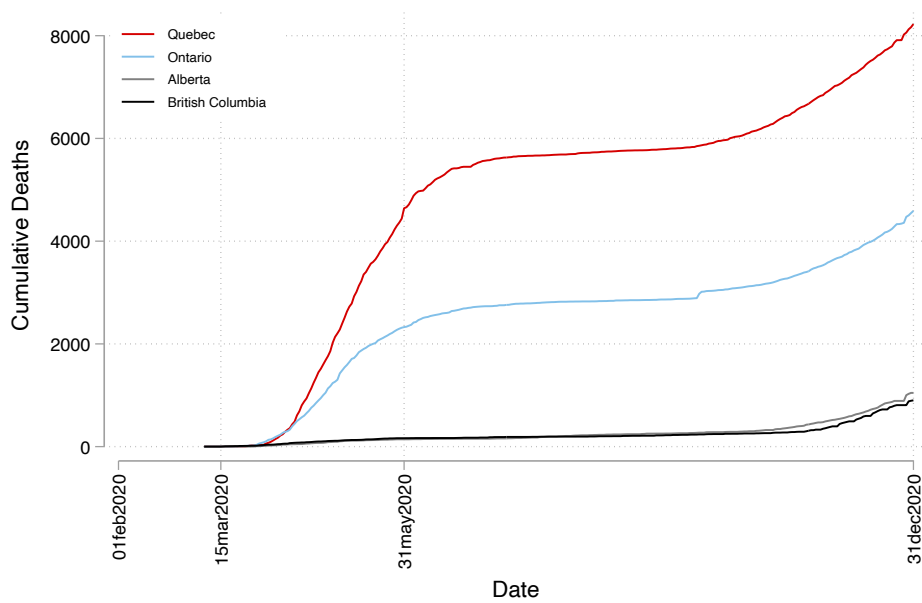
Notes: Authors' calculations using data provided by [Berry et al. \(2020\)](#). Data can be accessed via <https://raw.githubusercontent.com/ccodwg/Covid19Canada>.

Figure 2: Cumulative Cases and Deaths for the 4 Largest Provinces.

(a) Cumulative cases



(b) Cumulative deaths



Notes: Authors' calculations using data provided by [Berry et al. \(2020\)](#). Data can be accessed via <https://raw.githubusercontent.com/ccodwg/Covid19Canada>.

9 Tables

Table 1: Active Small Businesses

	INCORPORATION STATUS		EMPLOYED		IN LABOUR FORCE	HOURS (MILLIONS)	
	Unincorporated	Incorporated	No paid help	Has paid help		Full-time	Part-time
Feb 2020	3748	3368	5040	2076	7132	68.73	9.61
May 2020	3225	2787	4395	1617	6017	41.53	7.91
Jul 2020	3280	2621	4330	1571	5978	55.49	9.30
Dec 2020	3007	2505	3957	1555	5574	61.25	8.61
Feb 2019	3781	3382	5087	2076	7211	65.61	9.54
May 2019	3922	3359	5043	2238	7341	72.39	9.99
Jul 2019	3867	3473	5115	2225	7410	70.55	9.27
Dec 2019	3738	3365	5024	2079	7139	69.79	10.08
Dec - May 2020 (% Δ)	-6.76	-10.12	-9.97	-3.83	-7.36	47.51	8.84
May - Feb 2020 (% Δ)	-13.95	-17.25	-12.80	-22.11	-15.63	-39.58	-17.74
Dec - Feb 2020 (% Δ)	-19.77	-25.62	-21.49	-25.10	-21.85	-10.88	-10.46
Dec - May 2019 (% Δ)	-4.69	0.18	-0.38	-7.10	-2.75	-3.58	0.96
May - Feb 2019 (% Δ)	3.73	-0.68	-0.86	7.80	1.80	10.32	4.66
Dec - Feb 2019 (% Δ)	-1.14	-0.50	-1.24	0.14	-1	6.37	5.67
2020 - 2019 Δ	-18.63	-25.12	-20.25	-25.24	-20.85	-17.25	-16.13

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and December 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in actual hours worked at main job, and below the 99th-percentile in real hourly wages. Variable for hours refers to hours at the respondent's main job, which is self-employment. Weights are applied up to the population. 2020 - 2019 Δ is the double-difference which is calculated as (December - February 2020) - (December - February 2019).

Table 2: Small Business by Individual Characteristics

	Sex		Immigrant Status		Marital Status		Women		Men		Education Level		Age Group			
	Male	Female	Not Immigrant	Immigrant	Not Married	Married	No Young Kids	Has Young Kids	No Young Kids	Has Young Kids	Less than HS	HS & Some Col	Postsec	25 to 34	35 to 54	55 plus
	ACTIVE SMALL BUSINESS COUNT															
Feb 2020	4334	2782	4799	2317	2615	4501	829	2037	1343	2907	499	1475	5142	1166	3936	2014
May 2020	3655	2357	4120	1892	2123	3889	774	1695	1125	2418	393	1250	4369	1045	3267	1700
Jul 2020	3555	2346	4071	1830	2140	3761	712	1701	1014	2474	398	1307	4196	1049	3119	1732
Dec 2020	3343	2169	3774	1738	1987	3525	658	1602	946	2306	347	1124	4041	896	2947	1669
Feb 2019	4488	2675	4975	2188	2731	4432	821	1871	1325	3146	498	1531	5134	1232	3924	2008
May 2019	4460	2821	5136	2821	2865	4416	914	1974	1272	3121	518	1600	5163	1252	4061	1969
Jul 2019	4484	2856	5067	2273	2791	4549	877	2016	1312	3135	541	1620	5179	1263	4100	1976
Dec 2019	4347	2756	4775	2328	2693	4410	855	2003	1320	2925	497	1456	5150	1232	3913	1958
Dec - May 2020 (% Δ)	-8.54	-7.98	-8.40	-8.14	-6.41	-9.36	-14.99	-5.49	-15.91	-4.63	-11.70	-10.08	-7.51	-14.26	-9.79	-1.82
May - Feb 2020 (% Δ)	-15.67	-15.28	-14.15	-18.34	-18.81	-13.60	-6.63	-16.79	-16.23	-16.82	-11.24	-15.25	-15.03	-10.38	-17.00	-15.59
Dec - Feb 2020 (% Δ)	-22.87	-22.03	-21.36	-24.99	-24.02	-21.68	-20.63	-21.35	-29.56	-20.67	-30.46	-23.80	-21.41	-23.16	-25.13	-17.13
Dec - May 2019 (% Δ)	-2.53	-2.30	-7.03	8.53	-6.00	-0.14	-6.46	1.47	3.77	-6.28	-4.05	-9.00	-0.25	-1.60	-3.64	-0.56
May - Feb 2019 (% Δ)	-0.62	5.46	3.24	-1.97	4.91	-0.36	11.33	5.51	-4.00	-0.79	4.02	4.51	0.86	1.62	3.49	-1.94
Dec - Feb 2019 (% Δ)	-3.14	3.03	-4.02	6.40	-1.39	-0.50	4.14	7.06	-0.38	-7.02	-0.20	-4.90	0.31	0.00	-0.28	-2.49
2020 - 2019 Δ	-19.72	-25.06	-17.34	-31.39	-22.62	-21.19	-24.77	-28.41	-29.18	-13.65	-30.26	-18.90	-21.72	-23.16	-24.85	-14.64
	SMALL BUSINESS AGGREGATE HOURS (MILLIONS)															
Feb 2020	52.57	25.78	52.83	25.51	28.26	50.08	7.28	18.49	17.26	35.31	5.60	16.09	56.65	12.50	45.17	20.68
May 2020	35.37	14.07	35.41	14.02	16.26	33.17	4.20	9.87	11.46	23.91	3.58	11.14	34.71	7.72	27.37	14.34
Jul 2020	44.29	20.50	45.56	19.23	22.71	42.09	5.69	14.82	13.75	30.54	4.86	14.63	45.30	11.76	35.39	17.64
Dec 2020	47.07	22.80	47.99	21.88	23.92	45.94	6.42	16.38	13.92	33.14	4.35	14.22	51.29	11.27	39.03	19.55
Feb 2019	51.27	23.89	51.08	24.08	28.56	46.59	6.85	17.04	15.93	35.34	5.41	16.17	53.57	12.88	42.42	19.85
May 2019	55.24	27.13	57.83	24.55	31.95	50.43	8.50	18.63	16.54	38.71	6.07	18.65	57.65	14.43	46.98	20.97
Jul 2019	53.97	25.84	53.58	26.24	29.56	50.26	7.38	18.46	16.58	37.39	5.90	19.19	54.73	14.06	45.63	20.13
Dec 2019	53.33	26.55	53.22	26.66	29.46	50.42	7.54	19.01	17.75	35.58	5.56	16.42	57.90	13.30	45.93	20.65
Dec - May 2020 (% Δ)	33.07	62.07	35.50	56.02	47.11	38.48	52.99	65.93	21.52	38.60	21.33	27.65	47.77	45.98	42.63	36.32
May - Feb 2020 (% Δ)	-32.72	-45.44	-32.97	-45.04	-42.46	-33.76	-42.41	-46.63	-33.63	-32.27	-32.07	-30.77	-38.73	-38.20	-39.41	-30.63
Dec - Feb 2020 (% Δ)	-10.47	-11.57	-9.17	-14.26	-15.36	-8.27	-11.89	-11.44	-19.35	-6.12	-22.43	-11.62	-9.46	-9.78	-13.59	-5.44
Dec - May 2019 (% Δ)	-3.46	-2.15	-7.97	8.61	-7.79	-0.02	-11.30	2.02	7.35	-8.08	-8.49	-11.94	0.43	-7.79	-2.24	-1.52
May - Feb 2019 (% Δ)	7.76	13.57	13.22	1.95	11.85	8.23	24.08	9.35	3.81	9.54	12.22	15.33	7.61	12.00	10.75	5.61
Dec - Feb 2019 (% Δ)	4.03	11.13	4.19	10.72	3.14	8.21	10.06	11.55	11.44	0.68	2.69	1.55	8.07	3.28	8.26	4.00
2020 - 2019 Δ	-14.49	-22.70	-13.36	-24.98	-18.50	-16.48	-21.95	-23.00	-30.79	-6.81	-25.13	-13.18	-17.53	-13.06	-21.85	-9.44

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and December 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in actual hours worked at main job, and below the 99th-percentile in real hourly wages. Weights are applied up to the population. 2020 - 2019 Δ is the double-difference which is calculated as (December - February 2020) - (December - February 2019).

Table 3: Small Business by North American Classification Industry System (NAICS), Two-Digit Sectors

	ACTIVE SMALL BUSINESS COUNT												SMALL BUSINESS AGGREGATE HOURS (MILLIONS)											
	Agriculture	Forest/Fish/Mine/Oil Gas	Construction	Durables Manufa	Nondurables Manufa	Wholesale Trade	Retail Trade	Transport/Warehousing	Finance/Insure/Real Estate	Prof/Scient/Tech	Mgmt/Admin/Other Support	Educational Services	Health Care/Soc Assist	Info/Culture/Rec	Accommod/Food	Other Services								
Feb 2020	574	188	1022	90	87	153	472	437	456	919	469	150	892	282	264	658								
May 2020	352	143	843	97	87	119	401	388	411	842	425	157	783	227	205	530								
Jul 2020	443	122	796	73	91	131	395	402	391	790	415	156	710	234	196	556								
Dec 2020	399	152	743	66	72	107	379	352	377	746	366	148	687	197	183	537								
Feb 2019	539	205	1102	92	109	147	435	490	509	978	458	161	786	282	235	633								
May 2019	427	174	1156	97	87	149	499	463	514	1002	440	206	808	285	262	712								
Jul 2019	523	167	1152	88	85	179	471	472	477	1004	428	176	831	296	276	715								
Dec 2019	592	172	1088	89	93	146	438	437	451	914	449	151	882	277	285	639								
Dec - May 2020 (% Δ)	13.35	6.29	-11.86	-31.96	-17.24	-10.08	-5.49	-9.28	-8.27	-11.40	-13.88	-5.73	-12.26	-13.22	-10.73	1.32								
May - Feb 2020 (% Δ)	-38.68	-23.94	-17.51	7.78	0	-22.22	-15.04	-11.21	-9.87	-8.38	-9.38	4.67	-12.22	-19.50	-22.35	-19.45								
Dec - Feb 2020 (% Δ)	-30.49	-19.15	-27.30	-26.67	-17.24	-30.07	-19.70	-19.45	-17.32	-18.82	-21.96	-1.33	-22.98	-30.14	-30.68	-18.39								
Dec - May 2019 (% Δ)	38.64	-1.15	-5.88	-8.25	6.90	-2.01	-12.22	-5.62	-12.26	-8.78	2.05	-26.70	9.16	-2.81	8.78	-10.25								
May - Feb 2019 (% Δ)	-20.78	-15.12	4.90	5.43	-20.18	1.36	14.71	-5.51	0.98	2.45	-3.93	27.95	2.80	11.49	12.48	0.95								
Dec - Feb 2019 (% Δ)	9.83	-16.10	-1.27	-3.26	-14.68	-0.68	0.69	-10.82	-11.39	-6.54	-1.97	-6.21	12.21	-1.77	21.28	0.95								
2020 - 2019 Δ	-40.32	-3.05	-26.03	-23.41	-2.56	-29.39	-20.39	-8.63	-5.93	-12.28	-20	4.88	-35.20	-28.37	-51.96	-19.34								
Feb 2020	3.73	0.94	10.67	1.29	1	2.30	5.25	6.41	6.39	12.37	4.44	1.05	10.01	3.31	3.01	6.17								
May 2020	3.21	0.75	6.99	0.87	0.80	1.51	3.76	4.15	3.66	8.90	3.05	0.65	5.36	1.67	1.40	2.72								
Jul 2020	3.74	0.65	9.57	0.94	1.11	1.82	5.10	5.48	4.44	9.87	3.63	0.70	8.10	1.99	2.08	5.56								
Dec 2020	3.76	0.83	9.35	1.27	1.27	1.68	5.26	5.71	6.47	11.29	2.60	0.95	8.87	2.35	2.90	5.29								
Feb 2019	3.39	0.91	10.07	0.88	0.98	1.84	4.73	7.34	6.02	12.57	3.86	1.29	9.02	3.44	2.80	6.03								
May 2019	3.58	0.97	12.53	0.88	0.95	2.01	6.26	6.67	6.29	12.65	4.25	1.96	9.49	3.64	3.20	7.04								
Jul 2019	3.56	0.77	13.22	0.75	1.31	2.19	5.81	7.34	5.81	12.02	4.15	1.60	8.63	3.03	3.61	6.04								
Dec 2019	3.98	0.76	11.82	1.05	1.16	2.13	5.71	7.40	5.58	12.49	4.29	1.44	9.95	2.84	3.12	6.17								
Dec - May 2020 (% Δ)	17.30	10.33	33.68	45.74	59.76	11.61	40.06	37.78	77.07	26.94	-15.02	45.61	65.58	41.14	106.60	94.50								
May - Feb 2020 (% Δ)	-14.09	-19.80	-34.51	-31.95	-20.64	-34.53	-28.52	-35.29	-42.77	-28.07	-31.15	-37.98	-46.51	-49.58	-53.37	-55.93								
Dec - Feb 2020 (% Δ)	0.77	-11.52	-12.45	-0.83	26.78	-26.92	0.12	-10.84	-1.34	-8.69	-41.50	-9.69	-11.43	-28.83	-3.66	-14.29								
Dec - May 2019 (% Δ)	11.23	-21.47	-5.65	18.37	22.37	5.79	-8.88	10.86	-11.31	-1.27	1.01	-26.75	4.85	-21.94	-2.55	-12.32								
May - Feb 2019 (% Δ)	5.63	5.59	24.40	1.06	-3.70	9.39	32.57	-9.04	4.46	0.66	10.18	51.62	5.25	5.99	14.28	16.73								
Dec - Feb 2019 (% Δ)	17.49	-17.08	17.37	19.63	17.84	15.73	20.80	0.84	-7.36	-0.62	11.29	11.06	10.35	-17.27	11.37	2.34								
2020 - 2019 Δ	-16.72	5.56	-29.82	-20.46	8.94	-42.65	-20.68	-11.68	8.70	-8.07	-52.78	-20.75	-21.77	-11.56	-15.03	-16.63								

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and December 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in actual hours worked at main job, and below the 99th-percentile in real hourly wages. Weights are applied up to the population. Industries: Utilities, Public Administration were excluded due to insignificant number of self-employed in these industries. 2020 - 2019 Δ is the double-difference which is calculated as (December - February 2020) - (December - February 2019).

Table 4: Small Business by National Occupation Classification (NOC), Broad Occupational Categories

	Business/Fin/Admin	Health	Management	Natural/Applied Sci	NaturalResource/Agric	Art/Culture/Rec	Educ/Law/Social	Manufact/Utilities	Sales/Services	Trades/Transpo/Equip
	ACTIVE SMALL BUSINESS COUNT									
Feb 2020	604	636	1965	341	234	452	506	116	1050	1212
May 2020	538	543	1492	325	221	369	486	122	866	1050
Jul 2020	504	472	1505	288	197	401	487	117	865	1065
Dec 2020	466	455	1423	272	204	376	457	84	852	923
Feb 2019	637	539	1851	372	244	489	453	135	1120	1323
May 2019	666	536	1876	374	223	503	531	128	1115	1329
Jul 2019	697	556	1892	358	239	478	512	125	1129	1354
Dec 2019	594	589	1990	359	238	457	515	112	993	1256
Dec - May 2020 (% Δ)	-13.38	-16.21	-4.62	-16.31	-7.69	1.90	-5.97	-31.15	-1.62	-12.10
May - Feb 2020 (% Δ)	-10.93	-14.62	-24.07	-4.69	-5.56	-18.36	-3.95	5.17	-17.52	-13.37
Dec - Feb 2020 (% Δ)	-22.85	-28.46	-27.58	-20.23	-12.82	-16.81	-9.68	-27.59	-18.86	-23.84
Dec - May 2019 (% Δ)	-10.81	9.89	6.08	-4.01	6.73	-9.15	-3.01	-12.50	-10.94	-5.49
May - Feb 2019 (% Δ)	4.55	-0.56	1.35	0.54	-8.61	2.86	17.22	-5.19	-0.45	0.45
Dec - Feb 2019 (% Δ)	-6.75	9.28	7.51	-3.49	-2.46	-6.54	13.69	-17.04	-11.34	-5.06
2020 - 2019 Δ	-16.10	-37.74	-35.09	-16.74	-10.36	-10.27	-23.37	-10.55	-7.52	-18.78
	SMALL BUSINESS AGGREGATE HOURS (MILLIONS)									
Feb 2020	6.35	7.38	20.58	5.47	1.52	4.47	5.56	1.32	11.16	14.54
May 2020	4.98	3.64	13.32	3.87	1.64	2.07	3.76	1.06	4.99	10.12
Jul 2020	5.19	5.65	16.59	4.32	1.69	3.01	5.01	1.33	8.54	13.45
Dec 2020	6.13	5.98	18.22	4.35	1.29	4.18	5.93	1.21	9.30	13.27
Feb 2019	6.88	5.85	18.07	5.17	1.25	5.42	5.74	1.24	10.88	14.67
May 2019	6.76	6.41	21.44	5.31	1.72	5.77	6.35	1.17	11.67	15.77
Jul 2019	6.57	6.06	21.09	4.72	1.60	4.65	5.30	1.40	11.51	16.94
Dec 2019	6.75	6.96	21.38	5.24	1.40	4.44	5.82	1.27	10.64	15.97
Dec - May 2020 (% Δ)	23.09	64.17	36.78	12.58	-21.15	102.04	57.75	14.34	86.57	31.16
May - Feb 2020 (% Δ)	-21.64	-50.65	-35.26	-29.38	7.72	-53.74	-32.38	-19.61	-55.33	-30.40
Dec - Feb 2020 (% Δ)	-3.55	-18.98	-11.45	-20.49	-15.06	-6.54	6.67	-8.08	-16.66	-8.70
Dec - May 2019 (% Δ)	-0.18	8.56	-0.27	-1.44	-18.36	-23.12	-8.30	8.55	-8.77	1.28
May - Feb 2019 (% Δ)	-1.67	9.57	18.68	2.80	37.09	6.50	10.65	-5.44	7.27	7.51
Dec - Feb 2019 (% Δ)	-1.84	18.95	18.36	1.33	11.93	-18.13	1.46	2.64	-2.14	8.89
2020 - 2019 Δ	-1.71	-37.93	-29.80	-21.82	-26.99	11.59	5.21	-10.72	-14.52	-17.59

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and December 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in actual hours worked at main job, and below the 99th-percentile in real hourly wages. Weights are applied up to the population. 2020 - 2019 Δ is the double-difference which is calculated as (December - February 2020) - (December - February 2019).

Table 5: Small Business by Index (counts)

	INDEXES															
	PHYSICAL PROXIMITY				DISEASE EXPOSURE				CRITICAL WORKER				WORK FROM HOME			
	Below	Median	Above	Median	Below	Median	Above	Median	Below	Median	Above	Median	Below	Median	Above	Median
Feb 2020	3772		3537		4634		2675		4424		2885		2706		4603	
May 2020	3189		3156		3918		2427		3840		2505		2407		3938	
July 2020	3085		3091		3753		2423		3773		2403		2394		3782	
Dec 2020	2911		2843		3559		2195		3483		2271		2056		3698	
Feb 2019	3831		3566		4721		2676		4459		2938		2718		4679	
May 2019	3853		3652		4732		2773		4608		2897		2627		4878	
July 2019	3831		3744		4803		2772		4646		2929		2790		4785	
Dec 2019	3703		3624		4654		2673		4455		2872		2649		4678	
May - Feb 2020 (% Δ)	-15.46		-10.77		-15.46		-9.26		-13.19		-13.19		-11.04		-14.45	
Dec - May 2020 (% Δ)	-3.26		-2.06		-4.22		-0.15		-1.74		-4.07		-0.54		-3.96	
Dec - Feb 2020 (% Δ)	-18.22		-12.61		-19.02		-9.40		-14.70		-16.73		-11.53		-17.84	
May - Feb 2019 (% Δ)	31.61		25.43		32.65		21.92		28.00		29.40		32.16		26.55	
Dec - May 2019 (% Δ)	0.58		2.41		0.25		3.59		3.35		-1.40		-3.34		4.25	
Dec - Feb 2019 (% Δ)	32.37		28.45		32.99		26.29		32.29		27.59		27.75		31.92	
2020 - 2019 Δ	-47.07		-36.20		-48.10		-31.18		-41.19		-42.59		-43.21		-41.00	

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and December 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in actual hours worked at main job, and below the 99th-percentile in real hourly wages. Weights are applied up to the population. Columns differ first by the index applied to the sample and second by whether the subsample lies above or below the median value of the index. 2020 - 2019 Δ is the double-difference which is calculated as (December - February 2020) - (December - February 2019).

Table 6: Small Business by Index (hours)

	INDEXES											
	PHYSICAL PROXIMITY			DISEASE EXPOSURE			CRITICAL WORKER			WORK FROM HOME		
	Below Median	Above Median	Below Median	Above Median	Below Median	Above Median	Below Median	Above Median	Below Median	Above Median	Below Median	Above Median
Feb 2020	40.01	38.33	51.15	27.20	45.98	32.36	29.18	49.16	29.18	32.36	29.18	49.16
May 2020	26.36	23.07	35.42	14.01	28.17	21.27	18.09	31.35	18.09	21.27	18.09	31.35
July 2020	32.16	32.63	42.49	22.30	37.55	27.24	25.83	38.96	25.83	27.24	25.83	38.96
Dec 2020	35.80	34.07	45.82	24.04	40.03	29.84	24.89	44.98	24.89	29.84	24.89	44.98
Feb 2019	38.95	36.20	48.61	26.54	43.75	31.41	27.15	48.01	27.15	31.41	27.15	48.01
May 2019	40.98	41.39	54.22	28.16	48.62	33.75	29.11	53.27	29.11	33.75	29.11	53.27
July 2019	39.69	40.12	52.96	26.86	46.78	33.03	30.35	49.46	30.35	33.03	30.35	49.46
Dec 2019	40.21	39.66	51.54	28.34	46.45	33.43	29.81	50.07	29.81	33.43	29.81	50.07
May - Feb 2020 (% Δ)	-34.11	-39.82	-30.75	-48.47	-38.74	-34.29	-38.02	-36.24	-38.02	-34.29	-38.02	-36.24
Dec - May 2020 (% Δ)	21.98	41.45	19.95	59.16	33.32	28.08	42.82	24.29	42.82	28.08	42.82	24.29
Dec - Feb 2020 (% Δ)	-19.63	-14.87	-16.93	-17.99	-18.33	-15.84	-11.48	-20.75	-11.48	-15.84	-11.48	-20.75
May - Feb 2019 (% Δ)	8.82	6.27	6.10	10.39	9.30	5.27	9.09	6.74	9.09	5.27	9.09	6.74
Dec - May 2019 (% Δ)	5.22	14.33	11.53	6.08	11.15	7.46	7.21	10.96	7.21	7.46	7.21	10.96
Dec - Feb 2019 (% Δ)	14.49	21.50	18.34	17.10	21.48	13.12	16.96	18.44	16.96	13.12	16.96	18.44
2020 - 2019 Δ	-34.12	-36.37	-35.27	-35.09	-39.81	-28.95	-28.44	-39.19	-28.44	-28.95	-28.44	-39.19

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and December 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in actual hours worked at main job, and below the 99th-percentile in real hourly wages. Weights are applied up to the population. Columns differ first by the index applied to the sample and second by whether the subsample lies above or below the median value of the index. 2020 - 2019 Δ is the double-difference which is calculated as (December - February 2020) - (December - February 2019).

Table 7: Counts of Individuals Employed by Businesses Sizes

	ACTIVE SMALL BUSINESS COUNT							
	Firm Size				Establishment Size			
	<i>Less than 20</i>	<i>20 to 99</i>	<i>100 to 499</i>	<i>Greater than 500</i>	<i>Less than 20</i>	<i>20 to 99</i>	<i>100 to 499</i>	<i>Greater than 500</i>
Feb 2020	6672	6620	6025	20930	11700	13372	8681	6495
May 2020	4819	4967	4998	17443	8787	10510	7538	5392
Jul 2020	5412	5082	4984	16890	9402	10388	7377	5201
Dec 2020	5466	4986	5040	16802	9639	10475	7203	4977
Feb 2019	6960	6517	6203	21115	12216	13537	8667	6374
May 2019	7386	6709	6347	21162	12376	13624	9095	6509
Jul 2019	7072	6745	6148	20502	11774	13329	9025	6339
Dec 2019	6766	6539	5869	20728	11668	13404	8408	6423
Dec - May 2020 (% Δ)	13.43	0.38	0.84	-3.67	9.70	-0.33	-4.44	-7.70
May - Feb 2020 (% Δ)	-27.77	-24.97	-17.05	-16.66	-24.90	-21.40	-13.17	-16.98
Dec - Feb 2020 (% Δ)	-18.08	-24.68	-16.35	-19.72	-17.62	-21.66	-17.03	-23.37
Dec - May 2019 (% Δ)	-8.39	-2.53	-7.53	-2.05	-5.72	-1.61	-7.55	-1.32
May - Feb 2019 (% Δ)	6.12	2.95	2.32	0.22	1.31	0.64	4.94	2.12
Dec - Feb 2019 (% Δ)	-2.79	0.34	-5.38	-1.83	-4.49	-0.98	-2.99	0.77
2020 - 2019 Δ	-15.29	-25.02	-10.96	-17.89	-13.13	-20.68	-14.04	-24.14

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and December 2020. Observations are only those who are employed (excluding self-employed), aged 25 to 64, below the 99th-percentile in actual hours worked at main job, and below the 99th-percentile in real hourly wages. Weights are applied within the sample. Firms size is the total amount of individuals who work for the business across all locations of employment; establishment size is the total number of people who work at the same location as the respondent. 2020 - 2019 Δ is the double-difference which is calculated as (December - February 2020) - (December - February 2019).

Table 8: Employees' Aggregate Hours Worked by Businesses Sizes

	SMALL BUSINESS AGGREGATE HOURS (MILLIONS)							
	Firm Size				Establishment Size			
	<i>Less than 20</i>	<i>20 to 99</i>	<i>100 to 499</i>	<i>Greater than 500</i>	<i>Less than 20</i>	<i>20 to 99</i>	<i>100 to 499</i>	<i>Greater than 500</i>
Feb 2020	68.92	73.60	67.12	224.30	122.55	145.46	96.48	69.45
May 2020	49.74	57.25	58.06	199.10	94.59	119.96	87.98	61.60
Jul 2020	62.95	62.20	60.01	186.61	108.83	116.94	86.89	59.12
Dec 2020	70.58	69.43	70.79	231.17	126.52	145.55	100.72	69.18
Feb 2019	69.03	69.73	67.05	218.43	122.88	143.07	92.40	65.89
May 2019	75.75	72.87	69.99	223.32	127.90	146.52	99.29	68.23
Jul 2019	71.77	71.19	62.98	191.57	117.86	129.03	90.52	60.10
Dec 2019	72.43	75.63	67.40	231.06	126.62	152.33	96.34	71.23
Dec - May 2020 (% Δ)	41.90	21.26	21.93	16.11	33.75	21.33	14.47	12.29
May - Feb 2020 (% Δ)	-27.83	-22.21	-13.50	-11.24	-22.82	-17.53	-8.80	-11.30
Dec - Feb 2020 (% Δ)	2.41	-5.68	5.47	3.06	3.23	0.06	4.40	-0.40
Dec - May 2019 (% Δ)	-4.38	3.79	-3.70	3.46	-1.00	3.97	-2.97	4.40
May - Feb 2019 (% Δ)	9.74	4.49	4.39	2.24	4.09	2.41	7.45	3.54
Dec - Feb 2019 (% Δ)	4.93	8.46	0.52	5.78	3.04	6.47	4.27	8.10
2020 - 2019 Δ	-2.52	-14.13	4.95	-2.72	0.19	-6.41	0.13	-8.49

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and December 2020. Observations are only those who are employed (excluding self-employed), aged 25 to 64, below the 99th-percentile in actual hours worked at main job, and below the 99th-percentile in real hourly wages. Weights are applied up to the population. Firms size is the total amount of individuals who work for the business across all locations of employment; establishment size is the total number of people who work at the same location as the respondent. 2020 - 2019 Δ is the double-difference which is calculated as (December - February 2020) - (December - February 2019).

A2 Appendix Tables

Table A1: Background Information on COVID-19 in Canadian Provinces

Province	First Reported Case	First Death	Emergency Declared	School Closures
Newfoundland and Labrador	March 14, 2020	March 30, 2020	March 18, 2020	March 16, 2020
Nova Scotia	March 15, 2020	April 7, 2020	March 22, 2020	March 23, 2020
Prince Edward Island	March 14, 2020	None	March 16, 2020	March 23, 2020
New Brunswick	March 12, 2020	June 4, 2020	March 19, 2020	March 16, 2020
Quebec	February 27, 2020	March 18, 2020	March 14, 2020	March 13, 2020
Ontario	January 25, 2020	March 11, 2020	March 17, 2020	March 16, 2020
Manitoba	March 12, 2020	March 27, 2020	March 20, 2020	March 23, 2020
Saskatchewan	March 11, 2020	March 30, 2020	March 18, 2020	March 20, 2020
Alberta	March 5, 2020	March 19, 2020	March 17, 2020	March 15, 2020
British Columbia	January 1, 2020	March 8, 2020	March 18, 2020	March 18, 2020

Table A2: Active Small Business by Individual Characteristics: Atlantic Canada, Quebec

	Sex		Immigrant Status		Marital Status		Women		Men		Education Level		Age Group			
	Male	Female	Not Immigrant	Immigrant	Not Married	Married	No Young Kids	Has Young Kids	No Young Kids	Has Young Kids	Less than HS	HS & Some Col	Postsec	25 to 34	35 to 54	55 plus
ATLANTIC CANADA																
Feb 2020	532	348	797	83	307	573	95	252	139	394	90	201	588	115	471	294
May 2020	409	322	676	55	262	469	120	201	109	301	64	147	520	106	395	230
Jul 2020	439	306	702	43	249	496	99	210	105	331	60	174	511	98	414	233
Dec 2020	420	296	665	51	236	480	88	208	101	319	45	163	508	96	382	238
Feb 2019	564	329	834	59	301	592	90	237	138	428	84	206	603	109	482	302
May 2019	523	339	798	64	284	578	97	245	133	387	64	220	578	94	474	294
Jul 2019	521	330	786	65	273	578	106	234	134	377	64	208	579	107	469	275
Dec 2019	519	333	780	72	273	579	111	223	141	377	78	192	581	113	475	263
Dec - May 2020 (% Δ)	2.69	-8.07	-1.63	-7.27	-9.92	2.35	-26.67	3.48	-7.34	5.98	-29.69	10.88	-2.31	-9.43	-3.29	3.48
May - Feb 2020 (% Δ)	-23.12	-7.47	-15.18	-33.73	-14.66	-18.15	26.32	-20.24	-21.58	-23.60	-28.89	-26.87	-11.56	-7.83	-16.14	-21.77
Dec - Feb 2020 (% Δ)	-21.05	-14.94	-16.56	-38.55	-23.13	-16.23	-7.37	-17.46	-27.34	-19.04	-50.00	-18.91	-13.61	-16.52	-18.90	-19.05
Dec - May 2019 (% Δ)	-0.76	-1.77	-2.26	12.50	-3.87	0.17	14.43	-8.98	6.02	-2.58	21.88	-12.73	0.52	20.21	0.21	-10.54
May - Feb 2019 (% Δ)	-7.27	3.04	-4.32	8.47	-5.65	-2.36	7.78	3.38	-3.62	-9.58	-23.81	6.80	-4.15	-13.76	-1.66	-2.65
Dec - Feb 2019 (% Δ)	-7.98	1.22	-6.47	22.03	-9.30	-2.20	23.33	-5.91	-11.92	2.17	-7.14	-6.80	-3.65	3.67	-1.45	-12.91
2020 - 2019 Δ	-13.07	-16.16	-10.09	-60.59	-13.82	-14.03	-30.70	-11.55	-29.51	-7.12	-42.86	-12.11	-9.96	-20.19	-17.44	-6.13
QUEBEC																
Feb 2020	727	449	913	263	688	488	128	344	191	513	113	211	852	211	620	345
May 2020	624	368	818	174	603	389	115	271	170	436	96	155	741	177	533	282
Jul 2020	578	356	763	171	547	387	108	266	132	428	86	153	695	172	485	276
Dec 2020	527	375	733	169	571	331	120	270	127	385	77	137	689	146	481	276
Feb 2019	699	438	919	218	689	448	148	316	178	495	108	199	830	201	629	307
May 2019	696	484	973	207	699	481	162	348	172	498	109	199	872	191	670	320
Jul 2019	695	495	956	234	698	492	172	341	198	479	99	204	888	211	676	303
Dec 2019	731	463	924	270	713	481	143	354	204	493	107	191	896	216	654	324
Dec - May 2020 (% Δ)	-15.54	1.90	-10.39	-2.87	-5.31	-14.91	4.35	-0.37	-25.29	-11.70	-19.79	-11.61	-7.02	-17.51	-9.76	-2.13
May - Feb 2020 (% Δ)	-14.17	-18.04	-10.41	-33.84	-12.35	-20.29	-10.16	-21.22	-10.99	-15.01	-15.04	-26.54	-13.03	-16.11	-14.03	-18.26
Dec - Feb 2020 (% Δ)	-27.51	-16.48	-19.72	-35.74	-17.01	-32.17	-6.25	-21.51	-33.51	-24.95	-31.86	-35.07	-19.13	-30.81	-22.42	-20.00
Dec - May 2019 (% Δ)	5.03	-4.34	-5.04	30.43	2.00	0.00	-11.73	1.72	18.60	-1.00	-1.83	-4.02	2.75	13.09	-2.39	1.25
May - Feb 2019 (% Δ)	-0.43	10.50	5.88	-5.05	1.45	7.37	9.46	10.13	-3.37	0.61	0.93	0.00	5.06	-4.98	6.52	4.23
Dec - Feb 2019 (% Δ)	4.58	5.71	0.54	23.85	3.48	7.37	-3.38	12.03	14.61	-0.40	-0.93	-4.02	7.95	7.46	3.97	5.54
2020 - 2019 Δ	-32.09	-22.19	-20.26	-59.59	-20.49	-39.54	-2.87	-33.54	-48.11	-24.55	-30.93	-31.05	-27.08	-38.27	-26.39	-25.54

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and December 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in actual hours worked at main job, and below the 99th-percentile in real hourly wages. Variable for hours refers to hours at the respondent's main job, which is self-employment. Weights are applied up to the population. 2020 - 2019 Δ is the double-difference which is calculated as (December - February 2020) - (December - February 2019).

Table A3: Active Small Business by Individual Characteristics: Ontario, Manitoba and Saskatchewan

	Sex		Immigrant Status		Marital Status		Women		Men		Education Level		Age Group			
	Male	Female	Not Immigrant	Immigrant	Not Married	Married	No Young Kids	Has Young Kids	No Young Kids	Has Young Kids	Less than HS	HS & Some Col	Postsec	25 to 34	35 to 54	55 plus
ONTARIO																
Feb 2020	1222	800	1177	845	624	1398	240	591	391	800	110	430	1482	348	1118	556
May 2020	1025	699	1022	702	528	1196	209	538	306	671	73	376	1275	310	921	492
Jul 2020	984	679	991	672	532	1131	199	516	290	658	89	386	1189	304	882	477
Dec 2020	910	542	859	593	430	1022	139	457	260	596	68	279	1105	243	765	444
Feb 2019	1230	730	1174	786	631	1329	230	527	374	829	114	374	1471	333	1092	534
May 2019	1259	780	1221	818	688	1351	253	568	374	844	125	374	1476	362	1124	553
Jul 2019	1260	774	1184	850	642	1392	239	579	351	865	112	472	1450	337	1117	580
Dec 2019	1217	768	1140	845	635	1350	226	578	357	824	107	414	1464	339	1083	563
Dec - May 2020 (% Δ)	-11.22	-22.46	-15.95	-15.53	-18.56	-14.55	-33.49	-15.06	-15.03	-11.18	-6.85	-25.80	-13.33	-21.61	-16.94	-9.76
May - Feb 2020 (% Δ)	-16.12	-12.62	-13.17	-16.92	-15.38	-14.45	-12.92	-8.97	-21.74	-16.12	-33.64	-12.56	-13.97	-10.92	-17.62	-11.51
Dec - Feb 2020 (% Δ)	-25.53	-32.25	-27.02	-29.82	-31.09	-26.90	-42.08	-22.67	-33.50	-25.50	-38.18	-35.12	-25.44	-30.17	-31.57	-20.14
Dec - May 2019 (% Δ)	-3.34	-1.54	-6.63	3.30	-7.70	-0.07	-10.67	1.76	-4.55	-2.37	-14.40	-5.48	-0.81	-6.35	-3.65	1.81
May - Feb 2019 (% Δ)	2.36	6.85	4.00	4.07	9.03	1.66	10.00	7.78	0.00	1.81	9.65	17.11	0.34	8.71	2.93	3.56
Dec - Feb 2019 (% Δ)	-1.06	5.21	-2.90	7.51	0.63	1.58	-1.74	9.68	-4.55	-0.60	-6.14	10.70	-0.48	1.80	-0.82	5.43
2020 - 2019 Δ	-24.48	-37.46	-24.12	-37.33	-31.72	-28.48	-40.34	-32.35	-28.96	-24.90	-32.04	-45.81	-24.96	-31.97	-30.75	-25.57
MANITOBA & SASKATCHEWAN																
Feb 2020	690	460	962	188	311	839	157	308	248	437	118	328	704	207	632	311
May 2020	556	357	754	159	226	687	135	231	216	331	92	253	568	157	491	266
Jul 2020	649	342	821	170	261	730	110	251	213	417	138	273	579	163	517	311
Dec 2020	642	346	799	189	261	727	118	239	230	401	113	281	594	181	530	277
Feb 2019	736	358	929	165	289	805	121	245	234	494	137	337	620	173	576	344
May 2019	724	392	963	153	339	777	133	274	194	515	110	325	681	198	572	345
Jul 2019	821	416	1065	172	388	849	138	290	259	550	136	381	719	235	644	358
Dec 2019	741	454	1020	175	316	879	170	294	251	480	126	348	721	215	648	332
Dec - May 2020 (% Δ)	15.47	-3.08	5.97	18.87	15.49	5.82	-12.59	3.46	6.48	21.15	22.83	11.07	4.58	15.29	7.94	4.14
May - Feb 2020 (% Δ)	-19.42	-22.39	-21.62	-15.43	-27.33	-18.12	-14.01	-25.00	-12.90	-24.26	-22.03	-22.87	-19.32	-24.15	-22.31	-14.47
Dec - Feb 2020 (% Δ)	-6.96	-24.78	-16.94	0.53	-16.08	-13.35	-24.84	-22.40	-7.26	-8.24	-4.24	-14.33	-15.62	-12.56	-16.14	-10.93
Dec - May 2019 (% Δ)	2.35	15.82	5.92	14.38	-6.78	13.13	27.82	7.30	29.38	-6.80	14.55	7.08	5.87	8.59	13.29	-3.77
May - Feb 2019 (% Δ)	-1.63	9.50	3.66	-7.27	17.30	-3.48	9.92	11.84	-17.09	4.25	-19.71	-3.56	8.84	14.45	-0.69	0.29
Dec - Feb 2019 (% Δ)	0.68	26.82	9.80	6.06	9.34	9.19	40.50	20.00	7.26	-2.83	-8.03	3.26	16.29	24.28	12.50	-3.49
2020 - 2019 Δ	-7.64	-51.60	-26.74	-5.53	-25.42	-22.54	-65.34	-42.40	-14.52	-5.40	3.79	-17.59	-31.92	-36.84	-28.64	-7.44

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and December 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in actual hours worked at main job, and below the 99th-percentile in real hourly wages. Variable for hours refers to hours at the respondent's main job, which is self-employment. Weights are applied up to the population. 2020 - 2019 Δ is the double-difference which is calculated as (December - February 2020) - (December - February 2019).

Table A4: Active Small Business by Individual Characteristics: Alberta, British Columbia

	Sex		Immigrant Status		Marital Status		Women		Men		Education Level		Age Group			
	Male	Female	Not Immigrant	Immigrant	Not Married	Married	No Young Kids	Has Young Kids	No Young Kids	Has Young Kids	Less than HS	HS & Some Col	Postsec	25 to 34	35 to 54	55 plus
ALBERTA																
Feb 2020	542	325	615	252	262	605	95	234	205	333	66	172	629	135	493	240
May 2020	504	302	598	208	191	615	132	171	184	319	54	179	572	142	477	187
Jul 2020	440	284	555	169	187	537	110	178	148	288	50	180	495	135	404	185
Dec 2020	398	264	503	159	154	508	100	170	129	263	45	152	466	102	363	197
Feb 2019	572	343	675	240	307	608	116	218	176	405	63	217	634	166	501	248
May 2019	570	358	707	221	309	619	136	221	190	381	77	213	638	187	528	213
Jul 2019	562	368	688	242	307	623	110	247	187	386	100	210	620	183	531	216
Dec 2019	527	311	584	254	255	583	107	217	201	313	66	191	581	151	471	216
Dec - May 2020 (% Δ)	-21.03	-12.58	-15.89	-23.56	-19.37	-17.40	-24.24	-0.58	-29.89	-17.55	-16.67	-15.08	-18.53	-28.17	-23.90	5.35
May - Feb 2020 (% Δ)	-7.01	-7.08	-2.76	-17.46	-27.10	1.65	38.95	-26.92	-10.24	-4.20	-18.18	4.07	-9.06	5.19	-3.25	-22.08
Dec - Feb 2020 (% Δ)	-26.57	-18.77	-18.21	-36.90	-41.22	-16.03	5.26	-27.35	-37.07	-21.02	-31.82	-11.63	-25.91	-24.44	-26.37	-17.92
Dec - May 2019 (% Δ)	-7.54	-13.13	-17.40	14.93	-17.48	-5.82	-21.32	-1.81	5.79	-17.85	-14.29	-10.33	-8.93	-19.25	-10.80	1.41
May - Feb 2019 (% Δ)	-0.35	4.37	4.74	-7.92	0.65	1.81	17.24	1.38	7.95	-5.93	22.22	-1.84	0.63	12.65	5.39	-14.11
Dec - Feb 2019 (% Δ)	-7.87	-9.33	-13.48	5.83	-16.94	-4.11	-7.76	-0.46	14.20	-22.72	4.76	-11.98	-8.36	-9.04	-5.99	-12.90
2020 - 2019 Δ	-18.70	-9.44	-4.73	-42.74	-24.28	-11.92	13.02	-26.89	-51.28	1.70	-36.58	0.35	-17.55	-15.41	-20.38	-5.01
BRITISH COLUMBIA																
Feb 2020	616	405	647	374	342	679	128	294	171	428	51	207	763	134	594	293
May 2020	523	323	491	355	245	601	101	245	162	338	56	177	612	134	453	258
Jul 2020	496	348	491	353	277	567	97	269	133	345	35	183	626	142	427	275
Dec 2020	457	335	465	327	263	529	114	237	115	326	44	191	557	122	435	235
Feb 2019	726	438	745	419	393	771	116	328	217	503	49	309	806	210	617	337
May 2019	714	442	787	369	455	701	130	321	187	518	60	296	800	184	662	310
Jul 2019	668	430	738	360	409	689	120	317	192	469	80	232	786	182	636	281
Dec 2019	616	423	662	377	373	666	132	303	174	430	61	208	770	180	584	275
Dec - May 2020 (% Δ)	-12.62	-4.30	-5.30	-7.89	7.35	-11.98	12.87	-3.27	-29.01	-3.55	-21.43	7.91	-8.99	-8.96	-3.97	-8.91
May - Feb 2020 (% Δ)	-15.10	-20.25	-24.11	-5.08	-28.36	-11.49	-21.09	-16.67	-5.26	-21.03	9.80	-14.49	-19.79	0.00	-23.74	-11.95
Dec - Feb 2020 (% Δ)	-25.81	-17.28	-28.13	-12.57	-23.10	-22.09	-10.94	-19.39	-32.75	-23.83	-13.73	-7.73	-2.7	-8.96	-26.77	-19.80
Dec - May 2019 (% Δ)	-13.73	-4.30	-15.88	2.17	-18.02	-4.99	1.54	-5.61	-6.95	-16.99	1.67	-29.73	-3.75	-2.17	-11.78	-11.29
May - Feb 2019 (% Δ)	-1.65	0.91	5.64	-11.93	15.78	-9.08	12.07	-2.13	-13.82	2.98	22.45	-4.21	-3.75	-12.38	7.29	-8.01
Dec - Feb 2019 (% Δ)	-15.15	-3.42	-11.14	-10.02	-5.09	-13.62	13.79	-7.62	-19.82	-14.51	24.49	-32.69	-4.47	-14.29	-5.35	-18.40
2020 - 2019 Δ	-10.66	-13.86	-16.99	-2.54	-18.01	-8.47	-24.73	-11.77	-12.93	-9.32	-38.22	24.96	-22.53	5.33	-21.42	-1.40

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and December 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in actual hours worked at main job, and below the 99th-percentile in real hourly wages. Variable for hours refers to hours at the respondent's main job, which is self-employment. Weights are applied up to the population. 2020 - 2019 Δ is the double-difference which is calculated as (December - February 2020) - (December - February 2019).

Table A5: Employees' Summary Statistics

		FIRM SIZE									
		Less than 20		20 to 99		100 to 500		Greater than 500		Total	
<i>Independent Regressors</i>		%	No.	%	No.	%	No.	%	No.	%	No.
Total		17.0	324,379	16.1	306,976	15.2	290,158	51.6	983,931	100.0	1,905,444
Sex of respondent											
	Male	16.7	158,816	17.5	166,766	16.3	155,341	49.5	471,497	100.0	952,421
	Female	17.4	165,563	14.7	140,210	14.1	134,817	53.8	512,433	100.0	953,023
Marital status											
	25 to 29	19.6	54,902	17.3	48,575	14.8	41,463	48.3	135,472	100.0	280,412
	30 to 34	17.3	47,405	16.2	44,422	14.9	40,784	51.5	141,066	100.0	273,677
	35 to 39	16.5	42,902	15.6	40,631	15.3	39,782	52.5	136,342	100.0	259,657
	40 to 44	15.3	38,203	14.9	37,122	15.4	38,444	54.4	135,946	100.0	249,715
	45 to 49	15.4	35,773	15.6	36,236	15.0	34,958	54.0	125,402	100.0	232,369
	50 to 54	15.8	38,563	15.6	38,105	15.3	37,386	53.3	130,019	100.0	244,073
	55 to 59	17.2	38,298	16.4	36,474	15.6	34,723	50.9	113,309	100.0	222,805
	60 to 64	19.8	28,333	17.8	25,410	15.8	22,618	46.5	66,375	100.0	142,736
Age groups											
	Not Married	17.7	162,470	16.8	154,405	15.2	139,236	50.2	460,592	100.0	916,704
	Married	16.4	161,909	15.4	152,571	15.3	150,922	52.9	523,338	100.0	988,740
Immigration status											
	Not immigrant	17.1	240,831	16.2	227,774	15.0	211,480	51.8	729,707	100.0	1,409,792
	Immigrant	16.9	83,548	16.0	79,202	15.9	78,678	51.3	254,223	100.0	495,652
Highest educational attainment											
	Less than high school	26.4	28,844	22.5	24,622	16.6	18,097	34.5	37,704	100.0	109,266
	High school or some college	20.3	81,187	18.2	72,778	15.2	60,619	46.3	184,870	100.0	399,454
	Postsecondary accreditation	15.3	214,349	15.0	209,577	15.1	211,442	54.5	761,357	100.0	1,396,724

Notes: Authors' calculations. Data from the Canadian Labour Force Survey. Observations are only those who are employed (excluding self-employed), aged 25 to 64, below the 99th-percentile in actual hours worked at main job, and below the 99th-percentile in real hourly wages. Weights are used in constructing these values.

Table A6: Real Hourly Wage by Business Sizes

	FIRM SIZE				
	All Individuals	Less than 20	20 to 99	100 to 500	Greater than 500
Post COVID	1.006 (0.0403)	0.551 (0.2551)	0.965 (0.3377)	1.053 (0.1814)	1.041 (0.1113)
Observations	1905444	335778	308914	293147	967605
ESTABLISHMENT SIZE					
Post COVID	1.006 (0.0403)	0.758 (0.2674)	1.264 (0.1024)	0.600 (0.1285)	1.243 (0.3368)
Observations	1905444	608106	641129	398835	257374
Indv. Char.	✓	✓	✓	✓	✓
Prov. FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Month FE	✓	✓	✓	✓	✓
Prov. X Year FE	✓	✓	✓	✓	✓

Notes: Authors' calculations. Data from the Canadian Labour Force Survey. All regressions are estimated using OLS, with weights applied. Standard errors clustered by province are in parentheses. The time period is January 2017 to December 2020. Observations are only those who are employed (excluding self-employed), aged 25 to 64, below the 99th-percentile in actual hours worked at main job, and below the 99th-percentile in real hourly wages. The outcome variable is the real hourly wage of an individual. Individual characteristics include categorical variables which control for sex, marital status, age groups, immigration status, and highest level of educational attainment. Fixed effects include provincial, year, month, and province \times year. Post COVID is a dummy variable which equals one for all months after and including March 2020. The top (bottom) panel uses a question to break individuals up into firm (establishment) size; columns differ based on the sample which regression coefficients are estimated on, as indicated by the column headings. The "All Individuals" and first column uses the whole sample, while the second column shows the sample with "[l]ess than 20" at their firm (establishment) in the top (bottom) panel, and so on, to the fifth column which uses only those working in firms or establishments with "[g]reater than 500" employees. Firms size is the total amount of individuals who work for the business across all locations of employment; establishment size is the total number of people who work at the same location as the respondent.

Table A7: Actual Weekly Hours Worked at Main Job by Business Sizes

	FIRM SIZE				
	All Individuals	Less than 20	20 to 99	100 to 500	Greater than 500
Post COVID	-1.103 (0.1432)	-1.459 (0.2230)	-1.416 (0.2759)	-1.064 (0.1932)	-0.902 (0.2176)
Observations	1905444	335778	308914	293147	967605
ESTABLISHMENT SIZE					
Post COVID	-1.103 (0.1432)	-1.407 (0.1449)	-1.189 (0.2639)	-0.846 (0.1922)	-0.728 (0.1164)
Observations	1905444	608106	641129	398835	257374
Indv. Char.	✓	✓	✓	✓	✓
Prov. FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Month FE	✓	✓	✓	✓	✓
Prov. X Year FE	✓	✓	✓	✓	✓

Notes: Authors' calculations. Data from the Canadian Labour Force Survey. All regressions are estimated using OLS, with weights applied. Standard errors clustered by province are in parentheses. The time period is January 2017 to December 2020. Observations are only those who are employed (excluding self-employed), aged 25 to 64, below the 99th-percentile in actual hours worked at main job, and below the 99th-percentile in real hourly wages. The outcome variable is the actual weekly hours worked at an individual's main job and is measured in hours. Individual characteristics include categorical variables which control for sex, marital status, age groups, immigration status, and highest level of educational attainment. Fixed effects include provincial, year, month, and province \times year. Post COVID is a dummy variable which equals one for all months after and including March 2020. The top (bottom) panel uses a question to break individuals up into firm (establishment) size; columns differ based on the sample which regression coefficients are estimated on, as indicated by the column headings. The "All Individuals" and first column uses the whole sample, while the second column shows the sample with "[l]ess than 20" at their firm (establishment) in the top (bottom) panel, and so on, to the fifth column which uses only those working in firms or establishments with "[g]reater than 500" employees. Firms size is the total amount of individuals who work for the business across all locations of employment; establishment size is the total number of people who work at the same location as the respondent.