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**Canadian Small Businesses' Employees and Owners
during COVID-19**

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Abstract

Canadian employers are largely small businesses. Their relevance for job creation and labour demand is integral for policymakers concerned with adverse labour market outcomes resulting from 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. We find large decreases in the number of small business owners, the number of employed, and in hours worked, from February to July 2020. We also find large labour market impact on small business employees. Our research confirms increasing employment, hours worked, and small business ownership as provinces began reopening their economies in May to July 2020. Still, these improvements are often below pre-March 2020 trends with some demographic groups, such as female and immigrant small business owners, having considerably worse outcomes than their respective counterparts.

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

JEL CODES: L26, J21, J24, I18

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1 Introduction

COVID-19 is affecting the way Canadians do business and the structure of the economy. Reductions in demand are widespread and were being exacerbated by policy responses which have reduced spread and deaths by closing non-essential businesses and forcing workplace adjustments. 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, which are more likely to face credit constraints and have 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 in contrast to large businesses. We use the Canadian Labour Force Survey (LFS), a representative survey, between January 2017 and July 2020 to investigate labour market outcomes for Canadian employers and employees. We find large decrease in the number of small business owners, the number of employed, and in hours worked, from February to July 2020. Our research finds that working-aged small business owners continue to have substantially lower labour force participation and employment rates following the onset of the pandemic, with improvements beginning in May and continuing through June. In particular, labour force participation amongst female small business owners is considerably slow to respond in May and June when compared to their male counterparts. Immigrant small business owners, especially recent immigrants to Canada, fall behind their non-immigrant peers in all labour market outcomes, despite similar pre-pandemic levels and trends. For employees, our research shows that smaller businesses downsized faster in the March and April 2020 in comparison to large businesses. Smaller firms did, however, increase their firm size much faster in May, June, and July, relative to larger firms, suggesting flexible business practices. And still, firms of all sizes have a total number of employees in July 2020 less than their January 2019 totals. Those still employed and working for smaller businesses had larger decreases in their actual hours worked per week at their main job when compared to larger firms. In combination with increasing wages for all business sizes following March 2020, our findings suggest that lower-wage employees were let go before higher-wage employees.

While a slew of proactive and reactive policy options are available to governments and stakeholders as described in [Gunderson \(2020\)](#), our paper is integral in documenting characteristics of businesses most affected by COVID-19. Knowing smaller businesses are some of the most affected means being able to craft policy aimed at reducing permanent job loss, and being better prepared to face future pandemics.

The literature on how small business owners and their employees are weathering the pandemic is scarce and motivates this research. In Canada, the self-employed have been

affected severely, with decreases larger for those that are immigrants, females and less educated (Beland et al., 2020d). In the United States, similar results are obtained by Fairlie (2020a) and Fairlie (2020b) who note decreased counts of minority small business owners (African-American, Latinx, and Asian), females, and immigrants, between February and April 2020.¹ We extend the work of Beland et al. (2020d). We incorporate additional months to study the rebound and also focus on workers of small businesses who are likely to be affected by business closure decisions made by owners. These workers are a good measure of how small business are coping with the pandemic. Importantly, we document the rebounds found in May through July, and any difference by owners characteristics. We also document the small businesses the most affected by the pandemic by industries, occupations, and geographic location in Canada.

Our results contribute to the growing literature that studies the impact of the pandemic on economic outcomes in Canada (Beland et al. (2020b,c,d); Lange and Warman (2020)) and other countries (Beland et al. (2020a); Rojas et al. (2020); Brodeur et al. (2020); Kahn 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 and summarizes the important trends from the pandemic while Section 5 concludes.

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

Canadian businesses' economic situation worsened in April 2020 with continued large losses in revenue due to the COVID-19 pandemic (Statistics Canada, 2020b). Many businesses experienced decreases in demand for their products, resulting in reductions in revenue greater than 20 percent (Statistics Canada, 2020a), and many changed their behaviour to better serve their clientele and employees.² While the general impacts of COVID-19 on the Canadian labour market is a fruitful field of research (Beland et al., 2020b; Lemieux et al., 2020; Koebel and Pohler, 2020), there is a dearth of detailed re-

¹Fairlie (2020b) and Fairlie (2020a) use the American Current Population Survey (which can be thought of as an American-equivalent of the LFS) for their results.

²45% of businesses claimed they needed to innovate how they engaged with their customers; 42.9% of businesses altered their production toward more topical goods like hand sanitizers and personal protective equipment (Statistics Canada, 2020a).

search relating COVID-19 and small businesses despite their importance. Small business, which employed up to 69.9% of the private labour force in 2018 and were responsible for 57% of the employment growth between 2013 and 2018 (Innovation, Science and Economic Development Canada, 2019), are vital to the Canadian economy. Yet, general entrepreneurship has been declining in Canada since the 1980's (Cao et al., 2017) and there is increasing concern that the pandemic will exacerbate this trend.

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-19.³ While some of the programs introduced ease pressure on cash-flow, others increase the availability of credit. This is integral because the hardships smaller businesses face during crises are related to tightened lending constraints (Bartik et al., 2020; Eggers, 2020) since their “smallness” disables them from hedging against uncertain shocks, making them unattractive to lenders. Still, concerns remain that the impact of government policy on small businesses is not as far reaching as required.

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). And though 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, 2020b). And small businesses were less likely to have mortgage payment deferrals approved (Tam et al., 2020).

The long term effects on the self-employed due to changes caused by COVID-19 are still 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

³The 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 CEBA loans (<https://www.canada.ca/content/dam/fin/publications/efs-peb/homepage/EFS2020-eng.pdf>). The loans are interest-free and allow loan forgiveness if any outstanding balance is repaid by December 2022 (<https://ceba-cuec.ca/>). Many other program which help businesses have also been introduced; important programs include: 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. For a complete list, see canada.ca/en/department-finance/economic-response-plan.html. 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).

to COVID-19. These arrangements have worked well for some businesses and will likely remain in place after the pandemic (Ozimek, 2020). This provides a disincentive for workers to become self-employed since non-pecuniary benefits of being self-employed are gained without additional risks. On the other hand, historically small businesses have 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.

The literature on how small business owners and their employees are weathering the pandemic is scarce and motivates this research. In Canada, the self-employed have been affected severely, with decreases larger for those that are immigrants, females and less educated (Beland et al., 2020d). In the United States, similar results are obtained by Fairlie (2020b) and Fairlie (2020a) 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 extend the work of Beland et al. (2020d) by incorporating additional months and study heterogenous impact in the recovery. We also focus on workers of small businesses who are likely to be affected by business closure decisions made by owners. These workers are a good measure of how small business are coping with the pandemic. We also document the small businesses the most affected by the pandemic by industries and occupations.

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. The LFS has been used extensively to study labour market dynamics and this is especially true during the COVID-19 pandemic. 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 enter and exit the survey. Six cohorts (about 60,000 households) are represented in each month of the LFS. Each cohort will stay for six months consecutively and 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, employment status, *etc.* 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. This view of the self-employed is consistent with research on small business owners in the U.S. (Fairlie, 2020b) and we use both terms, self-employed and small business owners, interchangeably. We can therefore 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 (although this also seems to be the case as in Beland et al. (2020d)) 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 based on firm sizes.

The PUMF version of the LFS has its own limitations. Household-level identification is not given and the PUMF is not linked to any other publicly available surveys, taxfiler or firm-level information, which restricts the scope of our analysis. Moreover, the unprecedented nature of the pandemic on labour markets need not be best captured by the LFS which is primarily used for constructing traditional labour market indicators. While we construct traditional unemployment and labour force participation measures, we also focus on raw counts of small businesses owners and Canadian aggregate hours worked to understand how the pandemic is affecting various dimensions of the labour market.

We restrict the LFS along the following dimensions. We use the LFS data from January 2017 to June 2020 since different variables (such as immigration status and occupational characteristics) were not available before then. 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, or who report working hours, above the 99th percentile. Much of our analysis focuses on changes in raw counts and figures of labour market trends of small business owners conditional on socioeconomic characteristics. All calculations should be considered weighted unless otherwise specified.

3.2 Empirical Strategy

We explore the relationship between COVID-19 and employees of small businesses using the following equation:

$$Y_{i,p,t} = \alpha + \beta PostCOVID_t + X_{i,p,t}\gamma + \theta_p + \delta_t + \varepsilon_{i,p,t}. \quad (1)$$

Equation 1 is used to understand how characteristics of individual i , in province p , at time t , influences their labour market outcome, $Y_{i,p,t}$. Labour market outcomes we are most interested in include actual hours worked at individuals' main job and changes in real wages.⁴ The onset of COVID-19 pandemic, and responses, is captured by the indicator variable $PostCOVID_t$ that takes on a value of 1 in all months after February 2020 and otherwise is zero. Importantly, we are interested in the magnitude and sign of β , which represents the average labour market response, conditional on control variables $X_{i,p,t}$, provincial fixed effects θ_p , and time fixed effects δ_t , following COVID-19. Our control variables include categorical variables for sex, marital status, age groups, highest level of educational attainment, and an indicator for those classified as an immigrant.

3.3 Descriptive Statistics

Appendix Table A1 displays summary statistics of employees broken down by the size of the firm and their characteristics. Most individuals are working nearly full-time, with work hours ranging between 32 and 34 hours across all different firm sizes as shown in the top panel. Individuals working for smaller firms earn less on average than those who work for larger firms.

The bottom panel shows counts and percentages based on different characteristics and constructed by row. For example, 16.6% of males work in firms with less than 20 employees, 17.6% 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. Generally, nearly half of the individuals work for firms greater than 500 individuals in size and indicated by the top most row labelled "Total". 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 16.2% 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

⁴It should be noted that outcomes such as labour force participation or unemployment rates are not feasible since all individuals are coded as working.

34.6% work at very large firms (“Greater than 500”). 54.5% of those with at least a post secondary accreditation work at firms with over 500 employees while only 15.3% of those with at least a post secondary education working for firms with fewer than 20 employees.

4 Results

In answering our research question, we investigate 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 and the workers of small businesses are the subject of our second subsection. Within each subsection, we first discuss figures and time trends of traditional labour market outcomes (unemployment, labour force participation, actual hours worked) conditional on various socioeconomic factors. We also analyse changes in the total employed and aggregate hours worked.

4.1 Small Business Owners

We explore the impacts of COVID-19 on the labour market of small business owners by constructing time series plots of labour market outcomes: unemployment, labour force participation, actual hours worked. Figures 1 to 2, and Appendix Figures A1 to A6, are all set in the same manner: the top figure is the unemployment rate while the middle and bottom panel are the labour force participation rate, and actual hours worked at main job per week⁵, respectively.⁶

Figure 1 shows the labour market outcomes for the self-employed by their incorporation status.⁷ We see a sharp increase in the unemployment rates for both incorporated and unincorporated self-employed beginning in March 2020 (Figure 1a) which is captured also by drops in labour force participation (Figure 1b) and actual hours worked in a week at their main job (Figure 1c). All labour market outcomes show evidence of rebounding in May through July, excepting the unemployment rates for the unincorporated. When comparing July 2020 to May 2020, the unincorporated had reductions in the unemployment rate in July to about 3.5 percent, increases in labour force participation to 96%, and are working about 5 more hours. For the incorporated self-employed over the same period, the unemployment and labour force participation rates are stabilizing at about 1.25 percent and 97 percent, respectively, and their actual hours of work increased by about 5 hours in June 2020 relative to May of the same year.

⁵We have also done this for total actual hours worked and find results which are qualitatively equivalent and nearly indistinguishable. Total actual hours worked measures are only slightly greater than actual hours of work at the main job.

⁶All figures use weighted aggregates of individuals who were self-employed, aged 25 to 64, and omitting those in the top one percentile of total actual weekly hours worked.

⁷The distinction 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)).

Figure 2 distinguishes the self-employed by those who have paid workers and those we do not. The unemployment rates across those with and without paid workers show similar increases following February 2020, both showing about a 1.5 increase in percentage points between February and May 2020. The trend continued for those with paid help, with small increases in unemployment rate. Those without paid help saw small decreases. This trend diverges in July 2020, where those without paid help nearly doubled their unemployment rate to around 3%. Labour force participation rates and the actual hours worked at main job measure rebounded in May, June, and July, 2020 across both groups of the self-employed, another potential reason for the large unemployment for those without paid help. For those with paid help, labour force participation increased by about 0.5 percentage points between May 2020 and June 2020, while hours worked are nearly back to levels prior to the pandemic. For those without paid help, June 2020 had increasing labour force participation and increasing hours worked relative to May 2020. Still, all measures are lower than their February 2020 levels, indicating continued labour market woes from economic shutdowns and COVID-19.

Appendix Figure A1 shows how COVID-19 has impacted self-employed individuals when differentiated by sex. The most notable feature of this figure is the divergence between male and female labour force participation among the working-aged self-employed during COVID-19. Females have a labour force participation rate just above 96% as of July 2020 which is down from about 97 percent in February 2020, but up from the series low 94% in April 2020; males show a similar pattern likewise nearly one percentage point lower in July when compared to February 2020. The unemployment rate increased for both sexes in July 2020, with female owners slightly higher than males. Actual hours worked display similar patterns of decline during March and April with recoveries made by both males and females, with slightly greater recovery for males. Appendix Figure A2 further breaks down these labour market characteristics for women with and without kids. “Kids” is used to refer to children aged 12 and below. While the labour force participation and actual hours worked are similar for women with and without kids, the unemployment rate for those women with kids is about 2 percentage points above women without kids in July of 2020. Similar trends occur for males with kids, which had increasing unemployment to near 2.5% in July 2020. Interestingly, female small business owners with kids are working slightly fewer hours than their female counterparts without kids. This is contrary to males with kids who began working more hours in July 2020 relative to their counterparts without kids.

Appendix Figure A3 captures changes in labour market characteristics due to COVID-19 for the self-employed with varying levels of education. Individuals with less than high school education have the highest unemployment rate in July of 2020 (about 3.5 percent) followed by those with a postsecondary accreditation (about 2.5 percent) and those with a high school diploma or some college (about 2.0 percent). In this outcome, there has not

been a rebounding of the unemployment rate, even though all categories of individuals by education status had increasing labour force participation and actual hours worked.

Appendix Figure A4 explores the relationship between highest educational attainment, sex, and whether or not they have kids under the age of 12. This can be viewed as a combination of previous outcome measures. This graphs captures some of the inequality which exists between the less educated and more educated which may lead to different labour market outcomes. Unemployment and Labour force participation graphs largely contain the patterns which were displayed in previous Appendix Figures A1, A2, and A3. Hours of work, however, give a key insight. For female small business owners, those without kids are better rebounding than their counterparts with kids. Females with kids *and* above a bachelors degree are working more hours compared to female small business owners with kids and without a bachelors degree. It is, therefore, the least educated, small business owners who are mothers that are struggling to increase their hours of work back to pre-pandemic levels. This is in stark contrast to male business owners with kids who are working more hours when compared to their male counterparts without kids. Interestingly, for male business owners with kids, it is the less educated who are working more hours than the more educated males with kids. Still, for males business owners, those who are working the least amount of hours are those without kids and with less than a bachelors degree.

Appendix Figure A5 distinguishes the self-employed by their immigration status. The immigrant self-employed are being heavily affected by the COVID-19 pandemic. Their unemployment rate is nearly double that of non-immigrants at 2 percent with labour force participation and actual hours worked at their main job being less than non-immigrants in June 2020. The unemployment rate of immigrants, again, nearly doubled to 4% in July 2020. This is of particular note since the unemployment rate was lower, and the labour force participation was higher, for immigrants prior to the pandemic. With respect to actual hours worked, immigrant self-employed worked similar amounts (or greater) prior to the pandemic but have worked less in all months after and including March 2020.

Appendix Figure A6 further disaggregates immigrants into those who are relatively new to Canada (less than or equal to 10 years since migration) compared to those who have been here for a longer time and non-immigrants. The series are considerably more volatile across all time periods for those who have recently immigrated to Canada (less than 10 years). While they had the worse labour market outcomes relative to those who have been in Canada greater than 10 years during April and May, July saw this finding return with immigrants who have been in Canada less time having higher unemployment and lower labour force participation relative to those who immigrated earlier.

Appendix Figure A7 breaks down the effect of COVID-19 by different age groups for the working-aged self-employed. The unemployment rate increases following March 2020 with all groups increasing their unemployment rate by about one percentage point

between the lowest point of 2020 with the highest point of 2020. June 2020 shows decreases in the unemployment rates for individuals who are 25 to 34 and 35 to 44, before continued increases in July. Those who are 45 to 54 and 55 to 64 had increases in their unemployment rate in July 2020. Labour force participation in July remained below the January 2020 rates for those younger than 55 by one to two percentage points. Those between 55 and 64 are seeing labour force participation rates similar to their January 2020 rates. The actual hours worked for self-employed decreased for all groups to below 20 hours a week in April 2020, with all groups having between 26 and 28 actual hours worked per week at their main job in July 2020. Still, this is at least 3 hours fewer than January 2020 actual hours worked (between 31 and 35) for all groups.

Appendix Figure A8 shows the labour market outcomes for the self-employed when grouped by those who are married. Small business owners who were married had a 2.5% unemployment rate compared to a 2.25% unemployment rate compared to the not married. This is considerably higher than in June where it looked like married business owners were set to recover much faster than unmarried business owners. The labour force participation rate for married and not married self-employed were both at about 96.75 percent in July 2020, representing an increase of 1.25 and just over 2.5 percentage points from May 2020 for married and not married, respectively. Although below January 2020 levels, the actual hours worked at their main job saw similar declines (recoveries) in March and April (May through July) 2020, for both the married and unmarried.

Traditional labour market outcomes (as presented in the previous figures) may not wholly capture the effects of COVID-19 on workers.⁸ In this vein, we explore the relationship between the aggregate employed and the aggregate hours worked for small business owners in Tables 1 through 4 Appendix Tables A2 and A3. Aggregate Hours worked and the counts of self-employed are being heavily affected as noted by Beland et al. (2020d) and we continue this investigation.

Table 1 displays key characteristics of small business owners and how they are changing since the onset of the pandemic. Many owners (-12.4%) left the labour force in July 2020 relative to February 2020, while those that remained active and working full-time hours decreased by -19.3% over the same period. Owners which worked part-time hours also decreased their aggregate actual hours worked by -3.2%. The number of incorporated (unincorporated) small business owners decreased by -22.2% (-12.5%) between February and July 2020. The number of small business owners who had paid help decreased by -24.4% between February and July 2020, which is considerably more than the -14.1% decrease of owners without paid help. It seems that those with employees are less likely to leave labour markets while those without employees may have greater flexibility given business conditions.

Table 2 further categorizes the decrease in small business owners by their individual

⁸See Lemieux et al. (2020) for a discussion on this issue.

characteristics. There are approximately the same reduction of female and male business owners of -15.7% and -18.0%, respectively. There were about -6 percentage points fewer immigrant small business owners than non-immigrant business owners, who themselves had about a -15% reduction between February and July 2020. Marital status of the owner does not seem to differentiate the impact of COVID-19 on small business owners with both married and not married owners seeing decreases of -18.1% and -16.4%, respectively. Having children who are aged 12 or younger impacts females and males differently. The number of female owners with (without) kids decreased by -16.5% (-14.2%). The number of male owners with (without) kids decreased by -14.9% (-24.5%).

Those small business owners with less than a high school education were most affected by the pandemic since the counts of business owners decreased by -20.3%. Owners who completed high school or some form of post secondary education had decreases equal to -11.4% and -18.4%, respectively, between February 2020 and July 2020. There was a decrease in small business owners across all age groups between February 2020 and July 2020, with those aged 35 to 54 most affected (-20.8%). The number of owners aged 25 to 34 and aged 55 and 64 had percentage decreases equal to -10.0% and -14.0%, respectively, between February and July of 2020.

Table 2 further documents the impact of COVID-19 on small business owners' hours worked. Relative to the number of small business owners in Table 1, many of the numbers in Table 2 are larger in magnitude. Still, decreases across all categories persist in the aggregate hours worked by small business owners. Females reduce their hours worked (-20.5%) considerably more than their male counterparts (-15.8%) between February 2020 and July 2020. In this labour market measure, 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 -19.9% (-13.5%); Women (men) without kids reduced their aggregate hours worked by -21.9% (-20.3%). Across the same time period, immigrant business owners reduced their hours by nearly -24.6%, almost double their non-immigrant equivalents (-13.8%). Those who are unmarried (married) reduced their total aggregate hours worked by -19.7% (-15.97%). Aggregate hours worked decreased for those with less than high school education, a high school diploma or some college, and those with post secondary, by -13.2%, -9.1%, and -20.0%, respectively, between February and July of 2020. Small business owners aged 35 to 54 were the most affected age group between February 2020 and June 2020 where aggregate hours worked were reduced by -21.6%. Younger individuals (25 to 34) and older individuals (55 to 64) reduced their aggregate hours by -5.9% and -14.7% across the same period.

In general, we see large declines in traditional labour market measures, counts of small active business owners and their aggregate hours worked, between March and April, small recoveries in May and June, and heterogeneity in July. Some of those most affected, including females, the less educated, and immigrants, are those who are historically mired

in economic hardship. Indeed, when creating cross-tabulations of sex, education, and young children variables, we find that less educated females with young children have the lowest labour force participation rates throughout the Canadian epidemic.

Appendix Tables A2 and A3 show the change in active small business owners when broken down by various geographic regions of Canada. In particular, Appendix Table A2 focuses on Atlantic Canada (Newfoundland and Labrador, Nova Scotia, Prince Edward Island, New Brunswick), Quebec, and Ontario, while Appendix Table A3 focuses on Manitoba plus Saskatchewan, Alberta, and British Columbia. This paragraph summarizes sex differences and how the less educated are being affected though the tables contain more information. Many of the trends from all of Canada persist at the regional levels for small business owners. This is particularly true in Manitoba plus Saskatchewan and Quebec which have double-difference measures which show females are substantially more affected than men. However, there is significant heterogeneity across provinces for those with and without kids. Less than high school small business numbers in Atlantic Canada, Quebec, and Ontario, follow the national trends. In the Canadian West, Manitoba and Saskatchewan had the least educated least affected, with large increases between February and July 2020. Small Business numbers in Alberta and BC reduced by -83.0% and -94.6%, respectively, when using our double-difference measures.

Tables 3 and 4 show how the total number of small businesses owners and their aggregate hours have changed by North American Industry Classification System (NAICS) and National Occupation Classification (NOC), respectively. Owners in all industries, excepting non-durable manufacturing and educational services, experienced declines in their total number during pandemic. The largest decreases in the number of active small businesses were experienced by Forestry, Fishing, Mining, and Oil and Gas (-35.1%), Accommodations and Food (-25.8%), Agriculture (-22.8%) between February and July 2020. Those industries which are focused around natural resources are less affected when considering our double-difference measures because they were also declining in 2019. Our double-difference measures show that the most affected industries were Accommodations and Food (-36.5%), Other Services (-31.5%), and Health Care and Social Assistance (-25.5%). Excepting non-durable manufacturing, all other industries faced between a -24.5% (Information, Culture, and Recreation) and -3.6% (Finance, Insurance, and Real Estate). Aggregate hours worked by all small business owners decreased across all industries, excepting the agricultural industry. Natural Resource, and Food and Accommodations industries were still amongst the highest affected industries, with Information, Culture and Social Assistance, and Educational Services also being highly affected industries.

Table 4 investigates how the self-employed are impacted based on occupational characteristics from the National Occupation Classification's (NOC) broad categories. Excepting Manufacturing and Utilities, all nine other occupational categories experienced

declines. Little affected were the number of individuals whose occupations in Education, Law and Social, Community and Government Services (Educ/LAW/Social) who declined by about -3.8% between February and July 2020. Similar to the NAICS, health occupations experienced some of the largest declines (-25.8) over this period. Similarly, the number of small business owners who were primarily in management had a decrease of -23.4%. Services and Sales, Natural Resources and Agriculture, Business and Finance and Administration, Natural and Applied Science occupations, Art and Culture and Recreation, all experienced declines between -18% and -11%. The bottom panel of Table 4 uses the same NOC industries but measures the aggregate changes in hours worked by small business owners. Those working in Natural Resources and Agricultural occupations and those in Manufacturing and Utilities had positive growth through the pandemic. All other occupations saw decreases in their aggregate hours worked. Owners working in Arts, Culture and Recreational occupations reduced their number of hours worked by -32.8% between February and July 2020. Understandably, owners working in the sales and service sector and those working in health occupations decreased their hours worked -23.5% and -23.5%, respectively, during the pandemic. Importantly, double-difference measures, excepting the number of owners in Manufacturing and Utilities, are all negative, independent of occupation or labour market measures.

4.2 Employees of Varying Business Sizes

The top row of Figure 3 shows the aggregate counts of individuals working by various sizes of firms and establishments. The LFS defines firms and establishments slightly differently where firms are “number of employees at *all* of the employer [as] collected from employees” (emphasis added) while establishment size represents the “number of employees at the location of employment (building or compound) [as] collected from employees.” (Statistics Canada, 2020c) Figure 3a shows that prior to COVID-19, just over 6 million individuals work for large firms (greater than 500 individuals) while about 6 million work for firms with less than 500 employees. This is a contrast to where individuals work which is characterized in Figure 3b. Most individuals work at locations that have less than 500 employees present. Both Figures 3a and 3b show that beginning in March 2020, there were reductions in those who claimed to work for all sizes of businesses, with those working at locations with less than 100 employees being most affected. May and June of 2020 are showing signs of recovery back to pre-COVID-19 counts of individuals at work while July shows recovery slowing.

The loss-of- and return-to-work dynamics are explored further in Figures 3c and 3d which shows the percentage change in aggregate counts between January 2019 and July 2020, using January 2019 as the base month. Prior to the COVID-19 pandemic, small firms saw modest growth relative to large firms while large establishments had greater

growth compared to small establishments. A clear pattern emerges following COVID-19. Firms of all sizes saw substantial loss in counts in March and April, before seeing more modest losses in counts during May, and even fewer losses in June. Fewer individuals reported working for smaller firms in May and June. Those working for larger firms saw losses too, but not nearly as many as those working for smaller firms. When we condition on establishment size (how many people work at a location) we see little effects in May and June for those working for businesses with greater than 100 employees following a decline in March and April. In this case, many larger establishments were near their January 2019 levels as of June 2020. However, those who worked at smaller establishments saw substantial decreases in counts which persist well into June 2020 and represent a near 10 percent loss relative to their 2019 counts. By July 2020, we see changes appearing to level out.

Tables 5 and 6 show the decrease in counts and aggregate hours, respectively, for individuals who work in differently sized firms or establishments. Recall that firms are the total number of workers at all locations of employment while establishments are the number of employees at the location of employment [Statistics Canada \(2020c\)](#). Table 5 shows that across all business sizes, independent of using firm or establishment size, there were substantial decreases between February 2020 and July 2020 in the total number of employed, showing the wide extent to which COVID-19 is impacting businesses. Smaller firms (establishments) were particularly affected. Employees working for firms (establishments) with less than 20 or between 20 to 99 employees have -18.9% (-19.7%) and 23.4% (-22.3) percentage decreases, respectively, from February to July 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 -17.3% (-15.0%) and -19.4% (-20.2%), respectively, in the counts of employed. Our double-difference measures largely reinforce these findings since all columns (excepting establishments with less than 20 employees) show decreases similar, or larger, in magnitude. This suggests that firms who were growing between February and July 2019 saw large reductions in employees during COVID-19. And even for those establishments with less than 20 individuals, the loss in employees in 2020 (-18.17) dwarfed the loss in employees in 2019 (-2.27) by nearly nine times over. Firms of all sizes reduced their employees at slower rates in July relative to May 2020 with smaller firms increasing the number of employees.

Table 6 shows the aggregate hours worked broken down by business size. Similar to Table 5, we see a decrease across all columns between February and July 2020 and in our double-difference measures. Firms (establishments) with less than 20 workers and firms (establishments) with between 20 and 99 workers saw percentage decreases of -8.7% (-11.3%) and -15.6% (-19.7), respectively, between February and July 2020. Larger firms (establishments) such as those with between 100 and 499 employees and those with greater than 500 employees had percentage changes of -10.6% (-9.9%) and -17.0% (-15.4),

respectively. Just as small firms added jobs in July relative to May of 2020, so too did firms less than 500 individuals all increase their aggregate hours worked. Firms with less than 20 individuals increased their aggregate hours worked in July by 26.5% relative to May 2020, a sign of recovery for small businesses.

Tables 5 and 6 help summarize 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 hours being worked, and individual hours being worked. Second, while establishment and firm size show some variation in counts and aggregate hours, patterns are largely the same. Third, In aggregate, those working for businesses (either firms or establishments) with between 100 to 499 employees fared best through COVID-19 and those who worked or are working for larger firms were not necessarily insulated from the pandemic.

To better tease out the relationship for hours worked, we estimate equation 1. Table 7 shows these estimates and how working-aged, employed, individuals are being impacted following the onset of COVID-19. Columns differentiate the subsample used in our estimation, with column 1 representing the whole sample. The second column is the smallest firm/establishment size (less than 20), while successive columns monotonically increasing business sizes to column 5 which shows those firms/establishments with greater than 500 employees. The top panel uses the firm size to determine subsamples while the bottom panel uses establishment sizes. On average, all individuals saw a decrease in hours worked at their main job equal to about -1.86 in levels. Relative to a 37.5 hour work week, this is a decrease in hours worked by nearly 5%. Firms with less than 20, between 20 to 99, between 100 to 499, and greater than 500, employees, saw decreases in levels of hours equal to -2.8, -2.3, -1.7, and -1.5, respectively. Estimates using establishment size display a similar pattern: less than 20, between 20 to 99, between 100 to 499, and greater than 500, employees, saw decreases in levels of hours equal to -2.5, -2.0, -1.3, and -1.2, respectively. It should be noted that these values may offer lower bounds for hours lost as we are forced to use samples of the employed and cannot include individuals the hours lost for those that lost their job.

Appendix Table A4 is similarly structured to 7 but uses real hourly wages as the outcome variable in equation 1. In months amidst the pandemic, we see an increase in the average real hourly wage of about \$1.23 CAD. The top panel of Appendix Table A4 shows those firms with less than 20, between 20 to 99, between 100 to 499, and greater than 500, employees, saw an increase in levels of wages equal to \$0.88, \$1.18, \$1.31, and \$1.11, respectively. When looking at employees who work at establishments with less than 20, between 20 to 99, between 100 to 499, and greater than 500, employees, there are increases in wages equal to \$1.06, \$1.42, \$0.70, and \$1.32, respectively. While no clear pattern emerges when differentiating between firm/establishment size, all firms and establishments of varying sizes see an increase in their real hourly wages. This combined

with previous results documenting large job loss and labour force participation seems to suggest those who remain employed are likely to be higher earners. Indeed, this is consistent with [Statistics Canada \(2020d\)](#) and [Statistics Canada \(2020e\)](#) which notes that while aggregate earnings decreased in April and May, the average weekly earnings has been increasing as low-wage workers are let go.

This is important for understanding who is most affected. Those who work for large firms or at establishments with many people are considerably better off than those working for, or at, smaller businesses. To summarize, much the impact from COVID-19 on individuals working for smaller firms are more likely to see a reduction hours worked.

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 have begun to reopen their economy as in May and June 2020, our research confirms increasing employment, hours worked, and small business ownership relative to March and April 2020. These improvements are often still below pre-March 2020 trends with some demographic groups, such as women and immigrant small business owners, seeing considerably worse rebounds than their respective counterparts.

Canadian employers are largely small businesses, Their relevance for job creation and labour demand is integral for policymakers concerned with adverse labour market outcomes resulting from the COVID-19 pandemic. 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.

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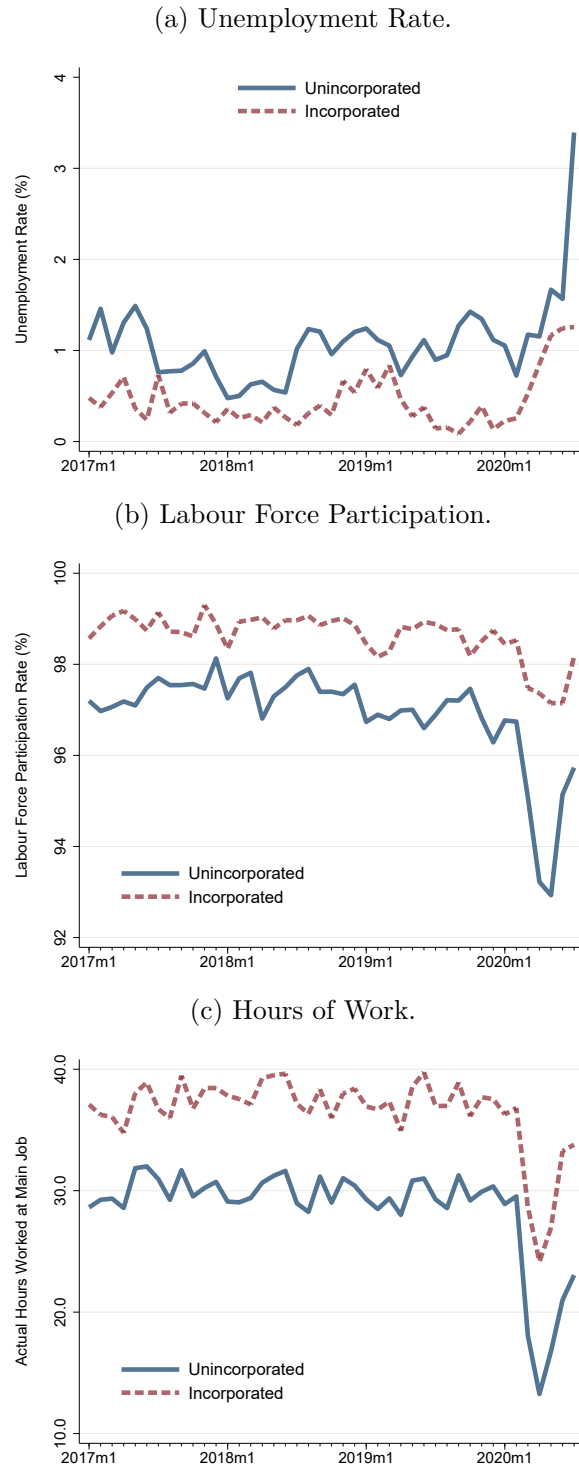
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7 Figures

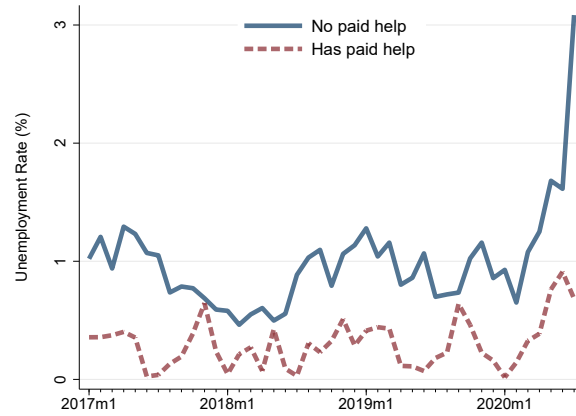
Figure 1: Labour Market Outcomes for the Self-Employed by Incorporation Status.



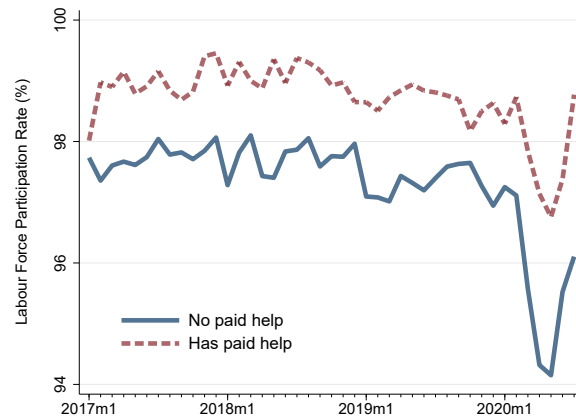
Notes: Authors' calculations. Data from the Canadian Labour Force Survey with final weights applied to all subgraphs. The time period is January 2017 to July 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in total actual hours worked at main job, and below the 99th-percentile in real hourly wages. Panel A plots the unemployment rate by incorporation status. Panel B plots the labour force participation by incorporation status. Individuals in the labour force were employed at work, employed but absent from work, or unemployed, during the survey week. Panel C plots the usual total hours work by incorporation status. This includes individuals that were in the labour force with those who were unemployed were assigned a value of zero.

Figure 2: Labour Market Outcomes for the Self-Employed by those with Paid Help.

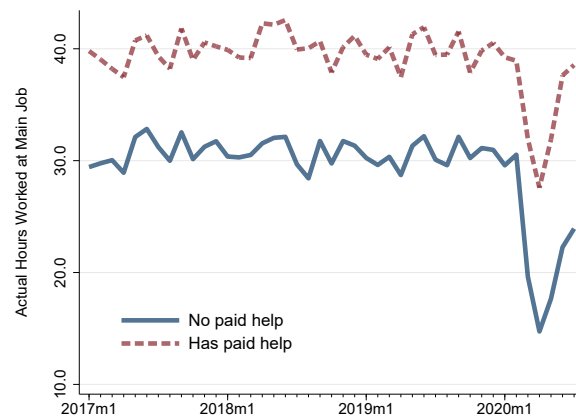
(a) Unemployment Rate.



(b) Labour Force Participation.

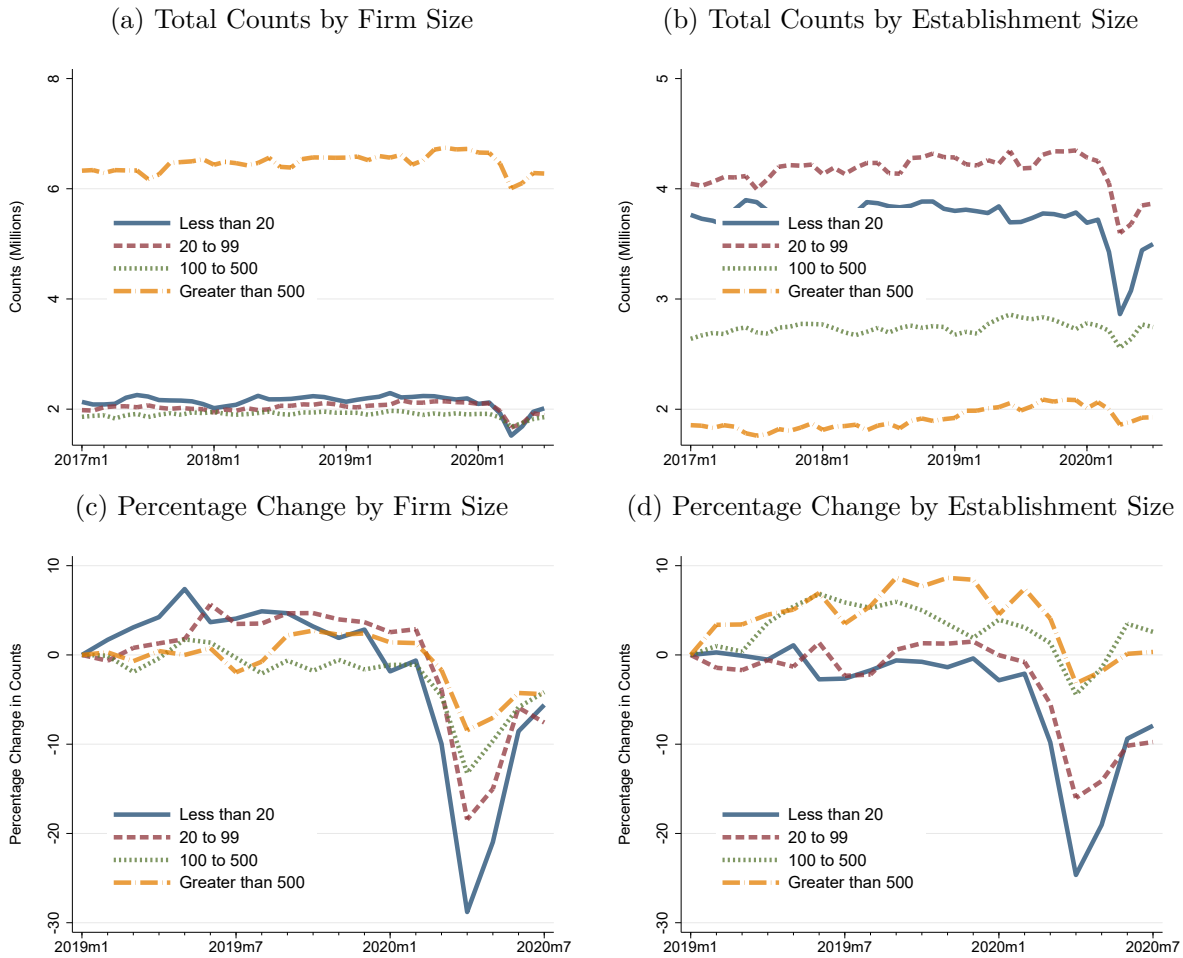


(c) Hours of Work.



Notes: Authors' calculations. Data from the Canadian Labour Force Survey with final weights applied to all subgraphs. The time period is January 2017 to July 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in total actual hours worked at main job, and below the 99th-percentile in real hourly wages. Panel A plots the unemployment rate by those with paid help. Panel B plots the labour force participation by those with paid help. Individuals in the labour force were employed at work, employed but absent from work, or unemployed, during the survey week. Panel C plots the usual total hours work by those with paid help. This includes individuals that were in the labour force with those who were unemployed were assigned a value of zero.

Figure 3: Counts by Firm and Establishment Size.



Notes: Authors' calculations. Data from the Canadian Labour Force Survey with final weights applied to all subgraphs. Observations are only those who are aged 25 to 64, below the 99th-percentile in total actual hours worked at main job, and below the 99th-percentile in real hourly wages. Panel A (Firm Size) and B (Establishment Size) plots the counts of individuals between January 2017 and July 2020 by the size of the firm. Panel C (Firm Size) and D (Establishment Size) shows the percentage change in counts between January 2019 and July 2020 where January 2019 is considered as the base year.

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
July 2020	3280	2621	4330	1571	5978	55.49	9.30
Feb 2019	3781	3382	5087	2076	7211	65.61	9.54
July 2019	3867	3473	5115	2225	7410	70.55	9.27
Jul - May 2020 (% Δ)	1.71%	-5.96%	-1.47%	-2.86%	-0.66%	33.63%	17.64%
Jul - Feb 2020 (% Δ)	-12.47%	-22.19%	-14.08%	-24.35%	-16.18%	-19.27%	-3.22%
Jul - Feb 2019 (% Δ)	2.29%	2.68%	0.55%	7.18%	2.76%	7.52%	-2.85%
2020 - 2019 Δ	-14.76%	-24.87%	-14.63%	-31.52%	-18.94%	-26.78%	-0.37%

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and July 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 (July - February 2020) - (July - February 2019).

Table 2: Small Business by Individual Characteristics

	Sex		Immigrant Status		Marital Status		ACTIVE SMALL BUSINESS COUNT				Education Level			Age Group		
	Male	Female	Non Immigrant	Immigrant	Not Married	Married	Woman	Man	No Young kids	Has Young kids	Less than hs	Hs & some col	Post Sec	25 to 34	35 to 54	55 plus
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
Feb 2019	4488	2675	4975	2188	2731	4432	821	1871	1325	3146	498	1531	5134	1232	3924	2008
Jul 2019	4484	2856	5067	2273	2791	4549	877	2016	1312	3135	541	1620	5179	1263	4100	1976
Jul - May 2020 (% Δ)	-2.75%	-0.44%	-1.18%	-3.29%	0.76%	-3.27%	-8.04%	0.37%	-9.88%	2.32%	1.31%	4.56%	-3.96%	0.39%	-4.51%	1.90%
Jul - Feb 2020 (% Δ)	-17.98%	-15.67%	-15.18%	-21%	-18.16%	-16.44%	-14.15%	-16.48%	-24.51%	-14.89%	-20.28%	-11.37%	-18.40%	-9.97%	-20.75%	-14.00%
Jul - Feb 2019 (% Δ)	-0.11%	6.79%	1.84%	3.90%	2.20%	2.64%	6.76%	7.78%	-0.95%	-0.36%	8.69%	5.82%	0.87%	2.58%	4.49%	-1.55%
2020 - 2019 Δ	-17.87%	-22.46%	-17.02%	-24.90%	-20.37%	-19.08%	-20.91%	-24.26%	-23.56%	-14.53%	-28.97%	-17.19%	-19.27%	-12.55%	-25.24%	-12.46%
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
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
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
Jul - May 2020 (% Δ)	25.22%	45.78%	28.66%	37.15%	39.63%	26.87%	35.56%	50.13%	20.02%	27.70%	35.74%	31.30%	30.51%	52.27%	29.31%	23.00%
Jul - Feb 2020 (% Δ)	-15.75%	-20.46%	-13.76%	-24.63%	-19.66%	-15.97%	-21.93%	-19.88%	-20.34%	-13.51%	-13.23%	-9.10%	-20.03%	-5.90%	-21.65%	-14.68%
Jul - Feb 2019 (% Δ)	5.29%	8.17%	4.89%	8.97%	3.49%	7.86%	7.80%	8.31%	4.11%	5.82%	8.95%	18.67%	2.16%	9.12%	7.57%	1.39%
2020 - 2019 Δ	-21.04%	-28.62%	-18.65%	-33.60%	-23.15%	-23.83%	-29.73%	-28.19%	-24.45%	-19.32%	-22.18%	-27.76%	-22.19%	-15.02%	-29.22%	-16.07%

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and July 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 (July - February 2020) - (July - 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/Insur/REstate	Prof/Scient/Tech	Mgmt/Admin/OtherSupport	Educational Services	HealthCare/SocAssist	Info/Culture/Rec	Accomm/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				
Feb 2019		539	205	1102	92	109	147	435	490	509	978	458	161	786	282	235	633				
Jul 2019		523	167	1152	88	85	179	471	472	477	1004	428	176	831	296	276	715				
Jul - May 2020 (% Δ)		25.85%	-14.69%	-5.58%	-24.74%	4.60%	10.08%	-1.50%	3.61%	-4.87%	-6.18%	-2.35%	-0.64%	-9.32%	3.08%	-4.39%	4.91%				
Jul - Feb 2020 (% Δ)		-22.82%	-35.11%	-22.11%	-18.89%	4.60%	-14.38%	-16.31%	-8.01%	-4.25%	-14.04%	-11.51%	4%	-20.40%	-17.02%	-25.76%	-15.50%				
Jul - Feb 2019 (% Δ)		-2.97%	-18.54%	4.54%	-4.35%	-22.02%	21.77%	8.28%	-3.67%	-6.29%	2.66%	-6.55%	9.32%	5.73%	4.96%	17.45%	12.95%				
2020 - 2019 Δ		-19.85%	-16.57%	-26.65%	-14.54%	26.62%	-36.15%	-24.59%	-4.34%	-7.97%	-16.70%	-4.96%	-5.32%	-26.13%	-21.99%	-43.20%	-28.46%				
Feb 2020		3.73	0.94	10.67	1.29	1.00	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				
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				
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				
Jul - May 2020 (% Δ)		16.70%	-12.86%	36.90%	7.72%	39.98%	21.23%	35.85%	32.10%	21.48%	10.95%	18.78%	7.53%	51.31%	19.06%	47.84%	104.35%				
Jul - Feb 2020 (% Δ)		0.26%	-30.11%	-10.35%	-26.70%	11.08%	-20.62%	-2.89%	-14.52%	-30.48%	-20.19%	-18.23%	-33.31%	-19.06%	-39.97%	-31.06%	-9.95%				
Jul - Feb 2019 (% Δ)		5.19%	-16.19	31.27%	-14.20%	33.36%	18.88%	22.91%	-0.01%	-3.52%	-4.33%	7.53%	23.59%	-4.30%	-11.93%	28.65%	0.10%				
2020 - 2019 Δ		-4.94%	-13.93%	-41.62%	-12.50%	-22.28%	-39.50%	-25.79%	-14.51%	-26.96%	-15.87%	-25.76%	-56.90%	-14.76%	-28.04%	-59.72%	-10.05%				

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and July 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 (July - February 2020) - (July - February 2019).

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

	Active Small Business Count									
	Business/Fin/Admin	Health	Management	Natural/AppliedSci	NaturalResour/Agric	Art/Culture/Rec	Educ/Law/Socia	Manufact/Utilities	Sales/service	Trades/Transpo/Equip
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
Feb 2019	637	539	1851	372	244	489	453	135	1120	1323
Jul 2019	697	556	1892	358	239	478	512	125	1129	1354
Jul - May 2020 (% Δ)	-6.32%	-13.08%	0.87%	-11.38%	-10.86%	8.67%	0.21%	-4.10%	-0.12%	1.43%
Jul - Feb 2020 (% Δ)	-16.56%	-25.79%	-23.41%	-15.54%	-15.81%	-11.28%	-3.75%	0.86%	-17.62%	-12.13%
Jul - Feb 2019 (% Δ)	9.42%	3.15%	2.22%	-3.76%	-2.05%	-2.25%	13.02%	-7.41%	0.80%	2.34%
2020 - 2019 Δ	-25.98%	-28.94%	-25.62%	-11.78%	-13.76%	-9.03%	-16.78%	8.27%	-18.42%	-14.47%
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
Feb 2019	6.88	5.85	18.07	5.17	1.25	5.42	5.74	1.24	10.88	14.67
Jul 2019	6.57	6.06	21.09	4.72	1.60	4.65	5.30	1.40	11.51	16.94
July - May 2020 (% Δ)	4.38%	55.09%	24.55%	11.75%	3.24%	45.77%	33.25%	26.12%	71.33%	32.90%
July - Feb 2020 (% Δ)	-18.21%	-23.46%	-19.37%	-21.08%	11.21%	-32.57%	-9.89%	1.39%	-23.47%	-7.50%
July - Feb 2019 (% Δ)	-4.47%	3.58%	16.73%	-8.76%	27.56%	-14.25%	-7.67%	12.81%	5.80%	15.44%
2020 - 2019 Δ	-13.74%	-27.04%	-36.10%	-12.32%	-16.35%	-18.32%	-2.22%	-11.42%	-29.27%	-22.94%

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and July 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 (July - February 2020) - (July - February 2019).

Table 5: Counts of Individuals Employed by Businesses Sizes

	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	6621	6023	20924	11701	13370	8678	6491
May 2020	4820	4968	4998	17437	8789	10512	7534	5389
Jul 2020	5412	5079	4983	16857	9396	10384	7374	5178
Feb 2019	6960	6517	6202	21111	12217	13539	8666	6368
Jul 2019	7072	6739	6143	20492	11775	13320	9020	6331
Jul - May 2020 (% Δ)	12.27%	2.22%	-0.32%	-3.32%	6.90%	-1.22%	-2.13%	-3.93%
Jul - Feb 2020 (% Δ)	-18.89%	-23.29%	-17.27%	-19.44%	-19.70%	-22.34%	-15.03%	-20.24%
Jul - Feb 2019 (% Δ)	1.61%	3.35%	-0.94%	-2.96%	-3.61%	-1.64%	4.09%	-0.57%
2020 - 2019 Δ	-20.50%	-26.64%	-16.32%	-16.32%	-16.09%	-20.70%	-19.12%	-19.12%

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and July 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 (July - February 2020) - (July - February 2019).

Table 6: Employees' Aggregate Hours Worked by Businesses Sizes

	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	67.07	224.25	122.55	145.46	96.41	69.41
May 2020	49.74	57.25	58.05	198.96	94.60	119.96	87.90	61.55
Jul 2020	62.92	62.12	59.96	186.07	108.68	116.80	86.85	58.75
Feb 2019	69.03	69.72	67.02	218.36	122.87	143.07	92.37	65.82
Jul 2019	71.76	71.18	62.93	191.45	117.85	128.98	90.46	60.04
Jul - May 2020 (% Δ)	26.50%	8.50%	3.28%	-6.48%	14.88%	-2.64%	-1.19%	-4.55%
Jul - Feb 2020 (% Δ)	-8.70%	-15.60%	-10.61%	-17.02%	-11.32%	-19.70%	-9.92%	-15.36%
Jul - Feb 2019 (% Δ)	3.95%	2.10%	-6.10%	-12.32%	-4.09%	-9.85%	-2.07%	-8.78%
2020 - 2019 Δ	-12.65%	-17.70	-4.50%	-4.70%	-7.24%	-9.85%	-7.85%	-6.58%

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and July 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 (July - February 2020) - (July - February 2019).

Table 7: Actual Weekly Hours Worked at Main Job by Business Sizes

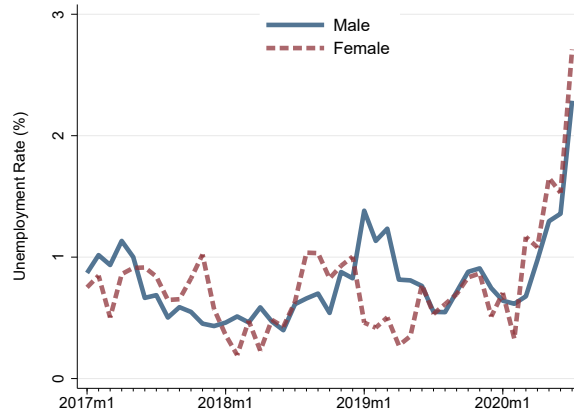
	FIRM SIZE				
	All Individuals	Less than 20	20 to 99	100 to 500	Greater than 500
Post COVID	-1.860 (0.2585)	-2.802 (0.4165)	-2.263 (0.4983)	-1.721 (0.3124)	-1.512 (0.2732)
Observations	1739762	306801	282891	266845	883225
ESTABLISHMENT SIZE					
Post COVID	-1.860 (0.2585)	-2.522 (0.2701)	-2.035 (0.4345)	-1.311 (0.3164)	-1.190 (0.1400)
Observations	1739762	555947	586390	363071	234354
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 July 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.

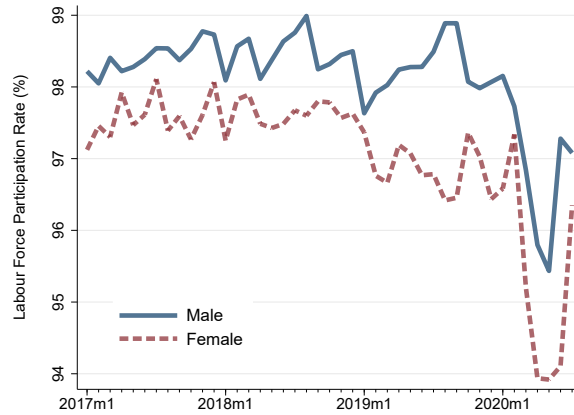
A2 Appendix Figures

Figure A1: Labour Market Outcomes for the Self-Employed by Sex.

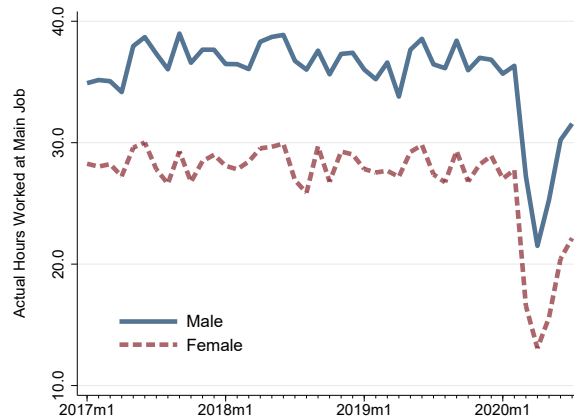
(a) Unemployment Rate.



(b) Labour Force Participation.

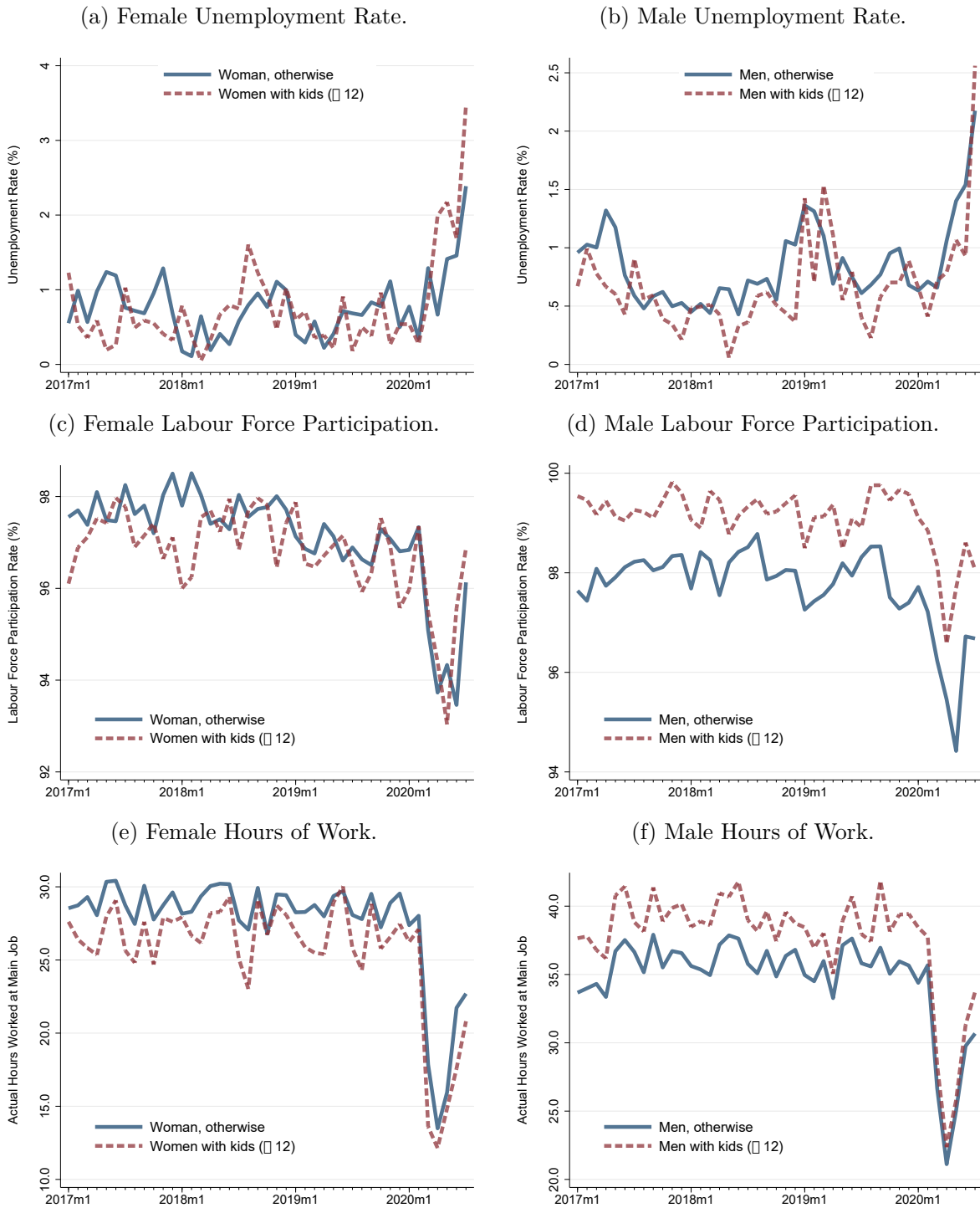


(c) Hours of Work.



Notes: Authors' calculations. Data from the Canadian Labour Force Survey with final weights applied to all subgraphs. The time period is January 2017 to July 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in total actual hours worked at main job, and below the 99th-percentile in real hourly wages. Panel A plots the unemployment rate by sex. Panel B plots the labour force participation by sex. Individuals in the labour force were employed at work, employed but absent from work, or unemployed, during the survey week. Panel C plots the actual hours worked at main job by sex. This includes individuals that were in the labour force with those who were unemployed were assigned a value of zero.

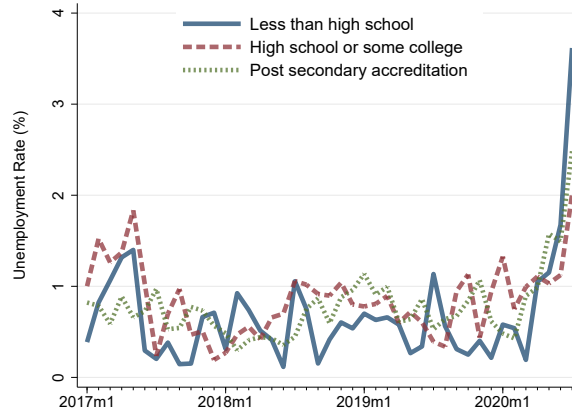
Figure A2: Labour Market Outcomes for the Self-Employed for Women with and without Kids.



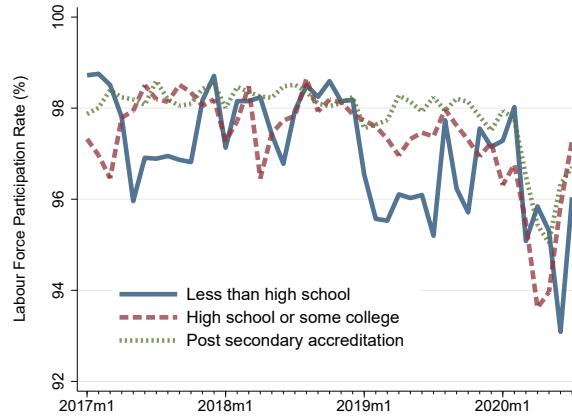
Notes: Authors' calculations. Data from the Canadian Labour Force Survey with final weights applied to all subgraphs. The time period is January 2017 to July 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in total actual hours worked at main job, and below the 99th-percentile in real hourly wages. The top row plots the unemployment rate, with separate columns for women and men, for those with and without kids under the age of 13. The middle row plots the labour force participation, with separate columns for women and men, for those with and without kids under the age of 13. Individuals in the labour force were employed at work, employed but absent from work, or unemployed, during the survey week. The bottom row plots the actual hours worked at main job, with separate columns for women and men, for those with and without kids under the age of 13. This includes individuals that were in the labour force with those who were unemployed were assigned a value of zero.

Figure A3: Labour Market Outcomes for the Self-Employed by Highest Educational Attainment.

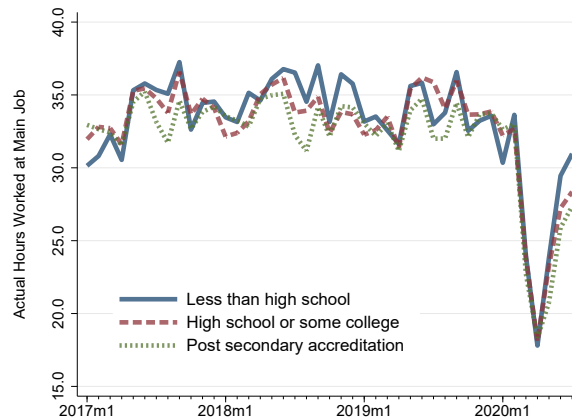
(a) Unemployment Rate.



(b) Labour Force Participation.

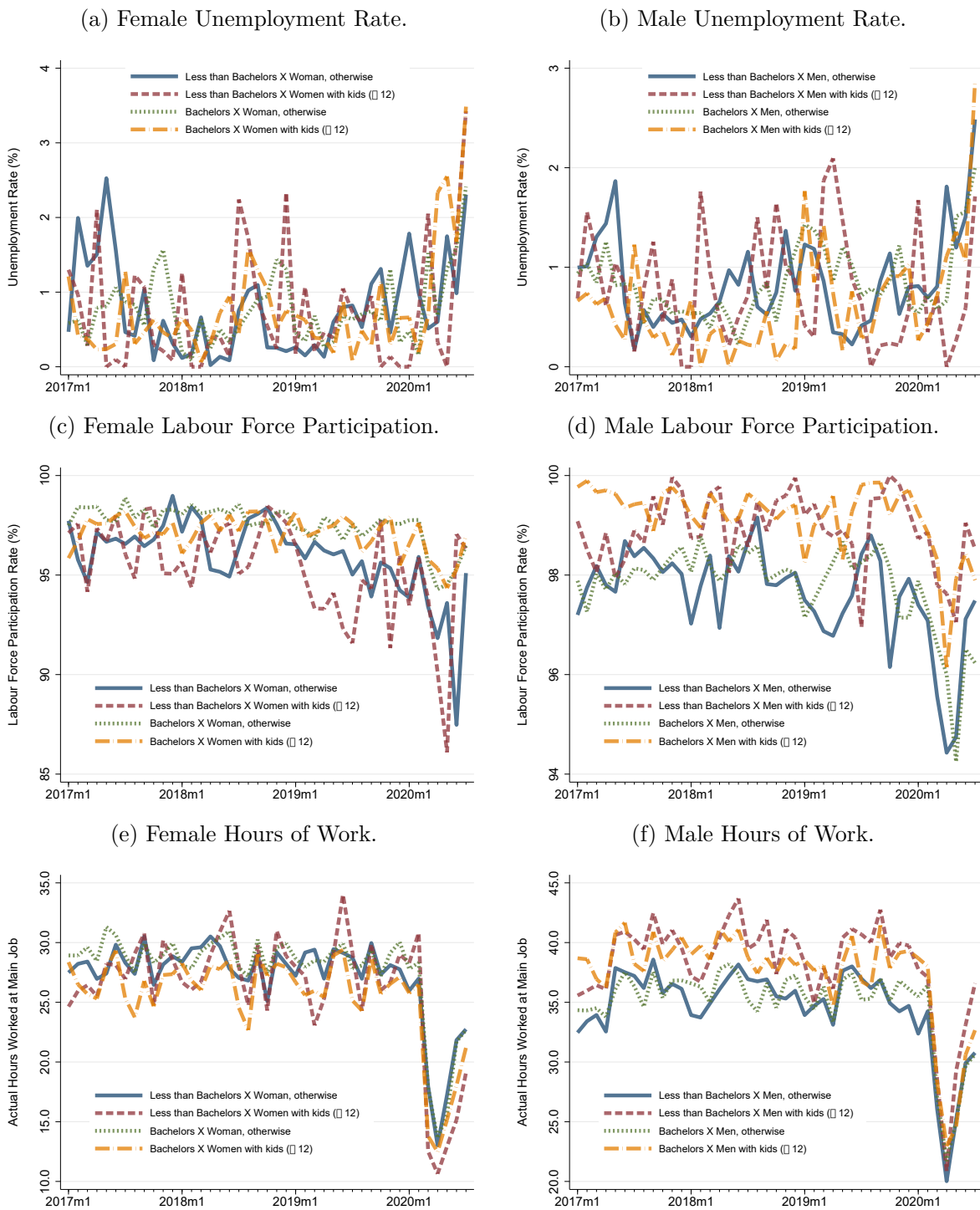


(c) Hours of Work.



Notes: Authors' calculations. Data from the Canadian Labour Force Survey with final weights applied to all subgraphs. The time period is January 2017 to July 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in total actual hours worked at main job, and below the 99th-percentile in real hourly wages. Panel A plots the unemployment rate by highest educational attainment. Panel B plots the labour force participation by highest educational attainment. Individuals in the labour force were employed at work, employed but absent from work, or unemployed, during the survey week. Panel C plots the actual hours worked at main job by highest educational attainment. This includes individuals that were in the labour force with those who were unemployed were assigned a value of zero.

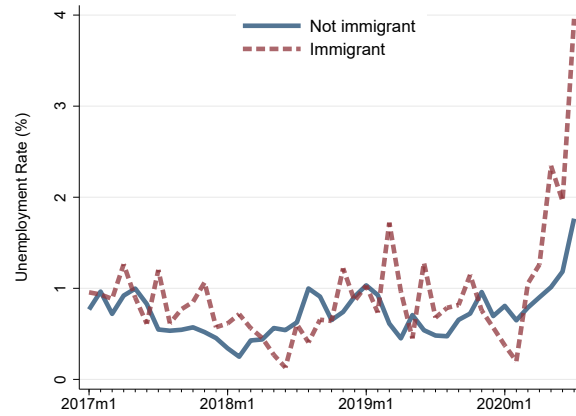
Figure A4: Labour Market Outcomes for the Self-Employed for Women with and without Kids.



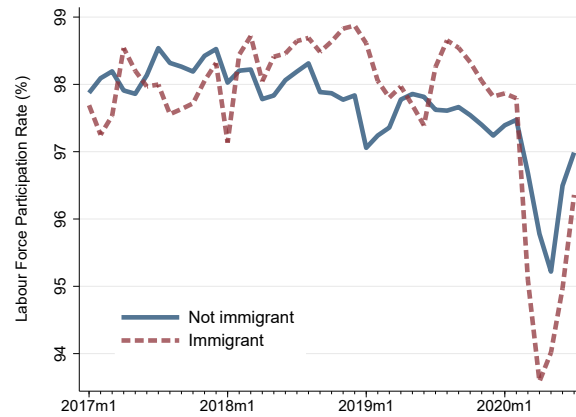
Notes: Authors' calculations. Data from the Canadian Labour Force Survey with final weights applied to all subgraphs. The time period is January 2017 to July 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in total actual hours worked at main job, and below the 99th-percentile in real hourly wages. The top row plots the unemployment rate, with separate columns for women and men, for those with and without kids under the age of 13. The middle row plots the labour force participation, with separate columns for women and men, for those with and without kids under the age of 13. Individuals in the labour force were employed at work, employed but absent from work, or unemployed, during the survey week. The bottom row plots the actual hours worked at main job, with separate columns for women and men, for those with and without kids under the age of 13. This includes individuals that were in the labour force with those who were unemployed were assigned a value of zero.

Figure A5: Labour Market Outcomes for the Self-Employed by Immigration Status.

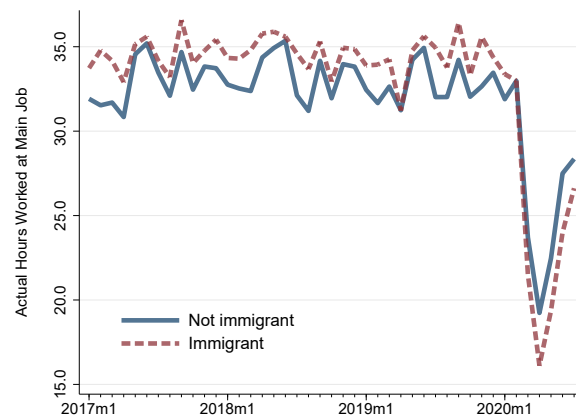
(a) Unemployment Rate.



(b) Labour Force Participation.



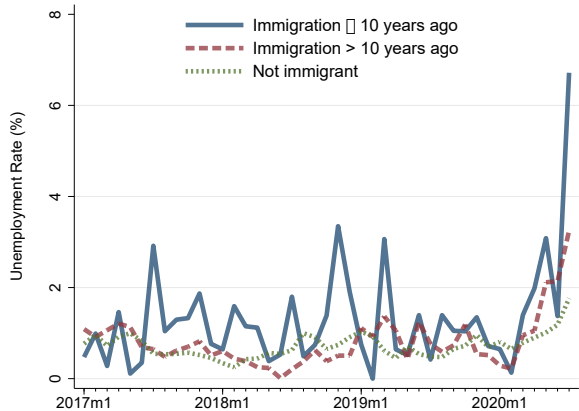
(c) Hours of Work.



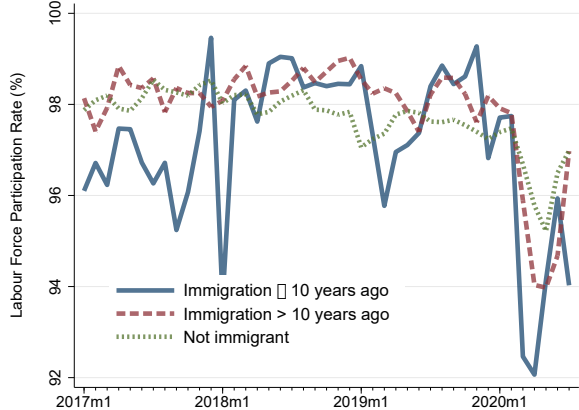
Notes: Authors' calculations. Data from the Canadian Labour Force Survey with final weights applied to all subgraphs. The time period is January 2017 to July 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in total actual hours worked at main job, and below the 99th-percentile in real hourly wages. Panel A plots the unemployment rate by immigration status. Panel B plots the labour force participation by immigration status. Individuals in the labour force were employed at work, employed but absent from work, or unemployed, during the survey week. Panel C plots the actual hours worked at main job by immigration status. This includes individuals that were in the labour force with those who were unemployed were assigned a value of zero.

Figure A6: Labour Market Outcomes for the Self-Employed for Immigrants by Years Since Migration.

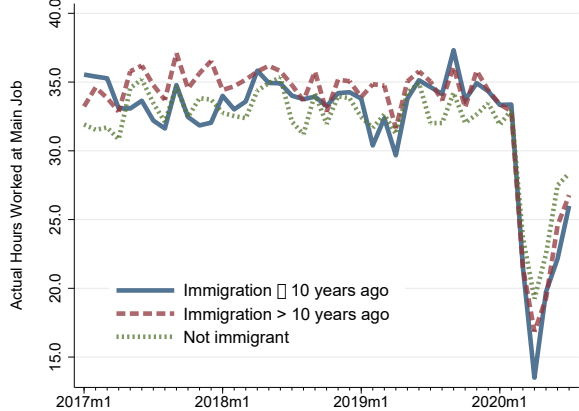
(a) Unemployment Rate.



(b) Labour Force Participation.



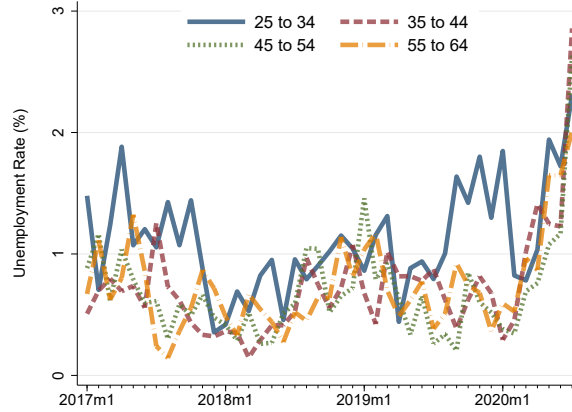
(c) Hours of Work.



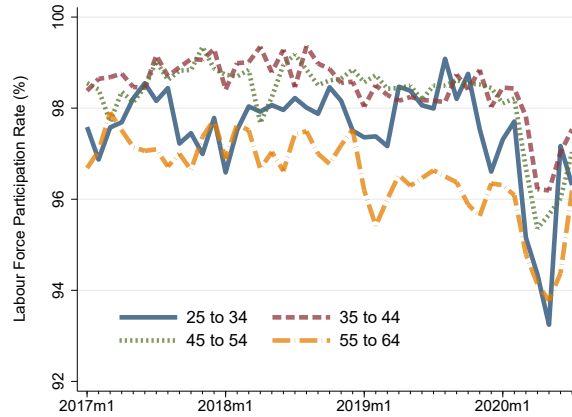
Notes: Authors' calculations. Data from the Canadian Labour Force Survey with final weights applied to all subgraphs. The time period is January 2017 to July 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in total actual hours worked at main job, and below the 99th-percentile in real hourly wages. Panel A plots the unemployment rate for immigrants by years since migration. Panel B plots the labour force participation for immigrants by years since migration. Individuals in the labour force were employed at work, employed but absent from work, or unemployed, during the survey week. Panel C plots the actual hours worked at main job for immigrants by years since migration. This includes individuals that were in the labour force with those who were unemployed were assigned a value of zero.

Figure A7: Labour Market Outcomes for the Self-Employed by Age Categories.

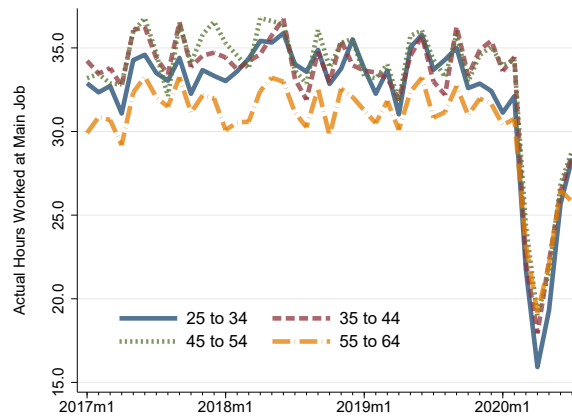
(a) Unemployment Rate.



(b) Labour Force Participation.



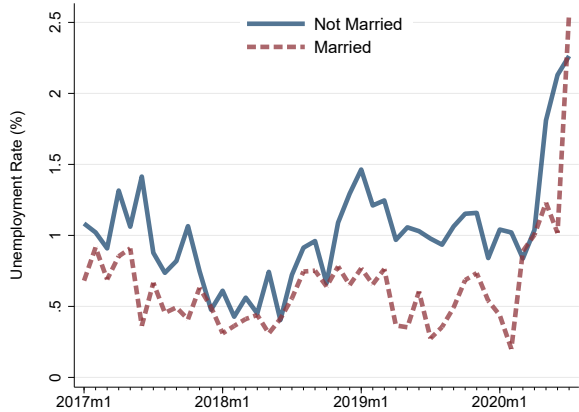
(c) Hours of Work.



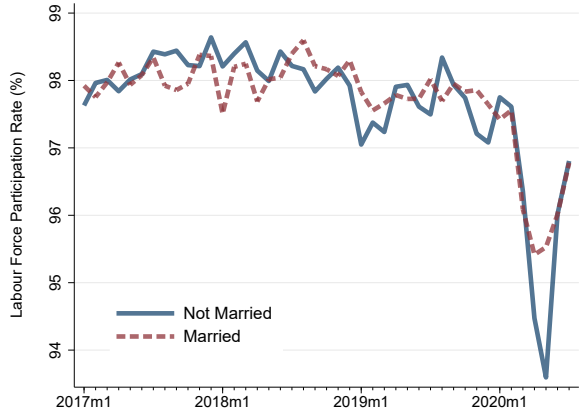
Notes: Authors' calculations. Data from the Canadian Labour Force Survey with final weights applied to all subgraphs. The time period is January 2017 to July 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in total actual hours worked at main job, and below the 99th-percentile in real hourly wages. Panel A plots the unemployment rate by age categories. Panel B plots the labour force participation by age categories. Individuals in the labour force were employed at work, employed but absent from work, or unemployed, during the survey week. Panel C plots the actual hours worked at main job by age categories. This includes individuals that were in the labour force with those who were unemployed were assigned a value of zero.

Figure A8: Labour Market Outcomes for the Self-Employed by Marital Status.

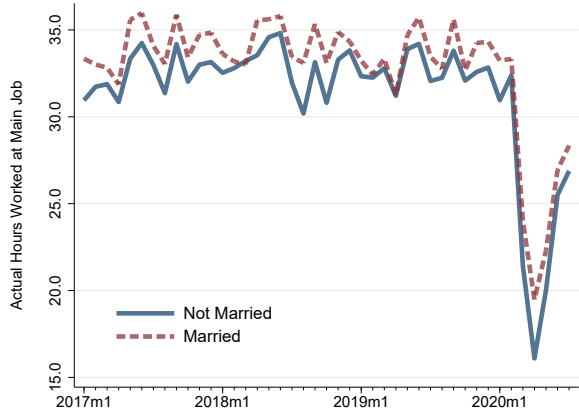
(a) Unemployment Rate.



(b) Labour Force Participation.



(c) Hours of Work.



Notes: Authors' calculations. Data from the Canadian Labour Force Survey with final weights applied to all subgraphs. The time period is January 2017 to July 2020. Observations are only those who are self-employed, aged 25 to 64, below the 99th-percentile in total actual hours worked at main job, and below the 99th-percentile in real hourly wages. Panel A plots the unemployment rate by marital status. Panel B plots the labour force participation by marital status. Individuals in the labour force were employed at work, employed but absent from work, or unemployed, during the survey week. Panel C plots the actual hours worked at main job by marital status. This includes individuals that were in the labour force with those who were unemployed were assigned a value of zero.

A4 Appendix Tables

Table A1: Employees' Summary Statistics

	Mean	Std. Dev.	Min.	Max.	Count					
Actual hours per week at main job										
Total	33.02	14.47	0.00	74.70	1,739,762					
Less than 20	32.05	14.06	0.00	74.50	306,801					
20 to 99	34.07	13.86	0.00	74.50	282,891					
100 to 500	34.08	14.24	0.00	74.70	266,845					
Greater than 500	32.70	14.82	0.00	74.7	883,225					
Real Hourly Wage										
Total	27.98	12.17	2.02	66.29	1,739,762					
Less than 20	22.84	9.78	2.16	66.29	306,801					
20 to 99	25.48	11.00	2.12	66.29	282,891					
100 to 500	27.78	11.76	2.88	66.29	266,845					
Greater than 500	30.52	12.63	2.02	66.29	883,225					
FIRM SIZE										
	less than 20		20 to 99		100 to 500		Greater than 500		Total	
	%	No.	%	No.	%	No.	%	No.	%	No.
Total	17.0	295,784	16.2	281,917	15.2	264,094	51.6	897,967	100.0	1,739,762
Sex of respondent										
Male	16.6	144,257	17.6	153,011	16.3	141,272	49.5	429,795	100.0	868,335
Female	17.4	151,527	14.8	128,906	14.1	122,822	53.7	468,172	100.0	871,427
Marital status										
Not Married	17.7	148,720	16.9	142,043	15.1	126,958	50.3	421,929	100.0	839,649
Married	16.3	147,065	15.5	139,874	15.2	137,136	52.9	476,038	100.0	900,113
Age Groups										
25 to 29	19.5	50,117	17.5	44,802	14.8	37,995	48.2	123,471	100.0	256,385
30 to 34	17.3	43,217	16.3	40,674	14.8	36,971	51.5	128,410	100.0	249,272
35 to 39	16.5	39,224	15.6	37,038	15.3	36,326	52.6	124,774	100.0	237,362
40 to 44	15.3	34,706	15.0	33,895	15.2	34,511	54.5	123,572	100.0	226,684
45 to 49	15.4	32,648	15.7	33,288	15.1	32,027	53.9	114,690	100.0	212,653
50 to 54	15.7	35,139	15.8	35,391	15.3	34,218	53.1	118,773	100.0	223,521
55 to 59	17.2	34,969	16.5	33,507	15.5	31,536	50.9	103,640	100.0	203,652
60 to 64	19.8	25,765	17.9	23,322	15.7	20,510	46.6	60,637	100.0	130,234
Immigration status										
Not immigrant	17.1	219,978	16.2	209,202	15.0	192,951	51.7	666,315	100.0	1,288,447
Immigrant	16.8	75,806	16.1	72,715	15.8	71,143	51.3	231,652	100.0	451,315
Highest educational attainment										
Less than high school	26.4	26,555	22.5	22,693	16.5	16,645	34.6	34,854	100.0	100,748
High school or some college	20.2	74,367	18.3	67,274	15.1	55,462	46.4	170,705	100.0	367,808
Post secondary accreditation	15.3	194,862	15.1	191,950	15.1	191,987	54.5	692,408	100.0	1,271,206

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

	Sex		Immigrant Status		Marital Status		Woman		Man		Education Level			Age Group		
	Male	Female	Non Immigrant	Immigrant	Not Married	Married	No Young kids	Has Young kids	No Young kids	Has Young kids	Less than hs	Has & some col	Post Sec	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
Feb 2019	564	329	834	59	301	592	90	237	138	428	84	206	603	109	482	302
Jul 2019	521	330	786	65	273	578	106	234	134	377	64	208	579	107	469	275
Jul - May 2020 (% Δ)	7.33%	-4.97%	3.85%	-21.82%	-4.96%	5.76%	-17.50%	4.48%	-3.67%	9.97%	-6.25%	18.37%	-1.73%	-7.55%	4.81%	1.30%
Jul - Feb 2020 (% Δ)	-17.48%	-12.07%	-11.92%	-48.19%	-18.89%	-13.44%	4.21%	-16.67%	-24.46%	-15.99%	-33.33%	-13.43%	-13.10%	-14.78%	-12.10%	-20.75%
Jul - Feb 2019 (% Δ)	-7.62%	0.30%	-5.76%	10.17%	-9.30%	-2.36%	17.78%	-1.27%	-2.90%	-11.92%	-23.81%	0.97%	-3.98%	-1.83%	-2.70%	-8.94%
2020 - 2019 (Δ)	-9.86%	-12.37%	-6.16%	-58.36%	-9.59%	-11.07%	-13.57%	-15.40%	-21.56%	-4.07%	-9.52%	-14.40%	-9.12%	-12.95%	-9.40%	-11.81%
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
Feb 2019	699	438	919	218	689	448	148	316	178	495	108	199	830	201	629	307
Jul 2019	695	495	956	234	698	492	172	341	198	479	99	204	888	211	676	303
Jul - May 2020 (% Δ)	-7.37%	-3.26%	-6.72%	-1.72%	-9.29%	-0.51%	-6.09%	-1.85%	-22.35%	-1.83%	-10.42%	-1.29%	-6.21%	-2.82%	-9.01%	-2.13%
Jul - Feb 2020 (% Δ)	-20.50%	-20.71%	-16.43%	-34.98%	-20.49%	-20.70%	-15.62%	-22.67%	-30.89%	-16.57%	-23.89%	-27.49%	-18.43%	-18.48%	-21.77%	-20.00%
Jul - May 2019 (% Δ)	-0.57%	13.01%	4.03%	7.34%	1.31%	9.82%	16.22%	7.91%	11.24%	-3.23%	-8.33%	2.51%	6.99%	4.98%	7.47%	-1.30%
2020 - 2019 (Δ)	-19.92%	-33.73%	-20.46%	-42.32%	-21.80%	-30.52%	-31.84%	-30.59%	-42.13%	-13.34%	-15.56%	-30%	-25.42%	-23.46%	-29.25%	-18.70%
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
Feb 2019	1230	730	1174	786	631	1329	230	527	374	829	114	374	1471	333	1092	534
Jul 2019	1260	774	1184	850	642	1392	239	579	351	865	112	472	1450	337	1117	580
Jul - May 2020 (% Δ)	-4%	-2.86%	-3.03%	-4.27%	0.76%	-5.43%	-4.78%	-4.09%	-5.23%	-1.94%	21.92%	2.66%	-6.75%	-1.94%	-4.23%	-3.05%
Jul - Feb 2020 (% Δ)	-19.48%	-15.12%	-15.80%	-20.47%	-14.74%	-19.10%	-17.08%	-12.69%	-25.83%	-17.75%	-19.09%	-10.23%	-19.77%	-12.64%	-21.11%	-14.21%
Jul - May 2019 (% Δ)	2.44%	6.03%	8.85%	8.14%	1.74%	4.74%	3.91%	9.87%	-6.15%	4.34%	1.75%	26.20%	-1.43%	1.20%	2.29%	8.61%
2020 - 2019 (Δ)	-21.92%	-21.15%	-16.65%	-28.62%	-16.49%	-23.84%	-21%	-22.56%	-19.68%	-22.09%	-17.34%	-36.44%	-18.34%	-13.84%	-23.40%	-22.82%

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and July 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 (July - February 2020) - (July - February 2019).

Table A3: Active Small Business by Individual Characteristics: Manitoba and Saskatchewan, Alberta, British Columbia

	Sex		Immigrant Status		Marital Status		Woman		Man		Education Level			Age Group		
	Male	Female	Non Immigrant	Immigrant	Not Married	Married	No Young kids	Has Young kids	No Young kids	Has Young kids	Less than hs	Has & some col	Post Sec	25 to 34	35 to 54	55 plus
MANITOBA AND 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
Feb 2019	736	358	929	165	289	805	121	245	234	494	137	337	620	173	576	344
Jul 2019	821	416	1065	172	388	849	138	290	259	550	136	381	719	235	644	358
Jul - May 2020 (% Δ)	16.73%	-4.20%	8.89%	6.92%	15.49%	6.26%	-18.52%	8.66%	-1.39%	25.98%	50%	7.91%	1.94%	3.82%	5.30%	16.92%
Jul - Feb 2020 (% Δ)	-5.94%	-25.65%	-14.66%	-9.57%	-16.08%	-12.99%	-29.94%	-18.51%	-14.11%	-4.58%	16.95%	-16.77%	-17.76%	-21.26%	-18.20%	0.00%
Jul - Feb 2019 (% Δ)	11.55%	16.20%	14.64%	4.24%	34.26%	5.47%	14.05%	18.37%	10.68%	11.34%	-0.73%	13.06%	15.97%	35.84%	11.81%	4.07%
2020 - 2019 Δ	-17.49%	-41.85%	-29.30%	-13.82%	-50.33%	-18.46%	-43.99%	-36.87%	-24.80%	-15.91%	17.68%	-29.82%	-33.72%	-57.09%	-30%	-4.07%
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
Feb 2019	572	343	675	240	307	608	116	218	176	405	63	217	634	166	501	248
Jul 2019	562	368	688	242	307	623	110	247	187	386	100	210	620	183	531	216
Jul - May 2020 (% Δ)	-12.70%	-5.96%	-7.19%	-18.75%	-2.09%	-12.68%	-16.67%	4.09%	-19.57%	-9.72%	-7.41%	0.56%	-13.46%	-4.93%	-15.30%	-1.07%
Jul - Feb 2020 (% Δ)	-18.82%	-12.62%	-9.76%	-32.94%	-28.63%	-11.24%	15.79%	-23.93%	-27.80%	-13.51%	-24.24%	4.65%	-21.30%	0%	-18.05%	-22.92%
Jul - May 2019 (% Δ)	-1.75%	7.29%	1.93%	0.83%	0%	2.47%	1.30%	6.25%	6.25%	58.73%	-3.23%	-3.23%	-2.21%	10.24%	5.99%	-12.90%
2020 - 2019 Δ	-17.07%	-19.90%	-11.68%	-33.77%	-28.63%	-13.71%	20.96%	-37.23%	-34.05%	-8.82%	-82.97%	7.88%	-19.10%	-10.24%	-24.04%	-10.01%
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
Feb 2019	726	438	745	419	393	771	116	328	217	503	49	309	806	210	617	337
Jul 2019	668	430	738	360	409	689	120	317	192	469	80	232	786	182	636	281
Jul - May 2020 (% Δ)	-5.16%	7.74%	0%	-0.56%	13.06%	-5.66%	-3.96%	9.80%	-17.90%	2.07%	-37.50%	3.39%	2.29%	5.97%	-5.74%	6.59%
Jul - Feb 2020 (% Δ)	-19.48%	-14.07%	-24.11%	-5.61%	-19.01%	-16.49%	-24.22%	-8.50%	-22.22%	-19.39%	-31.37%	-11.59%	-17.96%	5.97%	-28.11%	-6.14%
Jul - Feb 2019 (% Δ)	-7.99%	-1.83%	-0.94%	-14.08%	4.07%	-10.64%	3.45%	-3.35%	-11.52%	-6.76%	63.27%	-24.92%	-2.48%	-13.33%	3.08%	-16.62%
2020 - 2019 Δ	-11.49%	-12.25%	-23.17%	8.47%	-23.08%	-5.86%	-27.67%	-5.15%	-10.70%	-12.63%	-94.64%	13.32%	-15.47%	19.30%	-31.19%	10.47%

Notes: Authors' calculations. Data from the Canadian Labour Force Survey using cross-sections between February 2019 and July 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 (July - February 2020) - (July - February 2019).

Table A4: Real Hourly Wage by Business Sizes

	FIRM SIZE				
	All Individuals	Less than 20	20 to 99	100 to 500	Greater than 500
Post COVID	1.240 (0.0550)	0.884 (0.1723)	1.184 (0.3885)	1.309 (0.1904)	1.114 (0.0783)
Observations	1739762	306801	282891	266845	883225
ESTABLISHMENT SIZE					
Post COVID	1.240 (0.0550)	1.063 (0.2065)	1.425 (0.1432)	0.704 (0.1583)	1.317 (0.2416)
Observations	1739762	555947	586390	363071	234354
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 July 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.