

The Effect of the COVID-19 Pandemic on Gender Inequality in Hours of Work in Canada

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Abstract

In this study, I use Statistics Canada's Labour Force Survey to evaluate the impact of the COVID-19 pandemic on the supply side of the labour market. Specifically, I analyze how the labour supply of men and women changed, and whether this change decreased the gap between the hours of work of men and women. Many recent studies find that women's labour force status and labour supply have deteriorated because of the pandemic. The main reasons are the closure of school facilities, which imposed an extra burden on women to stay at home and care for their children, and the chaos occurring in the market that had a greater effect on industries in which mostly women work. My findings show that while these kinds of closures affected the hours of work of individuals, they did not affect women more severely than men. While men experienced a larger drop in hours of work than women, the gender difference did not significantly change compared to last year. I show with graphs and with the Blinder-Oaxaca decomposition that the pandemic did not affect the gender difference in hours worked significantly. I also highlight the effect of remote working and show that those who can do 30-40% of their work remotely experienced a larger drop in hours, but recovered to their previous levels in a shorter period of time.

Keywords: COVID-19 Pandemic, Gender Inequality, Oaxaca decomposition.

1. Introduction

On 31st December 2019, the World Health Organization's country office in China found new cases of "viral pneumonia" in Wuhan. At the same time, the WHO's Epidemic Intelligence from Open Sources (EIOS) picked up a media report from a program of the International Society for Infectious Diseases with the same cases of "pneumonia of unknown cause" in the same city. On February 11th, the name "COVID-19" was given to a novel infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Finally, WHO declared the COVID-19 to be a pandemic on March 10th (WHO 2020).

In Canada, Prime Minister, Justin Trudeau created a COVID-19 committee as cases started to rise. Provinces across Canada started to implement lock-down policies, school closures and declared states of emergency almost in the same week (the middle week of March). However, the provinces differed with respect to the timing of their re-openings. Between the last week of April and the last week of May, almost all provinces re-opened their economy (Vogel, 2020)

These government interventions (social distancing, self-isolation and travel restrictions) in order to curb the COVID-19 curve had detrimental effects around the globe and affected all the economic sectors (Nicola et al. 2020). Indeed, the pandemic resulted in job losses and an unprecedented recession in many economies. ILO (2020) estimates suggest countries that have included workplace closures within their COVID-19 containment measures include around 81 percent of the global workforce. Until April 22nd 2020, close to 1.1 billion informal economy workers lived and worked in full lockdown conditions, with an additional 304 million in countries in partial lockdown.

In India, Estupinan et al. (2020) provide evidence that 116.18 million (25 percent) and 78.93 million (17 percent) workers in the labour force were affected by the first and second lock-

downs. Europe also experienced job losses. In early April, 15% and 5% of individuals in the U.K. and Germany experienced job loss (Adams-Prassl et al. 2020). In North America, the US and Canada experienced job losses of 18% and 15% respectively (Adams-Prassl et al. 2020, Lemieux et al. 2020).

However, unlike other recessions which affected men more than women, studies find that this is not the case in the pandemic recession. Alon et al. (2020) demonstrate that the pandemic recession is unique because of main three factors: diminished within-household insurance,¹ a widening of the gender wage gap throughout the recovery, and the weakening of gender norms relating to household chores and childcare. As a result, childcare facilities (formal and informal) will play a key role in determining one's labour force status and work hours.

While several studies focus on labour force status, it is very hard to use the standard definition of unemployment to analyze the effect of COVID-19. According to Jones et al. (2020) the number of people who are "Marginally Attached" to the labour force (those who have expressed a desire to work) increased in the time of COVID-19. This fact gives rise to uncertainty about the number of workers among the marginally attached group who are permanently separated from their employers as opposed to waiting to be rehired. Thus, determining people's labour force status is so complicated that it is better to focus on other factors (like hours worked) to determine the effect of the pandemic.

With this background in mind, I will use data from the Labour Force Survey of June 2019 (the comparison month) and of the June 2020 (the reference month), along with the Oaxaca decomposition technique, to measure gender inequality in hours of work (which is measured by

¹ Household insurance implies that members of the household will provide their financial support (through providing more labour, giving money directly and etc.) in difficult financial circumstances, to another member in order to keep the household's financial level stable.

their actual hours worked at the main job in this paper), and to see whether this inequality has been affected by the pandemic. This paper will contribute to the growing literature on gender inequality in the time of COVID-19, especially that which relates to the labour market. Moreover, by identifying important categories determining the gap between men and women, this paper will provide insight to the policy makers trying to implement measures to decrease the role of that/those variable(s).

In section 2, I provide a literature review and explain the recent studies done by researchers in related fields. Section 3 concentrates on the methodology. Section 4 provides a description of the data. Section 5 explains the results and finally section 6 will conclude.

2. Literature review

In this section I review some analyses of gender inequality in labour force status and hours worked that have been carried out recently all over the world. On the one hand, these papers are of importance because they inform readers about the gender inequality literature and show us how hours worked differ simply because of an individual's gender. On the other hand, they will provide an analytical framework and guide us to an understanding of the variables that are critical in explaining the pandemic recession gender gap in hours worked; that is, if there is any gender difference, which variables or predictors might increase/decrease the difference. This understanding will be used in the next section to build an empirical model.

Starting with Canada, Lemieux et al. (2020) used Labour Force Survey Data (LFS) data in April 2020 to evaluate the impact of COVID-19 on the labour market through aggregate weekly hours. Their sample consists of individuals aged 20-64 who live in the Canadian provinces. Looking at the adjusted percentage difference between February 2020 and April 2020, they show

that men experienced a drop of 31 percent in their hours worked, compared to 34 percent for women.² They also include the type of industry in their analytics and show that those in the two lowest income quantiles constitute 80 percent of the people who lost their job.

Using the March 2020 LFS, Koebel and Pohler (2020) tried to measure the causal effect of the shutdowns on the hours worked across the earnings distribution (they calculate the earnings by multiplying individuals' usual hours in their main job wage by the market wage). They use a difference-in-difference strategy and take actual hours worked as each respondent's "treated" hours worked, and usual hours worked as each respondent's "control" hours worked. They find that government restrictions have reduced hours worked by 11.13 percent in general. Moreover, considering men and women, they show that 63 percent of individuals in the bottom income quintile are women, while in the top income quintile women account for only 36 percent. This is another sign that women make up most of the low-income industries.

Using the LFS between February 2020 and May 2020, Béland et al. (2020) examine the effect of the pandemic on the business ownership of self-employed people. They found that women were 0.9 percentage points more likely to lose their businesses (declines of -12.9% and -12.0% for women and men, respectively). Moreover, immigrants face a decrease in business ownership of 16.1 percent compared to 10.6 percent for non-immigrants. Marital status is also important because unmarried individuals experienced a greater decline than those who are married (-15.4 % versus -10.5 percent respectively). They deny the importance of school closures in decreasing women's participation in business ownership as their results show women having no kids experienced a drop in their ownership of 6.3 percent more than women with kids. They also highlight the effect of

² Because of the monthly increase in employment level as a result of the increase in population (the trend effect), as well as the timing of the holidays, the authors decided to use the percentage change in hours worked between January and April 2018 as their adjustment.

education, showing that less-educated owners experience greater declines in their business ownership (-17.8%).

In the U.S., Alon et al. (2020a) focus exclusively on the difference between the pandemic recession and regular recessions and identify two main channels that have generated this difference: the first is the imposition of social distancing across sectors and occupations; and the second is childcare. They use data from the American Community Survey (ACS), the American Time Use Survey (ATUS) and the Current Population Survey (CPS) to investigate the work situation under lockdown. Then they use the CPS and the ATUS to show that women do more of the childcare than men. They develop a new model called a “dynamic model of work and childcare” to support their findings and compare the current recession with the previous ones, but the part that relates to our study suggests that women’s unemployment increased by 12.8 percentage points between February and April 2020, versus an increase of only 9.9 percentage points for men. Moreover, women’s hours dropped by 7 percentage points more than those of men during this period. They emphasize the importance of the ability to work remotely and mention that in the industries with less of this ability, women participate more, and so their employment is hit harder. According to this study, childcare obligations play a major role in reducing employment and hours worked.

Cajner et al. (2020) use data from ADP (a provider of cloud-based human resource management solutions), finding similar results to Alon et al. (2020a) during the first 4 months of 2020 for the U.S. labour market (women experienced a decline in employment which was 4 percentage points higher than that of men: 22 percent versus 18 percent). However, less than 0.5 percentage points of this difference can be explained by the industry in which people are working. In other words, even within specific industries, women are experiencing larger job declines relative

to men. Consequently, they conclude that industry type, firm size and location do not play a detrimental role in the employment reduction of women.

In contrast, Alon et al. (2020b) find that the type of industry and whether the person can work remotely or not matters, showing that 52% and 39% of men and women, respectively, work remotely and work in critical occupations. Interestingly, Collins et al. (2020) used CPS data for the U.S. to examine the effect of the pandemic on dual-earner different-sex families. In their research, it is evident that mothers with young children have reduced their hours four to five times more than fathers. Consequently, the gender gap in hours of work has grown by 20–50 percent.

The same situation is observable in Europe. Adams-Prassl et al. (2020) collected survey data from three different countries namely, the U.S., the U.K. and Germany, with the co-operation of professional survey companies. They use the probability of job loss as their dependent variable in their estimation of a linear probability model, and estimate the effect of individual and job characteristics on it. They find that while there is a significant difference between the employment (job loss) of men and women and those who have a university degree and those who do not during the crisis in the U.S. and the U.K., there is no disparity between men and women or between those with a university degree and those without in Germany. Women in the U.S. and the U.K. are 7 and 5 percentage points, respectively, more likely to lose their job compared to men. Moreover, people with a college degree in the U.S. and the U.K. are less likely to lose their jobs, compared to those that do not have any degree, by 8 and 6 percentage points, respectively. They conclude that in both the U.S. and the U.K., people working in “food preparation and serving” and “personal care and service” are very likely to have lost their job due to the pandemic. In Germany, people working in “auxiliary” and “mechanical” occupations had the highest likelihood of losing their job.

Farré et al. (2020) used a survey consisting of people aged between 24-50 to focus on gender inequality as a result of the pandemic in Spain. While both men and women experienced the same drop in employment (around 9 percent), the results show that women experienced furloughed and unemployed situations slightly more than men. They indicate that the increase in childcare and housework as a result of school closure was one of the main factors underlying this difference, with women working more at home by 17 percentage points more than men.

Sevilla and Smith (2020) in the U.K. interviewed respondents aged between 18-60 in May 2020. They discovered that women were more likely to stop their work than men, with women 7 percentage points less likely to be working than men, 4 percentage points more likely to be furloughed and 2 percentage points more likely to not work anymore. However, women with kids are 10 percentage points less likely to work because of the pandemic than men with kids. Again in the U.K., Hupkau and Petrongolo (2020) use the U.K. Labour Force Survey, noting that working in the lockdown sector or the ability to work remotely only provides partial insurance against job losses. They find that while 42 percent of men and 30 percent of women were either in locked-down sectors or could not work from home, men were hurt as severely as women.

Finally, a study by Del Boca et al. (2020) for Italy also emphasizes the importance of childcare and housework, and shows that having children and thus doing unequal intra-household allocation of extra work created by the COVID-19 will amplify the risk of poor female labour outcomes, as women bear more of the burden of housework (especially childcare) compared to their partners.

In conclusion, while there is no gender difference in hours of work in Germany, the situation is not the same in other countries. In Spain, Italy, the U.K., the U.S. and Canada, the reduction in female hours of work was significantly greater than that of men. The most prominent

explanation for this is the lockdown leading to the closure of childcare facilities and specific industries where women had higher levels of participation. The closure of childcare facilities brings an extra burden to families and raises the question of how this new burden is going to be managed within the family. If the allocation of this new burden is biased towards women (which is the case, according to the recent studies), then the gender gap in hours worked will increase. Moreover, if more women participate in COVID-affected industries than men (like food, retail, accommodation and etc.), then we will see a further increase in the gender gap. I will discuss these issues in the Results section of this paper.

3. Methodology

The methodology that will be used is the one provided by Blinder (1973) and Oaxaca (1973) for linear regression models. This is a method of evaluating the difference in mean outcomes between subgroups (defined by race, gender, ethnic group). The subgroup that is used in this paper is “gender”. This method, firstly, involves estimating a linear regression equation for whatever the outcome of interest is. Then the difference in mean outcomes is decomposed into two main components, one of which is explained by differences in the characteristics of the two groups, and the other of which is the unexplained residual component. The following equations show the steps of the decomposition:

$$Y_M = X' \beta_M + \epsilon_M \text{ (OLS regression for men)} \quad (1)$$

$$Y_F = X' \beta_F + \epsilon_F \text{ (OLS regression for women)} \quad (2)$$

$$R = \bar{Y}_M - \bar{Y}_F = \{\bar{X}_M - \bar{X}_F\}' \hat{\beta}_F + (\bar{X}_F)' (\hat{\beta}_M - \hat{\beta}_F) + \{\bar{X}_M - \bar{X}_F\}' (\hat{\beta}_M - \hat{\beta}_F) \quad (3)$$

Equations 1 and 2 express the linear models for men and women. The dependent variable is the “actual hours worked per week at main job.” I focus on the variable “actual hours worked

per week at main job” because it is more appropriate to use this variable instead of “labour force status”. According to Lemieux et al. (2020), the effect of childcare responsibilities and issues regarding working from home are reflected mostly in hours worked, rather than labour force status. In addition, my explanatory variables are the age of the person (from 15 to 64); the main industry of occupation; whether individual has any child between 0-6, 6-12, 13-17 or 18-24 years of age; marital status (whether the person is single or married); type of economic family (whether the individual is in a dual earner family or not), the highest level of educational attainment; the class of worker (whether the person works in the public or private sector), immigration status (whether a person is an immigrant or not); union membership (whether an individual is a member of a union or not); and firm size (whether an individual works in an organization with less than 20 employees, 20 to 99 employees, 100 to 500 employees or more than 500 employees).

In equation (3), R is the mean difference between the actual hours worked of men and women, \overline{X}_M is the sample mean of male characteristics, \overline{X}_F is the sample mean of female characteristics, $\widehat{\beta}_F$ is the female coefficient vector derived from the regression of female hours worked on female characteristics and $\widehat{\beta}_M$ is the male coefficient vector derived from the regression of male hours worked on male characteristics.

In equation (3), $\{\overline{X}_M - \overline{X}_F\}'\widehat{\beta}_F$ is called the “endowment effect.” This part of the difference can be attributed to the difference in mean characteristics (like education, age, marital status and etc.) and is weighted by the female vector of coefficients. The second component $(\overline{X}_F)'(\widehat{\beta}_M - \widehat{\beta}_F)$ takes into account the contribution of differences in coefficients and is called the “unexplained” component. It measures how unequally the characteristics affect the hours worked of men and women. The third component is the interaction term $\{\overline{X}_M - \overline{X}_F\}'(\widehat{\beta}_M - \widehat{\beta}_F)$. It

This part of the total difference depends on both the difference in coefficients and the difference in the mean characteristics.

However, several authors have suggested modifications to equation (3). For example, Oaxaca and Ransom (1994) showed that it can also be written:

$$R = \{\overline{X}_M - \overline{X}_F\}'\{\mathbf{W}\widehat{\beta}_M + (\mathbf{I} - \mathbf{W})\widehat{\beta}_F\} + \{(\mathbf{I} - \mathbf{W})'\overline{X}_M + \mathbf{W}'\overline{X}_F\}'(\widehat{\beta}_M - \widehat{\beta}_F) \quad (4)$$

where “ \mathbf{W} ” is a matrix of relative weights for the coefficients of men and \mathbf{I} is the identity matrix.

If one sets \mathbf{W} equal to

$$\widehat{W} = (X_M'X_M + X_F'X_F)^{-1}X_M'X_M,$$

and substitutes \widehat{W} into the equation (4), then the reference coefficients which are applied in the decomposition will be the coefficients from a regression in which the data for men and women have been pooled. Using the coefficients from a pooled regression will avoid the problem overvaluing one group and undervaluing the other. This is the approach that I adopt here.

Another potential problem is that since all of the explanatory variables in my model are dummy variables, the results of the decomposition will be dependent on the choice of the reference categories. For dealing with this problem, Suits (1984) suggests adding an appropriate constant to each dummy variable coefficient, proposing that these constants should be chosen so as to force the mean of the transformed coefficients to equal zero. Then, by fitting a regression with the sum of coefficients of dummy variables restricted to zero, the interpretation of the coefficients will be the same regardless of the reference categories. Taking advantage of this finding, Yun (2005) suggests applying this transformation in Oaxaca decomposition context by running separate “normalized” linear regressions for two comparison groups. I also use this method in this paper. Moreover, I also clustered my standard errors at the province level.³

³ The calculations are done using the downloadable Stata command “oaxaca,” written by Jann (2008).

4. Data

The data that are used in this paper are drawn from the Labour Force Survey (LFS). The LFS is a monthly survey that gathers information on the labour market activities of Canadian's working age population. On average, each month 56,000 households (reflecting about 100,000 individuals) respond to a survey, providing detailed information on their characteristics (age, marital status, work hours, labour force status, etc.) However, the size of the sample varies across time due to data quality and budget constraints.

The LFS data are collected in two different stages. The first stage consists of selecting clusters from each geographic area. The second stage consists of selecting dwellings from within each selected cluster. The survey uses a rotating panel, which means that the selected dwellings remain in the sample for six months. Each month 1/6th of the sample of dwellings is replaced and after six months, there is a completely new set of dwellings in the sample. Data collection is done during the reference week of the LFS, which is normally the week including the 15th of the month. The information is gathered via field interviews or telephone (if available). However, since 2015, those who are eligible have been given the option to answer the survey on-line. In addition, in each dwelling, information about the household is provided by one knowledgeable household member to avoid extra cost and time (Statistics Canada 2020).

The main reason for choosing the LFS for this paper is first, the LFS public use data files are readily available. Second, it contains the variables I intended to use for my evaluation. In addition, it is a very high quality survey with a recognized survey design.

In this paper, I focus on the LFS of June 2020 (post-pandemic month) and June 2019 (pre-pandemic month). I select June 2020 for the post-pandemic months for the following reason. If we

consider the pandemic as a recession, May 2020 is the trough of the business cycle, with an unemployment rate of 13.7%. From June 2020 on we can see that the unemployment rate started to fall to 8.9 % in October 2020. Thus the first month from which the recovery started is June 2020 (Trading Economics 2020). This month is of potential importance as we see business re-openings, while childcare facilities are completely or partially closed (some provinces opened their schools partly in the last week of May or the first week of June). However, the risk still remained and we cannot consider the availability of childcare to be of great help for parents (Public Health Ontario 2020).

Among the months prior to the pandemic, we select June 2019. There are two reasons defining our selection. First of all, based on the sampling of LFS, we will have completely new individuals in our sample if we take June 2019 and thus the sample will be independent. Secondly, we will cope with seasonality effect if we consider the same month in both years.

I restrict the sample to individuals between 15 to 64 (those who provide more labour), so I will drop those who are above 64. I also drop “self-employed incorporated and unincorporated individuals,” because recent studies show that this group of workers provide different types and hours of labour (Béland et al. 2020). Thus I only analyze employees in the labour market in the public and private sectors. I dropped individuals who work more than 55 hours per week in order to avoid potential outliers (the outliers have been detected based on the interquartile range measure). In our June 2020 dataset, my initial sample consists of 87,779 individuals. After modifying the dataset according to above-mentioned criteria, my final sample for June 2020 consists of 38,181 individuals, of whom 18,867 are male workers and 19,314 are female workers. For June 2019, the original sample consists of 101,343 individuals. After applying the same criteria

to June 2019, I end up having 48,677 individuals, of whom 23,536 are male workers and 25,141 are female workers.

Tables 1 and 2 show the descriptive statistics of the variables in two different samples: one for June 2019 and one for June 2020. Except for “Hours worked at the main job”, which is a continuous and the dependent variable, all the other variables are dummy variables.

Table 1 shows the mean, standard deviation, min and max of the variables for June 2019. Most of men in the sample are aged 35-39. However, women aged 50-54 make up most of the female sample. Moreover, most of the male workers work in construction, while female workers are mostly employed in the healthcare and social assistance industries. Moreover, most of the men and women in the sample have a post-secondary certificate. More men and women fall into the category of “having a child aged 0-6” than any other child age categories. Almost half of the sample consists of married men and women (a mean of 0.44 for each of them). More women than men are working in the public sector in June 2019 (a mean of 0.344 compared to a mean of 0.194). Almost one-fifth of the sample is made up of immigrants. Moreover, more women are union members than men (a mean of 0.3385 for women and a mean of 0.2802 for men). In addition, almost half of the sample are members of dual-earner families. People in Ontario make up more of the sample (both men and women have a mean of 0.27) compared to other provinces. Finally, both men and women worked more in larger firms than in other firms.

Table 2 shows the descriptive statistics for men and women in June 2020. Again men aged 35-39 and women aged 50-54 accounted for most of the sample; however, these groups have lower proportions compared to June 2019. The construction and healthcare and social assistance industries still remained the largest categories for male and female workers in June 2020 (a mean of 0.1190 for men in the construction industry and a mean of 0.2611 for women in the healthcare

industry). Similarly, men and women with a post-secondary education constitute the largest educational category (both with a mean of 0.38). Similar to June 2019, the category of children aged 0-6 has the highest mean for men and women. Similar to the previous year, married men and women constitute half of the sample. Moreover, while 37% of women worked in the public sector in June 2020, only 20% of men are public sector workers. In addition, only 16% and 15% of the sample are male and female immigrants, respectively. Additionally, more than half of the sample are in dual-earner families (a mean of 0.53 for men and a mean of 0.57 for women). Similar to June 2019, more people are living in Ontario than any other province (a mean of 0.27 for men and a mean of 0.26 for women). Finally, almost half of the men and half of the women are working in firms with +500 employees.

5. Results

5.1 Descriptive analysis

Figures 1-13 reveal the effect of the pandemic on the hours worked graphically.⁴ Figure 1 illustrates the hours worked by individuals from 1979 to 2020 and shows how their levels have been affected by different recessions. The pandemic recession by far has had the most detrimental effect on hours worked by individuals (among five recent crises). Figure 2 shows the hours worked by each gender from 1979 to 2020. It shows there has always been a gap between men and women, but it narrows as we get closer to the present. Figure 3 shows the changes in hours of work of each gender during 2020. Although men's hours experienced a larger cumulative drop than those of women, women lost their hours of work in a shorter period of time than men did (we observe this result by comparing the slopes of the lines for men and women). However, men

⁴ The figures are based on LFS data from January 1979 to October 2020.

experienced a recovery in a shorter period of time than women did during the month of the recovery (June 2020).

Figures 4-11 are dedicated to the hours of work of individuals within industries. Instead of following the LFS classification for industries, I classified industries into three main categories, based on their ability to allow remote working. The classification is based on the findings of Gallacher and Hossain (2020).⁵ Industries like agriculture, fishing/hunting, forestry, and mining/quarrying in which less than 30% of work is done remotely fall into the category of “industry with ability to work remotely below 30%.” Similarly, industries such as business/building, manufacturing of durable and non-durable goods, public administration, other services, accommodation and food services, transportation and warehouse, retail trade, construction and utilities fall into the category of “industry with ability to work remotely 30-40%.” Finally, information/culture/recreation, healthcare and social assistance, educational service, professional/scientific, wholesale trade, real state/rental and finance and insurance industries fall into the category “industry with ability to work remotely above 40%.”

Figure 4 shows how hours worked in these industry groupings evolved during the last 40 years in Canada. The pandemic recession affected those industries in which 30-40% of their work can be done remotely more severely than the others. Figure 5 shows the detailed changes in the hours of work of individuals in accordance with their broad industrial category. Those whose industry allows them to do 30-40% of their work remotely experienced a larger drop and a faster recovery during the months of the pandemic. Figure 6 shows the hours worked of each gender in industries with an ability to work remotely of less than 30%. As figure 7 shows, while hours worked of women were insignificantly affected, hours worked of men experienced a larger drop

⁵ They used Dingel and Neiman’s (2020) methodology and applied it to the LFS data, provide a classification in which jobs are divided into different categories based on their share of the work that can be done remotely.

compared to that of women within these industries. Figure 8 shows the hours worked of each gender in industries with an ability to work remotely between 30-40%. We can see the same pattern that we saw in figure 6 in the hours of work of men and women. In addition, Figure 9 indicates the hours of work of individuals in industries where 30-40% of the work is done remotely. Again, hours worked of men experienced a larger drop compared to those of women within these industries. In contrast, figure 10 shows that women work more hours than men in industries where more than 40% of the work is done remotely. Figure 11 illustrates this difference in hours between men and women during the months of the pandemic in detail, and we can see that the hours worked of women in industries with the ability to work remotely above 40% experienced a larger drop and tried to recover to the previous levels in a shorter period compared to hours of work of men in these industries.

Finally, figure 12 shows how individuals with and without children to take care of differed in terms of hours worked. Figure 13 shows that in June 2020 (which is the first month of the recovery), individuals without children recovered to the previous levels in a shorter period than those with children. This probably reflects the impact of the closure of school and childcare facilities. However, unlike other studies, we see that the hours worked by individuals without children were hit harder than the hours of those with children, meaning that the closure of childcare and school facilities did not affect the hours worked of individuals as much as was previously expected. The most likely explanation for this discrepancy is probably related to the characteristics of the sample used in this paper, which differs from the other samples used in other papers.

Tables 3 and 4 compare the hours of work in June 2019 (pre-COVID) and June 2020 (post-COVID period). Within the age category, the average work hours of men are lower in June 2020

compared to June 2019, except for men aged 15-19 who experienced an increase in their average hours (by 4 hours approximately). Similar changes occurred for women. Women aged between 15-19 experienced an increase of 2.47 hours. In all age categories men experienced a larger drop than women, except for the men in the 40-44 and 60-64 age groups who experienced less of a decline compared to women in the same age categories (0.05 and 1.13 hours, respectively).

The only industry in which men increased their hours compared to last year is the Information/culture/recreation industry (average hours increased by 0.72). For women, however, forestry (by 1.67), fishing/hunting (by 7.45), mining/oil/gas (1.15) and finance and insurance (by 0.34) are industries that saw more hours worked on average compared to last year. While the magnitudes of the changes in the work hours of women were more severe than those of men in industries like Agriculture, Forestry, Fishing/hunting, mine/oil/gas, Utilities, Construction, Retail, Real state, Professional/Scientific, Business, Information/culture/recreation, Accommodation and food services, and public administration, the magnitudes of the changes in the work hours of men were more severe than those of women in the rest of the industries.

While men with some high school education worked a little more on average (by 0.46 hours) compared to the previous year, their average hours of work decreased in all other educational groups, especially among those who have a little education or have a post-secondary certificate (by 1.46 and 1.62 hours, respectively). Women with some high school education provided more labour during the recovery, compared to June 2019, by about 1.36 hours. In other educational attainment categories, however, we see a decline in hours worked, with the highest decline observable for those women who have little education or have a high school diploma, by about 3.65 and 2.01 hours respectively. The table also shows that women with an educational level like 0-8 years of education or a high school graduate experienced greater losses, while women

with some high school education experienced a greater increase in their hours worked, compared to men with the same level of educational attainment. In other educational categories, men experienced a greater loss than women.

As might be expected, having children decreased the hours worked for both men and women considerably. Men with a child between 6-12 years of age decreased their hours of work more than men with children in any other age group (by 1.63 hours). The same observation applies to women with children of the same age, but with a slightly larger decrease than that of men. While women compared to men with a child between 13-17 or 18-24 years of age lose fewer hours than men between June 2020 and June 2019, they lost more hours on average if they had a child between 0-6 years old (0.12 hours more than men with the same characteristic).

While married men lost 0.44 more hours than married women, single men and women lost similar numbers of hours. In addition, while men in public sector experienced an increase in their hours worked by almost 1 hour, women on average lost 0.2 hours. In the private sector, however, men's average hours drop by an hour more than those of women. Moreover, while immigrant women lost more hours than immigrant men (a difference of 0.36 hours), Canadian women lost fewer hours than Canadian men (a difference of 0.21 hours). While men in unions lost on average more hours than women in unions between 2019 and 2020 (by 0.59 hours), on average non-union women lost more hours than non-union men (by 0.75). Moreover, men in dual earner families lost more hours between 2019 and 2020 than women did (by 0.17 hours on average). In contrast, women in other types of economic families lost more hours (by 0.05 hours) than men.

Both men and women suffered a drop in average hours worked in all provinces across Canada, except for women living in Prince Edward Island who experienced an increase in their average hours. Although men in the provinces of Newfoundland and Labrador, Nova Scotia,

Quebec, Saskatchewan, Alberta and British Columbia experienced a larger reduction in hours than women, the opposite was true in New Brunswick, Ontario and Manitoba.

Finally, for all types of firm size, both men and women suffered a decrease in hours worked. Although women lost more hours compared to men in small and medium sized firms (with 0-20 and 20-99 workers) by 1.36 hours, they lost fewer hours in large firms (100-500 and 500+) by (0.87 hours).

In conclusion, this analysis shows that women lost hours of work faster and recovered these lost hours more slowly than did men. Moreover, industries in which 30-40 percent of work can be done remotely were affected more severely than other industries. Furthermore, unlike other studies, we conclude that the hours worked by individuals without children were hit harder than the hours of those with children. Moreover, the hours of work of individuals with different educational attainments varied significantly from those of the previous year.

5.2 The decomposition of changes in hours worked

Table 5 shows the coefficient, estimates in equations (1) (2), as well as the pooled estimates need as the reference coefficients in equation (4). All were estimated using OLS and the standard errors are clustered at the provincial level (robust standard errors are expressed in the parentheses). Panel (A) of the table contains the estimates for equations (1) and (2) for June 2019. The OLS regressions are statistically significant (many of the estimated coefficients are statistically significant).⁶ According to R^2 , it fits better for women than for men. (R^2 is 0.03 for men and 0.1 for women). Panel (B) contains the estimates for equations (1) and (2) for June

⁶ According to Cameron and Miller (2015), while it is usual to announce the F statistics for the validity of the regressions, it is not possible to have a F statistic when there are thousands of observations in a few clusters. However, it is still possible to have a statistical inference on individual regressions (page 327 of the abovementioned article).

2020. Again, the OLS regressions are statistically significant (many of the estimated coefficients are statistically significant). Similarly, the fit is better for women than for men, (R^2 is 0.03 for men and 0.11 for women). Finally, Panel (C) shows the pooled reference coefficients.

Table 6 shows the decomposition results for June 2019 and June 2020. In June 2019, the difference in average hours worked between men and women is 7.065 hours (37.049 hours for men and 29.983 hours for women), and in June 2020 the difference is 6.804 hours (35.56 hours for men vs 28.76 hours for women). Thus the gender gap in hours worked between men and women decreased. This is not because women provide more labour on average than men, but because men experienced a larger drop in their hours than women. In addition, while both the explained and unexplained components of the difference fell (from 1.12 hours to 0.957 hours for the explained component and 5.946 hours to 5.846 hours for the unexplained component), the explained component decreased by little more than the unexplained component. In June 2019, 15.85% and 84.15% of the difference in average hours worked between men and women are attributed to the explained and unexplained components, respectively. However, in June 2020 the unexplained component constitutes a larger part and the explained component constitutes a smaller part, compared to the previous year (85.92% and 14.08% respectively.)

However, now we face a question as to whether the pandemic significantly affects the difference in hours worked between men and women. In order to address this, I provide a confidence interval of each of the groups for June 2019 and June 2020 in Table 7. If the confidence intervals do not have any overlap, we can conclude that the pandemic indeed had a significant impact. However, we see that confidence intervals in two months overlapped each other, meaning that the changes that occurred in the differences in hours worked between men

and women, neither in the total difference, nor in the explained and unexplained components, are significant.

Looking more closely at the explained component, we can see a few differences and similarities with respect to the role of age categories. There is no statistically significant gender gap in hours worked between men and women in the 15-19, 20-24 and 40-44 age groups in either year, holding all else constant. While there had been a statistically significant gender gap in hours worked against women aged 25-29, 45-49 and 60-64 in June 2019, these gaps disappeared in June 2020. In contrast, now we see a gap in hours worked between men and women aged 55-59 in June 2020 of 0.05 hours. Men aged 30-34 worked fewer hours compared to women in both years (by 0.033 hours in 2019 and by 0.027 hours in 2020), holding all else constant. Similarly, men aged 35-39 worked fewer hours than women in the same age group (0.02 hours less in June 2019 and 0.07 hours less in June 2020). However, men aged 50-54 worked more compared to women aged 50-54 (by 0.047 hours in 2019 and by 0.039 hours in 2020).

There are only two educational categories where there have been changes in their contribution to the explained component between June 2019 and June 2020. Although there were no significant differences between men and women in any educational categories in June 2019, in June 2020 women with only an elementary education or with a bachelor's degree worked more hours than men, by 0.018 hours and 0.112 hours respectively.

The explained components of the child's age categories have not changed noticeably. While the difference in hours worked remained insignificant between men and women who had a child aged 6-12 in both years, women on average worked more hours compared to men in other categories in both years. In the child aged 0-6 category, women work more than men by 0.11 hours for both years. Women who had a child aged 13-17 worked 0.017 and 0.20 more hours

than men in June 2019 and June 2020 respectively. If they had a child aged 18-24, they also worked more hours than men, by 0.016 hours in June 2019 and 0.026 hours in June 2020.

Looking at the contribution to the explained component of the industry categories, we see a lot of changes between June 2019 and June 2020. The difference in hours worked between men and women remained insignificant within some industries in both years.

Fishing/hunting/trapping, utilities, real state/ rentals, professional / scientific, education service, other services and public administration fall into this category. In contrast, construction, manufacture of durable goods, retail, healthcare and social assistance, information and recreation, accommodation and food services are industries where the difference in hours worked between men and women remained statistically significant. The magnitude of the difference remained approximately similar, with men working more hours than women within these industries in both years. Although there had been a gender gap in hours worked in forestry, mining, manufacturing of non-durable goods, wholesale, transportation and finance in June 2019, these gaps disappeared in June 2020. Although there was no significant difference between men and women within agriculture and the business/building industry in June 2019, we now see a statistically significant difference within these industries in June 2020. While women on average worked fewer hours compared to men in agriculture (by 0.02 hours), they worked on average more hours in the business/building industry (by 0.02).

Interestingly, when all else is held constant, on average there no significant differences between men and women in hours worked by province. This is true in both June 2019 and June 2020.

Nevertheless, size of the firm for which the individual works does contribute to the explained component. Although there had been a gender gap within firms with 0-20, 20-99 and

more than 500 employees, the gaps disappeared in June 2020. In contrast, while there was no difference in the average hours worked between men and women in firms with 100-500 employees in June 2019, in June 2020 men – on average – worked more hours than women within these firms.

Neither being married, nor being an immigrant, nor living in a dual earner family plays any role in determining the explained gender gap in hours worked in either year. While women working in the public sector worked fewer hours than men in June 2019 (by 0.133 hours), they worked more hours in June 2020 (by 0.264), holding all else constant. Finally, the gender gap remained significant and similar in magnitude in both years between men and women who are union members.

Turning our attention to the unexplained component of the gender gap with respect to the role of age categories, we can see a few changes with respect to the statistical significance of the differences. Although there had been a gender gap in almost all age categories in June 2019, these gaps were no longer present in June 2020, and being in a specific age group does not affect the hours worked of the two genders unequally.

Although there was no difference between unexplained component of the hours worked of men and women in any of educational attainment categories in June 2019, we see discrepancies in favor of women who are in the “some post-secondary” and “above bachelor’s degree” category in June 2020 (by 0.057 and 0.161 hours, respectively).

The factor that makes the biggest contribution to the unexplained component of the total difference is whether men or women have a child. In both years, women with a child aged 0-6 worked on average considerably less than men, by 1.1 and 1.4 hours in June 2019 and June 2020 respectively. Men with children in other age categories on average worked more than women,

and the magnitude of the difference is almost the same in both years. Although there were not any differences between men and women with children aged 18-24 category in June 2019, women in this category worked on average more hours than men in June 2020 (by 0.29 hours).

Considering the contribution of industries to the unexplained component of the differences, we see a few changes between the two months of study. Industries like forestry, mining/gas, construction, manufacture of both durable and non-durable goods, finance/insurance, professional/scientific, healthcare/social assistance, accommodation and food services and public administration where there was a significant difference between men and women in June 2019 no longer treated men and women differently in June 2020. However, a new gender inequality appeared in the retail industry and it benefited (in term of hours worked) men more than women by 0.173 hours. Although in the information/culture/recreation industry, women on average worked 0.04 more hours than men in June 2019, men on average worked 0.096 hours more than women in June 2020. There is no significant difference between the work hours of men and women in either months of the study in other industries.

Looking at the unexplained component with respect to the role of marriage, we can see that the gender gap in hours worked remained significant in both years and men on average worked more hours than women (by 1.25 hours in June 2019 and 0.644 hours in June 2020).

There is no unexplained difference either between men and women working in public sector (compared to those working in the private sector) or between men and women working in different provinces. The same situation is true for men and women within the “union” category. Interestingly, while there was an unexplained difference between men and women within dual earner families in June 2019, there is no gender gap within this category in June 2020.

Looking at the unexplained component with respect to the firm size, we see that only men and women in firms with 0-20 employees experienced a difference in both years (by 0.122 and 0.183 hours in June 2019 and June 2020 respectively, in favor of men). Although there was not any gender gap in hours worked in June 2019, there was a gender gap in favor of women by about 0.48 hours in June 2020.

Overall, my results show that the pandemic did not change noticeably the relationship between age and the gender gap in hours worked. However, educational attainment became an important factor in determining the gender gap, benefiting women more than men in both the explained and unexplained components. In addition, the most profound change in contribution to the gender gap related to the age of children. Having a child who is in a need of care seems to have made women stay at home more than they used to, on average. Additionally, the contribution of different industry sectors changed a lot after the pandemic, and each contributed to the gender gap differently from the way they used to do. Among industries, healthcare and social assistance remained an important sector in determining the gender gap in hours of work, and its contribution is greater than that of other sectors (in the explained component). There are no changes in gender disparity within provinces, and married women are suffering less from gender inequality in the month of the recovery (compared to the gender inequality in June 2019). The pandemic did not make any changes to the difference in hours worked between men and women who are union members, and it makes women within dual-earner families reap the benefit of equality in their hours worked.

6. Conclusion

This paper has documented the effect of the pandemic on gender inequality between men and women in hours of work in Canada. Using LFS data for June 2019 and June 2020 and the Blinder-Oaxaca decomposition technique, I show that the difference between men and women in hours of work has not declined significantly due to the pandemic. This is not because women worked more hours than men, but because men experienced a larger drop in hours of work than women. While the explained component of the difference accounted for 15.85% of the total difference in June 2019, this share fell to 14.08% in the same month after the pandemic began. In contrast, the unexplained component increased by 1.77% from its level in June 2019 (from 84.15% to 85.92% in June 2020), suggesting that the economic shutdown created a more unequal environment for both men and women (especially for women). For men, for example, we see a discrepancy in the “some post-secondary” and “above bachelor’s degree” category in June 2020 (by 0.057 and 0.161 hours, respectively). For men, for example, the closure of childcare and school facilities as an example appears to have affected women more than men. As my results show, there is an increase in gender inequality against women with a child aged 0-6 in term of hours worked (from 1.099 difference in hours in June 2019 to 1.415 difference in hours in June 2020).

Nonetheless, all of these findings suggest that the variable “Hours of work at the main job,” which was expected to differ significantly as a result of Covid-19, may not be a good indicator of the impact of the pandemic in this research. The most likely reason is related to the size of the dataset; there is a difference of 10,000 observations between June 2019 and June 2020. Not accounting for people with zero hours of work is also problematic. However, since my dataset does not provide me with the labour force status of individuals in a previous year, it is not possible for me to capture this difference directly. To address this problem, future research could involve

estimating a Tobit model, which allows one to include people who are in the labour force but unemployed. In addition, future research could compare the effect of different recessions on the gap between men's and women's labour supply during the first month of the recovery, and investigate whether there exist any specific characteristics of men and women that were particularly correlated with gender differences during the pandemic recession.

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Graphs and Tables

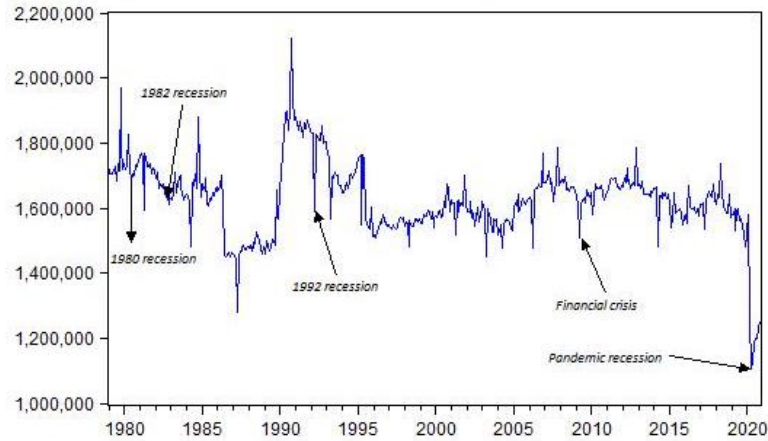


Figure 1: Authors calculation, LFS data. Seasonally adjusted total hours worked by employed individuals who are between 15-64 and who are not self-employed (incorporated or unincorporated).

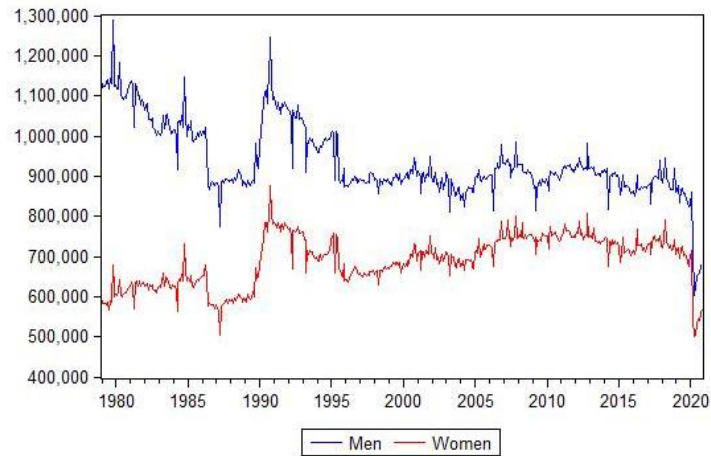


Figure 2: Authors calculation, LFS data. Seasonally adjusted total hours worked by employed men and women who are between 15-64 and who are not self-employed (incorporated or unincorporated).

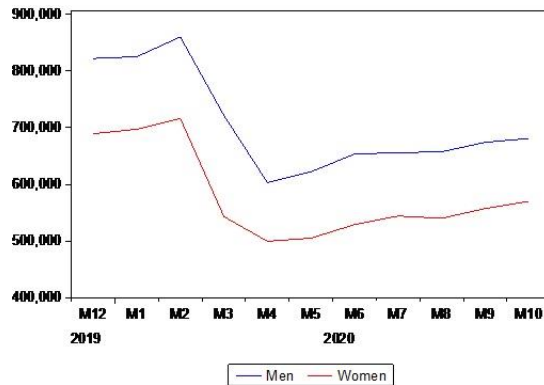


Figure 3: Authors calculation, LFS data. The detailed change of men and women hours worked during the months before and after the pandemic started from December 2019 to October 2020.

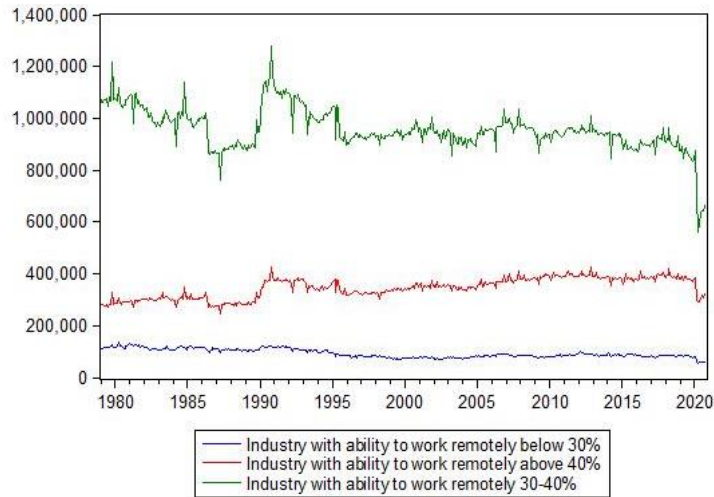


Figure 4: Author's calculation, LFS data. Hours worked in industry of individuals who are employed, not self-employed (incorporated or unincorporated) and between 15-64 years old, based on the possibility of remote-working.

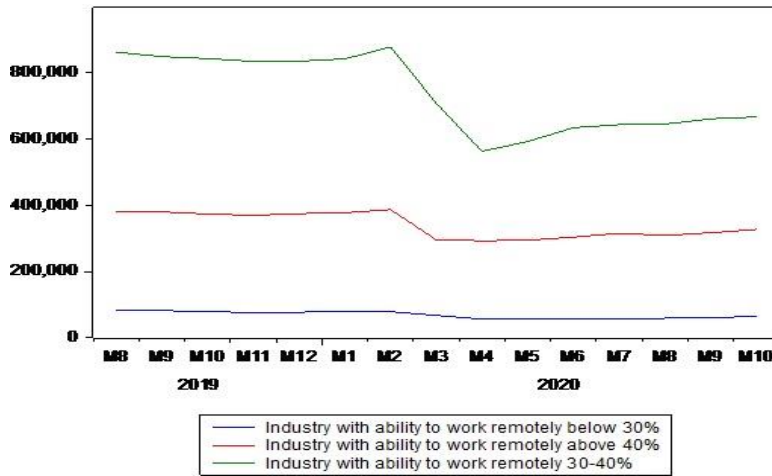


Figure 5: Author's calculation, LFS data. The detailed change of hours worked in industry of individuals who are employed, not self-employed (incorporated or unincorporated) and between 15-64 years old, based on the possibility of remote-working, between August 2019 to October 2020.

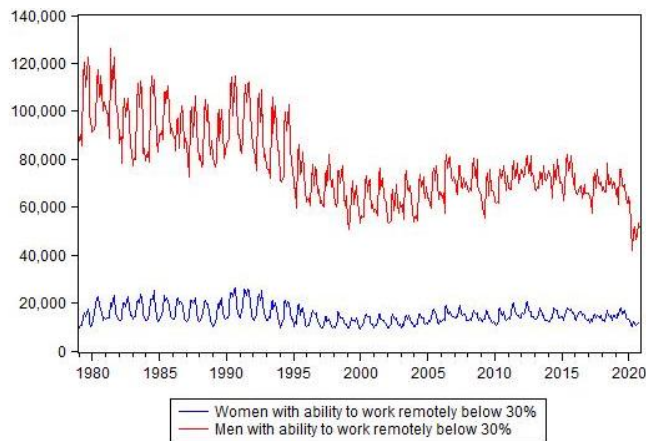


Figure 6: Author's calculation, LFS data. Hours worked for men and women who are employed, not self-employed (incorporated or unincorporated) and between 15-64 years old, in industries in which <30% of the works are done remotely.

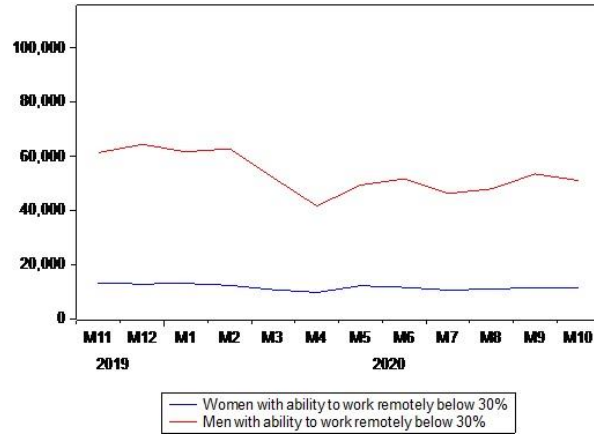


Figure 7: Author's calculation, LFS data. The detailed change of Hours worked for men and women who are employed, not self-employed (incorporated or unincorporated) and between 15-64 years old, in industries in which <30% of the works are done remotely between November 2019 to October 2020.

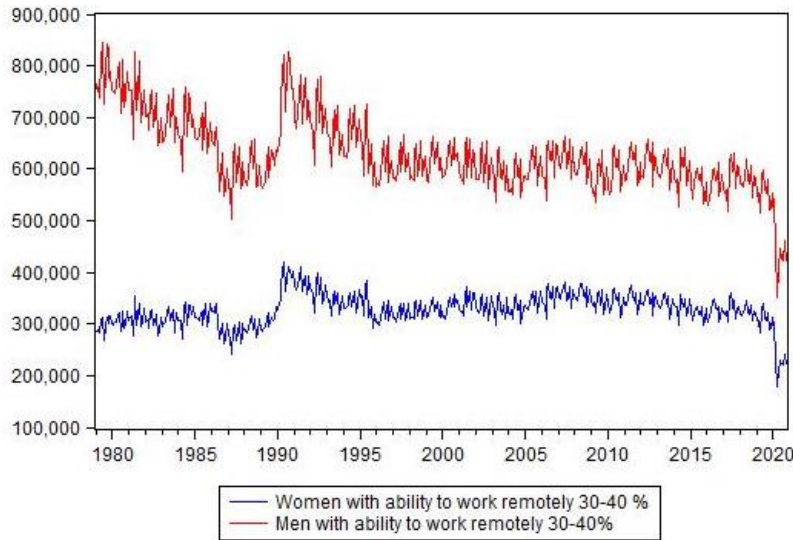


Figure 8: Author's calculation, LFS data. Hours worked for men and women who are employed, not self-employed (incorporated or unincorporated) and between 15-64 years old, in industries in which 30-40% of the works are done remotely.

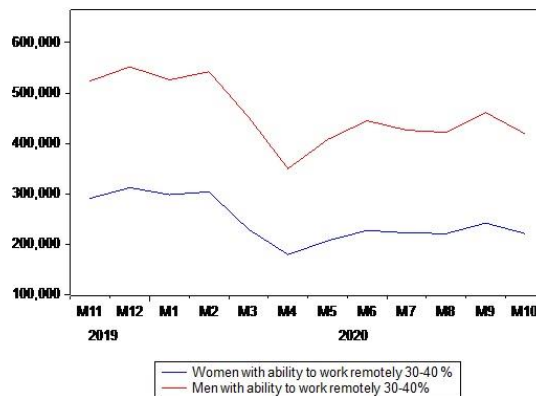


Figure 9: Author's calculation, LFS data. The detailed change of Hours worked for men and women who are employed, not self-employed (incorporated or unincorporated) and between 15-64 years old, in industries in which 30-40% of the works are done remotely between November 2019 to October 2020.

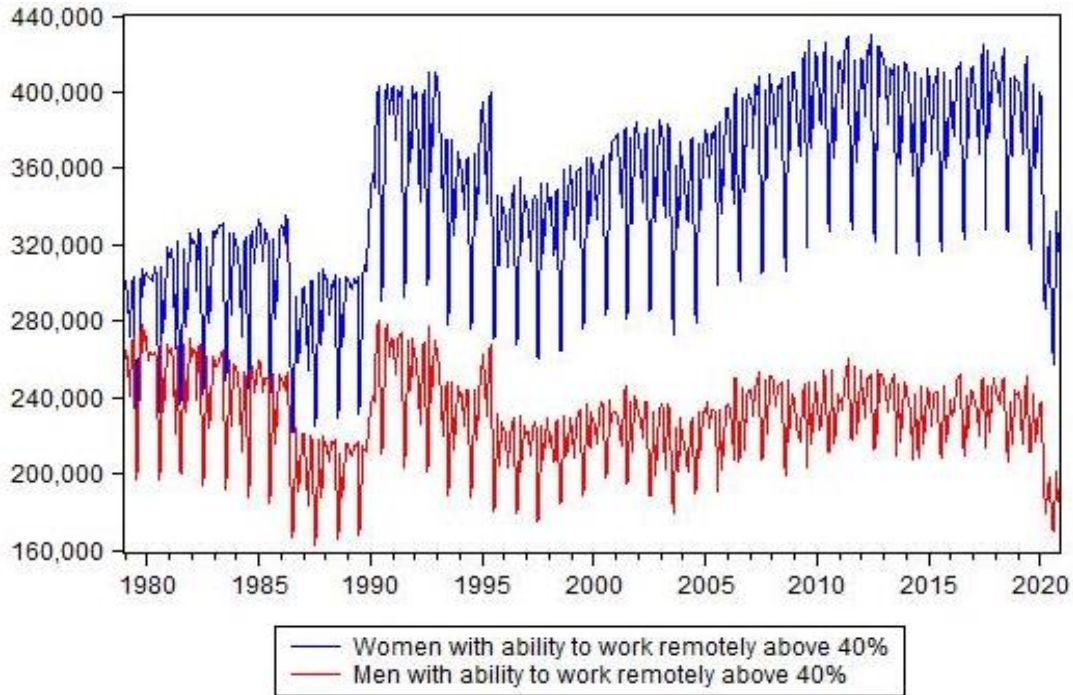


Figure 10: Author's calculation, LFS data. Hours worked for men and women who are employed, not self-employed (incorporated or unincorporated) and between 15-64 years old, in industries in which >40% of the works are done remotely.

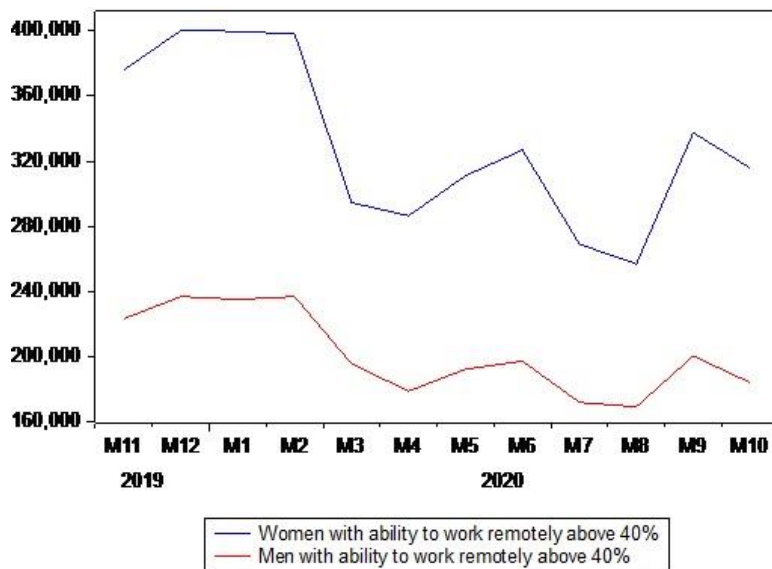


Figure 11: Author's calculation, LFS data. The detailed change of Hours worked for men and women who are employed, not self-employed (incorporated or unincorporated) and between 15-64 years old, in industries in which >40% of the works are done remotely between November 2019 to October 2020.

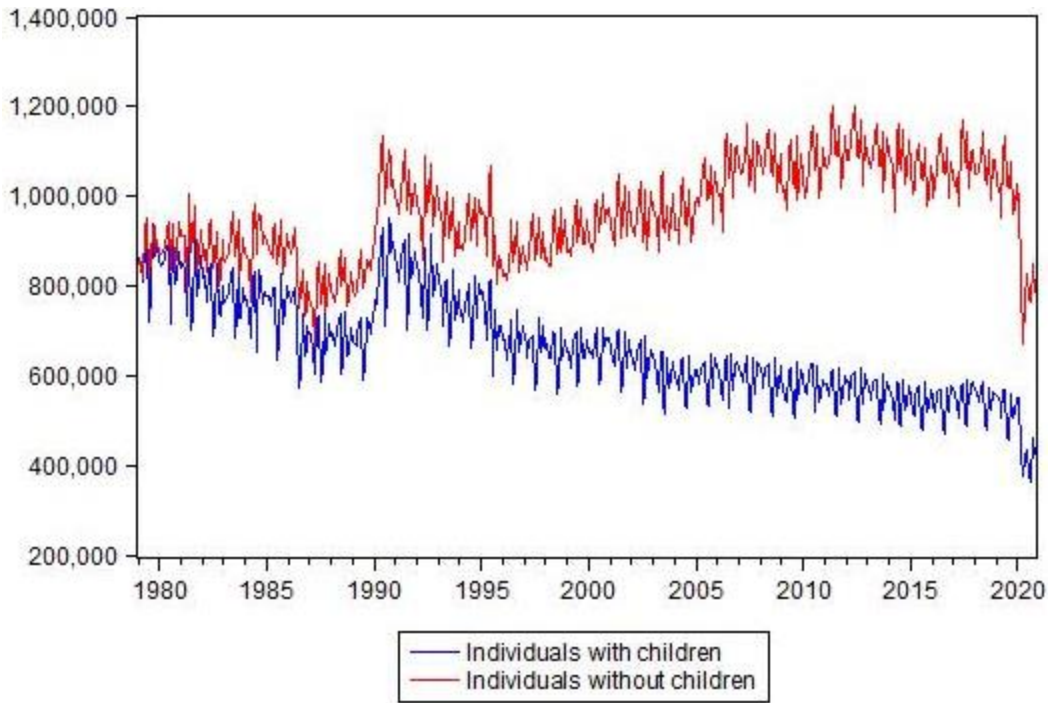


Figure 12: Author's calculation, LFS data. Hours worked by individuals whose child is between 0-17 years old (the age in which children are in need of childcare), versus those individuals whose child is either 18-24 or they do not have any children.

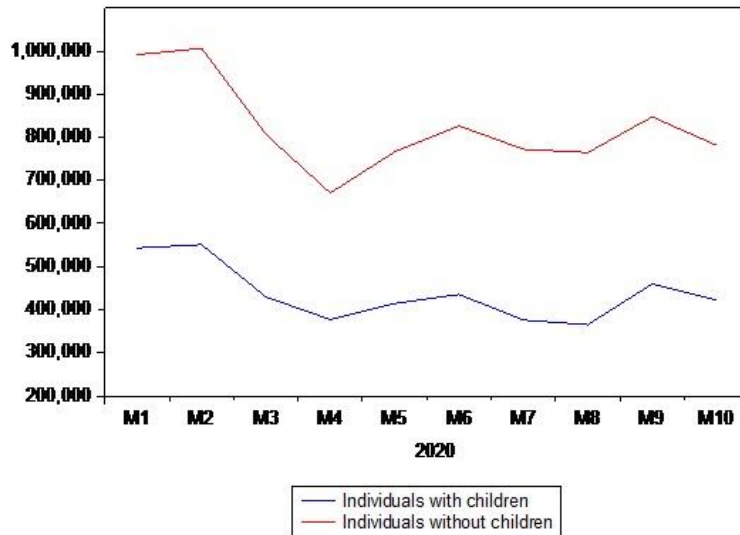


Figure 13: Author's calculation, LFS data. The detailed change of hours worked by individuals whose child is between 0-17 years old (the age in which children are in need of childcare), versus those individuals whose child is either 18-24 or they do not have any children, between January and October 2020.

Table 1: Descriptive Statistics for Variables in June 2019

	Male				Female			
	Mean	Std.Dev	Min	Max	Mean	Std.Dev	Min	Max
Actual hours of work at the main job	35.19	12.70	0	55	30	13.66	0	55
Age								
Age15-19	.062	.242	0	1	.065	.247	0	1
Age20-24	.1	.3	0	1	.093	.291	0	1
Age25-29	.109	.311	0	1	.108	.31	0	1
Age30-34	.108	.311	0	1	.11	.313	0	1
Age35-39	.113	.317	0	1	.111	.314	0	1
Age40-44	.105	.307	0	1	.11	.312	0	1
Age45-49	.108	.31	0	1	.111	.314	0	1
Age50-54	.108	.311	0	1	.115	.319	0	1
Age55-59	.109	.312	0	1	.109	.312	0	1
Age60-64	.076	.265	0	1	.068	.252	0	1
Industry								
Agriculture	.015	.123	0	1	.0104	.101	0	1
Forestry/logging	.007	.0834	0	1	.001	.039	0	1
Fish/Hunt/Trap	.002	.04	0	1	.0004	.0189	0	1
Mine/oil/gas	.032	.177	0	1	.007	.0819	0	1
Utilities	.015	.122	0	1	.005	.072	0	1
Construction	.12	.325	0	1	.018	.133	0	1
Manu durable	.091	.288	0	1	.022	.146	0	1
Manu non durable	.061	.239	0	1	.0314	.174	0	1
Wholesale	.044	.205	0	1	.0179	.133	0	1
Retail	.114	.318	0	1	.133	.34	0	1
Transport/Warehouse	.067	.25	0	1	.027	.161	0	1
Finance/Insurance	.028	.165	0	1	.048	.213	0	1
Realstate/Rentals	.012	.11	0	1	.01	.1	0	1
Professional/Scientific	.056	.23	0	1	.047	.212	0	1
Business/Building	.038	.19	0	1	.027	.162	0	1
Education service	.05	.218	0	1	.119	.324	0	1
Healthcare/Social Assistance	.047	.213	0	1	.242	.428	0	1
Information/Culture/Recreation	.039	.195	0	1	.039	.193	0	1
Accommodation/Food services	.058	.233	0	1	.087	.282	0	1
Other services	.034	.182	0	1	.035	.184	0	1
Public administration	.069	.253	0	1	.072	.259	0	1
Education								
Edu0-8	.018	.134	0	1	.011	.104	0	1
Some high school	.093	.29	0	1	.065	.247	0	1
High school graduate	.214	.41	0	1	.177	.382	0	1
Some post secondary	.068	.252	0	1	.068	.253	0	1
Post secondary certificate	.38	.485	0	1	.377	.485	0	1
Bachelor's degree	.157	.364	0	1	.215	.411	0	1
Above bachelor's degree	.069	.253	0	1	.085	.279	0	1
Age of child								
child 0-6	.382	.486	0	1	.337	.473	0	1
child 6-12	.28	.449	0	1	.29	.454	0	1
child 13-17	.177	.382	0	1	.194	.396	0	1
child 18-24	.16	.366	0	1	.178	.383	0	1

Table 1: Author's calculation using Labour Force Survey June 2019

	Male				Female			
	Mean	Std.Dev	Min	Max	Mean	Std.Dev	Min	Max
Marital Status								
Married	.443	.497	0	1	.442	.497	0	1
Class of work								
Public sector	.195	.396	0	1	.344	.475	0	1
Immigration status								
Immigrant	.166	.372	0	1	.165	.371	0	1
Union membership								
Union member	.28	.449	0	1	.339	.473	0	1
Economic family type								
Dual earner family	.553	.497	0	1	.59	.492	0	1
Province								
Newfoundland and Labrador	.03	.171	0	1	.033	.179	0	1
Prince Edward Island	.025	.156	0	1	.029	.167	0	1
Nova Scotia	.046	.21	0	1	.052	.221	0	1
New Brunswick	.046	.21	0	1	.049	.215	0	1
Quebec	.185	.388	0	1	.18	.384	0	1
Ontario	.279	.448	0	1	.279	.449	0	1
Manitoba	.082	.274	0	1	.079	.27	0	1
Saskatchewan	.071	.257	0	1	.073	.26	0	1
Alberta	.115	.319	0	1	.107	.31	0	1
British Columbia	.12	.325	0	1	.119	.324	0	1
Firm size								
firm 0-20	.19	.392	0	1	.188	.391	0	1
firm 20-99	.183	.387	0	1	.161	.367	0	1
firm 100-500	.159	.365	0	1	.142	.349	0	1
firm +500	.468	.499	0	1	.509	.45	0	1

Table 1: Author's calculation using Labour Force Survey June 2019

Table 2: Descriptive Statistics for Variables in June 2020

	Male				Female			
	Mean	Std.Dev	Min	Max	Mean	Std.Dev	Min	Max
Actual hours of work at the main job	34.17	13.42	0	55	29.08	14.56	0	55
Age								
Age15-19	.062	.241	0	1	.059	.236	0	1
Age20-24	.08	.271	0	1	.071	.257	0	1
Age25-29	.093	.29	0	1	.095	.294	0	1
Age30-34	.11	.312	0	1	.108	.311	0	1
Age35-39	.116	.321	0	1	.117	.322	0	1
Age40-44	.116	.32	0	1	.115	.319	0	1
Age45-49	.112	.315	0	1	.116	.32	0	1
Age50-54	.115	.319	0	1	.124	.33	0	1
Age55-59	.116	.32	0	1	.119	.324	0	1
Age60-64	.081	.273	0	1	.075	.263	0	1
Industry								
Agriculture	.015	.121	0	1	.009	.094	0	1
Forestry/logging	.006	.078	0	1	.002	.042	0	1
Fish/Hunt/Trap	.001	.038	0	1	.0004	.02	0	1
Mine/oil/gas	.031	.174	0	1	.006	.079	0	1
Utilities	.016	.127	0	1	.005	.072	0	1
Construction	.119	.324	0	1	.0183	.134	0	1
Manu durable	.092	.289	0	1	.02	.141	0	1
Manu non durable	.061	.239	0	1	.033	.179	0	1
Wholesale	.044	.205	0	1	.0185	.135	0	1
Retail	.114	.318	0	1	.134	.34	0	1
Transport/Warehouse	.066	.249	0	1	.024	.154	0	1
Finance/Insurance	.032	.176	0	1	.056	.23	0	1
Realstate/Rentals	.011	.106	0	1	.009	.096	0	1
Professional/Scientific	.059	.236	0	1	.05	.219	0	1
Business/Building	.039	.193	0	1	.024	.154	0	1
Education service	.053	.223	0	1	.126	.331	0	1
Healthcare/Social Assistance	.05	.219	0	1	.261	.439	0	1
Information/Culture/Recreation	.035	.184	0	1	.028	.165	0	1
Accommodation/Food services	.042	.201	0	1	.064	.244	0	1
Other services	.033	.179	0	1	.031	.175	0	1
Public administration	.078	.268	0	1	.078	.269	0	1
Education								
Edu0-8	.016	.124	0	1	.009	.096	0	1
Some highschool	.086	.28	0	1	.057	.233	0	1
High school graduate	.201	.401	0	1	.166	.372	0	1
Some post secondary	.066	.248	0	1	.061	.24	0	1
Post secondary certificate	.386	.487	0	1	.38	.485	0	1
Bachelor's degree	.166	.372	0	1	.23	.421	0	1
Above bachelor's degree	.08	.271	0	1	.095	.293	0	1
Age of child								
child 0-6	.367	.482	0	1	.325	.468	0	1
child 6-12	.291	.454	0	1	.298	.457	0	1
child 13-17	.18	.384	0	1	.199	.399	0	1
child 18-24	.162	.368	0	1	.179	.383	0	1

Table 2: Author's calculation using Labour Force Survey June 2020

	Male				Female			
	Mean	Std.Dev	Min	Max	Mean	Std.Dev	Min	Max
Marital Status								
Married	.472	.499	0	1	.471	.499	0	1
Class of work								
Public sector	.209	.406	0	1	.379	.485	0	1
Immigration status								
Immigrant	.166	.372	0	1	.159	.366	0	1
Union membership								
Union member	.301	.459	0	1	.364	.481	0	1
Economic family type								
Dual earner family	.537	.499	0	1	.579	.494	0	1
Province								
Newfoundland and Labrador	.025	.156	0	1	.031	.173	0	1
Prince Edward Island	.026	.158	0	1	.029	.169	0	1
Nova Scotia	.049	.216	0	1	.053	.223	0	1
New Brunswick	.05	.218	0	1	.055	.227	0	1
Quebec	.202	.401	0	1	.198	.399	0	1
Ontario	.276	.447	0	1	.266	.442	0	1
Manitoba	.096	.294	0	1	.092	.289	0	1
Saskatchewan	.07	.255	0	1	.07	.256	0	1
Alberta	.103	.304	0	1	.098	.298	0	1
British Columbia	.103	.304	0	1	.107	.309	0	1
Firm size								
firm 0-20	.184	.388	0	1	.176	.38	0	1
firm 20-99	.177	.381	0	1	.15	.357	0	1
firm 100-500	.16	.367	0	1	.147	.354	0	1
firm +500	.478	.499	0	1	.528	.499	0	1

Table 2: Author's calculation using Labour Force Survey June 2020

Table 3: Hours worked by individual's characteristics in June 2019

	Male			Female			Total		
	Count	Mean	Std	Count	Mean	Std	Count	Mean	Std
Age									
Age15-19	1,467	21.2	(13.5)	1,635	18.1	(11.7)	3,102	19.6	(12.7)
Age20-24	2,363	33.4	(12.2)	2,344	28.6	(12.9)	4,707	31	(12.8)
Age25-29	2,556	36.3	(11.2)	2,713	29.8	(14.5)	5,269	33	(13.4)
Age30-34	2,549	36.3	(11.8)	2,775	29.4	(14.7)	5,324	32.7	(13.8)
Age35-39	2,672	37.1	(11.1)	2,785	30.9	(13.5)	5,457	33.9	(12.8)
Age40-44	2,482	37.1	(11.5)	2,755	32.5	(12.4)	5,237	34.7	(12.2)
Age45-49	2,539	37.3	(11.7)	2,784	32.9	(12.1)	5,323	35	(12.1)
Age50-54	2,549	36.8	(12.2)	2,894	32.2	(12.5)	5,443	34.4	(12.6)
Age55-59	2,567	36.1	(12.9)	2,746	30.7	(13.5)	5,313	33.3	(13.7)
Age60-64	1,792	33.8	(13.8)	1,710	29.3	(13.6)	3,502	31.6	(13.9)
Industry									
Agriculture	359	37.6	(12.8)	262	31.8	(14.8)	621	25.2	(14)
Forestry/logging)	165	40.2	(10.9)	39	32.6	(12.7)	204	38.8	(11.7)
Fish/Hunt/Trap	38	40.2	(14.2)	9	31.5	(18.5)	47	38.6	(15.3)
Mine/oil/gas	764	34.8	(16.1)	170	35.6	(13.4)	934	34.9	(15.6)
Utilities	358	35.6	(12.7)	131	35.7	(10.6)	489	35.7	(12.2)
Construction	2,817	37.9	11.4	451	34.1	(12.2)	3,268	37.4	(11.6)
Manu durable	2,141	37.7	(11.8)	547	35.4	(12.8)	2,688	37.2	(12)
Manu non durable	1,428	36.7	12.4	790	35.4	(12.6)	2,218	36.3	(12.5)
Wholesale	1,031	38.4	10.4	450	33.9	13.2	1,481	37	(11.5)
Retail	2,694	32.2	(13.2)	3,344	27.7	(13.5)	6,038	29.7	(13.6)
Transport/Warehouse	1,581	35.1	(14)	672	30.9	(13.5)	2,253	33.8	(14)
Finance/Insurance	663	36.4	(10.6)	1200	31.9	(12.6)	1,863	33.5	(12.1)
Realstate/Rentals	291	36.3	(12.2)	252	32.1	(13.1)	543	34.4	(12.8)
Professional/Scientific	1,316	37.2	(10.5)	1,191	33.6	(12.5)	2,507	35.5	(11.6)
Business/Building	887	34.7	(13)	679	30.6	(13.1)	1,566	32.9	(13.2)
Education service	1,176	34.5	(12.4)	2,995	30.1	(14.1)	4,171	31.3	(13.8)
Healthcare/Social Assistance	1,117	32.9	(12.5)	6,089	28.9	(13.8)	7,206	29.5	(13.7)
Information/Culture/Recreation	928	31.8	(13.3)	976	27.8	(14.4)	1,904	29.7	(14)
Accommodation/Food services	1,355	28.3	(13.6)	2,189	25.9	(13.3)	3,544	26.8	(13.5)
Other services	809	36.5	(11.2)	883	29.7	(13.3)	1,692	33	(12.8)
Public administration	1,618	34.9	(11.7)	1,822	32.1	(12.6)	3,440	33.4	(12.3)
Education									
Edu0-8	430	33.4	(14.4)	276	27.3	(15.9)	706	31	(15.3)
Some highschool	2,186	29.5	(15.7)	1,646	21.7	(14.2)	3,832	26.2	(15.5)
High school graduatel	5,040	35.3	(12.7)	4,463	29.9	(13.1)	9,503	32.8	(13.2)
Some post secondary	1,609	32.5	(13.5)	1,722	27.7	(13.6)	3,331	30	(13.7)
Post secondary certificate	8,953	36.4	(12.1)	9,490	30.6	(13.1)	18,443	33.4	(12.9)
Bachelor's degree	3,701	36.3	(11.1)	5,405	31.4	(13.6)	9,106	33.4	(12.9)
Above bachelor's degree	1,617	36.5	(11)	2,139	32.3	(14.1)	3,756	34.1	(13)
Age of child									
child 0-6	3,269	36.6	(11.8)	3,329	25.3	(16.3)	6,598	30.9	(15.3)
child 6-12	2,402	37.5	(10.8)	2,872	32.3	(11.9)	5,274	34.7	(11.7)
child 13-17	1,514	37.4	(11.5)	1,923	32.9	(11.8)	3,437	34.9	(11.9)
child 18-24	1,367	36.8	(12.2)	1,763	31.9	(12.6)	3,130	34	(12.7)

Source: Author calculation using Labour Force Survey June 2019

	Count	Male Mean	Std	Count	Female Mean	Std	Count	Total Mean	Std
Marital Status									
Married	10,420	36.8	(11.8)	11,119	30.5	(13.7)	21,539	33.6	(13.2)
Single	13,116	33.9	(13.2)	14,022	29.6	(13.6)	27,138	31.7	(13.6)
Class of work									
Public sector	4,582	34.5	(12.3)	8,649	30.2	(13.8)	13,231	31.7	(13.5)
Private sector	18,954	35.3	(12.8)	16,492	29.9	(13.6)	35,446	32.8	(13.4)
Immigration status									
Immigrant	3,911	35.5	(11.8)	4,140	30.8	(13.4)	8,051	33.1	(12.8)
Not immigrant	19,625	35.1	(12.9)	21,001	29.8	(13.7)	40,626	32.4	(13.6)
Union membership									
Union member	6,595	34.6	(13.1)	8,512	29.5	(14.1)	15,107	31.8	(13.9)
not union member	16,941	35.4	(12.5)	16,629	30.2	(13.4)	33,570	32.8	(13.3)
Economic family type									
Dual earner family	13,021	35.5	(12.5)	14,824	29.7	(13.9)	27,845	32.4	(13.6)
Not dual earner family	10,515	34.8	(12.9)	10,317	30.5	(13.3)	20,832	32.7	(13.3)
Province									
Newfoundland and Labrador	710	35.6	(13.5)	834	30.2	(14.3)	1,544	32.7	(14.2)
Prince Edward Island	591	36.9	(11.5)	719	30.7	(13.3)	1,310	33.5	(12.9)
Nova Scotia	1,084	35.7	(12.5)	1,298	31.1	(12.9)	2,382	33.2	(12.9)
New Brunswick	1,085	35.5	(13.9)	1,225	31.5	(13.5)	2,310	33.4	(13.8)
Quebec	4,358	34.5	(12.6)	4,519	29.1	(13.5)	8,877	31.8	(13.4)
Ontario	6,562	35.3	(12.3)	7,025	30.3	(13.5)	13,587	32.7	(13.2)
Manitoba	1,932	35.1	(12.5)	1,988	30.1	(13.6)	3,920	32.5	(13.3)
Saskatchewan	1,677	35	(13.3)	1,830	29.8	(14)	3,507	32.2	(13.9)
Alberta	2,711	35.8	(12.6)	2,704	30.3	(13.8)	5,415	33	(13.5)
British Columbia	2,826	34.7	(13.1)	2,999	29.2	(14)	5,825	31.9	(13.8)
Firm size									
firm 0-20	4,471	34.8	(12.7)	4,740	28.5	(13.4)	9,211	31.5	(13.5)
firm 20-99	4,306	35.8	(12.2)	4,044	30.7	(13.3)	8,350	33.3	(13)
firm 100-500	3,735	36.2	(12.2)	3,565	31	(13.5)	7,300	33.7	(13.1)
firm +500	11,024	34.7	(13)	12,792	30.1	(13.9)	23,816	32.2	(13.7)

Source: Author calculation using Labour Force Survey June 2019

Table 4: Hours worked by individual's characteristics in June 2020

	Male			Female			Total		
	Count	Mean	Std	Count	Mean	Std	Count	Mean	Std
Age									
Age15-19	1,168	25.2	(13.6)	1,143	20.6	(12.5)	2,311	22.9	(13.2)
Age20-24	1,504	31.8	(13.3)	1,380	28	(13.6)	2,884	30	(13.6)
Age25-29	1,755	33.9	(13.4)	1,854	28	(15.6)	3,600	30.9	(14.9)
Age30-34	2,070	35.1	(12.9)	2,090	27.7	(15.9)	4,160	31.4	(15)
Age35-39	2,198	35.5	(12.7)	2,263	29.4	(14.8)	4,461	32.4	(14.1)
Age40-44	2,188	35.5	(12.5)	2,215	30.8	(13.9)	4,403	33.1	(13.4)
Age45-49	2,108	36	(12.6)	2,234	31.7	(13.4)	4,342	33.8	(13.2)
Age50-54	2,165	35.4	(12.9)	2,398	31.2	(13.8)	4,563	33.2	(13.5)
Age55-59	2,181	34.6	(13.8)	2,297	30	(14.1)	4,478	32.2	(14.1)
Age60-64	1,530	33.6	(14.6)	1,449	27.9	(14.9)	2,979	30.8	(15)
Industry									
Agriculture	279	35.6	(13.6)	171	29.3	(13.9)	450	33.2	(14)
Forestry/logging)	117	38.2	(13.4)	34	34.2	(10.9)	151	37.3	(13)
Fish/Hunt/Trap	27	39.7	(12.8)	8	39	(1.9)	35	39.6	(11.2)
Mine/oil/gas	589	33.6	(16.5)	123	34.3	(13.8)	712	33.7	(16.1)
Utilities	309	35.2	(12.3)	101	34.9	(9.7)	410	35.2	(11.7)
Construction	2,247	36.9	(12.7)	353	30.9	(14.7)	2,600	36.1	(13.2)
Manu durable	1,743	36.6	(12.1)	393	33.7	(13)	2,136	36.1	(12.3)
Manu non durable	1,151	35.5	(13.3)	643	34.1	(13.8)	1,794	35	(13.5)
Wholesale	832	36	(12.4)	358	32.4	(14.2)	1,190	34.9	(13.1)
Retail	2,152	31.3	(13.7)	2,581	26.5	(14.4)	4,733	28.7	(14.3)
Transport/Warehouse	1,250	33.7	(15.7)	467	29.8	(16)	1,717	32.6	(15.9)
Finance/Insurance	605	36	(9.3)	1,085	32.3	(12.5)	1,690	33.6	(11.6)
Realstate/Rentals	216	36	(11.4)	181	30.3	(13.7)	397	33.4	(12.8)
Professional/Scientific	1,121	36.5	(10.5)	975	32.7	(13.1)	2,096	34.8	(11.9)
Business/Building	731	32.6	(14.3)	472	27	(15.8)	1,203	30.4	(15.2)
Education service	993	32.5	(13.7)	2,427	29.9	(14.5)	3,420	30.7	(14.3)
Healthcare/Social Assistance	950	32.3	(13.1)	5,044	28.4	(14.7)	5,994	29	(14.5)
Information/Culture/Recreation	665	32.5	(13.6)	544	26.9	(15.7)	1,209	30	(14.9)
Accommodation/Food services	794	24.8	(14.4)	1,229	21.7	(14.8)	2,023	22.9	(14.7)
Other services	626	34.3	(13.3)	609	27.8	(14.6)	1,235	31.1	(14.3)
Public administration	1,470	34.7	(12)	1,516	31.7	(12.8)	2,986	33.2	(12.5)
Education									
Edu0-8	294	31.9	(15.5)	179	23.7	(16.1)	473	28.8	(16.2)
Some highschool	1,615	30	(15.3)	1,110	23.1	(14.5)	2,725	27.2	(15.3)
High school graduatel	3,792	34	(14)	3,204	27.9	(15)	6,996	31.2	(14.7)
Some post secondary	1,248	31.2	(14.3)	1,188	26.9	(14.5)	2,436	29.1	(14.5)
Post secondary certificate	7,279	34.7	(13.4)	7,346	29.1	(14.4)	14,625	31.9	(14.2)
Bachelor's degree	3,135	35.7	(11.4)	4,451	30.9	(14.1)	7,586	32.9	(13.3)
Above bachelor's degree	1,504	36	(11)	1,836	32.1	(14)	3,340	33.8	(12.9)
Age of child									
child 0-6	2,654	35.1	(13.3)	2,576	23.6	(17.2)	5,230	29.4	(16.4)
child 6-12	2,099	35.9	(12.5)	2,362	30.6	(13.8)	4,461	33.1	(13.5)
child 13-17	1,301	36	(12.6)	1,575	31.9	(13)	2,876	33.8	(13)
child 18-24	1,169	35.5	(12.9)	1,420	31.5	(13.2)	2,589	33.3	(13.2)

Source: Author calculation using Labour Force Survey June 2020

	Count	Male Mean	Std	Count	Female Mean	Std	Count	Total Meann	Std
Marital Status									
Married	8,901	35.5	(12.9)	9,092	29.6	(14.7)	17,993	32.5	(14.1)
Single	9,966	33	(13.7)	10,222	28.6	(14.4)	20,188	30.8	(14.3)
Class of work									
Public sector	3,936	33.9	(12.8)	7,317	30	(14.2)	11,253	31.4	(13.8)
Private sector	14,931	34.2	(13.6)	11,997	28.5	(14.7)	26,928	31.7	(14.4)
Immigration status									
Immigrant	3,128	34.5	(12.5)	3,070	29.4	(14.9)	6,198	32	(14)
Not immigrant	15,739	34.1	(13.6)	16,224	29	(14.5)	31,983	31.5	(14.3)
Union membership									
Union member	5,688	33.6	(13.7)	7,041	29.1	(14.5)	12,729	31.1	(14.3)
not union member	13,179	34.4	(13.3)	12,273	29.1	(14.6)	25,452	31.8	(14.2)
Economic family type									
Dual earner family	10,127	34.5	(13.1)	11,181	28.9	(14.7)	21,308	31.6	(14.2)
not dual earner family	8,740	33.7	(13.7)	8,133	29.3	(14.4)	16,873	31.6	(14.2)
Province									
Newfoundland and Labrador	474	33.8	(14.6)	597	29.3	(15)	1,071	31.3	(15)
Prince Edward Island	486	36.6	(12)	566	31.8	(12.9)	1,052	34	(12.7)
Nova Scotia	926	33.5	(14.3)	1,018	29.2	(14.2)	1,944	31.3	(14.4)
New Brunswick	942	34.9	(13.2)	1,057	30	(13.8)	1,999	32.3	(13.7)
Quebec	3,811	33.4	(13.3)	3,833	28.4	(14.2)	7,644	30.9	(14)
Ontario	5,206	34.6	(13.4)	5,138	29	(15.1)	10,344	31.8	(14.5)
Manitoba	1,807	34.4	(12.9)	1,780	29.2	(14.1)	3,587	31.8	(13.8)
Saskatchewan	1,320	34.3	(13.2)	1,360	29.1	(14.4)	2,680	31.6	(14.1)
Alberta	1,946	34.3	(13.8)	1,898	29.3	(14.6)	3,844	31.8	(14.4)
British Columbia	1,949	33.6	(13.6)	2,067	28.6	(15)	4,016	31.1	(14.5)
Firm size									
firm 0-20	3,482	33.9	(13.3)	3,391	26.6	(14.8)	6,873	30.3	(14.5)
firm 20-99	3,331	34.9	(13.2)	2,895	29.4	(14.3)	6,226	32.3	(14)
firm 100-500	3,026	35	(13.3)	2,834	30.1	(14.2)	5,860	32.6	(13.9)
firm +500	9,028	33.7	(13.6)	10,194	29.5	(14.5)	19,222	31.5	(14.3)

Source: Author calculation using Labour Force Survey June 2020

Table 5: Coefficient estimates of hours worked equations

Dependent variable: Hours worked at the main job				
Panel (A): 2019 coefficients				
	Men		Women	
Age15-19	-6.34*	3.41	-9.58**	(3.96)
Age20-24	-.62	1.3	-.94	(1.46)
Age25-29	1.76***	(.43)	-3.14***	(1.06)
Age30-34	1.35*	(.79)	.48	(.72)
Age35-39	1.79***	(.35)	2.96***	(.65)
Age40-44	1.48***	(.33)	3.78***	(.47)
Age45-49	1.55***	(.43)	3.56***	(.52)
Age50-54	1.15**	(.5)	2.91***	(.52)
Age55-59	-.17	(.83)	1.7*	(.98)
Age60-64	-1.94*	(1)	-1.73	(1.19)
Edu0-8	.17	(1)	-1.8	(1.26)
Some high school	-.32	(.29)	-.34	(.67)
High school graduate	-.002	(.5)	.12	(.24)
Some post secondary	-.55	.77	-.77	(.6)
Post secondary certificate	.11	(.34)	.32	(.29)
Bachelor's degree	.2	(.53)	1.03**	(.48)
Above bachelor's degree	.39	(.33)	1.45***	(.55)
child 0-6	-.8***	(.24)	-3.84***	(.41)
child 6-12	.26	(.22)	1.27***	(.19)
child 13-17	.35	(.22)	1.46***	(.27)
child 18-24	.19	(.28)	1.11*	(.36)
Agriculture	2.65**	(1.07)	2.18	(1.9)
Forestry/logging	4.55***	(1.18)	.39	(1.44)
Fish/Hunt/Trap	.07	(5.27)	-30.37***	(.95)
Mine/oil/gas	-3.34***	(.91)	3.47***	(1.03)
Utilities	1.27***	(1.54)	3.82***	(1.28)
Construction	1.59***	(.3)	3.36***	(1.03)
Manu durable	.5	(.4)	5.43***	(.66)
Manu non durable	.09	(.49)	4.63***	(.9)
Wholesale	.86*	(.51)	2.39***	(.58)
Retail	-.78*	(.46)	-.14	(.56)
Transport/Warehouse	-.96**	(.48)	.25	(.61)
Finance/Insurance	-1.04	(.65)	.54**	(.23)
Realstate/Rentals	-.7	(1.47)	1.72	(1.53)
Professional/Scientific	-.13	(.58)	2	(.37)
Business/Building	-.36	(.54)	-.15	(.51)
Education service	.55	(.96)	.3	(.44)
Healthcare	-1.33**	(.52)	-.78**	(.31)
Information	-1.91*	(.91)	-.13	(.52)
Accommodation	-3.31***	(.69)	-.99	(.71)
Other services	1.32**	(.62)	-.22	(.94)
Public administration	.41	(.63)	2.29***	(.8)
Married	.92***	(.25)	-.88	(.58)
Public sector	-1.66*	(.94)	-.42	(.39)
Immigrant	-.77**	(.35)	-.14	(.54)
Union member	-2.01***	(.34)	-2.39***	(.43)
Newfoundland and Labrador	.48***	(.07)	1.43***	(.09)
Prince Edward Island	1.28***	(.12)	.24***	(.07)

Nova Scotia	.27***	(.07)	1.13***	(.06)
New Brunswick	-.88***	(.05)	1.26***	(.07)
Quebec	-.58***	(.12)	.07***	(.18)
Ontario	.02	(.06)	-.11**	(.05)
Manitoba	-.37***	(.07)	-.38***	(.1)
Saskatchewan	-.3***	(.06)	-.13**	(.05)
Alberta	.33***	(.12)	-1.25***	(.11)
British Columbia	-.25***	(.06)	-1.48***	(.05)
dual_learner	.75***	(.17)	-.27	(.29)
firm 0-20	-1.12***	(.27)	-1.88***	(.3)
firm 20-99	.38	(.26)	.82***	(.21)
firm 100-500	.55	(.37)	.39*	(.2)
firm +500	.18	(.25)	.66***	(.15)
Constant	35.91***	(.4)	29.14***	(.74)
N	8,552		9,887	
R-squared	0.03		0.10	

Panel (B): 2020 coefficients

	Men		Women	
Age15-19	-17***	(3.88)	-14.74**	(6)
Age20-24	1.62	2.08	-2.5	(2.24)
Age25-29	1.39	(1.09)	-1.68	(1.21)
Age30-34	2.16***	(.78)	.9	(.71)
Age35-39	2.84***	(.74)	3.79***	(.75)
Age40-44	2.91***	(.65)	4.23***	(.68)
Age45-49	3.12***	(.75)	4.39***	(.62)
Age50-54	2.46***	(.69)	3.15***	(.94)
Age55-59	1.13	(.89)	2.65***	(.69)
Age60-64	-.63	(1.27)	-.2	(1.54)
Edu0-8	-2.45**	(1.24)	-5.97**	(2.3)
Some high school	-.66	(.83)	.17	(.92)
High school graduate	.99***	(.26)	-.44	(.8)
Some post secondary	-1.54**	(.67)	.02	(.63)
Post secondary certificate	.29	(.34)	.73	(.81)
Bachelor's degree	1.3***	(.38)	2.1**	(.6)
Above bachelor's degree	2.07***	(.42)	3.4***	(.37)
child 0-6	-.65	(.55)	-4.74***	(.46)
child 6-12	-.11	(.17)	.55*	(.32)
child 13-17	.26	(.31)	1.98***	(.22)
child 18-24	.5	(.39)	2.21*	(.57)
Agriculture	3.13***	(1.06)	.88	(1.26)
Forestry/logging	3.68	(2.9)	-1.8	(1.78)
Fish/Hunt/Trap	-3.16	(4.6)	12.94***	(4.28)
Mine/oil/gas	-1.5	(1.34)	1.69	(2.8)
Utilities	1.93	(1.23)	2.52	(1.86)
Construction	2.7***	(.5)	-.14	(1.16)
Manu durable	.99*	(.55)	2.71**	(1.22)
Manu non durable	.88	(.68)	1.33*	(.8)
Wholesale	.56	(.68)	1.51	(1.13)
Retail	-.38	(.7)	-2.47***	(.77)
Transport/Warehouse	-.48	(.96)	-1.3	(1.63)
Finance/Insurance	.03	(.6)	.31	(.86)
Realstate/Rentals	1.02	(1.36)	1.72	(1.34)
Professional/Scientific	.47	(.78)	.9	(.61)
Business/Building	-1.59	(1.08)	-4.35***	(1.28)
Education service	-.59	(1.19)	-1.64*	(.96)
Healthcare	-1.83**	(.87)	-3.11***	(.54)
Information	-.21	(.71)	-3.7***	(1.12)

Accommodation	-5.43***	(1.61)	-6.71***	(.67)
Other services	-.03	(.89)	-.99	(1.09)
Public administration	-.2	(.89)	-.33	(.82)
Married	.77	(.56)	-.12	(.35)
Public sector	.005***	(1.2)	1.57**	(.68)
Immigrant	-.7**	(.32)	-.42	(.58)
Union member	-2.5***	(.27)	-2.23***	(.81)
Newfoundland and Labrador	-.85***	(.09)	-.33**	(.14)
Prince Edward Island	1.51***	(.15)	3.54***	(.1)
Nova Scotia	-.92***	(.11)	-1.85***	(.05)
New Brunswick	.52***	(.09)	.65***	(.04)
Quebec	.37	(.27)	-.44**	(.17)
Ontario	.5***	(.09)	-.58**	(.07)
Manitoba	.4***	(.12)	.09	(.16)
Saskatchewan	-.43***	(.08)	-.71**	(.06)
Alberta	-.56***	(.2)	.57***	(.06)
British Columbia	-.52***	(.09)	-.94***	(.07)
dual_earner	.28	(.46)	-.29	(.34)
firm 0-20	-1.09***	(.39)	-2.29***	(.36)
firm 20-99	.17	(.43)	-.05	(.38)
firm 100-500	.98***	(.31)	1.51***	(.34)
firm +500	-.06	(.33)	.84***	(.3)
Constant	32.44***	(.65)	27.27***	(.57)
N	7,223		7,933	
R-Squared	0.03		0.11	
Panel(C): Reference coefficients	2019		2020	
Age15-19	-8.96***	(2.19)	-16***	(2.3)
Age20-24	-1.14	(1.29)	-1.65	(1.27)
Age25-29	-1.28	(.57)	-.77	.65
Age30-34	1.11***	(.34)	1.71***	(.66)
Age35-39	2.91***	(.38)	3.8***	(.5)
Age40-44	3.26***	(.22)	4.17***	(.46)
Age45-49	2.97***	(.25)	4.25***	(.44)
Age50-54	2.2***	(.32)	3.15***	(.38)
Age55-59	.75	(.63)	1.85***	(.39)
Age60-64	-1.82**	(.7)	-.53	(.9)
Edu0-8	-.58	(.66)	-2.98**	(1.2)
Some highschool	-.26	(.4)	-.59*	(.36)
High school graduate	-.002	(.24)	.23	(.26)
Some post secondary	-.74*	(.44)	-.78	(.49)
Post secondary certificate	.17	(.23)	.3	(.43)
Bachelor's degree	.54	(.36)	1.43***	(.35)
Above bachelor's degree	.87***	(.31)	2.39***	(.3)
child 0-6	-2.48***	(.17)	-2.7***	(.35)
child 6-12	.62***	(.13)	.08	(.16)
child 13-17	.97***	(.18)	1.12***	(.22)
child 18-24	.88***	(.16)	1.5***	(.2)
Agriculture	2.13**	(1.08)	2.68***	(.77)
Forestry/logging	3.26***	(1.1)	3.08	(2.15)
Fish/Hunt/Trap	-1.7	(3.93)	.95	(4.33)
Mine/oil/gas	-2.01**	(.86)	-.91	(1.43)
Utilities	1.45	(1.15)	1.53	(.95)
Construction	2.37***	(.25)	3.02***	(.52)
Manu durable	1.41***	(.4)	1.54***	(.44)
Manu non durable	1.52***	(.41)	1.1	(.71)
Wholesale	1.19***	(.37)	1.09	.71
Retail	-1.11***	(.32)	-1.42***	(.51)

Transport/Warehouse	-.88**	(.45)	-.7	(.89)
Finance/Insurance	-.87**	(.38)	.59	(.47)
Realstate/Rentals	.06	(1.04)	1.22	(.82)
Professional/Scientific	.3	(.36)	.82*	(.45)
Business/Building	-.81**	(.31)	-2.46***	(.76)
Education service	-.52	(.4)	-1.05	(.98)
Healthcare	-2.15***	(.41)	-2.65***	(.54)
Information	-1.59**	(.67)	-1.64**	(.73)
Accommodation	-2.59***	(.59)	-6.13***	(.93)
Other services	-.06	(.47)	-.14	(.47)
Public administration	.58	(.63)	-.51	(.72)
Married	-.16	(.33)	.13	(.36)
Public sector	-.79**	(.39)	1.36***	(.46)
Immigrant	-.41*	(.23)	-.45	(.35)
Union member	-2.2***	(.33)	-2.35***	(.31)
Newfoundland and Labrador	.86***	(.05)	-.54***	(.08)
Prince Edward Island	.75***	(.06)	2.72***	(.09)
Nova Scotia	.82***	(.05)	-1.34***	(.06)
New Brunswick	.38***	(.04)	.56***	(.05)
Quebec	-.71***	(.11)	-.13	(.16)
Ontario	-.05	(.04)	-.12	(.08)
Manitoba	-.35***	(.06)	.18	(.12)
Saskatchewan	-.22***	(.04)	-.61***	(.03)
Alberta	-.48***	(.09)	.01	(.1)
British Columbia	-.99***	(.03)	-.73***	(.03)
dual_earner	-.2	(.13)	-.36	(.24)
firm 0-20	-1.63***	(.23)	-1.7***	(.32)
firm 20-99	.66***	(.16)	.13	(.26)
firm 100-500	.49**	(.25)	1.22***	(.26)
firm +500	.48***	(.12)	.35	(.26)
Constant	36.30***	(.57)	32.86***	(.27)

Note: * indicates significance at the 10% level,

** significance at the 5% level,

and *** significance at 1% level.

Values in parentheses are robust standard errors connected for clustering at the provincial level.

Table 6: Oaxaca Decomposition for hours worked

	Hours (main job 2019)		Hours (main job 2020)	
Overall				
Men	37.05***	(202.28)	35.56***	(142.86)
Women	29.98***	(101.81)	28.76***	(155.40)
Difference -	7.066***	(26.40)	6.804***	(26.00)
Explained -	1.120***	(9.15)	0.957***	(4.42)
Unexplained	5.946***	(19.57)	5.846***	(18.69)
Explained	Hours (main job 2019)		Hours (main job 2020)	
Age15-19	0.00201	(0.70)	-0.00723***	(-2.78)
Age20-24	0.00705	(0.88)	0.00610	(1.20)
Age25-29	0.0246**	(1.99)	0.0181	(1.17)
Age30-34	-0.0337***	(-2.94)	-0.0275*	(-1.77)
Age35-39	-0.0240*	(-1.77)	-0.0736**	(-2.10)
Age40-44	-0.0287	(-1.56)	0.00696	(0.22)
Age45-49	0.0308*	(1.92)	0.0258	(0.99)
Age50-54	0.0471***	(2.83)	0.0398***	(3.21)
Age55-59	0.0211	(1.18)	0.0506***	(4.07)
Age60-64	-0.0238**	(-2.46)	-0.00762	(-0.58)
Edu0-8	-0.00336	(-0.86)	-0.0184**	(-2.27)
Some high school	-0.00633	(-0.65)	-0.0101	(-1.49)
High school graduate	-0.0000769	(-0.01)	0.0105	(0.86)
Some post-secondary	0.000636	(0.31)	0.000201	(0.11)
Post-secondary certificate	0.00212	(0.69)	0.00620	(0.63)
Bachelor's degree	-0.0379	(-1.50)	-0.112***	(-3.94)
Above bachelor's degree	-0.00458	(-1.39)	-0.0268	(-1.54)
child 0-6	-0.113***	(-7.70)	-0.115***	(-3.59)
child 6-12	-0.00600*	(-1.95)	-0.000553	(-0.46)
child 13-17	-0.0170***	(-3.97)	-0.0206***	(-2.67)
child 18-24	-0.0162***	(-4.77)	-0.0258***	(-5.29)
Agriculture	0.00740	(1.40)	0.0155**	(2.40)
Forestry/logging	0.0192*	(1.88)	0.0146	(1.28)
Fish/Hunt/Trap	-0.00201	(-0.42)	0.000705	(0.22)
Mine/oil/gas	-0.0705*	(-1.88)	-0.0306	(-0.62)
Utilities	0.0184	(1.25)	0.0206	(1.57)
Construction	0.240***	(9.08)	0.299***	(5.67)
Manu durable	0.110***	(3.28)	0.127***	(3.10)
Manu non-durable	0.0458***	(3.37)	0.0401	(1.54)
Wholesale	0.0354***	(3.02)	0.0311	(1.51)
Retail	0.0166**	(2.51)	0.0198**	(2.47)
Transport/Warehouse	-0.0390*	(-1.94)	-0.0305	(-0.77)
Finance/Insurance	0.0157**	(2.00)	-0.0155	(-1.25)
Real state/Rentals	0.000186	(0.06)	0.000754	(0.33)
Professional/Scientific	0.00562	(0.84)	0.00889	(1.35)

Business/Building	-0.00466	(-1.50)	-0.0154*	(-1.85)
Education service	0.0465	(1.28)	0.101	(1.07)
Healthcare/Social Assistance	0.504***	(5.18)	0.617***	(4.94)
Information/Culture/Recreation	-0.00888**	(-2.06)	-0.0131*	(-1.84)
Accommodation/Food services	0.0731***	(3.90)	0.109***	(4.44)
Other services	-0.0000196	(-0.07)	-0.000415	(-0.28)
Public administration	0.00662	(0.89)	-0.00480	(-0.65)
Married	-0.0153	(-0.49)	0.0122	(0.37)
Public sector	0.133**	(1.99)	-0.264***	(-2.90)
Immigrant	-0.00627	(-1.63)	-0.0116	(-1.29)
Union member	0.150***	(4.80)	0.187***	(5.16)
Newfoundland and Labrador	-0.000492	(-0.79)	0.00275	(0.93)
Prince Edward Island	-0.00264	(-0.93)	-0.00516	(-0.94)
Nova Scotia	-0.00577	(-0.96)	0.00455	(0.98)
New Brunswick	-0.00219	(-0.96)	-0.00312	(-0.98)
Quebec	-0.00250	(-0.88)	-0.000182	(-0.37)
Ontario	-0.0000837	(-0.33)	-0.00114	(-1.10)
Manitoba	-0.00128	(-0.93)	0.000125	(0.41)
Saskatchewan	0.000201	(0.68)	-0.00120	(-0.82)
Alberta	-0.00407	(-1.05)	0.0000451	(0.12)
British Columbia	-0.000785	(-0.44) 0	0.000909	(0.78)
Dual earner	-0.000456	(-0.13)	0.00446	(0.77)
Firm 0-20	0.0269***	(2.61)	0.00128	(0.09)
Firm 20-99	0.0125***	(3.15)	0.00262	(0.50)
Firm 100-500	0.0122	(1.59)	0.0278***	(3.13)
Firm +500	-0.0132*	(-1.87)	-0.0148	(-1.28)
Unexplained		Hours(main job 2019)		Hours(main job 2020)
Age15-19	0.00203	(0.51)	-0.00132	(-0.29)
Age20-24	0.00104	(0.10)	0.0248	(1.19)
Age25-29	0.260***	(4.15)	0.126	(1.44)
Age30-34	0.125	(0.72)	0.165	(1.27)
Age35-39	-0.223*	(-1.79)	-0.177	(-0.78)
Age40-44	-0.453***	(-3.67)	-0.274	(-1.37)
Age45-49	-0.376**	(-2.57)	-0.241	(-1.25)
Age50-54	-0.242**	(-2.41)	-0.100	(-0.52)
Age55-59	-0.122	(-1.36)	-0.108	(-1.07)
Age60-64	-0.00363	(-0.15)	-0.00568	(-0.17)
Edu0-8	0.0174	(1.02)	0.0162	(1.05)
Some high school	-0.000604	(-0.03)	-0.0205	(-0.43)
High school graduate	-0.0162	(-0.16)	0.199	(1.56)
Some post-secondary	0.00763	(0.19)	-0.0574*	(-1.87)
Post-secondary certificate	-0.0893	(-0.47)	-0.181	(-0.50)
Bachelor's degree	-0.198	(-1.19)	-0.216	(-1.33)
Above bachelor's degree	-0.109	(-1.52)	-0.161***	(-3.32)
Child 0-6	1.099***	(5.16)	1.415***	(5.82)

child 6-12	-0.289***	(-3.10)	-0.194*	(-1.71)
child 13-17	-0.205***	(-2.82)	-0.327***	(-7.72)
child 18-24	-0.152	(-1.58)	-0.288*	(-1.92)
Agriculture	0.00557	(0.26)	0.0174	(1.05)
Forestry/logging	0.0147**	(2.25)	0.0132	(1.10)
Fish/Hunt/Trap	0.00518	(0.95)	-0.0112	(-1.37)
Mine/oil/gas	-0.0953**	(-2.11)	-0.0401	(-1.16)
Utilities	-0.0187	(-0.97)	0.000912	(0.04)
Construction	-0.114***	(-2.74)	0.0232	(0.38)
Manu durable	-0.179***	(-4.26)	-0.0808	(-1.36)
Manu non-durable	-0.194***	(-3.47)	-0.0215	(-0.76)
Wholesale	-0.0371	(-1.56)	-0.0346	(-0.85)
Retail	-0.0647	(-1.00)	0.173**	(2.20)
Transport/Warehouse	-0.0365	(-1.18)	0.0279	(0.43)
Finance/Insurance	-0.0845***	(-3.06)	-0.00329	(-0.06)
Real state/Rentals	-0.0258	(-1.02)	-0.00647	(-0.32)
Professional/Scientific	-0.107***	(-3.32)	-0.0269	(-0.60)
Business/Building	-0.00245	(-0.11)	0.0638	(1.37)
Education service	-0.0571	(-0.51)	0.128	(1.15)
Healthcare/Social Assistance	-0.348***	(-4.67)	0.172	(1.45)
Information/Culture/Recreation	-0.0453***	(-2.72)	0.0965***	(2.98)
Accommodation/Food services	-0.100***	(-2.76)	0.0323	(1.00)
Other services	0.0523	(1.12)	0.0259	(0.54)
Public administration	-0.151**	(-2.12)	0.0152	(0.18)
Married	1.250***	(3.08)	0.644*	(1.68)
Public sector	-0.361	(-1.16)	-0.445	(-0.85)
Immigrant	-0.128	(-0.79)	-0.0570	(-0.47)
Union member	0.138	(0.84)	-0.103	(-0.28)
Newfoundland and Labrador	-0.0298	(-0.90)	-0.0136	(-0.87)
Prince Edward Island	0.0261	(0.89)	-0.0556	(-0.90)
Nova Scotia	-0.0384	(-0.91)	0.0409	(0.91)
New Brunswick	-0.0973	(-0.92)	-0.00710	(-0.74)
Quebec	0.0253	(0.54)	0.164	(1.02)
Ontario	0.0369	(1.09)	0.303	(1.22)
Manitoba	0.000911	(0.11)	0.0290	(0.88)
Saskatchewan	-0.0125	(-0.83)	0.0205	(0.89)
Alberta	0.177	(0.98)	-0.113	(-0.96)
British Columbia	0.131	(0.97)	0.0415	(0.91)
dual earner	0.782***	(2.80)	0.427	(0.90)
firm 0-20	0.122**	(1.99)	0.183**	(2.53)
firm 20-99	-0.0705	(-1.31)	0.0321	(0.33)
firm 100-500	0.0244	(0.45)	-0.0825	(-1.32)
firm +500	-0.252	(-1.47)	-0.482**	(-2.49)
Constant	6.770***	(7.48)	5.163***	(4.84)
	18439(N)		15156 (N)	

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 7: Oaxaca decomposition confidence intervals for June 2019 and June 2020

	June 2019				June 2020			
			95% Conf. Interval				95% Conf. Interval	
Overall								
Men	37.05***	(.18)	36.69	37.41	35.56***	(.25)	35.08	36.05
Women	29.98**	(.29)	29.41	30.56	28.76**	(.18)	28.4	29.12
Difference	7.07**	(.27)	6.54	7.59	6.8**	(.26)	6.29	7.32
Explained	1.12**	(.12)	.88	1.36	.96**	(.22)	.53	1.38
Unexplained	5.95**	(.3)	5.35	6.54	5.85**	(.31)	5.23	6.46
<i>N</i>	18439				15156			

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$