Impacts of COVID-19 on the Self-employed

Charlene Marie Kalenkoski, Ph.D., CFP®
Texas Tech University and IZA

Sabrina Wulff Pabilonia
U.S. Bureau of Labor Statistics

December 31, 2020

Abstract:
This study examines the initial impacts of COVID-19 on the employment and hours of unincorporated self-employed workers using monthly panel data from the Current Population Survey. Random-effects and difference-in-difference-in-differences models are estimated and differential impacts by gender, marital status, and parental status are examined from February to May 2020. Among all workers, the unincorporated self-employed are disproportionately affected. In addition, although employment and hours decreased for all groups of unincorporated self-employed workers due to the response to the health threat posed by the pandemic, differential impacts exist. Married women and single men were less likely to be working than married men. In addition, fathers of school-age children worked relatively fewer hours compared to men without children. Remote work and working in an essential industry mitigated some of the negative effects on employment and hours. These results are useful for policymakers to understand how vulnerable the unincorporated self-employed are in a pandemic so they can tailor assistance to this group.

Keywords: COVID-19, coronavirus, self-employment, entrepreneurship, gender, remote work

JEL codes: D1, J1, J16, J2, J23

Contact Information: Charlene Marie Kalenkoski, Department of Personal Financial Planning, Texas Tech University, 1301 Akron Avenue, Box 41210, Lubbock, TX 79409-1210 (email: charlene.kalenkoski@ttu.edu); Sabrina Wulff Pabilonia, U.S. Bureau of Labor Statistics, 2 Massachusetts Ave. NE, Rm. 2180, Washington, DC 20212 (e-mail: Pabilonia.Sabrina@bls.gov).

Acknowledgements: Charlene Marie Kalenkoski acknowledges research grant funding from the IZA Emergency Research Thrust for this project. We thank Daniel Hamermesh, Peter Meyer, and Jay Stewart for helpful suggestions. We thank Thomas Korankye for research assistance. This paper previously circulated under the title "Initial Impact of the COVID-19 Pandemic on the Employment and Hours of Self-employed Coupled and Single Workers by Gender and Parental Status." All views expressed in this paper are those of the authors and do not necessarily reflect the views or policies of the U.S. Bureau of Labor Statistics.

1. Introduction

The COVID-19 pandemic has led to serious disruptions in work, schooling, and family life around the world, though not all have been affected equally. Initially, in late February and early March 2020, individuals in the U.S. voluntarily started restricting activities to avoid exposure as news of the SARS-CoV-2 virus spread and some counties closed their schools (Goolsbee and Svyerson 2020; Heggeness 2020). Then, in an effort to control the virus in the second half of March 2020, many state and local governments began to impose stay-at-home orders and mandate closures of "nonessential" businesses, resulting in further restrictions of movement by individuals. Other states imposed partial business closures. The most restrictions and school closures were in effect in April. In May, some governments began easing restrictions, but many schools remained closed until the end of the school year.

This paper focuses primarily on the effects of the pandemic on unincorporated self-employed workers, who make up about 6 percent of the working population (U.S. Bureau of Labor Statistics 2020a). Incorporating a business allows the business owners to benefit from limited liability and a separate legal identity that protects those seeking to undertake risky investments (Levine and Rubinstein 2017). Other researchers (Fossen 2020; Fairlie 2020) have shown that it is important to distinguish between incorporated and unincorporated self-employment when examining variation over the business cycle, as these two groups of self-employed workers perform much different activities. On average, the incorporated perform activities requiring relatively stronger nonroutine cognitive skills, while the unincorporated perform activities requiring relatively lower levels of cognitive skills and relatively stronger manual skills (Levine and Rubinstein 2017). The latter also tend to earn less.

For several reasons, the unincorporated self-employed may have experienced the early months of this pandemic recession differently from the incorporated self-employed and other

wage and salary workers, especially the female unincorporated self-employed.[1] First, the pandemic had a larger effect on the service sector than the goods sector, because face-to-face interaction is more prevalent in the service sector. Among female workers in February 2020, 91 percent of the unincorporated self-employed worked in the service sector, while 86 percent of wage and salary workers worked in the service sector. On the other hand, among male workers, only 60 percent of the unincorporated self-employed worked in the service sector, while 67 percent of wage and salary workers worked in the service sector.[2]

Second, the unincorporated self-employed traditionally have not been eligible for unemployment assistance. However, the CARES Act, enacted on March 27th, 2020, allocated federal funds to states to use for the self-employed under a program called the Pandemic Unemployment Assistance (PUA) program, with some states starting to pay out in late April 2020. States, however, varied in their ability to orchestrate this new program in a timely manner and workers also may have been uncertain about their eligibility thus failing to apply. As of May 12th, only 37 states had started to pay out, and many eligible workers were still waiting for checks (Bahler 2020). In addition, while the unincorporated self-employed may have been eligible for the Paycheck Protection Program (PPP), which allocated loans that could be forgiven under certain conditions, larger businesses were more likely to receive PPP loans in the early stages of the program, and the unincorporated self-employed tend to have smaller businesses (Balyuk, Prabhala, and Puri 2020). These differences in the social safety net would suggest that unincorporated self-employed workers would be more likely to be working than wage and salary workers to financially support themselves.

[1] Technically, incorporated self-employed in the U.S. are considered employees of their own corporations and thus wage and salary workers.
[2] Authors' calculations based on the Current Population Survey.

Third, the ability of many Americans to work at home has dampened the resulting economic crisis (Barrero, Bloom, and Davis 2020; Bick, Blandin, and Mertens 2020; Brynjolfsson, Horton, Ozimek, Rock, Sharma, and Ye 2020; Montenovo, Jiang, Rojoas, Schmutte, Simon, Weinberg, and Wing 2020). According to the 2018 American Time Use Survey (ATUS), which showed time use one to two years pre-pandemic, 51 percent of unincorporated self-employed workers in the United States did some work at home on their main job on an average day, while only 21 percent of wage and salary workers did so (U.S. Bureau of Labor Statistics 2019). Thus, the self-employed also may have been more likely to do some of their work from home during the pandemic than wage and salary workers.

Finally, self-employed workers who were able to work from home were at the same time affected by school and day-care shutdowns, with children now being thrust into their work environment. These shutdowns probably affected female self-employed parents more than male self-employed parents because of gender norms within the home that result in women doing the majority of child care (Burda, Hamermesh, and Weil 2008; Sent and van Staveren 2019; Sevilla and Smith 2020). In addition, because women are more likely than men to become self-employed to better balance work and family demands (Budig 2006; Gimenez-Nadal, Molina, and Ortega 2012), there may be differential impacts by marital and parental status. However, the self-employed are also more likely to have greater flexibility in scheduling their own work hours than wage and salary workers, so they may have been better able to juggle work and child care time, even if it meant working a double shift.

The magnitude of the overall early effect of the U.S. response to the health threat posed by the pandemic on the total number of unincorporated self-employed workers was large. U.S. Bureau of Labor Statistics news releases (2020a and 2020b) state that between February and

April 2020, the number of unincorporated self-employed workers fell by 13 percent, not seasonally adjusted, from 9.4 million workers to 8.2 million workers. These figures include those who reported being employed but absent, which initially rose substantially for all groups of workers. Over the same period, Fairlie (2020) found that the number of actively working unincorporated self-employed workers fell by 28 percent.

This paper examines the impacts of the response to the COVID-19 pandemic on the employment and hours of unincorporated self-employed workers, using monthly panel data from the Current Population Survey (CPS) for February–May of 2020 for those who were self-employed and at work in February 2020. However, we also initially examine effects on employees and incorporated self-employed workers to show that those workers classified as unincorporated self-employed in February 2020 were disproportionately affected by COVID-19. Employees include those classified in the CPS as government workers, private sector workers, and nonprofit workers. Together, employees and incorporated self-employed workers are considered wage and salary workers.

In the analyses, February 2020 is considered a normal month and March, April, and May of 2020 are months affected by the COVID-19 shutdowns. Social distancing policies and shutdowns of schools and businesses began in March, were widespread by April, and began being relaxed in some locations in May. The school closures for primary and secondary students occurred for the most part after the March CPS reference week. All states had adopted some form of social distancing measures by March 23rd (Adolph, Amano, Bang-Jensen, Fullman, and Wilkerson 2020). Given the sequence of events, the negative effects of the shutdowns should be larger in April than in March and smaller in May than in April.

To determine how the employment and hours of unincorporated self-employed workers were affected differently across the months as the nature of the shutdowns changed, indicators for month are included as explanatory variables in the random-effects models. Differential impacts by gender, marital status, parental status, whether a plausibly remote job is held, and whether a job is in an essential industry are examined by interacting with these month variables.[3] Full sample estimates are obtained and separate models are also estimated on different gender and marital status subgroups, as suggested by the full sample results.

While these month dummies and interactions in the random-effects models can be treated as exogenous regressors, as COVID was an exogenous shock, and a host of control variables also are included to control for heterogeneity, any remaining unobserved heterogeneity could cause omitted variable bias. Therefore, we also estimate difference-in-difference-in-differences (DDD) models which net out these potentially omitted variables. For these models, respondents to the February and April CPS in 2019 comprise the control group, and respondents from the February and April CPS in 2020 comprise the treatment group. Treatment is assumed to occur in April 2020.

The results show that unincorporated self-employed workers were particularly hard-hit by the pandemic. Compared to February, effects were larger for April than for March, as expected, and the loosening of restrictions in May did not yet have much of a moderating effect. Although the shutdowns decreased employment and hours for all groups of self-employed workers, there were differential effects by gender, marital status, and parental status. Having children increased the probability that married men were working in March (school-aged children) and May (young children). Having young children increased the probability that single fathers were employed in

[3] Parental status is defined as there being a child under age 18 in the household.

April. Perhaps wives of married men and other caregivers such as grandparents were already available to care for non-school-aged children prior to the pandemic. However, single men with school-age children were less likely to be employed in April compared to February, perhaps because the single fathers of school-aged children had been relying on the school for care prior to the pandemic and lost that avenue once schools closed. There were no differential effects on employment for women by parental status. Having a remote job mitigated some negative employment effects of the shutdowns in April for married men and single women. Being in an "essential industry" also increased the probability of being employed for married men in March, for all in April, and for all singles in May.

Work hours were reduced substantially for most groups in April and May compared to February, with the effects larger in April than May. Married men with school-age children worked fewer hours in May than in February compared to married men without children. Single men with school-age children worked fewer hours in April than in February compared to single men without children. Single men with young children, however, worked more hours in April and May than in February compared to single men without children. There were no differential effects on hours for women by parental status. Being in a remote job mitigated the negative effects of the shutdowns on hours of work only for single women in April and possibly May. Working in an essential industry also mitigated the negative effects on hours for all groups in April and May, except for single men in May.

2. Related Literature

This paper contributes to several strands of literature, including the burgeoning literature on the labor-market effects of COVID-19 in general (see Brodeur, Gray, Islam, and Bhuiyan

2020 and Handwerker, Meyer, Piacentini, Schultz, and Sveikauskas 2020 for reviews). More specifically, this paper is related to the literature on the effects of the business cycle on the unincorporated self-employed, the effects of economic downturns in general, and the unprecedented effects of the simultaneous health shock on households and families.

The unincorporated self-employed have unique characteristics. One is their tendency to remain self-employed for relatively short durations, which is dependent on macroeconomic conditions (Rissman 2006). In addition, compared to the incorporated self-employed, they tend to engage in work activities that demand relatively low levels of cognitive skills and high levels of manual coordination (Levine and Rubinstein 2017). Although many of the self-employed may do some work from their home, a significant portion of unincorporated self-employed work in construction, including small, home-construction activities whose services were in lower demand during the COVID-19 pandemic while households were social distancing (Hipple and Hammond 2016). Because they can control their work hours to a greater extent than wage and salary workers, self-employed parents may have more flexibility to work reduced hours rather than stopping work altogether to provide more child care.

Prior research on the effects of macroeconomic conditions on the unincorporated self-employed in the United States finds that their total hours are procyclical (Carrington, McCue, and Pierce 1996; Pabilonia 2014); however, higher unemployment rates are associated with an increase in entry rates, often due to a lack of alternatives (Fairlie 2013; Fairlie and Fossen 2020), even at potentially reduced hours. Fairlie (2020) uses the CPS to examine the early effects of the COVID-19 pandemic on U.S. business owners (many of whom are classified as unincorporated self-employed workers). He found that between February and April 2020, the number of working business owners dropped by 28 percent. In addition, African-American, immigrant, and

female business owners were especially hard hit by the shutdown of nonessential activities. In May 2020, there were continued losses but also a partial rebound as businesses reopened, resulting in a net 18 percent decline between February and May 2020. Over the same period, but for Canadian self-employed workers, Beland et al. (2020) document a 10.1 percent decrease in ownership of unincorporated entities. They also find a substantial disproportionate decrease in ownership and aggregate hours for women, immigrants, and less-educated people.

In married households, members of a couple jointly decide how much time to devote to market work, household production, and their children, which may depend on relative income, social norms, productivity differences in time inputs, and bargaining power (Schoonbroodt 2018). As a result of the closure of schools and child-care facilities in response to the COVID-19 pandemic, there was an increased demand for household child care. In a married family, this increased responsibility could be shared. In a single-parent family, the burden likely fell completely on the parent unless there was an extra adult in the household, such as an unmarried partner, grandparent, aunt, or college student (informal care coming from outside the household was discouraged due to calls for social distancing). Although women spend more time caring for children than do men even among dual full-time earner couples (Alon, Doepke, Olmstead-Rumsey, and Tertilt 2020), Aguiar, Hurst, and Karabarbounis (2013) found that during the Great Recession, men reallocated time to child care as the unemployment rate increased, while women increased their housework time. More recently, Pabilonia and Vernon (2020) find that, when working remotely, fathers shift some of the reduction in their commute time to primary child care, while there is no change in primary child-care time for mothers. Some of that increase in time is during typical working hours. There is prior evidence from time-use surveys that a reduction in work-related activities leads to men shifting relatively more daily hours toward their

children. In addition, in the Great Recession, when male-dominated sectors such as manufacturing and construction were especially hard-hit, there was evidence that women worked more hours on weekends to compensate for lost income (Morrill and Pabilonia 2015).

Concurrent research on the early effects of the pandemic on the labor market finds that women, particularly those with children, are more affected than men on average (Montenovo, Jiang, Rojoas, Schmutte, Simon, Weinberg, and Wing 2020; Zamarro and Prados 2020). This is partly due to women's employment being concentrated in service-oriented sectors of the economy classified as "nonessential" (Alon, Doepke, Olmstead-Rumsey, and Tertilt 2020). However, it is also due to the increase in child-care responsibilities as schools and child-care facilities closed, affecting parents' ability to work outside (and sometimes inside) the home. Sevilla and Smith (2020), however, found a drop in the gender child-care gap in the U.K., as furloughed men picked up some of the increase in household-provided child care. Using the CPS and focusing on parents of school-age children, Heggeness (2020) compares labor market effects in U.S. states with early and late school closures. She found that mothers in early closure states were 68.8 percent more likely than mothers in late closure states to be employed but absent from work as a result of the shutdowns. Of those remaining active at their job, mothers had higher work hours relative to fathers, as fathers reduced their work hours to share in the increased child-care responsibilities resulting from the closures. Descriptive analyses based on the Understanding Coronavirus in America Tracking Survey indicate that 33 percent of working mothers in two-parent households provided all of the care for children while schools were closed in early April, while only 11 percent of working fathers provided all of the care (Zamarro and Prados 2020).

3. Data

The objective of this paper is to examine changes in the employment and work hours of unincorporated self-employed workers, using data from the CPS basic monthly files for February–May of 2020 for those initially self-employed in February 2020. February 2020 is considered a normal month, and March, April, and May of 2020 were affected by the COVID-19 shutdowns. The school closures for primary and secondary students occurred for the most part after the March CPS reference week. The CPS reference week typically includes the 12th of the month and ended in March on the 14th.[4] The World Health Organization (WHO) did not announce the pandemic until March 11th, although media coverage picked up in early March after several cases were identified in Washington State at the end of February and people had already started to change their behavior in response to the news reports. Nine states announced statewide emergencies prior to the CPS March reference week, but state-wide business closures were not mandated until late March.[5] Therefore, the effects are expected to be smaller in March than in April. If the re-openings were effective, the effects might be smaller in May than in April, as well.

The CPS interviews a panel of individuals/households for four months, then does not interview them for eight months, then re-interviews them again for four months. Each month there are eight rotation groups of households. Those households which are in their first or fifth month in the sample plausibly can be followed each month from February to May, while those in their second and sixth month in the sample can be followed from February to April, and so forth.

[4] The March CPS reference week was March 8th through 14th. The April CPS reference week was April 12th through 18th. The May CPS reference week was May 10th through 16th.
[5] These include Washington, California, Hawaii, Maryland, Indiana, Kentucky, Pennsylvania, Utah, and New York (Fullman 2020).

Thus, each subsequent month, the sample of potential continuers falls (approximately 75 percent in the second month of the panel, 50 percent in the third month, and 25 percent in the fourth month). However, in any given month, a household may also choose not to respond. For example, there may be a response in February and in April, but not in March and May, for an individual interviewed for the first time in February.

In our analyses, we examine the effects of the pandemic on non-institutionalized civilian adults aged 18 and older.[6] Worker type is determined by class of worker status on their main job in February, and those with jobs are required to be at work during the reference week in February (rather than employed but absent). We begin by following all workers from February through May 2020 (for the random-effects models). This sample includes an unbalanced panel of 48,570, 31,592, 20,690, and 10,076 employees; 2,276, 1,521, 1,045, and 530 incorporated self-employed workers; and 3,400, 2,299, 1,514, and 776 unincorporated self-employed workers, in February, March, April, and May, respectively. After showing that unincorporated self-employed workers are a particularly vulnerable group of workers, we then focus on this group only, to examine differences by gender, marital status, parental status, feasibility of a remote job, and essential industry designation.

After examining the full results from the random effects models, we also examine more parsimonious DDD models that interact one factor at a time with the treatment. For these, we use a balanced panel of individuals who were self-employed and at work in February 2019 or 2020 and subsequently interviewed in April of 2019 or 2020 (excluding March).[7] Comparing the

[6] We drop a small number of workers who can be matched on CPS identifying variables (HHRID HHRID2 PULINENO) but do not match on age and sex.
[7] May is not included in the DDD models, because there was a different treatment in May as the country began reopening.

same months across 2019 and 2020 controls for seasonal differences. In 2019, our sample includes 1,510 individuals. In 2020, our sample includes 1,514 individuals.[8]

A general concern about the CPS data collected during the pandemic has been a spike in those reporting employed but absent for "other reasons." Respondents who reported not working due to efforts to contain the spread of COVID-19 should have been classified as unemployed on temporary layoff, but many were misclassified as employed but absent (U.S. Bureau of Labor Statistics 2020b and 2020c). For this reason, this analysis focuses on changes in employed and at work status for those who were self-employed and at work in February, i.e. those with positive hours. However, for our main analyses, we do not require them to still be classified as self-employed workers in subsequent months in order to be counted as employed and at work.

Additional information included in the analysis concerns the plausibility that an individual's job (or their spouse's job, if applicable) can be done entirely remotely. This is referred to in the analysis as a remote job. In addition, information about whether an individual (or spouse, if applicable) worked in an essential industry is used. The remote-job variable is based on Dingel and Neiman (2020), who measured the feasibility of an occupation being done entirely at home based upon job tasks reported in the Occupational Information Network (O*NET) surveys, with some additional tweaks to match the change from the 2010 Census codes to the 2018 Census codes in the 2020 CPS.[9] In most cases, the remote-job variable takes a value

[8] In a sensitivity analysis, we also examined a sample of 321 self-employed workers who could be followed from February 2019 through April 2020 to bolster support for the parallel trends assumption. Estimates were similar in magnitude but often imprecise, due to the much smaller sample size.

[9] Additional research by Bick, Blandin, and Mertens (2020) using the Real-Time Population Survey (a CPS-like questionnaire) shows that about 72 percent of workers (or 35.2 percent of the workforce) who could work at home as defined by Dingel and Neiman (2020) actually worked entirely at home in May 2020.

of 0 for not being able to be done remotely, and 1 for being able to be done entirely remotely. However, in several cases, only part of an occupation in the CPS could be classified as being able to be done remotely, and so the value reflects the share employed in the occupation who can work remotely. The essential industry variable is based upon Delaware's nonessential closed business criteria, which is reported at the 4-digit NAICS level and thus can be matched to the CPS data at a detailed industry level (Delaware Division of Public Health, Coronavirus Response 2020). For three detailed CPS industries (Charter Bus Industry, Cable and Other Subscription Programming, and Real Estate), the September 2019 Quarterly Census of Employment and Wages (QCEW) is used to record the nonessential employment share.

4. Descriptive Statistics: Labor Market Differences by Worker Type, Gender, Marital Status, and Parental Status

Figure 1 shows the decline in employment by worker type (employee, incorporated self-employed, and unincorporated self-employed) from February through May for those who were working in February 2020. In March, as voluntary social distancing began, employment was lower for all groups than in February, with 93 percent of employees and the incorporated self-working. The unincorporated self-employed were hit the hardest, with only 87 percent working in March. In April, as closures were fully realized, employment was even lower for all three groups. Again, the unincorporated workers fared the worst, with only 62 percent working compared to 77 percent of the incorporated self-employed and 76 percent of employees. In May, as employment began to increase again in response to the relaxation of some COVID restrictions, all three groups had improved employment, with employees and the incorporated self-employed at about 80 percent of February employment but the unincorporated self-

employed were still far behind, at 68 percent of February employment (the rebound in employment from April to May was not statistically significant for the incorporated self-employed).

Focusing on this hardest hit group (the unincorporated self-employed), Figure 2 shows the decline in employment by gender for these workers.[10] In March, there is no difference by gender. However, in April, only 65 percent of the men and 58 percent of the women remained at work. Thus, while both men and women among the unincorporated self-employed suffered reduced employment in April, the shutdown had a statistically significant larger effect on women.[11] In May, given the partial re-openings, about 74 percent of the unincorporated self-employed men and just over 61 percent of the women were working.[12] For women, the difference between April and May was not statistically significantly different. Thus, men appear to be bouncing back while women do not. This may be due to gender roles, where the man is expected to be the breadwinner in the family (Allred 2018; Betrand, Kamenica, and Pan 2015), and the fact that schools and many child-care facilities had not yet re-opened as of May.

Figure 3 shows the decline in the average weekly hours worked by gender for unincorporated self-employed workers. In February, self-employed men worked approximately

[10] CPS final weights are used in the descriptive analyses.
[11] T-tests for all the employment and hours differences by gender, couple status and parental status reported in this descriptive section are statistically significant at the 5 percent level unless otherwise stated.
[12] Although our main analyses examine whether unincorporated self-employed workers are doing any work in subsequent months compared to February, some of the unincorporated self-employed reported that they had transitioned into wage-and-salary employment. Of those actively working in March, 5 percent of men and women switched to wage-and-salary employment. In April, 5 percent of men and 8 percent of women switched to wage-and-salary employment. By May, 11 percent of men and 18 percent of women switched to wage-and-salary employment. The last finding is statistically significantly different from zero at the 8 percent level.

37 hours per week and women worked approximately 30 hours per week. In March, hours declined to 32 hours per week for men, on average, and to 26 hours per week for women. In April, hours fell even further, to 23 hours per week for men and 16 hours for women. In May, hours started to bounce back for men (back to 28 hours per week), but there was little change for women.

Figure 4 shows how gender and parental status are related to employment for married individuals. Married couples can trade off housework and child-care tasks with their partner, and so individuals in these households have greater flexibility than those in single-parent households, all else equal. Again, we see a decline in employment for everyone between February and April and an increase from April to May. However, the declines are much larger for married women than for married men in April, especially those with children, and the rebound in May is smaller for married women with children than for those without. Having children reduces the rebound in May for married men, as well.

Figure 5 shows how gender and parental status are related to employment for single individuals. These individuals do not necessarily have a partner to help with household tasks such as caring for children.[13] Comparing Figure 5 to Figure 4, single men had larger declines in employment from February through April than married men. There is an especially large drop for single fathers with household children in April. However, single fathers experienced a large increase in employment in May, getting them almost to the same employment level as single men without children. Single women also experienced a drop in employment in March and April, with a slightly larger drop for single mothers than for non-parents in April (though the results were not statistically significant at conventional levels). However, single women, with or

[13] However, approximately 17 percent of single individuals are living with an unmarried partner.

without children, did not experience the rebound in employment in May as married individuals or single men did.

Figure 6 shows how gender and parental status are related to average weekly hours for married individuals by month. In February, married men without children worked approximately 37 hours, while married men with children worked about 41 hours. However, in April, married men worked only 25 hours, regardless of parental status. Women worked substantially less than men in all months, and women with children worked fewer hours than women without children, although the latter differences were only statistically significantly different from zero in February.

Figure 7 shows how single workers' average weekly hours were affected, by parental status and gender. Theirs is a similar story to that for married workers, but there is a huge drop in hours for single fathers in April compared to married fathers. Single fathers in April have an even lower number of work hours, on average, than single mothers, though the difference is not statistically significant. However, single fathers rebound in May, while single mothers do not. Appendix Table A1 provides greater detail about the descriptive statistics of the unincorporated self-employed sample, including a breakdown by the presence and age of children, given the different amounts of supervision and help with online schooling that were necessary during the school closures.

5. Models Used to Show Initial COVID-19 Impacts

Two types of models are estimated to examine the initial differential impacts of the COVID-19 pandemic on the employment and hours of the unincorporated self-employed. These impacts included demand-side impacts and supply-side impacts. On the demand side,

unincorporated self-employed workers reduced or possibly eliminated their work hours due to government restrictions on the types of goods and services that could be sold. In addition, due to stay-at-home orders and/or fear of COVID-19, consumers reduced their consumption of face-to-face services. On the supply side, self-employed workers may not have wanted to work due to fears regarding COVID-19 or had to stop working to care for and/or educate their children due to school closures. Our models are reduced-form models which cannot disentangle these demand- and supply-side effects. The first type of models, random-effects models, exploit the richness of the data to examine how employment and hours changed as social distancing and shutdowns began to occur in March, were more widespread and more often mandatory in April, and partial re-openings began in May. Month dummy variables capture the effects of the shutdowns and reopening, and they are interacted with gender, marital status, parental status, occupation type (remote work plausible or not), and industry type (essential or not), to determine whether the effects differ for the different groups. Further, the random-effects models are estimated separately for respondents who are married and those who are single, and also for men and women separately, as married couples may be better able to juggle responsibilities than singles, and there are different cultural expectations for men and women.

The second type of models, difference-in-difference-in-differences (DDD) models, do not examine the evolution of employment changes as social distancing and shutdowns began, became complete, and then began being rescinded. Instead, they consider the change from February to April as a single "treatment" and examine the effect of this treatment on employment and hours. While these models do not allow multiple interactions with the treatment as the random-effects models do, they do net out time-invariant unobserved heterogeneity. However,

we do not expect this to be an issue, given our extensive set of controls. We present these models as a robustness check.

5.1 Random-Effects Models

We estimate several random-effects models as follows:

(1) $E_{it} = \beta_0 + \beta_1 W_i + \beta_2 M_t + \beta_3 W_i * M_t + \gamma X_i + \mu_i + \varepsilon_{it}$

where E_{it} is an indicator for whether or not individual i in month t is employed and at work during the reference week and 0 otherwise.[14] W_i is a vector of key regressors measured in February 2020 (to avoid changes potentially caused by the treatment/shutdowns) that include dummies for gender and marital status (for pooled analyses only), any household child age <6, any household child age 6–17, respondent's job is a remote job, and respondent's job is in an essential industry. M_t is a vector of month dummy variables for March, April, and May of 2020. $W_i * M_t$ are the interactions between the key regressors included in W_i and month. The matrix X_i includes additional control variables measured as of February 2020. These include age and age squared, the number of extra adults in the household (besides a spouse or cohabiter), and indicators for older than age 65, education (high school degree, some college, bachelor's degree, advanced degree), race (African-American, other race), Hispanic ethnicity, cohabitation status, immigrant status, living in a metropolitan area, state of residence, own major industry, own major occupation, spouse's major industry, and indicators for whether a respondent's spouse is employed, in a remote job, and in an essential industry. μ_i is the unobserved, person-specific effect, assumed to be uncorrelated with the other included regressors, and ε_{it} is the random noise error term. The coefficients β_0, β_1, β_2, β_3, and the vector γ are to be estimated. The key

[14] Logit or probit random-effects models would be appropriate due to the dichotomous nature of the first dependent variable. However, the models would not converge. Robust standard errors adjust for heteroscedasticity.

coefficients are β_2 and β_3, as these give the level and interaction effects of the treatment (i.e. shutdowns). The models control for clustering by household, because in some cases both the respondent and his or her spouse are unincorporated self-employed workers and thus both are in the sample.

To examine the impact of COVID-19 on hours worked last week, we estimate tobit random-effects models via maximum likelihood as follows:

(2) $H_{it}^* = \beta_0 + \beta_1 W_i + \beta_2 M_t + \beta_3 W_i * M_t + \gamma X_i + \mu_i + \varepsilon_{it}$,

$H_{it} = H_{it}^*$ if $H_{it}^* > 0$,

$H_{it} = 0$ if otherwise,

where H_{it}^* is a latent hours variable behind the observed hours variable H_{it}, and the other variables are defined above.

5.2 Difference-in-Difference-in-Differences Models

We also estimate DDD models for which there is assumed to be one "treatment" that occurred in April 2020. The control group includes those sampled in both February and April 2019 and the treated group includes those sampled in both February and April 2020. We examine the initial differential effects of the social distancing and widespread shutdowns on employment in April by estimating several models of the following form:

(3) $E_{it} = \beta_0 + \beta_1 h_i + \beta_2 COVID + \beta_3 h_i * COVID + \beta_4 April_t + \beta_5 Year2020_t + \beta_6 April_t * h_i + \beta_7 Year2020_t * h_i + \gamma X_{it} + \varepsilon_{it}$

where E_{it} is an indicator for whether individual i was employed in month t. h_i is an indicator variable for a particular subgroup of self-employed workers (i.e., females, parents, those with a remote job, and those in an essential industry) who may be differentially affected by the pandemic. COVID equals 1 in April 2020 when the COVID-19 shutdowns were widespread and

0 otherwise. The effect of COVID-19 for those not in the subgroup of interest, non-parents for example, is β_2. The differential effect for those in the subgroup of interest, parents for example, is β_3. Our models explore only one differential at a time. The $April_t$ dummy is included to control for seasonal differences. $Year2020_t$ equals 1 if the individual is in the treated group (interviewed in 2020) and 0 otherwise. The model also allows for differential seasonal factors by subgroup and a subgroup-specific time trend. The matrix X_{it} includes the individual, spatial, and job characteristics controls specified above, which improves the model precision, and ε_{it} is the error term.[15] We estimate these models with ordinary least squares and cluster standard errors by household-year pair.

We examine the differential effects of COVID-19 on hours by estimating a tobit model using maximum likelihood as follows:

$$(4)\ H_{it} = \beta_0 + \beta_1 h_i + \beta_2 COVID + \beta_3 h_i * COVID + \beta_4\ April_t + \beta_5 Year2020_t + \beta_6 April_t * h_i + \beta_7 Year2020_t * h_i + \gamma X_{it} + \varepsilon_{it},$$

$$H_{it} = H_{it}^* \text{ if } H_{it}^* > 0,$$

$$H_{it} = 0 \text{ if otherwise,}$$

where H_{it}^* is a latent hours variable behind the observed hours variable H_{it}, and the other variables are defined above.

6. Initial Differential Impacts of COVID-19

6.1 Random-Effects Models Results

[15] An alternative model including individual fixed effects could also be estimated. Results are similar and available upon request.

Table 1 shows the estimated coefficients from the random-effects models for employment and hours that are estimated on the sample of all workers. Dummy variables are included for the incorporated self-employed and employees, leaving the unincorporated self-employed as the base category. These dummy variables are interacted with the month variables to show how the different groups' employment status and hours of work evolved over the course of the shutdowns and re-openings. The month indicators show that all groups were less likely to be employed in March through May compared to February. However, the employment and hours of employees and the incorporated self-employed were reduced by less than those of the unincorporated self-employed, thus highlighting their vulnerable status.

Because the coefficients from the random-effects models are difficult to interpret given the numerous interaction terms that are included, differences in predicted probabilities of being employed and at work across time and between groups are provided in Panel A of Table 2.[16] The predicted probabilities are provided in Appendix Table A4. Predicted probabilities of employment are 1 for everyone in February, as the condition for inclusion in the sample was to be employed and at work in February. Examining across time, the probability of employment was lower for all groups of workers in March, April, and May compared to February. The greatest losses occurred in April, when all restrictions were in place, and there was some improvement in May, when some restrictions began to be lifted. The unincorporated self-employed suffered a 11-percentage-point loss in employment in March compared to February, a 36-percentage-point loss in April compared to February, and a 31-percentage-point loss in May

[16] Summary statistics for the estimated models are included in Appendix Tables A2 and A3. Across months in 2020, demographics are similar, suggesting that the results should not suffer from nonresponse bias due to any differential reduction in nonresponse. Samples in February 2019 and 2020 indicate that our control group and treatment group are fairly similar.

compared to February. Employees were slightly better off than the unincorporated self-employed, with a reduction in employment of only 6 percentage points in March compared to February, 18 in April compared to February, and 14 in May compared to February. The differences in effects across these worker types are statistically significant. Although they too suffered losses in employment, the incorporated self-employed were the best off of the three groups, losing only 7 percentage points in employment in March compared to February, 21 in April compared to February, and 18 in May compared to February. These too are statistically significantly different from the unincorporated self-employed. Again, we see that the unincorporated self-employed are a particularly vulnerable group.

Panel B of Table 2 shows how hours worked last week were affected by the pandemic over time and across groups. The unincorporated self-employed saw over 5 fewer hours of work in March than in February, over 15 fewer in April than in February, and over 13 fewer in May than in February. The incorporated self-employed fared somewhat better, losing only about 3 hours in March compared to February, 10.5 hours in April compared to February, and 7 hours in May compared to February. The differences in effects across these worker types are again statistically significant. Employees lost about 3 hours in March, about 9 in April, and about 8 hours in May, all compared to February. These too are again statistically significantly different from the unincorporated self-employed. Again, as we did with employment, we can conclude that the unincorporated self-employed are the most vulnerable group in terms of hours reductions due to the pandemic. Therefore, in the rest of the analyses, we focus on differential effects among the unincorporated self-employed.

Columns 1–3 of Table 3 show the differences in the predicted probabilities of being employed and at work across time and across different groups defined by gender, marital status,

gender/marital status, age of children, remote job feasibility, and essential industry designation.[17] All groups see reductions in employment in March compared to February, and larger reductions in April. Some improvement in employment occurs for all groups in May. Females fare worse than males in April and May compared to February, and the effect is even bigger in May than in April. Perhaps this is because of the closing of schools, with gender roles leading the females rather than the males to engage in education at home. Indeed, married women are much worse off in terms of employment reductions than married men, and married men are better off than single men, providing further evidence of the effects of school and daycare closures. Parents with school-aged children had a higher probability of employment in March than in February relative to those without children. Unincorporated self-employed workers with a plausibly remote job had a higher probability of employment in April relative to February than those who didn't have a remote job. Those working in an essential industry had a higher probability of employment in both April and May relative to February than those who did not work in an essential industry.

Columns 4–6 of Table 3 show negative effects on hours of work for all groups, with the smallest effects in March and the largest effects in April, with May in between. In terms of hours, females are worse off than males in May compared to February. Again, while many businesses began to open in May, many schools were still closed, necessitating the need for someone at home to take care of children's education. Further evidence of this is that married women do worse than married men in May. Single women fared better than single men and married women fared worse than single women in March. Having children did not result in

[17] Appendix Table A5 shows the coefficients for the random-effects models, while Tables A6 and A7 show the predicted probabilities.

differential effects on hours. Unincorporated self-employed workers with a plausibly remote job had greater hours of work in April relative to February than those who did not have a remote job. Those working in an essential industry had greater hours of work in both April and May relative to February than those who did not work in an essential industry.

Overall, results in Table 3 suggest that married couples and females should be examined separately. In Tables 4–7, we present differences in predictions across months separately by marital/gender status and then make comparisons between workers without children to both those with young children under age 6 and those with school-aged children.[18] We also compare between those with and without the possibility of a remote job and those working in an essential industry and those not working in an essential industry.

Table 4 shows that having young children increases the probability that married men are employed in May compared to February. Having school-age children increases the probability that they are employed in March compared to February. On the other hand, single men with school-age children are less likely to be employed in April compared to February (Table 5). Single men with young children are more likely to be employed in April compared to February. Having a remote job increases April employment for married men and for single women, relative to February. Being in an "essential industry" increases the probability of being employed for married men in March, for all in April, and for all singles in May, compared to February.

Work hours were reduced substantially for most groups in April and May compared to February, with the effects larger in April than May (hours were also slightly reduced in March). Married men with school-age children worked fewer hours in May than in February compared to married men without children. Single men with school-age children worked fewer hours in April

[18] Random-effects coefficients are presented in Appendix Table A8.

than in February compared to single men without children, though the estimate is imprecise. Single men with young children, however, worked more hours in April and May than in February compared to single men without children. There were no differential effects on hours for women by parental status.

Being in a remote job increased only the hours of work of single women in April compared to February (Table 7). This also appears to be true for May, as the difference is similar, but it is not statistically significant at conventional levels. Working in an essential industry increased hours in April and May compared to February for all groups except for single men in May compared to February.

6.2 Difference-in-Difference-in-Differences Models Results

Table 8 shows the results from the DDD models for employment. Each panel is a separate regression. Panel A shows the effects of the COVID-19 shutdowns on several groups of self-employed workers, all married, married men, married women, all single, single men, and single women. Compared to the random-effects models (Table 3), the effects appear somewhat smaller in magnitude, with married individuals being 23 percentage points less likely and single individuals being 24 percentage points less likely to be employed and at work due to COVID. In Panel B, we examine whether there are different group effects by gender. Among married individuals, women were less likely to be employed and at work due to COVID than men, but the estimate is imprecise. However, among single individuals, the reductions in employment were larger for men than for women. We found this with the random-effects models, as well. Also similar to the estimates from the random-effects models, single fathers of school-age children (Panel D) were less likely to be employed in April 2020 due to COVID compared to single men without school-age children (a 17-percentage-point difference), though the effect is

imprecise. Having a remote job does not have a protective effect on the probability of employment in this model (Panel E). More important appears to be working in an essential industry (Panel F). Working in an essential industry compared to a non-essential industry substantially increased the probability of being employed for all groups, 16 percentage points for married men, 32 percentage points for married women, 30 percentage points for single men, and 24 percentage points for single women.

Table 9 shows the differences in predicted hours worked last week from the tobit DDD models.[19] The overall effect of the shutdowns in April 2020 is a reduction of about 12 hours per week, on average, which is smaller than what we found using the random-effects model. We do not find statistically significant gender differences in the reduction in hours due to COVID, although the effect in the singles regression is positive, as in the random-effects model. Hours for single fathers of school-age children are disproportionately negatively affected compared to men without school-age children (almost 11 fewer hours for single fathers, which is slightly larger than what we found using the random-effects model).

Again, as in the previous table, we do not find that having a remote job changes the effect of COVID on hours. However, working in an essential industry has a statistically significant positive effect on hours for married individuals, with married women working 15 hours more than married women not in an essential industry and married men working 10 hours more. Thus, being in an essential industry reduces the effects of the shutdowns on married individuals substantially. In addition, being in an essential industry reduces the effects of the shutdowns on the hours of single men.

[19] Predicted hours from the tobit model are for observed hours.

7. Conclusion

The initial impacts of COVID-19 on the employment and hours worked of the unincorporated self-employed indicate differential effects by gender, marital status, and parental status. The negative effects were largest in April 2020, with a small rebound in May 2020. As a result of the response to the COVID-19 pandemic, married women and single men were less likely to be employed and at work than married men. Single men with school-aged children were more greatly affected than those without children. Men with young children were less affected than those without children. There were no differential effects on women's employment by parental status. Both single and married fathers with school-age children spent relatively fewer hours working than men without children, suggesting that they may have been spending more time on household or child-care responsibilities. Negative effects on both employment and hours were mitigated if they worked in an essential industry. Having a remote job mitigated the negative employment effects for married men and single women and the negative effects on hours for single women only.

The stronger rebound in work for married men than for married women suggests that self-employed women may remain out of the labor force longer as men resume their role as the family breadwinner and women maintain their primary role as caregiver, especially as many schools are engaging in online rather than in-person learning. This could have serious long-term negative implications for female labor force participation, the gender wage gap, and household income.

References

Adolph, C., Amano, K., Bang-Jensen, B., Fullman, N., & Wilkerson, J. (2020). Pandemic politics: Timing state-level social distancing responses to Covid-19. *MedRXiv*, March 31. https://www.medrxiv.org/content/10.1101/2020.03.30.20046326v1.full.pdf.

Aguiar, M., Hurst, E., & Karabarbounis, L. (2013). Time use during the great recession. *American Economic Review*, 103(5), 1664–96. https://doi.org/10.1257/aer.103.5.1664.

Allred, C. A. (2018). Attitudes on women's roles in the home: 1986–2016. National Center for Marriage & Family Research, FP-18-10.

Alon, T. M., Doepke, M., Olmstead-Rumsey, J., & Tertilt, M. (2020). The impact of COVID-19 on gender equality. *Covid Economics: Vetted and Real-Time Papers*, 4, 62–85.

Balyuk, T., Prabhala, N. R., & Puri, M. (2020). Indirect costs of government aid and intermediary supply effects: lessons from the paycheck protection program. NBER Working Paper No. 28114.

Barrero, J. M., Bloom, N., & Davis, S. J. (2020). COVID-19 is also a reallocation shock. *Brookings Papers on Economic Activity*. https://www.brookings.edu/bpea-articles/covid-19-is-also-a-reallocation-shock/.

Bahler, K. (2020). A state-by-state guide to getting pandemic unemployment assistance benefits. *Money* (June 17, 2020). https://money.com/pandemic-unemployment-assistance-state-by-state/.

Beland, L., Fakorede, O., & Mikola, D. (2020). Short-term effect of COVID-19 on self-employed workers in Canada. *Canadian Public Policy*, 46(S1), S66–S81. https://doi.org/10.3138/cpp.2020-076.

Bertrand, M., Kamenica, E., & Pan, J. (2015). Gender identity and relative income within households. *Quarterly Journal of Economics*, 130(2), 571–614. https://doi.org/10.1093/qje/qjv001.

Bick, A., Blandin, A., & Mertens, K. (2020). Work from home after the COVID-19 outbreak. Federal Reserve Bank of Dallas Research Department Working Paper No. 2017. https://doi.org/10.24149/wp2017.

Brodeur, A., Gray, D., Islam, A., & Bhuiyan, S. J. (2020). A literature review of the economics of COVID-19. IZA Discussion Paper No. 13411.

Brynjolfsson, E., Horton, J., Ozimek, A., Rock, D., Sharma, G., & Tu Ye, H.Y. (2020). COVID-19 and remote work: An early look at US data. NBER Working Paper No. w27344.

Budig, M. (2006). Intersections on the road to self-employment: Gender, family and occupational class. *Social Forces*, 84, 2223–2239. https://doi.org/10.1353/sof.2006.0082.

Burda, M. C., Hamermesh, D. S., & Weil, P. (2008). Total work, gender and social norms in EU and US time use. Edited by Boeri, T., Burda, M., & Kramarz, F. *Working Hours and Job Sharing in the EU and USA: Are Europeans Lazy? Or Americans Crazy?* Oxford University Press, 11–91. ⟨hal-00972821⟩

Carrington, W. J., McCue, K., & Pierce, B. (1996). The role of employer/employee interactions in labor market cycles: Evidence from the self-employed. *Journal of Labor Economics*, 14(4), 571–602.

Dingel, J., & Neiman, B. (2020). How many jobs can be done at home? *Journal of Public Economics*, 189, https://doi.org/10.1016/j.pubeco.2020.104235.

Delaware Division of Public Health, Coronavirus Response. (2020). Essential and non-essential business categories during coronavirus closure. Accessed May 27, 2020. https://coronavirus.delaware.gov/business-categories-search/?business_to_remain_open=Closed.

Fairlie, R. W. (2013). Entrepreneurship, economic conditions, and the great recession. *Journal of Economics & Management Strategy*, 22 (2), 207–231. https://doi.org/10.1111/jems.12017.

Fairlie, R. W. (2020). The impact of COVID-19 on small business owners: Evidence from the first three months after widespread social-distancing restrictions. *Journal of Economics & Management Strategy*. https://doi.org/10.1111/jems.12400.

Fairlie, R. W., & Fossen, F. M. (2020). Defining opportunity versus necessity entrepreneurship: Two components of business creation. *Research in Labor Economics*, forthcoming.

Fossen, F. M. (2020). Self-employment over the business cycle in the USA: a decomposition. *Small Business Economics*. https://doi.org/10.1007/s11187-020-00375-3.

Fullman, N., Bang-Jense, B., Reinke, G., Magistro, B., Amano, K., Adolph, C., & Wilkerson, J. 2020. State-level social distancing policies in response to COVID-19 in the US. Accessed December 23, 2020. http://www.covid19statepolicy.org.

Gimenez-Nadal, J. I., Molina, J.A., & Ortega, R. (2012). Self-employed mothers and the work-family conflict. *Applied Economics*, 44(17), 1–15. https://doi.org/10.1080/00036846.2011.558486.

Goolsbee, A., & Svyerson, C. 2020. Fear, lockdown, and diversion: Comparing drivers of pandemic economic decline 2020. *Journal of Public Economics*, 193 https://doi.org/10.1016/j.jpubeco.2020.104311.

Handwerker, E. W., Meyer, P. B., Piacentini, J., Schultz, M., & Sveikauskas, L. (2020). Employment recovery in the wake of the COVID-19 pandemic. *Monthly Labor Review*, December 2020. https://www.bls.gov/opub/mlr/2020/article/pdf/employment-recovery.pdf.

Heggeness, M. L. (2020). Estimating the immediate impact of the COVID-19 shock on parental attachment to the labor market and the double bind of mothers. *Review of Economics of the Household*, 18, 1053–1078. https://doi.org/10.1007/s11150-020-09514-x.

Hipple, S. F., & Hammond, L.A. (2016). Self-employment in the United States. *BLS Spotlight on Statistics*. https://www.bls.gov/spotlight/2016/self-employment-in-the-united-states/home.htm.

Levine, R., & Rubinstein, Y. (2017). Smart and illicit: Who becomes an entrepreneur and do they earn more? *Quarterly Journal of Economics*, 132(2), 963–1018. https://doi.org/10.1093/qje/qjw044.

Montenovo, L., Jiang, X., Rojoas, F. L., Schmutte, I. M., Simon, K. I., Weinberg, B. A., & Wing, C. (2020). Determinants of disparities in COVID-19 job losses. NBER Working Paper No. 21732.

Morrill, M.S., & Pabilonia, S. W. (2015). What effects do macroeconomic conditions have on the time couples with children spend together? *Review of Economics of the Household*, 13(4), 791–814. https://doi.org/10.1007/s11150-015-9285-x.

Pabilonia, S.W. (2014). Measuring hours worked by the unincorporated self-employed using the CPS and ATUS. Conference paper, International Association of Research in Income and Wealth General Conference. http://www.iariw.org/papers/2014/PabiloniaPaper.pdf.

Pabilonia, S. W. & Vernon, V. (2020). Telework, wages, and time use in the United States. Conference Paper, Allied Social Sciences Associations (ASSA) Annual Meeting.

Rissman, E. (2006). The self-employment duration of younger men over the business cycle. *Economic Perspectives,* Federal Reserve Bank of Chicago 30(3).

Schoonbroodt, A. (2018). Parental child care during and outside of typical work hours. *Review of the Economics of the Household*, 16, 453–476. https://doi.org/10.1007/s11150-016-9336-y.

Sevilla, A., & Smith, S. (2020). Baby steps: the gender division of childcare during the COVID-19 pandemic. *Oxford Review of Economic Policy*, 36(S1), S169–S186. https://doi.org/10.1093/oxrep/graa027.

U.S. Bureau of Labor Statistics. (2019). American Time Use Survey — 2018 Results. https://www.bls.gov/news.release/pdf/atus.pdf.

U.S. Bureau of Labor Statistics. (2020a). The employment situation — March 2020. https://www.bls.gov/news.release/archives/empsit_04032020.pdf.

U.S. Bureau of Labor Statistics. (2020b). The employment situation — April 2020. https://www.bls.gov/news.release/archives/empsit_05082020.pdf.

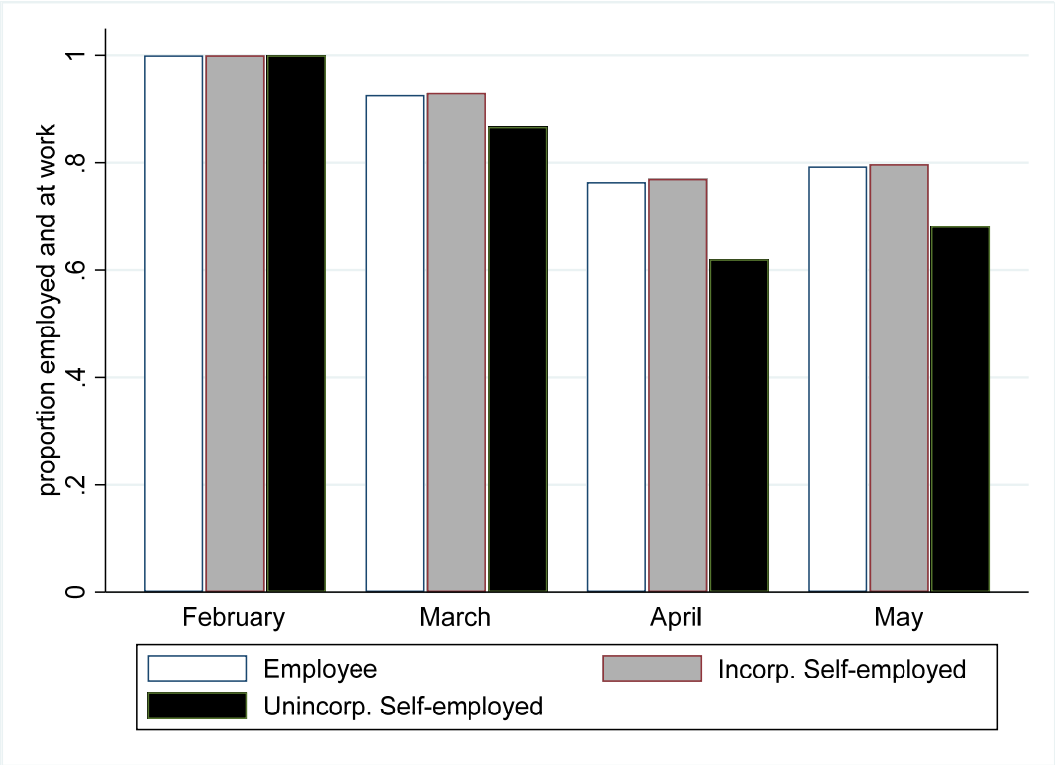
U.S. Bureau of Labor Statistics. (2020c). Frequently asked questions: The impact of the coronavirus (COVID-19) pandemic on the employment situation for April 2020. https://www.bls.gov/cps/employment-situation-covid19-faq-april-2020.pdf.

U.S. Bureau of Labor Statistics. (2020d). Update on the misclassification that affected the unemployment rate. Commissioner's Corner (blog), June 29, 2020, https://blogs.bls.gov/blog/2020/06/29/update-on-the-misclassification-that-affected-the-unemployment-rate/.

U.S. Bureau of the Census and U.S. Bureau of Labor Statistics. (2019–2020). Current Population Survey. https://www.census.gov/data/datasets/time-series/demo/cps/cps-basic.html. (Accessed June 14, 2020).

Zamarro, G. & Prados, M. J. (2020). Gender differences in couples' division of childcare, work and mental health during COVID-19. *Review of Economics of the Household*, forthcoming.

Fig. 1 Employed and at work in 2020 by worker type and month

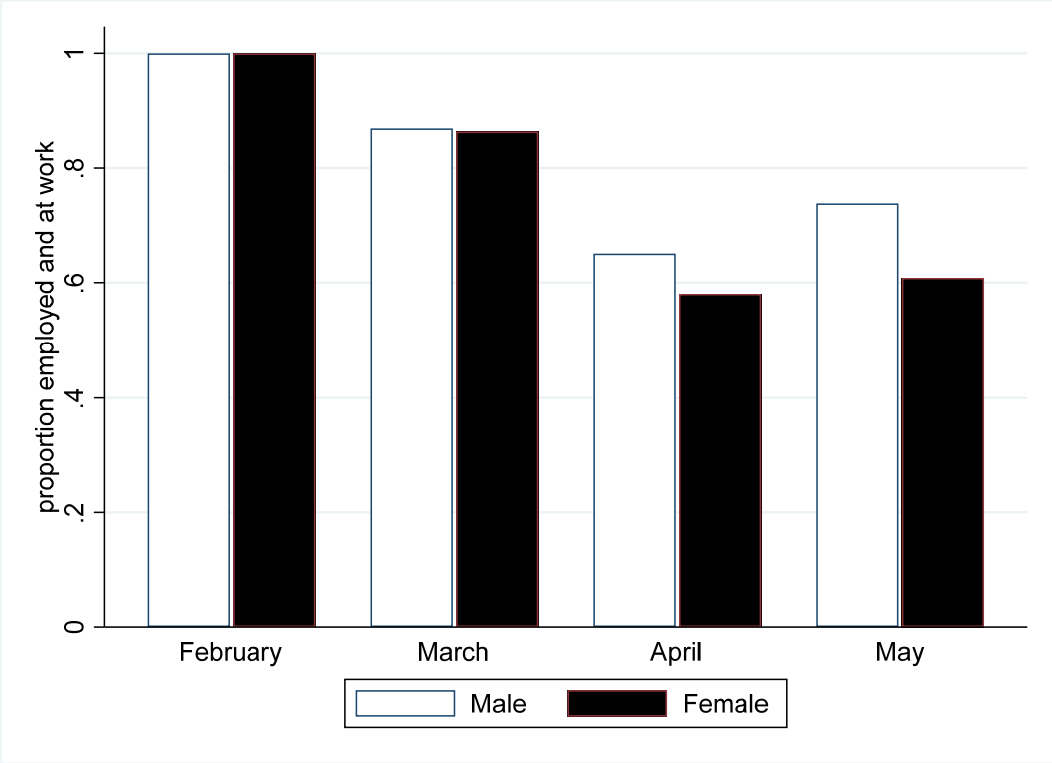


Note: All workers were employed and at work in February 2020.

For employees, N = 48,570, 31,592, 20,690 and 10,076 for consecutive months. For incorporated self-employed, N = 2,276, 1,521, 1,045, and 530 for consecutive months. For unincorporated self-employed, N = 3,400, 2,299, 1,514, and 776 for consecutive months.

Source: Current Population Survey

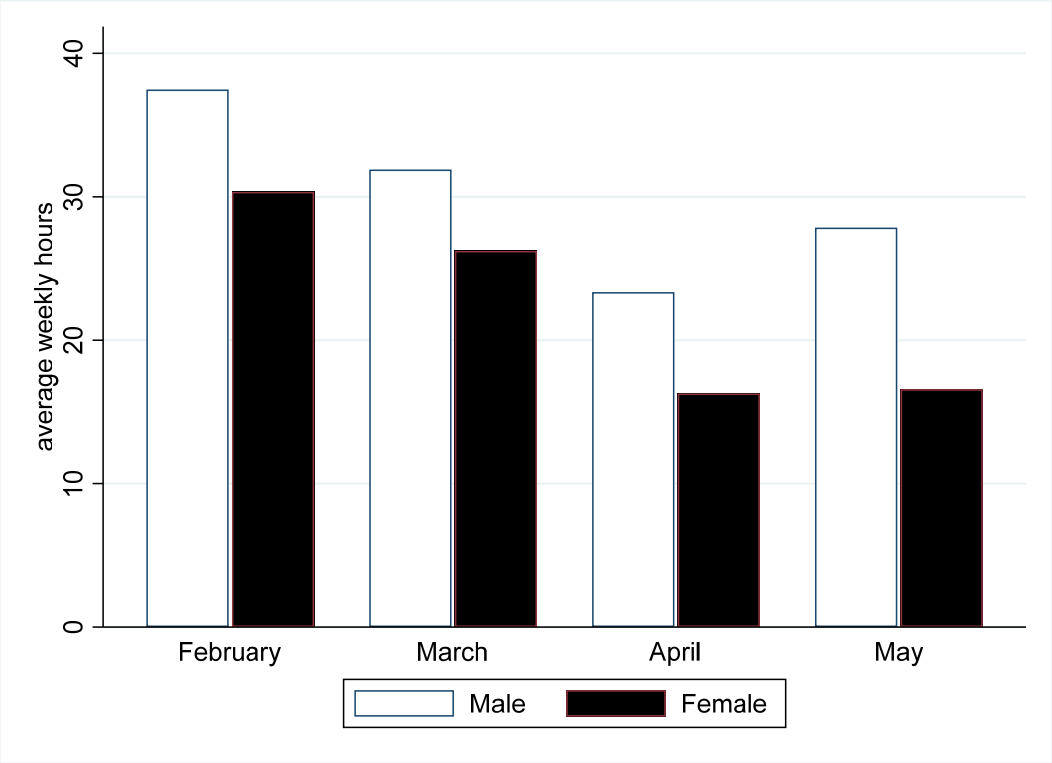
Fig. 2 Unincorporated self-employed who were at work in 2020



Note: All workers were self-employed and at work in February 2020. For males, N = 2,054, 1,364, 860, and 442 for consecutive months. For females, N = 1,346, 935, 654, and 334 for consecutive months.

Source: Current Population Survey

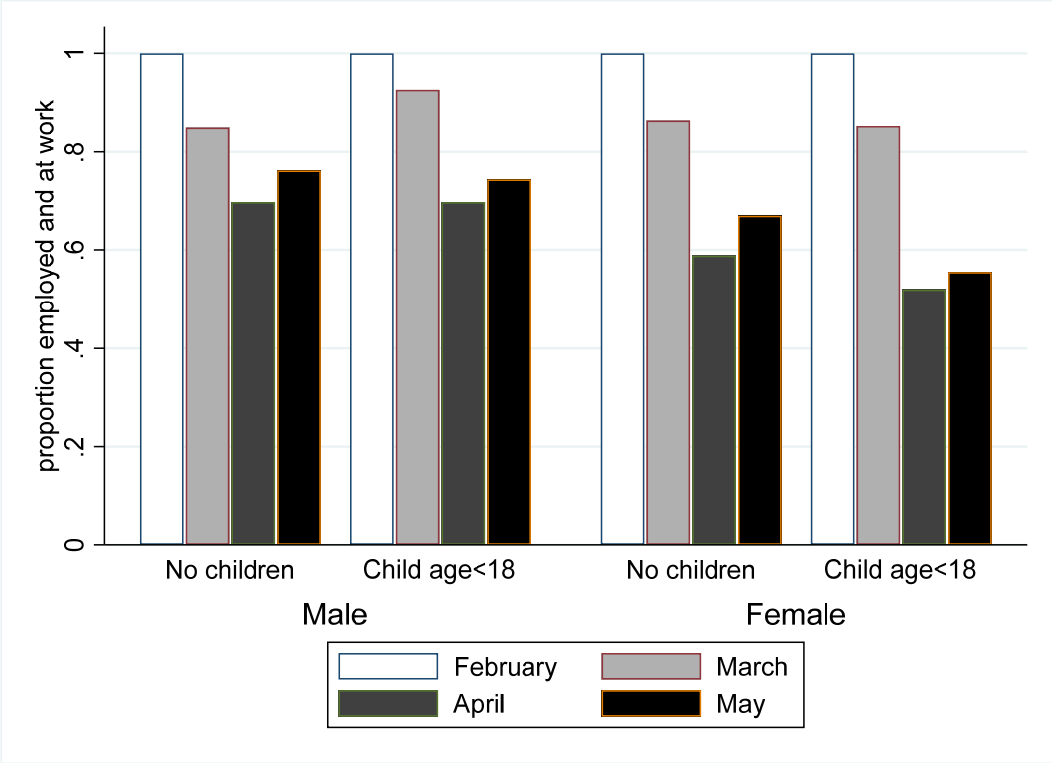
Fig.3 Average weekly hours worked by the unincorporated self-employed in 2020



Note: All workers were self-employed and at work in February 2020. For males, N = 2,054, 1,364, 860, and 442 for consecutive months. For females, N = 1,346, 935, 654, and 334 for consecutive months.

Source: Current Population Survey

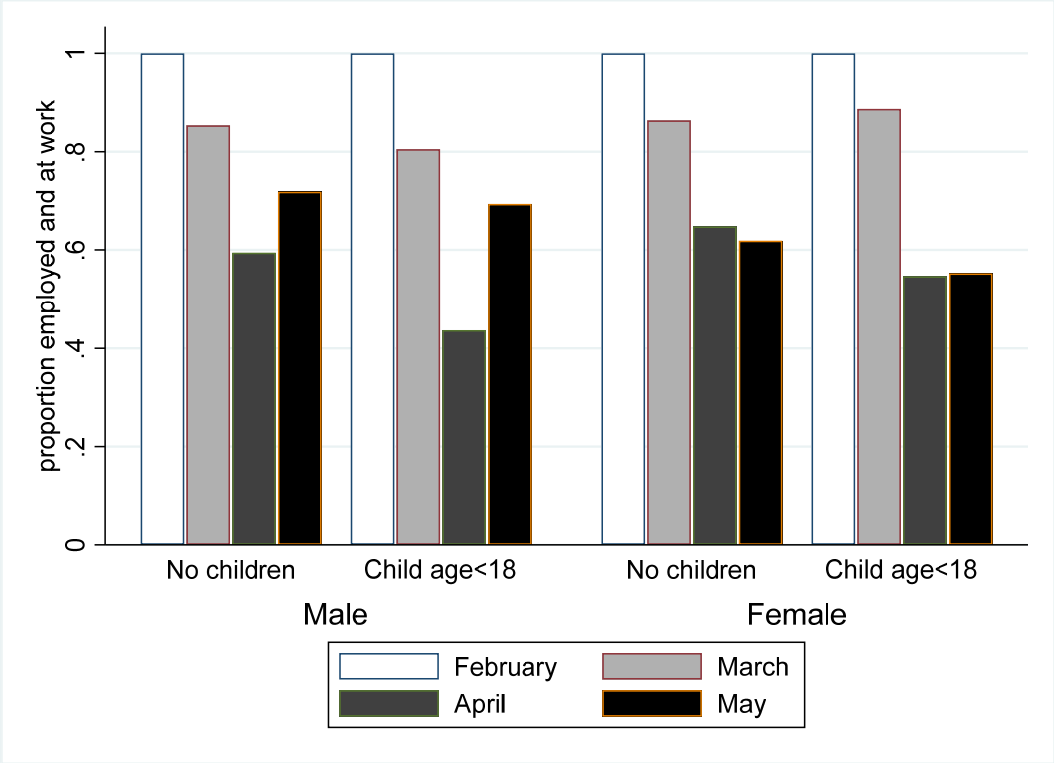
Fig.4 Unincorporated self-employed who were at work (married individuals, by parental status)



Note: All workers were self-employed and at work in February 2020. For males, N = 1,333, 904, 573, and 287. For females, N = 841, 573, 417, and 214.

Source: Current Population Survey

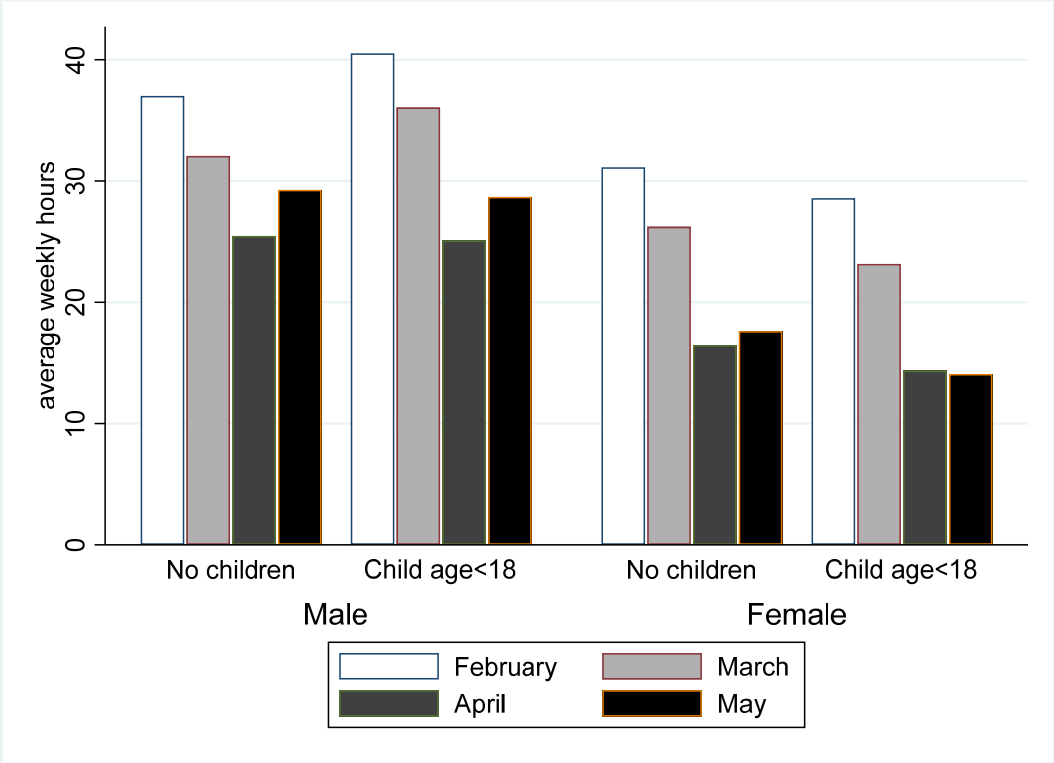
Fig.5 Unincorporated self-employed who were at work (single individuals, by parental status)



Note: All workers were self-employed and at work in February 2020. For males, N = 721, 460, 287, and 155. For females, N = 505, 362, 237, and 120.

Source: Current Population Survey

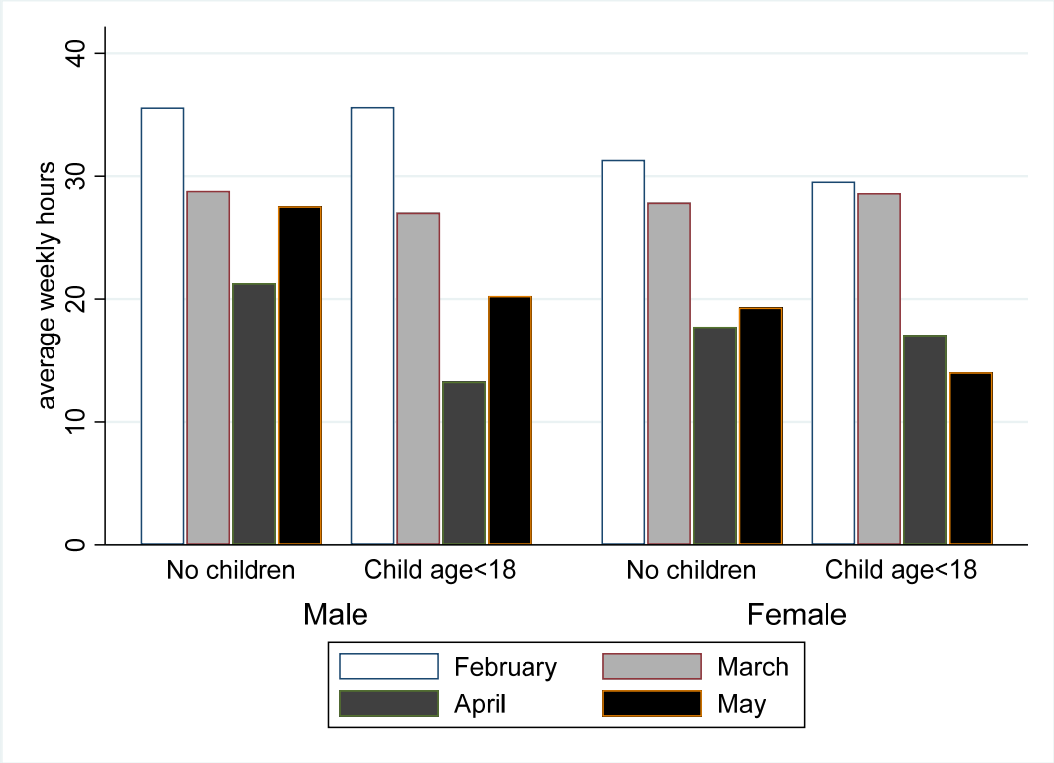
Fig.6 Average weekly hours worked by married individuals, by parental status



Note: All workers were self-employed and at work in February 2020. For males, N = 1,333, 904, 573, and 287. For females, N = 841, 573, 417, and 214.

Source: Current Population Survey

Fig.7 Average weekly hours worked by single individuals, by parental status



Note: All workers were self-employed and at work in February 2020. For males, N = 721, 460, 287, and 155. For females, N = 505, 362, 237, and 120.

Source: Current Population Survey

Table 1. Effects of COVID-19 on Employment and Hours (Random Effects Models)

	Employed and At Work (LPM)	Hours (Tobit)
Incorp. self-employed (ref. unincorp. SE)	-0.03**	3.38**
	(0.00)	(0.74)
Employee (ref. unincorp. SE)	-0.00	3.96**
	(0.00)	(0.49)
March	-0.12**	-5.32**
	(0.01)	(0.64)
April	-0.36**	-16.60**
	(0.02)	(1.05)
May	-0.31**	-14.17**
	(0.03)	(1.30)
March x Incorporated self-employed	0.05**	2.18*
	(0.02)	(0.99)
April x Incorporated self-employed	0.18**	5.67**
	(0.03)	(1.54)
May x Incorporated self-employed	0.16**	6.64**
	(0.04)	(2.00)
March x Employee	0.05**	2.41**
	(0.01)	(0.65)
April x Employee	0.15**	6.58**
	(0.02)	(1.06)
May x Employee	0.12**	5.66**
	(0.03)	(1.33)
Age	0.01**	1.04**
	(0.00)	(0.07)
Age squared	-0.00**	-0.01**
	(0.00)	(0.00)
Age 65 plus	-0.00	0.12
	(0.02)	(1.04)
Married	0.01	1.61**
	(0.01)	(0.33)
Cohabiter	0.00	0.76
	(0.01)	(0.40)
Female	-0.02**	-5.35**
	(0.00)	(0.21)
High school degree	0.01	2.92**
	(0.01)	(0.39)
Some college	0.01	2.42**
	(0.01)	(0.41)
Bachelor's degree	0.02	3.03**
	(0.01)	(0.44)
Observations	47,711	47,711
Between R^2	0.17	-

Notes: All workers were employed in February. Standard errors in parentheses are clustered by household. Additional controls include own major industry, own major occupation, spouse major industry and state fixed effects. * $p < 0.05$, ** $p < 0.01$.

Source: Current Population Survey, February–May 2020

Table 1. Effects of COVID-19 on Employment and Hours (Random Effects Models) (Continued)

	Employed and At Work (LPM)	Hours (Tobit)
Advanced degree	0.05**	5.14**
	(0.01)	(0.47)
African-American	-0.01**	-0.08
	(0.01)	(0.32)
Other race	-0.02**	-0.27
	(0.01)	(0.34)
Hispanic	-0.00	-0.57
	(0.01)	(0.30)
Child age<6	-0.00	0.10
	(0.00)	(0.24)
Child age 6-17	-0.00	-0.77**
	(0.00)	(0.28)
Remote job	0.00	0.09
	(0.00)	(0.27)
Essential industry	0.05**	3.41**
	(0.00)	(0.25)
Number of extra HH adults	-0.00	-0.29
	(0.00)	(0.11)
Immigrant	-0.02**	-1.49**
	(0.01)	(0.28)
Spouse Employed	0.00	-0.95
	(0.01)	(0.51)
Spouse Remote job	0.01	0.12
	(0.00)	(0.27)
Spouse Essential industry	-0.00	-0.92**
	(0.00)	(0.31)
Metropolitan area	-0.00	-0.45
	(0.00)	(0.26)
Observations	47,711	47,711
Between R^2	0.17	-

Notes: All workers were employed in February. Standard errors in parentheses are clustered by household. Additional controls include own major industry, own major occupation, spouse major industry and state fixed effects. * $p < 0.05$, ** $p < 0.01$.

Source: Current Population Survey, February–May 2020

Table 2. Differences in Predicted Probabilities of Being Employed and At Work and Hours Worked Last Week, by Worker Type in February (2020) (RE model)

Worker Types	March–Feb	April–Feb	May–Feb
Panel A. Employed and At Work			
Unincorporated SE	-0.11**	-0.36**	-0.31**
	(0.01)	(0.02)	(0.03)
Incorporated SE	-0.06**	-0.18**	-0.14**
	(0.01)	(0.02)	(0.03)
Employee	-0.07**	-0.21**	-0.18**
	(0.01)	(0.00)	(0.01)
Differences between worker types between			
Unincorporated SE - Incorporated SE	-0.05**	-0.18**	-0.16**
	(0.02)	(0.03)	(0.04)
Unincorporated SE - Employee	-0.05**	-0.15**	-0.12**
	(0.01)	(0.02)	(0.03)
Panel B. Hours Worked Last Week			
Unincorporated SE	-5.12**	-15.60**	-13.58**
	(0.62)	(0.94)	(1.19)
Incorporated SE	-2.87**	-10.45**	-7.16**
	(0.75)	(1.12)	(1.53)
Employee	-2.75**	-9.73**	-8.23**
	(0.13)	(0.22)	(0.28)
Differences between worker types			
Unincorporated SE - Incorporated SE	-2.25**	-5.15**	-6.42**
	(0.98)	(1.46)	(1.92)
Unincorporated SE - Employee	-2.37**	-5.87**	-5.35**
	(0.63)	(0.96)	(1.22)

Notes: N = 47,711. All workers were employed in February. Standard errors in parentheses are clustered by household. See controls in Table 1. * $p < 0.05$, ** $p < 0.01$.
Source: Current Population Survey, February–May 2020

Table 3. Differences in Predicted Probabilities of Being Employed and At Work and Hours for the Unincorporated Self-employed (RE model)

	Employed and At Work			Hours Worked Last Week		
Groups	March–Feb	April–Feb	May–Feb	March–Feb	April–Feb	May–Feb
Female	-0.14**	-0.39**	-0.36**	-4.95**	-14.45**	-14.18**
	(0.01)	(0.02)	(0.03)	(0.51)	(0.69)	(0.94)
Male	-0.13**	-0.32**	-0.26**	-5.76**	-14.27**	-10.66**
	(0.01)	(0.02)	(0.02)	(0.46)	(0.69)	(0.91)
Married	-0.13**	-0.33**	-0.29**	-5.29**	-14.22**	-12.13**
	(0.01)	(0.02)	(0.02)	(0.45)	(0.66)	(0.86)
Single	-0.15**	-0.37**	-0.32**	-5.89**	-15.33**	-12.92**
	(0.01)	(0.02)	(0.03)	(0.59)	(0.84)	(1.12)
Married women	-0.15**	-0.41**	-0.36**	-5.87**	-14.89**	-14.51**
	(0.02)	(0.02)	(0.03)	(0.63)	(0.84)	(1.13)
Married men	-0.11**	-0.27**	-0.23**	-4.90**	-13.25**	-9.76**
	(0.01)	(0.02)	(0.02)	(0.56)	(0.86)	(1.12)
Single women	-0.15**	-0.41**	-0.36**	-3.54**	-13.60**	-13.50**
	(0.02)	(0.02)	(0.03)	(0.87)	(1.19)	(1.63)
Single men	-0.16**	-0.40**	-0.30**	-7.58**	-16.50**	-12.33**
	(0.02)	(0.03)	(0.04)	(0.79)	(1.17)	(1.56)
No child	-0.15**	-0.34**	-0.31**	-5.62**	-14.07**	-12.02**
	(0.01)	(0.01)	(0.02)	(0.43)	(0.63)	(0.84)
Child age < 6	-0.16**	-0.36**	-0.28**	-6.80**	-14.81**	-10.35**
	(0.02)	(0.03)	(0.04)	(1.04)	(1.45)	(1.88)
Child age 6–17	-0.11**	-0.35**	-0.30**	-4.82**	-15.84**	-15.06**
	(0.01)	(0.02)	(0.03)	(0.74)	(1.09)	(1.41)
Not remote job	-0.13**	-0.38**	-0.27**	-5.28**	-15.49**	-12.77**
	(0.01)	(0.02)	(0.03)	(0.46)	(0.68)	(0.91)
Remote job	-0.14**	-0.29**	-0.26**	-5.87**	-13.02**	-11.86**
	(0.01)	(0.02)	(0.05)	(0.59)	(0.81)	(1.09)
Not essential industry	-0.15**	-0.50**	-0.41**	-6.01**	-21.97**	-17.47**
	(0.01)	(0.02)	(0.03)	(0.69)	(0.91)	(1.28)
Essential industry	-0.13**	-0.27**	-0.25**	-5.28**	-11.20**	-10.05*
	(0.01)	(0.01)	(0.02)	(0.44)	(0.66)	(0.83)

Notes: N = 7,989. All workers were employed in February. Standard errors in parentheses are clustered by household. See controls in Table 1. * $p < 0.05$, ** $p < 0.01$. Source: Current Population Survey, February–May 2020

Table 3. Differences in Predicted Probabilities of Being Employed and At Work and Hours for the Unincorporated Self-employed (RE model) (Continued)

	Employed and At Work			Hours Worked Last Week		
Differences between groups	March–Feb	April–Feb	May–Feb	March–Feb	April–Feb	May–Feb
Female - Male	-0.01	-0.07**	-0.10**	0.81	-0.17	-3.52**
	(0.01)	(0.02)	(0.03)	(0.65)	(0.92)	(1.26)
Married - Single	0.02	0.04	0.03	0.60	1.10	0.79
	(0.02)	(0.03)	(0.03)	(0.74)	(1.06)	(1.40)
Married women - Married men	-0.04*	-0.14**	-0.13**	-0.97	-1.65	-4.75**
	(0.02)	(0.03)	(0.04)	(0.78)	(1.10)	(1.46)
Single women - Single men	0.03	0.06	-0.04	4.03**	2.90	-1.17
	(0.02)	(0.04)	(0.05)	(1.16)	(1.65)	(2.28)
Married men - Single men	0.05*	0.13**	0.07	2.68**	3.25*	2.57
	(0.02)	(0.03)	(0.04)	(0.97)	(1.45)	(1.91)
Married women - Single women	-0.02	-0.07	-0.02	-2.33*	-1.29	-1.01
	(0.02)	(0.04)	(0.05)	(1.07)	(1.45)	(1.95)
Child age < 6 - no child	-0.01	-0.02	0.03	-1.18	-0.74	1.66
	(0.02)	(0.03)	(0.04)	(1.05)	(1.46)	(1.87)
Child age 6–17 - no child	0.04**	-0.01	0.01	0.80	-1.77	-3.04
	(0.02)	(0.03)	(0.04)	(0.82)	(1.20)	(1.56)
Remote job - not remote job	-0.00	0.09**	0.04	-0.59	2.47*	0.91
	(0.02)	(0.03)	(0.04)	(0.77)	(1.08)	(1.45)
Essential - not essential industry	0.02	0.23**	0.16**	0.73	10.77**	7.41**
	(0.02)	(0.03)	(0.04)	(0.84)	(1.44)	(1.55)

Notes: N = 7,989. All workers were employed in February. Standard errors in parentheses are clustered by household. See controls in Table 1. * $p < 0.05$, ** $p < 0.01$. Source: Current Population Survey, February–May 2020

Table 4. Differences in Predicted Probabilities of Being Employed and At Work for the Unincorporated Self-employed (2020) (COUPLES RE model)

	Married men (N = 3,097)			Married women (N = 2,045)		
Groups	March–Feb	April–Feb	May–Feb	March–Feb	April–Feb	May–Feb
No child	-0.14**	-0.28**	-0.26**	-0.15**	-0.39**	-0.35**
	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	(0.05)
Child age < 6	-0.14**	-0.33**	-0.14**	-0.22**	-0.46**	-0.42**
	(0.03)	(0.05)	(0.06)	(0.05)	(0.06)	(0.08)
Child age 6–17	-0.07**	-0.25**	-0.25**	-0.13**	-0.42**	-0.37**
	(0.01)	(0.03)	(0.05)	(0.03)	(0.04)	(0.06)
Not remote job	-0.12**	-0.30**	-0.22**	-0.14**	-0.44**	-0.41**
	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	(0.05)
Remote job	-0.11**	-0.22**	-0.26**	-0.17**	-0.38**	-0.32**
	(0.02)	(0.03)	(0.05)	(0.02)	(0.03)	(0.04)
Not essential industry	-0.18**	-0.44**	-0.28**	-0.14**	-0.54**	-0.42**
	(0.03)	(0.05)	(0.07)	(0.02)	(0.03)	(0.05)
Essential industry	-0.10**	-0.24**	-0.22**	-0.16**	-0.28**	-0.31*
	(0.01)	(0.02)	(0.03)	(0.02)	(0.03)	(0.04)
Differences between groups						
Child age < 6 - no child	-0.00	-0.05	0.13*	-0.06	-0.07	-0.07
	(0.03)	(0.06)	(0.06)	(0.05)	(0.06)	(0.08)
Child age 6–17 - no child	0.07**	0.03	0.01	0.02	-0.02	-0.02
	(0.02)	(0.04)	(0.05)	(0.03)	(0.05)	(0.07)
Remote job - not remote job	0.01	0.08*	-0.03	-0.02	0.07	0.08
	(0.02)	(0.04)	(0.06)	(0.03)	(0.05)	(0.07)
Essential - not essential industry	0.08*	0.20**	0.06	-0.02	0.25**	0.11
	(0.03)	(0.06)	(0.07)	(0.03)	(0.05)	(0.06)

Notes: All workers were employed in February. Standard errors in parentheses are clustered by household. See controls in Table 1. * $p < 0.05$, ** $p < 0.01$. Source: Current Population Survey, February–May 2020

Table 5. Differences in Predicted Probabilities of Being Employed and At Work for the Unincorporated Self-employed (2020) (SINGLES RE model)

	Single men (N = 1,623)			Single women (N = 1,224)		
Groups	March–Feb	April–Feb	May–Feb	March–Feb	April–Feb	May–Feb
No child	-0.16**	-0.39**	-0.31**	-0.13**	-0.33**	-0.35**
	(0.02)	(0.03)	(0.04)	(0.02)	(0.04)	(0.05)
Child age < 6	-0.17*	-0.16	-0.06	-0.09	-0.33**	-0.42**
	(0.08)	(0.11)	(0.14)	(0.05)	(0.09)	(0.12)
Child age 6–17	-0.18**	-0.56**	-0.38**	-0.13**	-0.36**	-0.27**
	(0.05)	(0.08)	(0.10)	(0.04)	(0.06)	(0.07)
Not remote job	-0.16**	-0.43**	-0.30**	-0.15**	-0.41**	-0.43**
	(0.02)	(0.04)	(0.05)	(0.03)	(0.054	(0.06)
Remote job	-0.17**	-0.33**	-0.30**	-0.11**	-0.26**	-0.24**
	(0.03)	(0.04)	(0.06)	(0.03)	(0.05)	(0.06)
Not essential industry	-0.14**	-0.59**	-0.45**	-0.14**	-0.44**	-0.48**
	(0.04)	(0.06)	(0.08)	(0.03)	(0.04)	(0.06)
Essential industry	-0.17**	-0.34**	-0.25**	-0.12**	-0.24**	-0.17**
	(0.02)	(0.03)	(0.04)	(0.03)	(0.04)	(0.05)
Differences between groups						
Child age < 6 - no child	-0.01	0.23*	0.25	0.04	0.00	-0.07
	(0.08)	(0.11)	(0.14)	(0.06)	(0.09)	(0.12)
Child age 6–17 - no child	-0.02	-0.17*	-0.07	-0.00	-0.03	0.08
	(0.05)	(0.08)	(0.11)	(0.04)	(0.07)	(0.09)
Remote job - not remote job	-0.01	0.11	-0.00	0.05	0.14*	0.19*
	(0.04)	(0.06)	(0.08)	(0.04)	(0.07)	(0.08)
Essential - not essential industry	-0.03	0.25**	0.20*	0.03	0.20**	0.31**
	(0.04)	(0.07)	(0.09)	(0.04)	(0.06)	(0.08)

Notes: All workers were employed in February. Standard errors in parentheses are clustered by household. See controls in Table 1. * $p < 0.05$, ** $p < 0.01$. Source: Current Population Survey, February–May 2020

Table 6. Differences in Predicted Hours Worked Last Week for the Unincorporated Self-employed (2020) (COUPLES RE model)

	Married men (N = 3,097)			Married women (N = 2,045)		
Groups	March–Feb	April–Feb	May–Feb	March–Feb	April–Feb	May–Feb
No child	-5.46**	-12.29**	-9.11**	-5.35**	-14.86**	-14.75**
	(0.70)	(1.06)	(1.41)	(0.80)	(1.10)	(1.51)
Child age < 6	-4.33**	-14.88**	-3.69	-8.59**	-15.38**	-14.66**
	(1.52)	(2.39)	(3.01)	(1.68)	(1.99)	(2.27)
Child age 6–17	-4.44**	-14.63**	-14.64**	-5.56**	-15.13**	-14.56**
	(1.08)	(1.65)	(1.65)	(1.61)	(1.61)	(2.18)
Not remote job	-4.78**	-13.85**	-8.75**	-5.66**	-16.22**	-16.45**
	(0.69)	(1.10)	(1.40)	(0.90)	(1.22)	(1.67)
Remote job	-5.12**	-11.65**	-11.61**	-6.17**	-13.82**	-13.26**
	(1.00)	(1.38)	(1.92)	(0.90)	(1.24)	(1.60)
Not essential industry	-5.93**	-21.76**	14.71**	-6.65**	-21.09**	-18.43**
	(1.55)	(2.10)	(2.66)	(0.93)	(1.21)	(1.68)
Essential industry	-4.69**	-11.56**	-8.73**	-5.11**	-9.03**	-11.15**
	(0.60)	(0.92)	(1.22)	(0.85)	(1.20)	(1.53)
Differences between groups						
Child age < 6 - no child	1.14	-2.59	5.43	-3.25	-0.52	0.90
	(1.52)	(2.37)	(3.01)	(1.75)	(2.06)	(2.41)
Child age 6–17 - no child	1.02	-2.35	-5.53*	-0.21	-0.27	0.19
	(1.23)	(1.87)	(2.38)	(1.38)	(1.85)	(2.47)
Remote job - not remote job	-0.34	2.19	-2.86	-0.51	2.40	3.19
	(1.23)	(1.82)	(2.44)	(1.28)	(1.78)	(2.37)
Essential - not essential industry	1.24	10.20**	5.98*	1.54	12.06**	7.27**
	(1.65)	(2.29)	(2.94)	(1.25)	(1.69)	(2.28)

Notes: All workers were employed in February. Standard errors in parentheses are clustered by household. See controls in Table 1. * $p < 0.05$, ** $p < 0.01$. Source: Current Population Survey, February–May 2020

Table 7. Differences in Predicted Hours Worked Last Week for the Unincorporated Self-employed (2020) (SINGLES RE model)

	Single men (N = 1,623)			Single women (N = 1,224)		
Groups	March–Feb	April–Feb	May–Feb	March–Feb	April–Feb	May–Feb
No child	-7.57**	-15.89**	-12.15**	-3.38**	-13.23**	-12.37**
	(0.87)	(1.28)	(1.72)	(1.05)	(1.40)	(1.95)
Child age < 6	-8.18**	-6.44	0.84	-6.45**	-11.28**	-13.00**
	(3.40)	(4.57)	(5.53)	(2.96)	(4.31)	(4.92)
Child age 6–17	-7.79**	-22.00**	-17.02**	-3.33	-14.57**	-15.77**
	(2.26)	(3.07)	(4.20)	(1.73)	(2.55)	(3.48)
Not remote job	-7.59**	-16.67**	-11.55**	-3.11*	-15.95**	-15.98**
	(0.98)	(1.48)	(2.03)	(1.23)	(1.52)	(2.07)
Remote job	-7.73**	-15.93**	-13.42**	-4.23**	-10.08**	-9.67**
	(1.47)	(1.98)	(2.56)	(1.30)	(2.00)	(2.57)
Not essential industry	-5.88**	-22.31**	-16.89**	-4.17**	-18.49**	-17.18**
	(1.56)	(1.90)	(3.01)	(1.19)	(1.61)	(2.27)
Essential industry	-8.14**	-14.17**	-10.05**	-3.26**	-8.54**	-8.53**
	(0.93)	(1.41)	(1.78)	(1.34)	(1.86)	(2.35)
Differences between groups						
Child age < 6 - no child	-0.61	9.45*	12.99*	-3.07	1.94	-0.63
	(3.42)	(4.60)	(5.48)	(2.95)	(4.34)	(4.93)
Child age 6–17 - no child	-0.22	-6.11	-4.87	0.05	-1.35	-3.41
	(2.38)	(3.22)	(4.37)	(1.97)	(2.83)	(3.86)
Remote job - not remote job	-0.15	0.74	-1.87	-1.12	5.87*	6.30
	(1.80)	(2.54)	(3.39)	(1.82)	(2.58)	(3.36)
Essential - not essential industry	-2.25	8.13**	6.84	0.91	9.94**	8.66**
	(1.83)	(2.38)	(3.50)	(1.81)	(2.52)	(3.33)

Notes: All workers were employed in February. Standard errors in parentheses are clustered by household. See controls in Table 1. * $p < 0.05$, ** $p < 0.01$. Source: Current Population Survey, February–May 2020

Table 8. Differential Effects of COVID on Employment Status (Difference-in-Difference-in-Differences Models)

Panel		MARRIED			SINGLE		
		ALL (N = 3,888)	MEN (N = 2,242)	WOMEN (N = 1,646)	ALL (N = 2,160)	MEN (N = 1,234)	WOMEN (N = 926)
A	COVID	-0.23**	-0.21**	-0.26**	-0.24**	-0.29**	-0.18**
		(0.02)	(0.02)	(0.03)	(0.03)	(0.04)	(0.04)
B	COVID	-0.21**			-0.29**		
		(0.02)			(0.04)		
	COVID X Female	-0.06			0.11*		
		(0.03)			(0.05)		
C	COVID		-0.20**	-0.25**		-0.30**	-0.18**
			(0.02)	(0.03)		(0.04)	(0.04)
	COVID X Child age<6		-0.06	-0.08		0.12	-0.08
			(0.06)	(0.08)		(0.12)	(0.14)
D	COVID		-0.19**	-0.24**		-0.26**	-0.17**
			(0.03)	(0.04)		(0.04)	(0.05)
	COVID X Child age 6-17		-0.04	-0.07		-0.17	-0.03
			(0.04)	(0.06)		(0.09)	(0.10)
E	COVID		-0.22**	-0.24**		-0.29**	-0.23**
			(0.03)	(0.05)		(0.05)	(0.06)
	COVID X Remote job		0.05	-0.03		-0.01	0.09
			(0.05)	(0.06)		(0.08)	(0.09)
F	COVID		-0.34**	-0.43**		-0.47**	-0.24**
			(0.06)	(0.04)		(0.08)	(0.06)
	COVID X Essential industry		0.16*	0.32**		0.30**	0.24**
			(0.07)	(0.06)		(0.09)	(0.08)

Notes: Each panel is a separate regression. Standard errors in parentheses are clustered by household-year. See Table 1 for control variables. Regressions include interactions of the subgroup with month and year. * $p < 0.05$, ** $p < 0.01$. Source: Current Population Survey, February and April 2019–2020

Table 9. Differential Effects of COVID on Hours (Tobit Difference-in-Difference-in-Differences Models)

Panel		MARRIED			SINGLE		
		ALL (N = 3,888)	MEN (N = 2,242)	WOMEN (N = 1,646)	ALL (N = 2,160)	MEN (N = 1,234)	WOMEN (N = 926)
A	Overall	-12.44**	-12.12**	-12.62**	-11.83**	-13.26**	-9.98**
		(0.91)	(1.14)	(1.24)	(1.20)	(1.63)	(1.74)
B	Male	-12.16**			-13.37**		
		(1.14)			(1.63)		
	Female	-12.69**			-9.99**		
		(1.24)			(1.74)		
	Difference Female - Male	-0.53			3.39		
		(1.54)			(2.37)		
C	No child		-11.70**	-12.02**		-13.44**	-9.89**
			(1.24)	(1.38)		(1.72)	(1.81)
	Child age<6		-14.07**	-15.29**		-10.83**	-11.13
			(2.77)	(2.81)		(4.95)	(6.08)
	Difference child age<6 – no child		-2.37	-3.27		2.61	-1.25
			(3.04)	(3.13)		(5.24)	(6.34)
D	No child		-11.30**	-11.79**		-11.48**	-9.68**
			(1.40)	(1.53)		(1.79)	(2.02)
	Child age 6-17		-13.70**	-14.14**		-22.20**	-11.13
			(1.95)	(2.10)		(3.86)	(3.48)
	Difference child age 6-17 – no child		-2.40	-2.34		-10.73*	-1.45
			(2.40)	(2.60)		(4.25)	(4.02)
E	Not remote job		-12.63**	-13.24**		-13.13**	-12.37**
			(1.47)	(1.97)		(2.06)	(2.34)
	Remote job		-11.09**	-11.98**		-13.62**	-6.69*
			(1.82)	(1.62)		(2.88)	(2.66)
	Difference remote job – not remote job		1.55	1.26		-0.49	5.67
			(2.38)	(2.61)		(3.63)	(3.62)
F	Not essential industry		-20.66**	-20.24**		-18.96**	-11.78**
			(3.03)	(1.72)		(2.90)	(2.76)
	Essential industry		-10.45**	-5.25**		-11.09**	-8.00**
			(1.21)	(1.66)		(1.91)	(2.42)
	Difference not essential – essential		10.20**	14.99**		7.87*	3.77
			(3.27)	(2.41)		(3.51)	(3.44)

Notes: Each panel is a separate regression. Standard errors in parentheses are clustered by household-year. See Table 1 for control variables. Regressions include interactions of the subgroup with month and year. * $p < 0.05$, ** $p < 0.01$. Source: Current Population Survey, February and April 2019–2020

Appendix A

Table A1. Mean Employment and Hours in 2020 by Marital and Parental Status (Unincorp. Self-employed)

Sample	February	March	April	May
Panel A. Employed and At Work				
Married				
Males	1.00	0.88	0.70	0.75
No children	1.00	0.85	0.70	0.76
Child age<6	1.00	0.91	0.66	0.81
Child age 6–17	1.00	0.92	0.69	0.73
Females	1.00	0.86	0.56	0.61
No children	1.00	0.86	0.59	0.67
Child age<6	1.00	0.76	0.48	0.57
Child age 6–17	1.00	0.87	0.54	0.59
Single				
Males	1.00	0.84	0.56	0.71
No children	1.00	0.86	0.59	0.72
Child age<6	1.00	0.85	0.61	0.94
Child age 6–17	1.00	0.79	0.37	0.67
Females	1.00	0.87	0.62	0.60
No children	1.00	0.85	0.65	0.62
Child age<6	1.00	0.89	0.60	0.55
Child age 6–17	1.00	0.90	0.57	0.64
Panel B. Average Weekly Hours				
Married				
Males	38.57	33.85	25.30	29.00
No children	37.02	32.07	25.48	29.26
Child age<6	39.18	35.57	24.54	31.41
Child age 6–17	40.56	35.97	24.10	27.84
Females	30.04	24.90	15.52	15.93
No children	31.13	26.22	14.37	17.61
Child age<6	25.79	18.01	11.89	13.12
Child age 6–17	29.45	24.67	15.34	15.40
Single				
Males	35.61	28.46	19.60	25.87
No children	35.60	28.81	21.30	27.55
Child age<6	37.82	30.62	18.81	27.75
Child age 6–17	36.00	24.64	11.15	19.17
Females	30.83	28.10	17.54	17.69
No children	31.35	27.85	17.05	19.30
Child age<6	25.57	24.81	20.49	15.30
Child age 6–17	30.60	29.66	17.21	15.67
Observations	3,400	2,299	1,514	776

Note: CPS final weights used. Sample restricted to those who were unincorporated self-employed and at work in February. Source: Current Population Surveys

Table A2. Means for Random Effects Sample (2020) Status (Unincorporated Self-employed)

Variable	February	March	April	May
Employed and at work	1.00	0.87	0.62	0.68
Hours on main job	34.67	29.61	20.29	22.96
Female	0.39	0.40	0.43	0.43
Age	49.45	49.37	49.37	48.91
Age 65 plus	0.16	0.16	0.16	0.16
High school degree	0.27	0.27	0.26	0.27
Some college	0.28	0.28	0.29	0.29
Bachelor's degree	0.23	0.24	0.24	0.24
Advanced degree	0.12	0.12	0.13	0.13
Black	0.08	0.08	0.07	0.07
Other race	0.07	0.07	0.07	0.06
Hispanic	0.18	0.18	0.18	0.20
Any child age<6	0.14	0.14	0.15	0.16
Any child age 6–17	0.30	0.31	0.31	0.32
Married	0.62	0.62	0.64	0.63
Number of extra HH adults	0.53	0.54	0.51	0.52
Cohabiter	0.06	0.06	0.06	0.07
Immigrant	0.22	0.22	0.22	0.21
Remote job	0.38	0.39	0.40	0.42
Essential industry	0.69	0.68	0.67	0.66
Own Industry				
Agriculture and mining	0.07	0.07	0.07	0.06
Construction	0.18	0.17	0.16	0.16
Manufacturing	0.03	0.03	0.03	0.03
Trade, transportation, and utilities	0.14	0.14	0.14	0.13
Information	0.02	0.02	0.02	0.02
Financial activities	0.08	0.08	0.08	0.10
Professional and business services	0.20	0.20	0.20	0.20
Educational and health services	0.11	0.11	0.12	0.12
Leisure and hospitality	0.07	0.07	0.08	0.08
Other services/public administration	0.11	0.11	0.10	0.10
Observations	3,400	2,299	1,514	776

Note: CPS final weights used. Sample restricted to those who were unincorporated self-employed and at work in February.

Source: Current Population Surveys

Table A2. Means for Random Effects Sample (2020) Status (Unincorp. Self-employed) (Continued)

Variable	February	March	April	May
Own Occupation				
Management, business, and financial	0.24	0.24	0.26	0.25
Professional	0.17	0.18	0.18	0.20
Service	0.20	0.20	0.20	0.19
Sales	0.11	0.12	0.12	0.11
Office and administrative support	0.03	0.03	0.03	0.03
Farming, fishing, and forestry	0.01	0.01	0.01	0.00
Construction and extraction	0.13	0.12	0.11	0.10
Installation, maintenance, and repair	0.03	0.03	0.02	0.03
Production	0.03	0.03	0.03	0.03
Transportation and material moving	0.06	0.05	0.05	0.05
Spouse – Employed	0.47	0.46	0.48	0.48
Spouse - Remote job	0.22	0.22	0.24	0.25
Spouse - Essential industry	0.34	0.34	0.36	0.35
Spouse Industry				
Agriculture and mining	0.03	0.03	0.03	0.04
Construction	0.04	0.03	0.03	0.04
Manufacturing	0.04	0.04	0.04	0.04
Trade, transportation, and utilities	0.08	0.08	0.09	0.08
Information	0.01	0.01	0.02	0.01
Financial activities	0.04	0.04	0.04	0.05
Professional and business services	0.06	0.07	0.08	0.08
Educational and health services	0.10	0.10	0.09	0.08
Leisure and hospitality	0.02	0.02	0.02	0.03
Other services/Public administration	0.05	0.05	0.05	0.05
Observations	3,400	2,299	1,514	776

Note: CPS final weights used. Sample restricted to those who were unincorporated self-employed and at work in February.

Source: Current Population Surveys

Table A3. Means for Difference-in-Difference-in-Differences Sample (Unincorp. Self-employed)

Variable	Feb 2019	April 2019	Feb 2020	April 2020
Employed at work	1.00	0.90	1.00	0.62
Hours on main job	34.66	32.99	34.40	20.29
Female	0.42	0.41	0.44	0.43
Age	49.36	49.37	49.73	49.37
High school degree	0.15	0.15	0.17	0.16
Some college	0.26	0.26	0.25	0.26
Bachelor's degree	0.28	0.28	0.29	0.29
Advanced degree	0.23	0.23	0.24	0.24
Black	0.12	0.12	0.13	0.13
Other race	0.07	0.06	0.07	0.07
Hispanic	0.09	0.09	0.07	0.07
Any child age<6	0.18	0.17	0.16	0.18
Any child age 6–17	0.16	0.16	0.15	0.15
Married	0.33	0.33	0.31	0.31
Number of extra HH adults	0.61	0.61	0.64	0.64
Cohabiter	0.52	0.52	0.50	0.51
Immigrant	0.07	0.07	0.06	0.06
Remote Job	0.22	0.22	0.21	0.22
Essential Industry	0.41	0.41	0.40	0.40
Own Industry				
Agriculture and mining	0.08	0.08	0.07	0.07
Construction	0.16	0.16	0.16	0.16
Manufacturing	0.03	0.03	0.03	0.03
Trade, transportation, and utilities	0.12	0.12	0.14	0.14
Information	0.01	0.01	0.02	0.02
Financial activities	0.07	0.07	0.08	0.08
Professional and business services	0.21	0.21	0.19	0.20
Educational and health services	0.12	0.12	0.12	0.12
Leisure and hospitality	0.06	0.06	0.08	0.08
Other services/public administration	0.13	0.12	0.10	0.10
Observations	1,510	1,510	1,514	1,514

Note: CPS final weights used. Some differences are due to different weights. Restricted to respondents who could be matched between February and April and who were working in February.

Source: Current Population Surveys, 2019–2020

Table A3. Means for Difference-in-Difference-in-Differences Sample (Unincorp. Self-employed) (Continued)

Variable	Feb 2019	April 2019	Feb 2020	April 2020
Own Occupation				
Management, business, and financial	0.26	0.26	0.26	0.26
Professional	0.17	0.17	0.18	0.18
Service	0.20	0.20	0.20	0.20
Sales	0.12	0.12	0.12	0.12
Office and administrative support	0.03	0.03	0.03	0.03
Farming, fishing, and forestry	0.00	0.00	0.01	0.01
Construction and extraction	0.12	0.12	0.10	0.11
Installation, maintenance, and repair	0.03	0.03	0.03	0.02
Production	0.02	0.02	0.03	0.03
Transportation and material moving	0.05	0.05	0.05	0.05
Spouse – Employed	0.47	0.47	0.48	0.48
Spouse - Remote job	0.23	0.23	0.24	0.24
Spouse - Essential industry	0.35	0.35	0.36	0.36
Spouse Industry				
Agriculture and mining	0.04	0.04	0.03	0.03
Construction	0.03	0.03	0.03	0.03
Manufacturing	0.03	0.03	0.04	0.04
Trade, transportation, and utilities	0.07	0.07	0.09	0.09
Information	0.01	0.01	0.02	0.02
Financial activities	0.04	0.04	0.04	0.04
Professional and business services	0.06	0.06	0.08	0.08
Educational and health services	0.11	0.11	0.09	0.09
Leisure and hospitality	0.02	0.02	0.02	0.02
Other services/Public administration	0.06	0.06	0.05	0.05
Observations	1,510	1,510	1,514	1,514

Note: CPS final weights used. Some differences are due to different weights. Restricted to respondents who could be matched between February and April and who were working in February.

Source: Current Population Surveys, 2019–2020

Table A4. Predicted Probabilities of Being Employed and At Work and Hours Worked Last Week, by Worker Type (2020) (RE model)

Worker Types	Feb	March	April	May
Probability of Being Employed				
Unincorporated SE	1.00	0.89	0.64	0.69
	(0.00)	(0.01)	(0.02)	(0.03)
Incorporated SE	1.00	0.94	0.82	0.86
	(0.00)	(0.01)	(0.02)	(0.03)
Employee	1.00	0.93	0.79	0.82
	(0.00)	(0.00)	(0.00)	(0.01)
Hours Worked Last Week				
Unincorporated SE	35.34	30.22	19.74	21.76
	(0.47)	(0.67)	(0.91)	(1.18)
Incorporated SE	41.33	38.47	30.88	34.17
	(0.56)	(0.77)	(1.09)	(0.92)
Employee	38.51	35.76	28.77	30.27
	(0.08)	(0.13)	(0.22)	(0.27)

Notes: N = 47,711. Standard errors in parentheses are clustered by household. See Table 1 for control variables.
Source: Current Population Survey, February – May 2020

Table A5. Effects of COVID on the Unincorp. Self-employed (RE Model Coefficients)

	Employed and At Work (LPM)	Hours (Tobit)
Female	0.00	-2.97**
	(0.01)	(1.02)
Married	-0.02	1.88
	(0.01)	(1.02)
Child age<6	-0.00	-1.35
	(0.01)	(0.91)
Child age 6-17	-0.01	-0.57
	(0.01)	(0.67)
Remote job	-0.02	1.16
	(0.01)	(0.91)
Essential industry	-0.02	-1.27
	(0.01)	(0.93)
March	-0.18**	-8.60**
	(0.02)	(1.13)
April	-0.60**	-29.90**
	(0.04)	(1.99)
May	-0.44**	-20.39**
	(0.05)	(2.63)
March x Female	0.03	4.39**
	(0.03)	(1.31)
April x Female	0.11**	6.32**
	(0.04)	(2.12)
May x Female	0.00	0.44
	(0.05)	(2.82)
March x Married	0.12**	4.15*
	(0.03)	(1.78)
April x Married	0.05	3.33
	(0.04)	(2.16)
May x Married	-0.01	-6.86**
	(0.01)	(1.20)
Female x Married	-0.07*	-5.41**
	(0.03)	(1.53)
March x Female x Married	-0.19**	-6.17*
	(0.05)	(2.51)
April x Female x Married	-0.09	-5.13
	(0.07)	(3.28)
May x Female x Married	0.00	-2.97**
	(0.01)	(1.02)
Observations	7,989	7,989
Between R^2	0.22	-

Note: Standard errors in parentheses are clustered by household. See Table 1 for control variables. * $p < 0.05$, ** $p < 0.01$. Source: Current Population Survey, February–May 2020

Table A5. Effects of COVID on the Unincorp. Self-employed (RE Model Coefficients) (continued)

	Employed and At Work (LPM)	Hours (Tobit)
March x Child age<6	-0.01	-0.68
	(0.02)	(1.14)
April x Child age<6	-0.02	-0.55
	(0.03)	(1.79)
May x Child age<6	0.05	3.56
	(0.04)	(2.15)
March x Child age 6-17	-0.03	-2.81
	(0.03)	(1.49)
April x Child age 6-17	-0.00	-3.90*
	(0.04)	(1.87)
May x Child age 6-17	-0.00	-0.60
	(0.02)	(0.83)
March x Remote job	0.09**	3.32*
	(0.03)	(1.31)
April x Remote job	0.04	1.27
	(0.04)	(1.73)
May x Remote job	0.02	0.75
	(0.02)	(0.91)
March x Essential industry	0.23**	13.65**
	(0.03)	(1.50)
April x Essential industry	0.16**	8.84**
	(0.04)	(1.91)
May x Essential industry	-0.01	-0.68
	(0.02)	(1.14)
Observations	7,989	7,989
Between R^2	0.24	-

Note: Standard errors in parentheses are clustered by household. See Table 1 for control variables. * $p < 0.05$, ** $p < 0.01$. Source: Current Population Survey, February–May 2020

Table A6. Predicted Probabilities of Being Employed and At Work for the Unincorp. Self-employed (2020) (RE model)

Groups	March	April	May
Female	0.86	0.61	0.64
	(0.01)	(0.02)	(0.03)
Male	0.87	0.68	0.74
	(0.01)	(0.02)	(0.02)
Married	0.87	0.67	0.71
	(0.01)	(0.02)	(0.02)
Single	0.85	0.63	0.68
	(0.01)	(0.02)	(0.03)
Married women	0.85	0.59	0.64
	(0.02)	(0.02)	(0.03)
Married men	0.89	0.73	0.77
	(0.01)	(0.02)	(0.03)
Single women	0.87	0.66	0.66
	(0.02)	(0.03)	(0.04)
Single men	0.84	0.60	0.70
	(0.02)	(0.03)	(0.03)
No child	0.85	0.66	0.69
	(0.01)	(0.01)	(0.02)
Child age<6	0.85	0.65	0.73
	(0.02)	(0.03)	(0.04)
Child age 6–17	0.90	0.65	0.70
	(0.01)	(0.02)	(0.03)
Not remote job	0.87	0.63	0.69
	(0.01)	(0.02)	(0.02)
Remote job	0.85	0.70	0.71
	(0.01)	(0.03)	(0.03)
Not essential industry	0.87	0.51	0.61
	(0.02)	(0.02)	(0.03)
Essential industry	0.86	0.72	0.75
	(0.01)	(0.02)	(0.02)

Notes: N = 7,989. All workers were employed in February. Standard errors in parentheses are clustered by household. See Table 1 for control variables.

Source: Current Population Survey, February–May 2020

Table A7. Predicted Hours Worked Last Week for the Unincorp. Self-employed (2020) (RE model)

Groups	Feb	March	April	May
Female	30.90	25.95	16.45	16.72
	(0.42)	(0.57)	(0.67)	(0.91)
Male	37.45	31.69	23.17	26.78
	(0.33)	(0.50)	(0.69)	(0.91)
Married	35.33	30.05	2111	23.20
	(0.34)	(0.49)	(0.64)	(0.84)
Single	34.01	28.11	18.69	21.09
	(0.44)	(0.64)	(0.84)	(1.11)
Married women	30.16	24.29	15.27	15.65
	(0.52)	(0.69)	(0.81)	(1.09)
Married men	38.60	33.69	25.35	28.84
	(0.41)	(0.61)	(0.86)	(1.12)
Single women	32.13	28.59	18.53	18.63
	(0.69)	(0.97)	(1.19)	(1.58)
Single men	35.52	27.44	18.82	22.99
	(0.56)	(0.86)	(1.18)	(1.56)
No child	34.37	28.76	20.30	22.36
	(0.33)	(0.48)	(0.62)	(0.83)
Child age<6	34.62	27.82	19.81	24.26
	(0.79)	(1.11)	(1.41)	(1.84)
Child age 6–17	36.26	31.44	20.42	21.20
	(0.51)	(0.76)	(1.05)	(1.38)
Not remote job	34.44	29.16	18.95	21.67
	(0.43)	(0.57)	(0.69)	(0.91)
Remote job	35.54	29.67	22.53	23.68
	(0.60)	(0.75)	(0.90)	(1.14)
Not essential industry	35.69	29.69	13.72	18.23
	(0.68)	(0.86)	(0.88)	(1.28)
Essential industry	34.48	29.20	23.28	24.43
	(0.38)	(0.50)	(0.69)	(0.85)

Notes: N = 7,989. Standard errors in parentheses are clustered by household. See Table 1 for control variables.

Source: Current Population Survey, February–May 2020

Table A8. Effects of COVID on Employment Status and Hours of Unincorp. Self-employed (RE Models Coefficients)

	Employment				Hours			
	Married		Single		Married		Single	
	Men	Women	Men	Women	Men	Women	Men	Women
Child age<6	-0.02*	-0.00	0.00	-0.03	-2.35	-5.84**	4.81	-2.44
	(0.01)	(0.02)	(0.02)	(0.03)	(1.23)	(1.85)	(2.73)	(2.67)
Child age 6-17	-0.01	0.01	-0.00	0.01	0.23	-0.85	-1.02	-0.52
	(0.01)	(0.01)	(0.02)	(0.02)	(1.03)	(1.33)	(1.64)	(1.86)
Remote job	-0.01	-0.03	-0.04	-0.05	-1.21	0.48	-0.40	3.96
	(0.02)	(0.02)	(0.03)	(0.03)	(1.71)	(1.63)	(2.38)	(2.25)
Essential industry	-0.01	-0.05*	0.06*	-0.05*	1.33	-4.67**	6.02**	-2.41
	(0.02)	(0.02)	(0.03)	(0.02)	(1.70)	(1.64)	(2.24)	(2.13)
March	-0.21**	-0.13**	-0.13**	-0.16**	-6.58**	-6.07**	-6.40**	-3.56
	(0.04)	(0.03)	(0.04)	(0.04)	(1.73)	(1.31)	(1.99)	(1.89)
April	-0.47**	-0.55**	-0.61**	-0.50**	-24.65**	-26.83**	-28.54**	-25.82**
	(0.06)	(0.05)	(0.07)	(0.06)	(3.01)	(2.32)	(3.50)	(3.11)
May	-0.29**	-0.45**	-0.45**	-0.59**	-13.89**	-23.38**	-19.26**	-24.96**
	(0.07)	(0.06)	(0.08)	(0.08)	(3.39)	(3.43)	(4.80)	(4.20)
March x Child age<6	0.01	-0.06	-0.00	0.02	1.59	-3.42	-0.46	-2.84
	(0.03)	(0.05)	(0.08)	(0.06)	(1.55)	(2.08)	(3.57)	(3.32)
April x Child age<6	-0.04	-0.06	0.18	0.03	-1.35	-2.60	6.57	3.18
	(0.05)	(0.06)	(0.10)	(0.10)	(2.63)	(3.02)	(4.82)	(5.29)
May x Child age<6	0.11	-0.03	0.15	-0.02	6.27*	-0.14	7.19	1.48
	(0.06)	(0.08)	(0.13)	(0.12)	(3.13)	(3.47)	(5.09)	(6.15)
Observations	3,097	2,045	1,623	1,224	3,097	2,045	1,623	1,224
Between R^2	0.22	0.32	0.30	0.36	-	-	-	-

Note: Standard errors in parentheses are clustered by household. See Table 1 for control variables. * $p < 0.05$, ** $p < 0.01$.

Source: Current Population Survey, February – May 2020

Table A8. Effects of COVID on Employment Status and Hours of Unincorp. Self-employed (RE Models Coefficients) (Continued)

	Employment				Hours			
	Married		Single		Married		Single	
	Men	Women	Men	Women	Men	Women	Men	Women
March x Child age 6-17	0.07**	0.03	-0.01	-0.00	1.07	-0.30	-0.46	0.03
	(0.02)	(0.03)	(0.05)	(0.04)	(1.28)	(1.54)	(2.62)	(2.15)
April x Child age 6-17	0.03	-0.02	-0.19*	-0.05	-1.96	-0.49	-11.86**	-1.70
	(0.04)	(0.05)	(0.08)	(0.07)	(2.09)	(2.47)	(4.57)	(3.57)
May x Child age 6-17	0.00	-0.01	-0.08	0.08	-5.40*	-0.87	-8.71	-1.76
	(0.05)	(0.07)	(0.11)	(0.09)	(2.58)	(3.11)	(5.69)	(5.11)
March x Remote job	0.01	-0.03	-0.01	0.05	-0.39	-0.55	-0.18	-1.11
	(0.02)	(0.03)	(0.04)	(0.04)	(1.30)	(1.45)	(1.95)	(1.98)
April x Remote job	0.08*	0.07	0.11	0.14*	2.37	3.56	0.87	8.39**
	(0.04)	(0.05)	(0.06)	(0.07)	(2.05)	(2.38)	(3.17)	(3.23)
May x Remote job	-0.03	0.08	-0.00	0.19*	-3.26	4.57	-2.28	8.87*
	(0.06)	(0.07)	(0.08)	(0.08)	(2.70)	(3.18)	(4.01)	(4.25)
March x Essential industry	0.08*	-0.02	-0.04	0.03	1.36	1.46	-2.17	0.92
	(0.03)	(0.03)	(0.04)	(0.04)	(1.76)	(1.41)	(2.04)	(1.96)
April x Essential industry	0.20**	0.25**	0.25**	0.20**	12.59**	15.53**	13.96**	12.32**
	(0.06)	(0.05)	(0.07)	(0.06)	(2.91)	(2.30)	(3.57)	(3.13)
May x Essential industry	0.06	0.11	0.20*	0.31**	6.87*	8.71**	9.76*	10.55*
	(0.07)	(0.06)	(0.09)	(0.08)	(3.39)	(3.05)	(4.67)	(4.18)
Observations	3,097	2,045	1,623	1,224	3,097	2,045	1,623	1,224
Between R^2	0.22	0.32	0.30	0.36	-	-	-	-

Note: Standard errors in parentheses are clustered by household. See Table 1 for control variables. * $p < 0.05$, ** $p < 0.01$.

Source: Current Population Survey, February – May 2020