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ABSTRACT

How the COVID-19 Lockdown Affected Gender Inequality in Paid and Unpaid Work in Spain*

The covid-19 pandemic led many countries to close schools and declare lockdowns during the Spring of 2020, with important impacts on the labor market. We document the effects of the covid-19 lockdown in Spain, which was hit early and hard by the pandemic and suffered one of the strictest lockdowns in Europe. We collected rich household survey data in early May of 2020. We document large employment losses during the lockdown, especially in "quarantined" sectors and non-essential sectors that do not allow for remote work. Employment losses were mostly temporary, and hit lower-educated workers particularly hard. Women were slightly more likely to lose their job than men, and those who remained employed were more likely to work from home. The lockdown led to a large increase in childcare and housework, given the closing of schools and the inability to outsource. We find that men increased their participation in housework and childcare slightly, but most of the burden fell on women, who were already doing most of the housework before the lockdown. Overall, we find that the covid-19 crisis appears to have increased gender inequalities in both paid and unpaid work in the short-term.

JEL Classification: D13, J13, J16

Keywords: COVID-19, gender roles, labor market, household work, childcare

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1. Introduction

The social distancing measures and stay-at-home orders to contain the covid-19 pandemic have affected the economic activity of men and women. To investigate the effects of the containment measures on gender inequalities, we ran a survey on a representative sample of 5,000 Spanish households in early May, during the lockdown driven by the spike in covid-19 cases in mid-March. We document how the lockdown led to changes in employment and time devoted to childcare and household chores, and stress how those changes differed by gender.

Regarding work, we show that women had lower employment rates than men before the lockdown. We then document large drops in employment for both men and women during the lockdown, of about 23 percentage points. Most of the employment losses were temporary, in the form of furloughs. Job losses were larger for less-educated workers. The sectors most hit were hospitality and retail, which were completely shut down for two months ("quarantined" sectors). At the other extreme, employment losses were smallest in "essential" sectors, such as health services, and sectors that allow for remote work, such as public administration, finance, and real estate. We also document that working from home became very prevalent during the lockdown, particularly among university educated and female workers.

Regarding childcare and housework, we focus on two-parent households with children, and find that women did the bulk of most chores both before and during lockdown. Men increased their participation in childcare and housework during the lockdown, but this increase was small in magnitude. Overall, we conclude that the covid-19 crisis appears to have reinforced gender inequalities in both paid and unpaid work, in the short-term.

We contribute to an emerging literature on the effects of the covid-19 lockdowns on labor markets and gender inequality. We are part of a small group of studies that have collected detailed, representative survey data during the confinement period in the Spring of 2020, the first one for Spain. A strength of our data is that we collect parallel information on standard labor market variables as well as childcare and housework time, including the within-household distribution of tasks, variables that are not collected in standard labor force surveys.

The remainder of the paper is organized as follows. In section 2 we summarize related research. This section is long and can be skipped for those familiar with the literature. Section 3 describes the institutional context in Spain, while in section 4 we provide the details of the data collection. We discuss the changes in employment for men and women in section 5, and section 6 describes the changes in childcare and housework. Section 7 concludes.

2. Related research

The covid-19 pandemic created dramatic and swift changes in the organization of societies across the world. Given the magnitude of the shock, it is not surprising that new research on the effects of covid-19 has also arisen at a rapid pace, as researchers aim to understand its potential impacts and policymakers aim to respond. In particular, there is growing research on the role that the pandemic has already played and may continue to play in widening inequalities.

Regarding gender inequality, emerging research finds that the pandemic and subsequent confinement and social distancing measures have had negative impacts on mental health, with larger effects on women (Etheridge and Spantig, 2020; Beland et al. 2020; Adams-Prassl 2020). Evidence of effects on domestic violence, on the other hand, is mixed (Brülhart and Lalive, 2020; Beland et al., 2020).

Early research also finds gendered impacts on work productivity, measured by a drop in the proportion of female authors of papers submitted during the lockdown (e.g. Fuchs-Shundeln, 2020), and more specifically a stark gender gap for mid-career economists starting early work into covid-related research (Amano-Patiño, et al. 2020). Hypothesized reasons for the gaps are primarily related to the dramatic increase in the child care burden falling primarily on mothers.

We estimate the impact that the strict confinement period in Spain had on (i) labor market outcomes, such as employment and layoffs, as well as working from home, and (ii) the household distribution of childcare and housework by gender. The lockdown in Spain shuttered businesses and mandated working from home in many cases, directly resulting in labor market shocks that we document here, while the closing of schools added the extra component of a sudden lack of access to childcare. A number of studies, along with this one, have simultaneously emerged to explore various implications related to these two areas.

Alon et al. (2020) make use of the American Time Use Survey and the American Community Survey for 2017 and 2018. They categorize "critical" and "telecommuting" occupations as well as flexible work. They also look at pre-crisis percentages of household work done by gender. They then make predictions on various ways that women are expected to be affected to a greater degree by covid-19 confinement measures. Similarly, Hupkau and Victoria (2020) use the 2019 Labor Force Survey from the National Statistics Institute of Spain to categorize sectors that are considered "essential" and "reduced due to confinement", and make predictions on workers' ability to work remotely. Hupkau and Petrongolo (2020) use the UK Labour Force Survey for 2019 and the 2015 time-use survey to also discuss potential implications.

These studies predict that women are more likely to lose their jobs during the covid-19 crisis, due to their over-representation in highly-affected sectors. Previous recessions have typically hit male-dominated sectors (e.g. manufacturing and construction), while the covid pandemic has hit services (e.g. restaurants, hotels, travel) heavily, which are more female dominated. Alon et al. (2020) also discuss how the labor market effects on women (and mothers in particular) are likely to be persistent, since previous research shows that job losses overall, and in recessions, lead to persistent earnings losses (Stevens, 1997; Davis and von Watcher, 2011).

These studies also describe how it is likely that women will take on disproportionately more of the household and childcare duties. The lockdown, paired with the closing of schools, eliminates the ability to outsource childcare through formal channels (e.g. schools), and greatly reduces the ability to outsource through informal channels (e.g. grandparents). Given the unequal division of childcare and household tasks before the crisis, this would translate into a large increase in the burden on mothers.

However, these studies also describe how a non-trivial proportion of fathers will find themselves in the position to be the primary caregiver to children, as their wives work outside the home and they are either not working or working from home. Given that a large part of gender inequality is driven by unequal division of labor within the household, the extent to which men pick up some of these tasks during confinement could lead to shifts in societal norms (Alon et al., 2020; Hapucheck and Petrongolo, 2020). This has potential to counter some of the losses experienced by women during this crisis. An additional factor that could counter the setbacks to women is that businesses may become more open to flexibility and remote work, which may help with balancing of family and work obligations (Alon et al., 2020).

The studies mentioned use pre-existing datasets to discuss expected impacts. Other recent papers collect and analyze, as we do, real-time data during the covid-19 pandemic.[1] Adams-Prassl et al. (2020) use real-time survey data collected for geographically representative samples for the US, UK and Germany. They find that workers in alternative work arrangements and in occupations that cannot be done from home were more likely to either lose their jobs or experience reduced earnings, and that this is more likely for the less educated and for women. They document that women are doing more childcare and homeschooling during the pandemic.

Sevilla and Smith (2020), also making use of real-time data collected for the UK, similarly find gender inequalities in childcare for couples with children. They also document that men working from home or laid-off increase their childcare more. Biroli et al. (2020) reach similar conclusions using real-time survey data for Italy, the US, and the UK, also noting job loss as an important factor in household changes from the status quo. Del Boca et al. (2020), using survey data on Italian couples, also finds gendered responses in housework and childcare, with men's response varying much more with the spousal work situation than women's. They also note that working mothers with very young children (ages 0-5) had the hardest time balancing work and family demands.

Likewise, Andrew et al (2020), using time-use diary data collected for a representative sample for the UK during the pandemic, document differential responses by gender when a partner is no longer working, with mothers picking up more than fathers do in response to their partners' employment situation. They conclude that employment changes cannot fully explain gender gaps in time use, and that despite doing notably less

[1] Somewhere in between these two cases, von Gaudecher et al (2020) use data collected in the first few days of lockdown in the Netherlands to ask about immediate work conditions and short-term expectations. The paper does not have a gender focus, but does find that lower educated individuals saw their work hours decrease the most.

than mothers, fathers have increase their childcare during this time. Calson et al. (2020) document similar gender impacts on household work for the US, and also find that, while men and women similarly perceive increases in mothers' childcare, fathers report doing more than their spouses report them doing during lockdown.

While not specifically focused on gender, work by Ma et al. (2020) highlights the important role of school closures on parental labor market decisions. They use survey data on junior high school students and their parents from China, observing a reduced probability of parents going back to work when workplaces were open, but schools were still closed.

Previous research also clearly shows that school is a crucial form of childcare that influences maternal labor market involvement (e.g. Gelbach, 2002; Graves, 2013). The difficult trade-off between using school closures as a means of reducing contagion and the large costs to education and parental labor market work has been discussed, and attempts have been made to quantify costs both in the case of influenza pandemics (Cauchemez et al. 2009; Lempel et al., 2009), as well as for the covid-19 pandemic (Fuchs-Schundeln et al., 2020).

The current evidence on household and market labor impacts shows some striking similarities across countries. In a large cross-country study, Foucault and Galasso (2020) use real-time survey data for representative samples for twelve countries.[2] They find that college educated, white collar workers and high income individuals were largely able to work from home, while lower educated, blue-collar workers and lower-income people were less likely to be able to work remotely and were more often not working. They note that gender gaps emerged in some countries, with women working from home more often.

[2] Australia, Austria, Brazil, Canada, France, Germany, Italy, New Zealand, Poland, Sweden, the UK and the US.

We also observe striking similarities from the previously-discussed studies with respect to household work. Namely, that mothers are doing more childcare and homeschooling during the pandemic (in most cases irrespective of their partner's employment situation). On the other hand, the degree to which fathers take on additional household and childcare duties is more dependent on their partner's employment situation.

Understanding the impacts of a major global event such as the covid-19 pandemic is relevant in its own right. Yet, this research also informs a number of larger areas of economic inquiry. For example, a number of studies have explored the role that recessions can play in exacerbating inequalities in society (Perri and Steinberg, 2012; Heathcote et al. 2010). Understanding the labor market consequences of the covid-19 crisis will contribute to this larger literature. Similarly, research on the covid-19 crisis should inform the larger academic and policy discussions regarding remote work and flexible work arrangements, as well as online learning.

Regarding gender inequalities, we may learn more on the persistent effects of increased paternal involvement in childcare. Alon et al. (2020) argue that "The literature on policy changes that engineer a similar change (e.g., "daddy months" and other forms of paternity leave) suggest that such a reallocation of duties within the household is likely to have persistent effects on gender roles and the division of labor" (p.5) (Farré and González, 2019, Tamm, 2019). To the extent that (some) men become the primary caregiver due to the covid-19 shock, this will inform the larger debate about the role that increasing paternal involvement in household work may have on narrowing gender gaps.

Overall, the literature on the changes in market and household work during the covid-19 crisis can help to inform the larger discussion of the division of labor outside and

within the household and its implications for gender equality. Our study contributes to this growing academic literature.

3. Institutional context

Spain was hit early and hard by the new virus, leading to one of the strictest lockdowns in Europe. On March 9th, the government announced that effective Wednesday March 11th, all classes at all educational levels would be cancelled in the region of Madrid, affecting more than 1.5 million students.[3] By Thursday, March 12th, this was extended to all of Spain.[4] On March 14th it was announced that effective in 24 hours, Spain would enter into "state of alarm".[5] The state of alarm entailed a nationwide lockdown, banning all trips that were not of absolutely necessity. Residents were ordered to stay home except to buy food or medicine, go to work, go to the hospital, or other emergencies.

While work outside the home was still allowed, those who could were asked to work from home, and lockdown restrictions also mandated the temporary closure of non-essential shops and businesses. On March 17, the Spanish government announced a support package of roughly 20% of GDP, including measures to help workers and companies affected by the lockdown. This package included the streamlining of temporary dismissal files (known as *ERTEs*), similar to a furlough.[6]

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[3] Source: https://elpais.com/espana/madrid/2020-03-09/la-comunidad-estudia-endurecer-sus-medidas-para-combatir-la-expansion-del-virus.html, accessed 6/22/2020.
[4] https://elpais.com/sociedad/2020-03-12/suspendidas-las-clases-en-todos-los-centros-educativos-de-euskadi.html
[5] https://elpais.com/espana/2020-03-13/el-gobierno-debate-decretar-el-estado-de-alarma.html, https://nationalpost.com/pmn/health-pmn/spain-to-impose-nationwide-lockdown-el-mundo, https://elpais.com/espana/2020-03-14/el-gobierno-prohibe-todos-los-viajes-que-no-sean-de-fuerza-mayor.html, https://www.theguardian.com/world/2020/mar/14/spain-government-set-to-order-nationwide-coronavirus-lockdown
[6] https://www.reuters.com/article/us-health-coronavirus-spain-aid/spain-approves-200-billion-euro-aid-package-for-coronavirus-crisis-pm-idUSKBN2142Q4, https://elpais.com/economia/2020-03-17/el-gobierno-aprobara-una-moratoria-para-el-pago-de-hipotecas.html

By March 28th, just 2 weeks after the state of alarm was announced, the Spanish government had officially banned all non-essential economic activity.[7] After these initial moves, the state of alarm was extended repeatedly, with the confinement conditions essentially unchanged. Overall, from March 15th through early May, Spain remained under the strictest lockdown in Europe.

Some easing of conditions began at the very end of April and beginning of May. Notably, on April 13 some workers in select sectors, such as construction and industry, who could not work from home but were not deemed essential sectors, were allowed to return to work.[8] On April 26th, some restrictions on personal activity were lifted, as children were able to go outside for the first time since the beginning of the confinement period, still only while adhering to strict conditions and hours.[9]

On April 28th, the government announced a plan for easing lockdown restrictions, referred to as "phases".[10] On May 2nd, adults were allowed to go outside to walk and do sports under strict conditions and adhering to a set time schedule. By May 11th, some regions were allowed to move to phase 1 of the de-escalation of restrictions. At this point, roughly half of the Spanish population experienced an easing of restrictions, allowing social gatherings of up to 10 people, adhering to social distancing, as well as some

[7] https://elpais.com/espana/2020-03-28/el-gobierno-amplia-el-confinamiento-los-trabajadores-de-actividades-no-esenciales-deberan-quedarse-en-casa.html, https://www.theguardian.com/world/2020/mar/28/covid-19-may-be-peaking-in-parts-of-spain-says-official

[8] https://english.elpais.com/economy_and_business/2020-04-13/i-dont-know-why-in-heck-we-have-to-go-back-if-theres-no-way-of-keeping-the-safety-distance.html

[9] https://elpais.com/elpais/2020/04/21/mamas_papas/1587486215_135242.html, https://www.france24.com/en/20200423-spain-coronavirus-lockdown-extension-may-9-covid-19-epidemic

[10] https://www.thelocal.es/20200428/what-we-know-about-spains-plan-for-transition-to-a-new-normal, https://elpais.com/sociedad/2020-04-28/estas-son-las-cuatro-fases-para-volver-a-la-normalidad-aprobadas-por-el-gobierno.html

businesses opening conditional on safety measures put in place.[11] The state of alarm was finally lifted on June 21, after 97 days of exceptional restrictions.

4. Data collection

During the month of May 2020, we contracted with a survey company (Ipsos) to run a survey for a representative sample of the Spanish population aged 24-50. The final sample size was 5,001 individuals. The survey was carried out with quotas by region to preserve representativeness at both the national and regional levels. Sampling quotas for education and family composition were also applied to guarantee representativeness of the sample along these dimensions.[12]

The survey was run in early May, with all respondents sampled between May 5th and May 19th, and the vast majority surveyed within the first few days of sampling (e.g. 4,246 of our 5,001 observations were sampled by May 7th). This means that the easing of the lockdown conditions had just started. For the vast majority of our sample, people had only been allowed the freedom of short programmed walks for less than 2 weeks at the time of interview. For respondents answering toward the end of our survey period, only some had been allowed any further freedoms, for a matter of days.

Given this context, our questions were asked in reference to two specific time periods. First, we ask questions referring to the time period "before the declaration of the state of alarm on March 14th due to the evolution of the covid-19 pandemic in Spain"

[11] https://www.euroweeklynews.com/2020/05/08/breaking-news-spains-government-approves-territories-that-can-move-to-phase-1-of-deescalation-lifting-restrictions-for-51-of-its-population-heres-the-complete-list/

[12] Quotas for ages and education were applied by Ipsos. For example, to ensure that our sample represents the national distribution of educational levels, the quotas used were set to achieve 24.8% with a "high" education level, 60.3% having a "medium" and 14.9% having a "low" educational attainment level. "High" is defined as having a university degree, "medium" is defined as having completed a professional training degree or Bachillerato (a 2-year college prep at the end of high school), and "low" corresponds to having a high school degree or less.

(translated from Spanish). Each following question then reminds the respondent of the relevant time period by starting with "before the declaration of the state of alarm", then proceeding with the rest of the question.

Second, we ask about the time "since the declaration of the state of alarm on March 14th." Each question asked of this later time period reminds the respondent of the relevant time frame by starting each question with "during the state of alarm." Both reference periods are very recent and salient in the minds of our respondents at the time of the survey.

Due to our age range restrictions, our sample most closely represents the prime working age population in Spain, which accounts for roughly 40% of the overall Spanish population.[13] In addition to representing the prime working age population in Spain, the age ranges align with key ages when children may be present in the household. Our sample is therefore particularly fit for our two main questions of interest, namely, (1) how the lockdown as a result of the covid-19 pandemic differentially affected the labor market status of men and women, and (2) the impact of the shock on the distribution of domestic tasks as well as childcare within the household by gender.

Table A1 shows descriptive statistics for both the full sample of respondents, and the subsample with children. Our sample of survey respondents is 58% female.[14] In our analysis of the household distribution of domestic and childcare tasks, we restrict our analysis to opposite sex couples with children. Of our 5,001 respondents, 72% report that

[13] For example, using age distribution numbers from INE (Table: "Población residente por fecha, sexo y edad" for June 1, 2019), our age range accounts for 37.6 % of the Spanish population. Comparing this to The World Factbook 2020 CIA reports for Spain, those aged 25-54 years (close, but not exactly our age range) accounts for 44.54% of the population, while the same INE population estimate for this age range is 42.8%.

[14] As the Ipsos universe for sampling is balanced in gender we expected to be close to 50% in general and so we did not include an additional specific target to get exactly 50% response by gender.

they are living with a partner. While 34% of households in Spain overall have children present (INE, 2018), this percentage is larger in our age range of 24-50 (57%).Our resulting sample of opposite sex households with children is 3,894, with key information on both the respondent and their spouse.

5. Changes in employment during the lockdown

5.1 Employment rates

Figure 1 (Panel A) shows labor market outcomes for men and women in our sample. Employment rates were higher for men before the lockdown, with only 13% of our male respondents out of work, compared with almost 29% of women. Around 7% of both men and women became unemployed during the lockdown, while 17% of men and 18% of women were furloughed. As a result, at the time of the survey, 63.5% of men were working, compared with 46% of women.

Furloughs were more common among lower-educated workers. Panel B of Figure 1 shows that almost 20% of workers with no university degree went on temporary leave during lockdown. While 76% of university-educated men were working at the time of the survey, the rate was only 41% for lower-educated women.

In order to document these changes more precisely, we estimate the following regression on the full sample of survey respondents (descriptive statistics for this sample are shown in appendix Table A2):

$$(1) \quad Y_{it} = \alpha + \beta_1 Female_i + \beta_2 Lockdown_t + \beta_3 Female_i * Lockdown_i + \gamma X_i + \varepsilon_{it},$$

where the dependent variable is the employment status of the respondent, and the main explanatory variables are: a female indicator, a dummy for the lockdown period (the time of the survey), and an interaction term. We include additional controls such as age and

household composition. We observe the employment status of each individual both before (*t=0*) and during lockdown (*t=1*).[16]

The results of estimating this regression are shown in Table 1. The dependent variable in Panel A of Table 1 is a binary indicator for the respondent working in the corresponding period (i.e. those on leave or furlough, as well as those not employed, get a 0). Column 1 does not include any controls. As seen in Figure 1, the female coefficient shows that women were working at a lower rate than men before the lockdown, by 15 percentage points. The fraction working fell by 23 percentage points among men during lockdown, and the drop was 2.5 points higher for women, but the difference is not statistically different from zero.

Column 2 displays the results when we include the control variables. Respondents with a university degree are 13 points more likely to work. Column 3 also shows that the drop in employment during the lockdown was significantly smaller for high-educated workers. We estimate a 25-point fall for workers with no university degree, compared with 18 points for university graduates. This difference is somewhat muted for women (column 4).

In columns 5 and 6, we add individual fixed-effects to the regressions, in order to control for all time-invariant, individual-level factors. The specification in column 5 suggests that the fall in the proportion working was significantly larger for women, by close to 3 percentage points.

Finally, columns 7 and 8 show the results of running the same regressions, for the subsample of respondents living in a different-sex couple with children. Women in this

[16] We only ask about employment status during lockdown if a respondent was working before. We thus miss information for respondents who were not working before lockdown but found a job during. These cases lead to some measurement error in the dependent variable (hopefully small).

sample were even less likely to work pre-lockdown, but job losses during lockdown did not affect them differentially from men.

As we saw in Figure 1, most of the employment losses during lockdown were temporary (furloughs). Panel B of Table 1 documents the changes in employment status, where employment is a binary indicator for workers holding a job, whether currently at work or on temporary leave. We find that the employment rate fell by about 7 percentage points, a bit more for women (but the difference is not statistically significant). We do not find that university-educated workers were more likely to keep their jobs. Combined with the previous table (and as shown in Figure 1), these results suggest that less-educated workers were more affected by furloughs.

We document this further by estimating the following regression for the sample of respondents working before lockdown:

(2) $Y_i = \alpha + \beta Female_i + \gamma X_i + \varepsilon_{it}$,

where Y is the respondent's employment status at the time of the survey (binary indicators for working, unemployed, or furloughed). The results are shown in Table 2 (columns 1 to 3). We find that (previously employed) women, as well as lower-educated workers, are significantly more likely to be furloughed and unemployed than men.

5.2 Increase in remote work

During the lockdown, many sectors were forced to shut down (temporarily), and those that could, were pushed to work remotely. Figure 2 (Panel A) shows the distribution of workers during lockdown, between remote and non-remote work. We find that 52% of women who continued working did so remotely, compared with 41.5% of men. Before lockdown, less than 9% of both male and female workers worked remotely. Panel B of Figure 2 also shows that remote work was much more common among university-

educated workers. This difference was barely noticeable before the lockdown, given the low prevalence of remote work for all groups.

We estimate equation (2) for the subsample of respondents who were working during the lockdown, where the dependent variable is now a binary indicator for remote work. The results are shown in column 6 of Table 2. We find that women were 6.5 percentage points more likely to work remotely than men, while university-educated workers were 33 points more likely to work from home during the lockdown than less-educated workers.

5.3 Employment changes by sector

The lockdown affected different sectors differentially. Some were close to completely shut down for three months (such as retail and hospitality), while some were forced to transition to remote work (such as education), and still some others remained open (essential sectors such as health services and supermarkets). We document these differences in Figure 3, which displays the fraction of workers in each sector who remained at work during the lockdown. Sectors are ordered from most to least male-dominated. The fraction of male workers is highest in construction, while the most feminized sector in our sample is health services.

We find large heterogeneity in activity rates across sectors. As expected, most of the workers in the hospitality sector were inactive during the lockdown. The second most affected sector was retail. At the other end, the sectors with the highest activity rates during the lockdown were: public administration, finance and real estate, and health services.

6. Changes in the distribution of childcare and housework

We have documented important drops in employment rates during the lockdown, larger for women and less-educated workers, and a large increase in the prevalence of remote

work. In this section, we focus on two-parent households of opposite sex with children, and study how the lockdown affected the distribution of childcare and housework between the partners, keeping in mind that schools were closed from March 13th until the end of the school year. In addition, at the time of the survey, restaurants were still closed, and the possibility to outsource household chores was still limited.

6.1 Changes in childcare

In the average household in our sample, the mother was doing most of the childcare before the lockdown. Mothers reported spending on average 28 hours a week on childcare, compared with 19 for fathers (Figure 4). These numbers suggest that women did almost 60% of the childcare.

We also asked respondents how childcare activities were shared between the couple, ranging from the mother doing 0 to 100% of each type of activity. Figure 5 (Panel A) shows the average reported shares for men and women before and during the lockdown. Our survey respondents report that before the lockdown mothers shouldered about 62% of the childcare, on average. This squares well with reported hours.

The lockdown increased the volume of childcare done by parents by 25% (from 48 to 60 hours a week, Figure 4). We are interested in understanding how the extra burden was shared between them. The right panel of Figure 5 shows that women were still doing most of the childcare during the lockdown, although men seem to have increased their participation, if only slightly.

We document these changes more precisely by estimating equation (1) with childcare as the dependent variable. The sample now includes both men and women in different-sex couples with children. The results are shown in Table 3. Note that we now control for the work status of the individual. Column 5 presents the results for weekly hours of childcare. Before the lockdown, women were spending 15 more hours than men in

childcare. During the lockdown, men increased their childcare time by almost 4 hours, while the increase for women was 3 hours larger (although the difference with respect to men was not statistically significant). Thus, we find that the increase in childcare needs was absorbed by both mothers and fathers taking on more of it.

Columns 1 to 4 use the shares done by each partner as the dependent variable. Column 4 shows that, again, mothers were doing much more childcare before, while their participation decreased by 6 percentage points during the lockdown (as shown in Figure 5). This is consistent with the results for hours. Fathers' increase in hours, even if not large, translates into men doing a slightly larger share of childcare, even though women are still shouldering most of it.

6.2 Changes in the distribution of household chores

We now turn to the rest of household chores. We ask about total weekly hours devoted to housework, and also about the within-couple distribution of six different tasks: cleaning, grocery shopping, laundry, food preparation, home repairs, and the managing of household finances. Women in our sample reported spending almost 12 hours a week on housework before the lockdown (Figure 4), almost twice as men (6.5).

Regression results are reported in Table 4. Columns 7 and 8 show again that women were doing much more housework than men before the lockdown (only repairs and household finances were predominantly male tasks). Hours increased after lockdown, and the increase was not significantly different for men and women. As a result, men's share increased (in all activities but repairs and management). The increase was small in cleaning, laundry, and food preparation, but quite large in grocery shopping. Figure 5 (Panel B) shows that men were doing most of the shopping during the lockdown. It's worth noting that during the confinement period, leaving the house was only allowed for grocery shopping.

The results for housework thus mirror those for childcare. An increase in total time spent in chores, which was absorbed by both partners increasing their dedication. This led to women still doing most of the work, but men increasing their participation slightly.

7. Conclusions

We report the main descriptive results from a representative household survey that we conducted in Spain during the covid-19 lockdown, in the Spring of 2020. We show that many workers (close to 20%) were affected by furloughs, especially lower-educated ones. Women were affected only slightly more by (temporary) job losses, and they were more likely to work from home during the confinement period.

We also document that the volume of childcare and housework taken on by parents increased significantly during this period. This increase was absorbed by both mothers and fathers doing more hours, but women continued to shoulder most of the burden. We find a gender gap in parents' shares of childcare and housework during the lockdown of about 17 percentage points on average (Figure 6). The gap was largest in laundry and cleaning activities, as well as physical childcare, while it was negative (such that men were doing most of it) for repairs and grocery shopping.

We interpret our results as showing that the covid-19 crisis, if anything, increased household specialization. During lockdown, women were more likely to be furloughed, unemployed, or working from home, and they took on most of the childcare and household chores. There is however some heterogeneity across households, which we haven't documented in the current version of this paper. In future work, we also intend to document the extent to which these changes in both paid and unpaid work are persistent.

References

Adams-Prassl, Abi, Teodora Boneva, Marta Golin, and Christopher Rauh "Inequality in the Impact of the Coronovirus Shock: Evidence from Real Time Surveys" IZA Discussion Papers, No. 13183, April 2020.

Adams-Prassl, Abi, Teodora Boneva, Marta Golin, and Christopher Rauh "The Impact of the Coronavirus Lockdown on Mental Health: Evidence from the US" Working Papers 2020-03, Human Capital and Economic Opportunity Working Group.

Alon, Titan, Matthias Doepke, Jane Olmstead-Rumsey and Michèle Tertilt. "The impact of Covid-19 on gender equality." *Covid Economics, Vetted and Real-Time Papers*, The Centre for Economic Policy Research (CEPR), Issue 4, April 14, 2020, pp. 62-85.

Amano-Patiño, Noriko, Elisa Faraglia, Chryssi Giannitsarou, Zeina Hasna. "The Unequal Effects of Covid-19 on Economists' Research Productivity." Cambridge-INET Working Paper Series No: 2020/22. Cambridge Working Papers in Economics: 2038

Andrew, Alison, Sarah Cattan, Monica Costa Dias, Christine Farquharson, Lucy Kraftman, Sonya Krutikova, Angus Phimister, Almudena Sevilla. "How are mothers and fathers balancing work and family under lockdown?" The Institute for Fiscal Studies, IFS Briefing Note BN290, May 2020. ISBN 978-1-912805-80-8

Beland, Louis-Philippe; Brodeur, Abel; Haddad, Joanne; Mikola, Derek. "Covid-19, Family Stress and Domestic Violence: Remote Work, Isolation and Bargaining Power." Global Labor Organization, GLO Discussion Paper, No. 571

Biroli, Pietro, Steven Bosworth, Marina Della Giusta, Amalia Di Girolamo, Sylvia Jaworska, and Jeremy Vollen. "Family Life in Lockdown." IZA DP No. 13398, June 2020.

Brülhart, Marius and Rafael Lalive "Daily suffering: Helpline calls during the Covid-19 crisis." *Covid Economics, Vetted and Real-Time Papers*, The Centre for Economic Policy Research (CEPR), ISSUE 19, May 18, 2020, pp.143-160.

Carlson, Daniel, Richard Petts and Joanna R. Pepin. "US Couples' Division of Housework and Childcare During Covid-19 Pandemic." Unpublished Manuscript, 2020.

Cauchemez, Simon, Neil M Ferguson, Claude Wachtel, Anders Tegnell, Guillaume Saour, Ben Duncan, Angus Nicoll. "Closure of schools during an influenza pandemic" The Lancet, Vol 9 August 2009.

Davis, Steven J., and Till von Wachter. 2011. "Recessions and the costs of job loss." Brookings Papers on Economic Activity, no. 2:1–72.

Del Boca, Daniela, Noemi Oggero, Paola Profeta and Maria Cristina Rossi. "Women's work before and during covid-19." *Covid Economics, Vetted and Real-Time Papers*, The Centre for Economic Policy Research (CEPR), ISSUE 28, June 12, 2020, pp.70-90.

Etheridge, Ben and Lisa Spantig. "The Gender Gap in Mental Well-Being During the Covid-19 Outbreak: Evidence from the UK" Institute for Social and Economic Research, ISER Working Paper Series, No. 2020-08, June 2020

Farré, Lídia, and Libertad González. 2019. "Does Paternity Leave Reduce Fertility?" Journal of Public Economics 172:52–66.

Foremny, Dirk, Pilar Sorribas-Navarro and Judit Vall Castelló. 2020. Living at the Peak: Health and Public Finance During the Covid-19 Pandemic. Available at SSRN: https://ssrn.com/abstract=3578483 or http://dx.doi.org/10.2139/ssrn.3578483

Foucault, Martial and Vincenzo Galasso. "Working After Covid-19: Crosscountry Evidence from Real-Time Survey Data." *Attitudes Toward Covid-19 A Comparative Study, SciencePo, CEVIPOF, Research note*, #9/ May 2020

Fuchs-Schundeln, Nicola "Gender structure of paper submissions at the Review of Economic Studies during COVID-19: First evidence." Found: https://www.restud.com/gender-structure-of-paper-submissions-during-covid-19/

Fuchs-Schündeln, Nicola, Moritz Kuhn, Michèle Tertilt "The Short-Run Macro Implications of School and Child-Care Closures." IZA DP No. 13353, June 2020

Gelbach, Jonah. "Public Schooling for Young Children and Maternal Labor Supply." *American Economic Review*, Vol. 92, No. 1, March 2002, pp. 307-322.

Graves, Jennifer. "School calendars, child care availability and maternal employment." *Journal of Urban Economics*, Vol. , November 2013, pp. 57-70. https://doi.org/10.1016/j.jue.2013.07.004

Heathcote, Jonathan Gianluca Violante and Fabrizio Perri. “Inequality in times of crisis: Lessons from the past and a first look at the current recession.” VOX CEPR Policy Portal, February 2, 2010. https://voxeu.org/article/economic-inequality-during-recessions

Hupkau, Claudia and Barbara Petrongolo. “Work, care and gender during the Covid-19 crisis” LSE Centre for Economic Performance, CEP Covid-19 analysis, Paper No.002, May 2020.

Hupkau, Claudia and Carlos Victoria “Covid-19 y desigualdad de géneroen España.” ESADE Center for Economic Policy and Political Economy, EsadeEcPol Insight #8, Abril 2020.

Instituto Nacional de Estatistica (INE), 2020. Table: “Población residente por fecha, sexo y edad,” calculated for July 1, 2019.

Instituto Nacional de Estatistica (INE), 2018. Press Release: “Continuous Household Survey Year 2017” (CHS-2017), 12 April, 2018. (https://www.ine.es/en/prensa/prensa_en.htm)

Lempel, Howard, Joshua M Epstein, and Ross A Hammond “Economic Cost and Health Care Workforce Effects of School Closures in the U.S.” Version 1. PLoS Curr. 2009 October 5; 1: RRN1051. (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2762813/?report=printable)

Ma, Sen, Zhengyun Sun, Hao Xue. “Childcare Needs and Parents’ Labor Supply: Evidence from the COVID-19 Lockdown” Unpublished Manuscript. June 19 2020

Perri, Fabrizio and Joe Steinberg. “Inequality & Redistribution during the Great Recession Both earnings inequality and government redistribution rose to historic highs. On net, low-earning households have become more vulnerable” Economic Policy Paper 12-1, Federal Reserve Bank of Minneapolis, February 2012.

Sevilla, Almudena and Sarah Smith, “Baby Steps: The Gender Division of Childcare During the Covid19 Pandemic.” The Centre for Economic Policy Research , CEPR Discussion Paper DP14804, May 24, 2020

Stevens, Ann Huff (1997): “Persistent effects of job displacement:
The importance of multiple job losses”. Journal of Labor Economics, 15(1): 165-188.

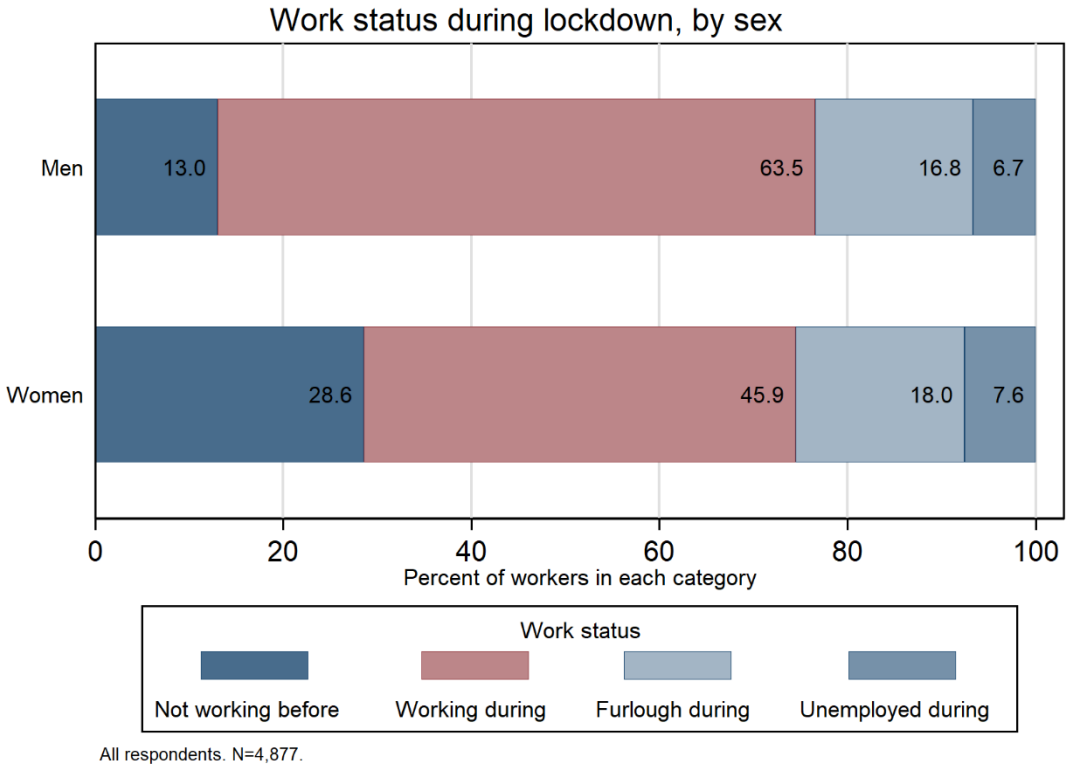
Tamm, Marcus. 2019. “Fathers’ parental leave-taking, childcare involvement
and labor market participation.” Labour Economics 59:184–197.

The World Factbook 2020. Washington, DC: Central Intelligence Agency, 2020.https://www.cia.gov/library/publications/the-world-factbook/geos/sp.html, Page last updated, May 4, 2020.

von Gaudecker, Hans-Martin, Radost Holler, Lena Janys, Bettina Siflinger and Christian Zimpelmann. “Labour Supply in the Early Stages of the COVID-19 Pandemic: Empirical Evidence on Hours, Home Office, and Expectations.” IZA DP No. 13158, April 2020.

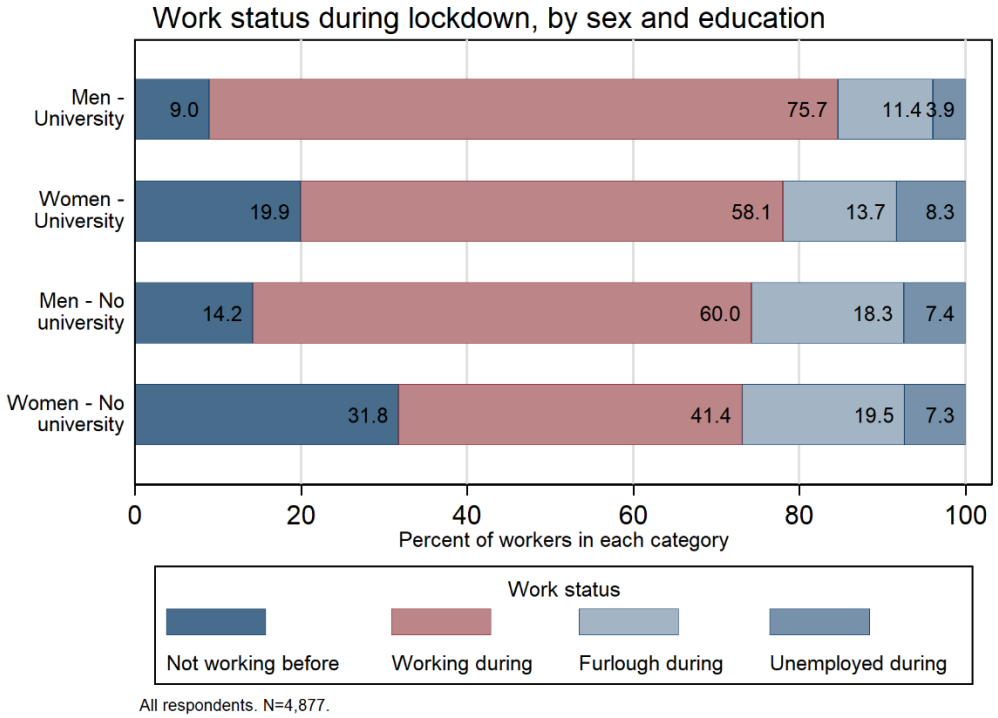
Figure 1. Employment status during lockdown, by sex and education

Panel A. By sex



All respondents. N=4,877.

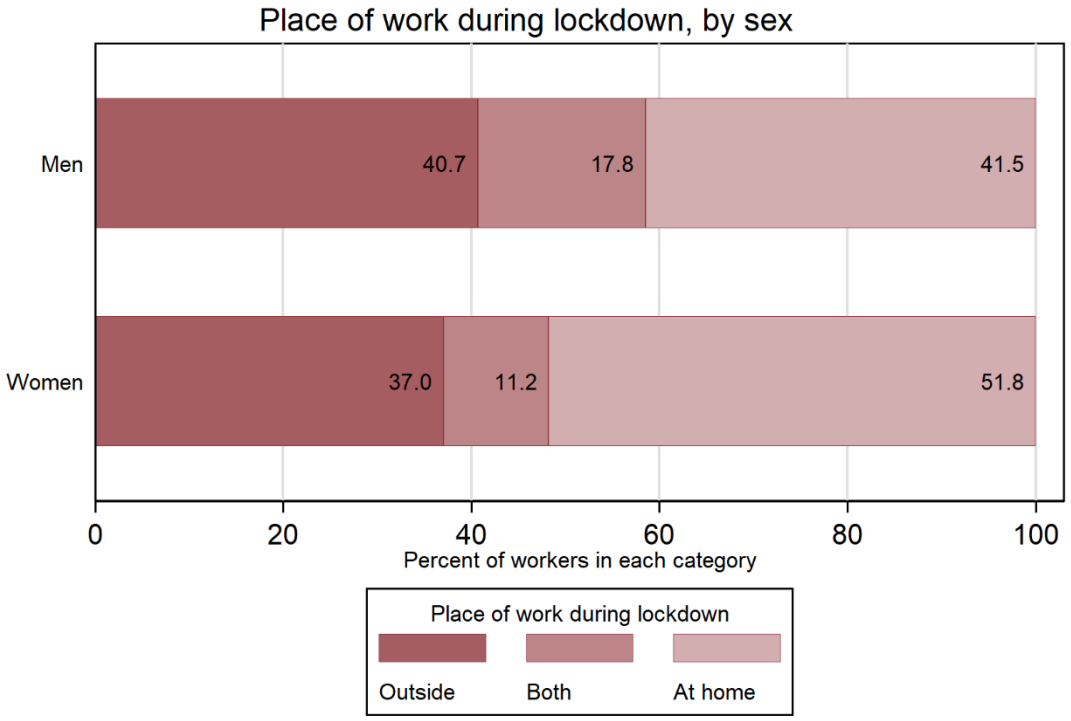
Panel B. By sex and education



All respondents. N=4,877.

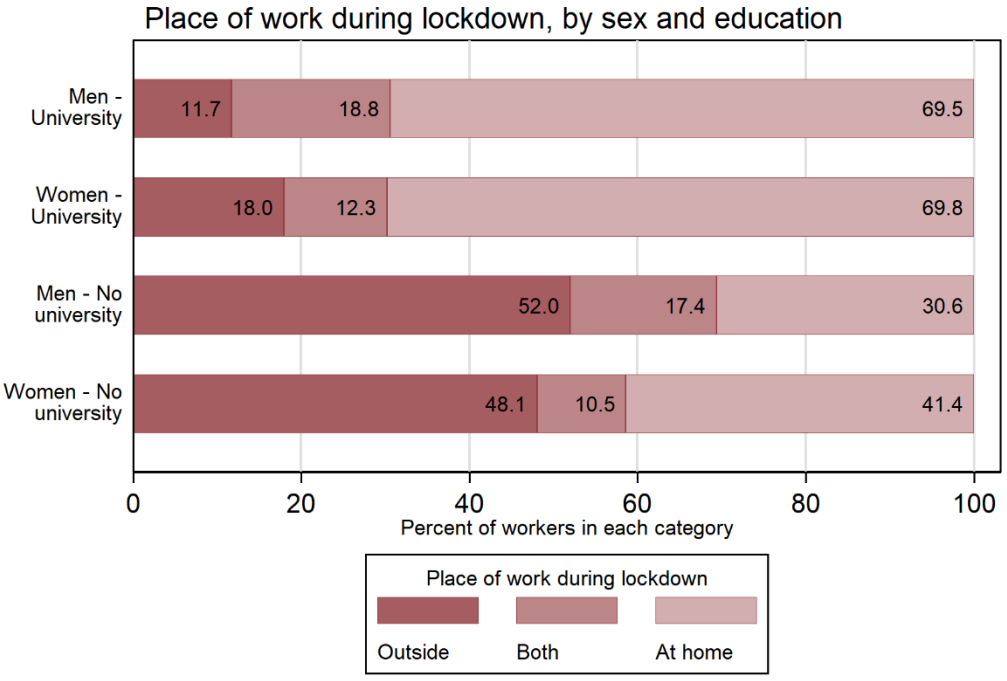
Figure 2. Prevalence of remote work during lockdown

Panel A. By sex



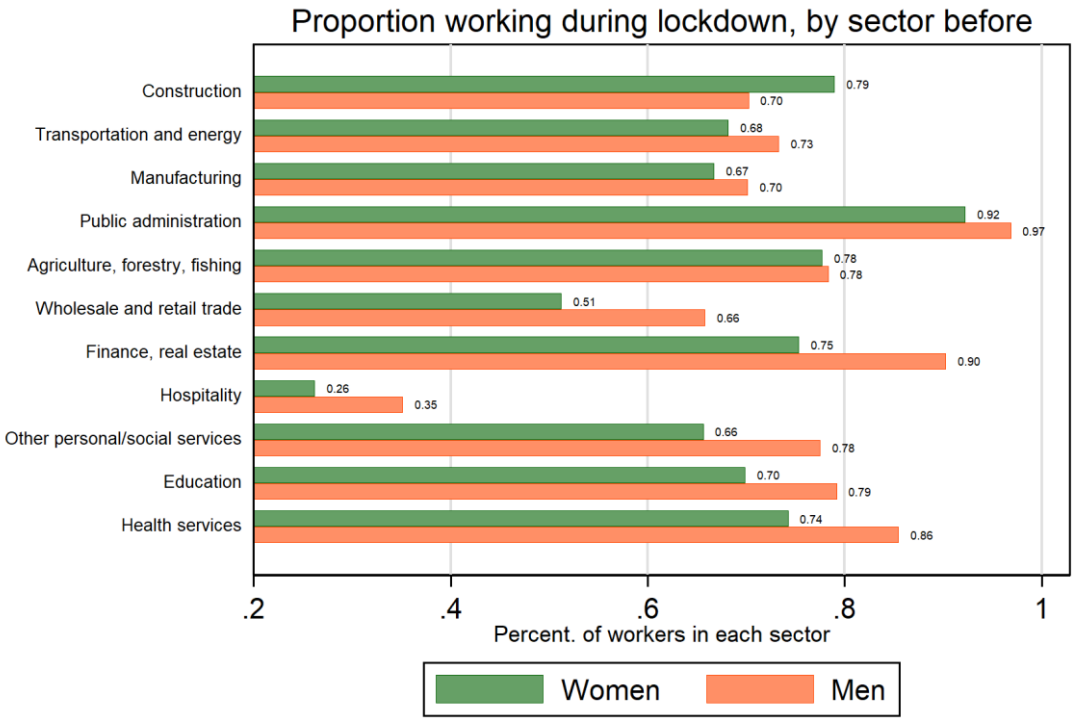
Respondents who are working during lockdown and with non-missing info on total hours and hours worked from home. N=2,267.

Panel B. By sex and education



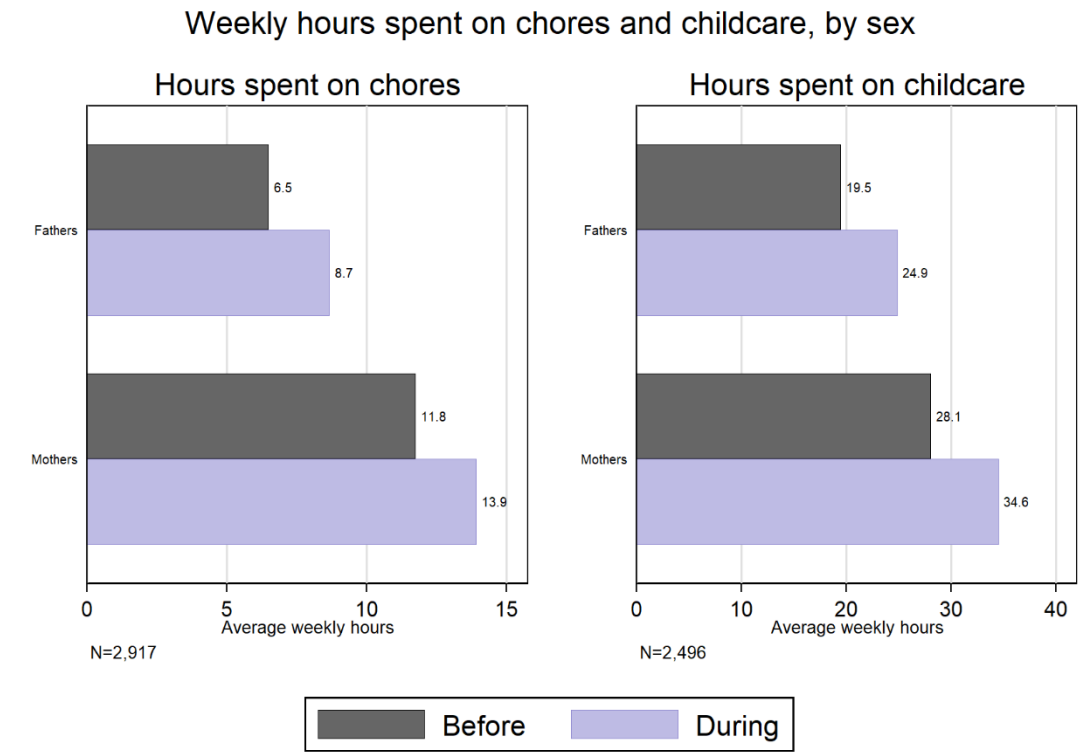
Respondents who are working during lockdown and with non-missing info on total hours and hours worked from home. N=2,267.

Figure 3. Fraction working during lockdown by sector



Respondents working before lockdown, with non-missing info on sector before lockdown. N=3,534.
Sectors are ordered from the lowest to the highest proportion of women before lockdown.

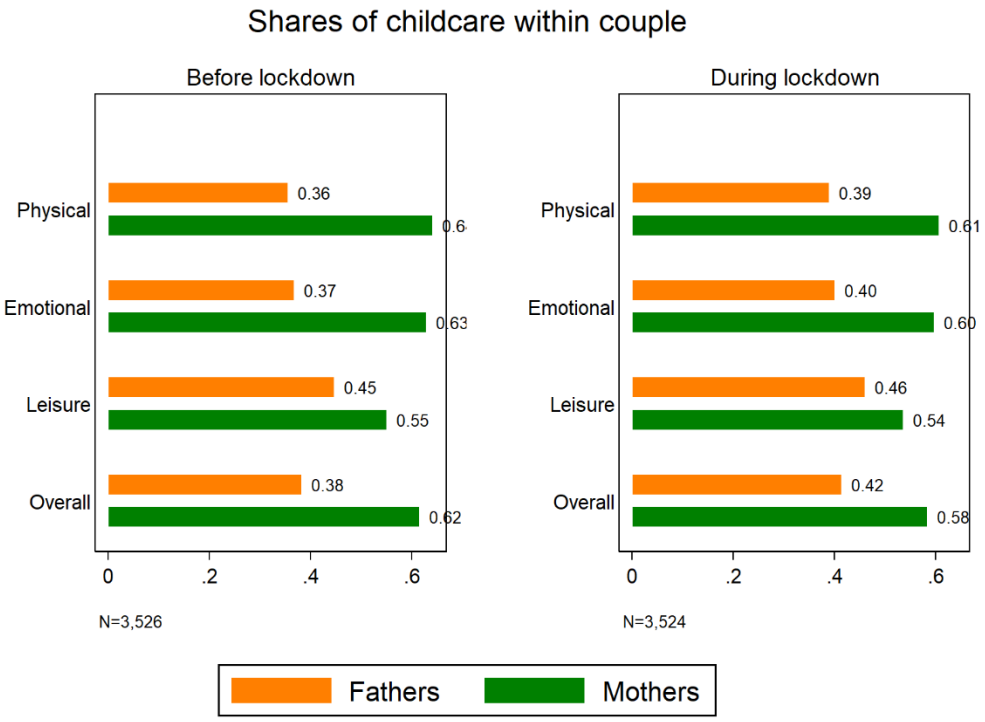
Figure 4. Hours of childcare and housework



Mothers and fathers of children under age 16.

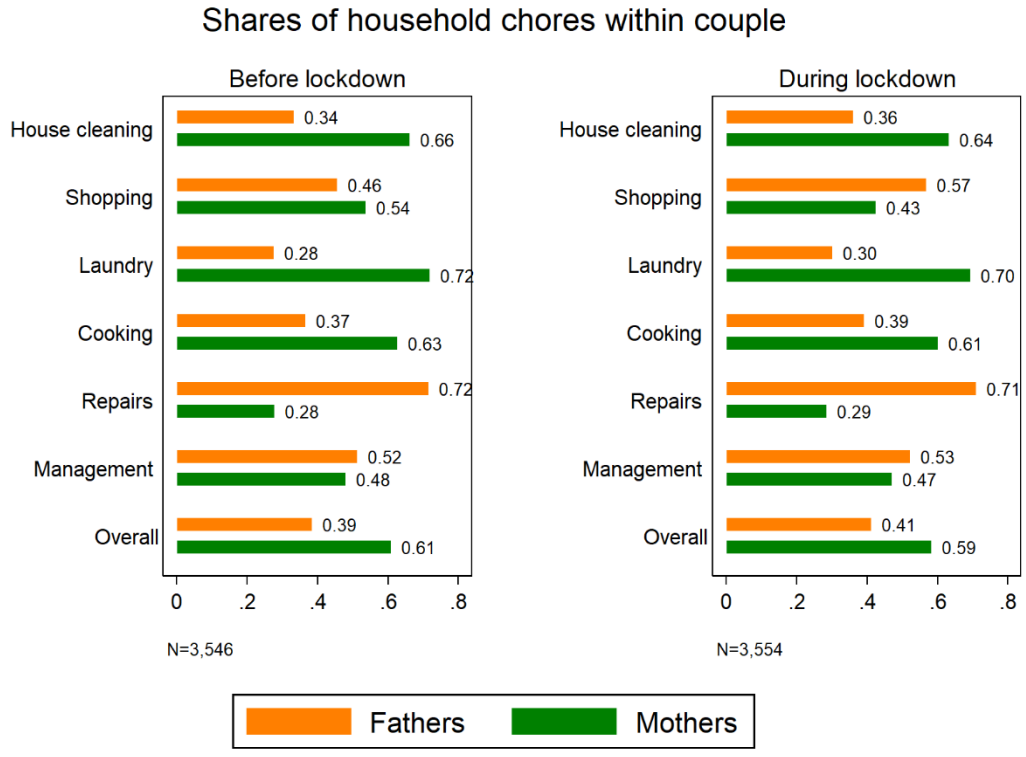
Figure 5. Within-household distribution of childcare and housework tasks

Panel A. Childcare



Mothers and fathers of children under age 16.

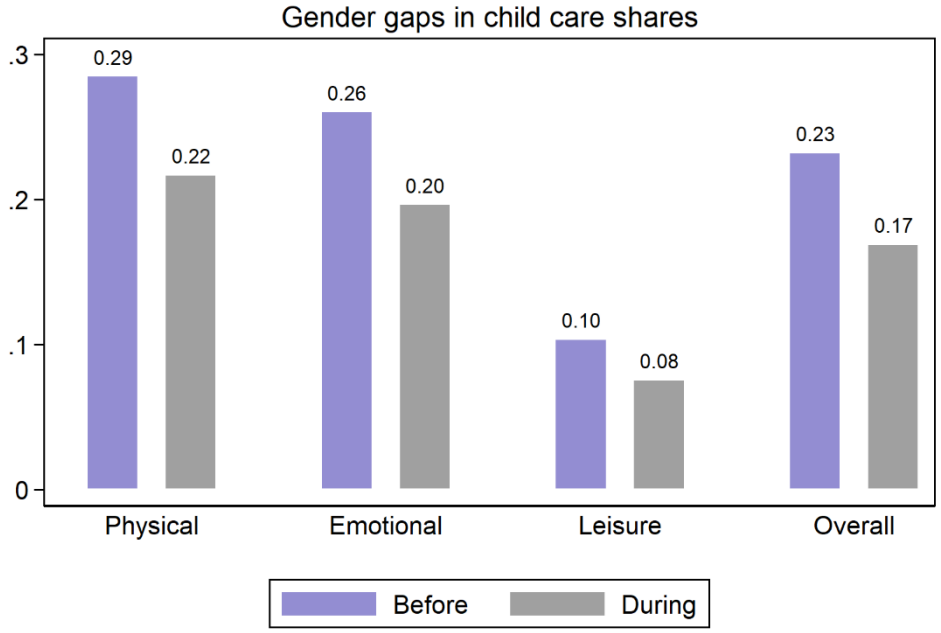
Panel B. Housework



Mothers and fathers of children under age 16.

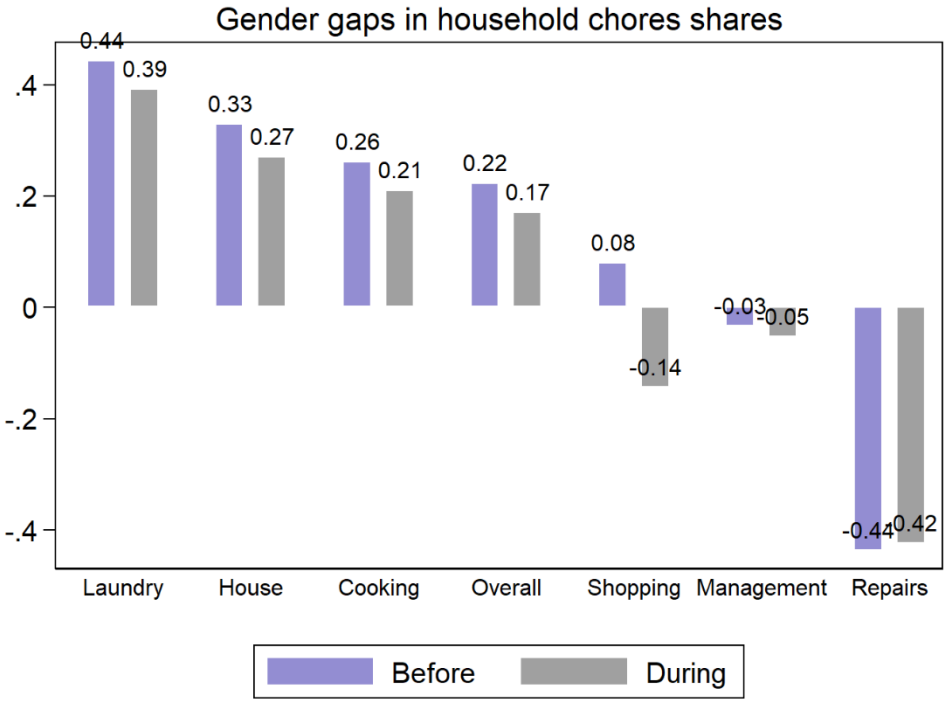
Figure 6. Gender gap in childcare and housework shares

Panel A. Childcare



Sample: Mothers and fathers of children aged under 16.
Gaps are computed as Mother's share-Father's share.
N=3,525.

Panel B. Housework



Sample: Mothers and fathers of children aged under 16.
Gaps are computed as Mother's share-Father's share.
N=3,525.

Table 1. Changes in work and employment during lockdown

Panel A. Working

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female	-0.148***	-0.143***	-0.142***	-0.162***			-0.254***	
	(0.011)	(0.011)	(0.011)	(0.014)			(0.020)	
Lockdown	-0.232***	-0.233***	-0.251***	-0.259***	-0.249***	-0.257***	-0.269***	-0.269***
	(0.013)	(0.013)	(0.014)	(0.015)	(0.010)	(0.011)	(0.022)	(0.018)
Lockdown x Female	-0.025	-0.025	-0.029	-0.014	-0.027**	-0.011	-0.007	-0.005
	(0.018)	(0.018)	(0.018)	(0.021)	(0.012)	(0.015)	(0.034)	(0.025)
University degree		0.127***	0.090***	0.043***			0.026*	
		(0.010)	(0.012)	(0.015)			(0.016)	
Lockdown x University			0.074***	0.107***	0.072***	0.107***	0.137***	0.137***
			(0.019)	(0.027)	(0.013)	(0.019)	(0.035)	(0.029)
Age		0.004***	0.004***	0.004***			-0.001	
		(0.001)	(0.001)	(0.001)			(0.001)	
Lives with partner		0.124***	0.124***	0.124***				
		(0.011)	(0.011)	(0.011)				
Has child under 5		0.037***	0.037***	0.038***			-0.006	
		(0.011)	(0.011)	(0.011)			(0.016)	
Female x University				0.078***			0.110***	
				(0.023)			(0.033)	
Lockdown x Female x Univ.				-0.056		-0.058**	-0.041	-0.043
				(0.038)		(0.026)	(0.057)	(0.041)
Constant	0.869***	0.598***	0.607***	0.616***	0.782***	0.782***	0.962***	0.825***
	(0.007)	(0.027)	(0.027)	(0.027)	(0.004)	(0.004)	(0.053)	(0.007)
Observations	9,811	9,811	9,811	9,811	9,811	9,811	3,561	3,561
R-squared	0.096	0.131	0.132	0.133	0.797	0.797	0.160	0.785
Individual FE	N	N	N	N	Y	Y	N	Y
Sample	S1	S1	S1	S1	S1	S1	S2	S2

Panel B. Employed

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female	-0.135***	-0.129***	-0.128***	-0.148***			-0.236***	
	(0.011)	(0.011)	(0.011)	(0.013)			(0.020)	
Lockdown	-0.068***	-0.068***	-0.071***	-0.077***	-0.068***	-0.075***	-0.072***	-0.072***
	(0.011)	(0.011)	(0.012)	(0.013)	(0.006)	(0.007)	(0.017)	(0.011)
Lockdown x Female	-0.011	-0.011	-0.012	-0.000	-0.010	0.002	-0.000	0.001
	(0.017)	(0.016)	(0.016)	(0.020)	(0.007)	(0.009)	(0.030)	(0.014)
University degree		0.088***	0.083***	0.038**			0.020	
		(0.009)	(0.012)	(0.015)			(0.015)	
Lockdown x University			0.010	0.036	0.009	0.035***	0.033	0.032*
			(0.018)	(0.023)	(0.008)	(0.011)	(0.027)	(0.017)
Age		0.003***	0.003***	0.003***			-0.002**	
		(0.001)	(0.001)	(0.001)			(0.001)	
Lives with partner		0.141***	0.141***	0.141***				
		(0.011)	(0.011)	(0.011)				
Has child under 5		0.030***	0.030***	0.031***			-0.023*	
		(0.010)	(0.010)	(0.010)			(0.014)	
Female x University				0.074***			0.113***	
				(0.022)			(0.032)	
Lockdown x Female x Univ.				-0.042		-0.044***	-0.013	-0.014
				(0.034)		(0.016)	(0.050)	(0.024)
Constant	0.876***	0.623***	0.624***	0.632***	0.796***	0.796***	1.044***	0.841***
	(0.007)	(0.026)	(0.026)	(0.026)	(0.003)	(0.003)	(0.047)	(0.004)
Observations	9,811	9,811	9,811	9,811	9,811	9,811	3,561	3,561
R-squared	0.034	0.072	0.072	0.073	0.909	0.909	0.090	0.903
Individual FE	N	N	N	N	Y	Y	N	Y
Sample	S1	S1	S1	S1	S1	S1	S2	S2

Note: Robust standard errors in parentheses. Sample: All respondents (S1) or respondents in opposite-sex couple with children under age 16 (S2). (*** p<0.01, ** p<0.05, * p<0.1)

Table 2. Work status during lockdown

	(1)	(2)	(3)	(4)	(6)	(5)
Dep. var.	Working	Furlough	Unemployed	Working at place of work	Working remotely	Partially remote
Female	-0.083***	0.060***	0.023**	0.002	0.065***	-0.068***
	(0.015)	(0.014)	(0.009)	(0.019)	(0.020)	(0.015)
University degree	0.129***	-0.105***	-0.024**	-0.345***	0.330***	0.014
	(0.016)	(0.015)	(0.010)	(0.020)	(0.021)	(0.015)
Age	0.006***	-0.003***	-0.003***	0.004**	0.000	-0.004***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)
Lives with partner	0.044**	-0.012	-0.032***	-0.008	0.022	-0.014
	(0.019)	(0.017)	(0.012)	(0.026)	(0.027)	(0.020)
Has children	-0.010	0.018	-0.008	-0.042	-0.058**	0.100***
	(0.020)	(0.018)	(0.012)	(0.026)	(0.027)	(0.020)
Has child under 5	0.052**	-0.038**	-0.014	0.037	0.017	-0.053***
	(0.021)	(0.019)	(0.013)	(0.026)	(0.027)	(0.020)
Constant	0.432***	0.345***	0.222***	0.376***	0.329***	0.295***
	(0.045)	(0.041)	(0.029)	(0.061)	(0.064)	(0.047)
Observations	3,806	3,806	3,806	2,267	2,267	2,267
R-squared	0.035	0.021	0.013	0.120	0.113	0.022

Note: Standard errors in parentheses. Sample: All respondents working before lockdown (columns 1-3) or respondents who remained in-work during lockdown (columns 4-6). (*** p<0.01, ** p<0.05, * p<0.1)

Table 3. Changes in childcare during lockdown

Dep. var.	(1) Physical care	(2) Emotional care	(3) Leisure	(4) Overall	(5) Hours
Female	0.253***	0.226***	0.074***	0.201***	14.928***
	(0.009)	(0.010)	(0.010)	(0.009)	(1.433)
Lockdown	0.042***	0.028***	0.002	0.023***	3.810***
	(0.010)	(0.010)	(0.010)	(0.009)	(1.477)
Lockdown x Female	-0.072***	-0.066***	-0.027*	-0.063***	2.935
	(0.013)	(0.014)	(0.014)	(0.012)	(1.993)
University degree	-0.009	-0.011	-0.017**	-0.008	-0.110
	(0.007)	(0.008)	(0.008)	(0.007)	(1.095)
Age	-0.000	-0.001**	0.001	-0.000	0.037
	(0.001)	(0.001)	(0.001)	(0.001)	(0.086)
Has child under 5	-0.006	-0.005	0.001	-0.001	11.297***
	(0.007)	(0.008)	(0.008)	(0.007)	(1.123)
Works	-0.065***	-0.056***	-0.058***	-0.057***	-9.548***
	(0.008)	(0.008)	(0.008)	(0.007)	(1.212)
Constant	0.524***	0.588***	0.563***	0.544***	19.426***
	(0.027)	(0.027)	(0.028)	(0.024)	(3.941)
Observations	3,500	3,521	3,507	3,528	2,499
R-squared	0.283	0.226	0.048	0.230	0.195

Note: Standard errors in parentheses. Sample: Male and female members of different-sex couples with children under 16. (*** p<0.01, ** p<0.05, * p<0.1)

Table 4. Changes in household tasks during lockdown

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var.	House cleaning	Shopping	Laundry	Cooking	Repairs	Management	Overall	Hours
Woman	0.291***	0.053***	0.409***	0.220***	-0.458***	-0.056***	0.189***	3.442***
	(0.010)	(0.014)	(0.012)	(0.014)	(0.012)	(0.013)	(0.009)	(0.490)
Lockdown	0.019*	0.064***	0.020	0.004	-0.012	0.012	0.010	2.016***
	(0.011)	(0.015)	(0.012)	(0.014)	(0.013)	(0.014)	(0.009)	(0.510)
Lockdown x Female	-0.060***	-0.216***	-0.052***	-0.050***	0.013	-0.018	-0.052***	-0.391
	(0.014)	(0.020)	(0.016)	(0.019)	(0.017)	(0.019)	(0.013)	(0.682)
University degree	-0.008	-0.011	0.005	-0.027**	-0.033***	-0.013	-0.005	-0.135
	(0.008)	(0.011)	(0.009)	(0.011)	(0.010)	(0.010)	(0.007)	(0.377)
Age	-0.001	-0.000	-0.001	0.000	-0.001	0.002**	-0.000	0.139***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.030)
Has child under 5	0.003	-0.007	0.001	0.003	0.005	0.015	0.011	0.450
	(0.008)	(0.011)	(0.009)	(0.011)	(0.010)	(0.011)	(0.007)	(0.385)
Works	-0.077***	-0.011	-0.060***	-0.089***	-0.023**	0.020*	-0.055***	-4.592***
	(0.009)	(0.012)	(0.010)	(0.011)	(0.010)	(0.011)	(0.007)	(0.409)
Constant	0.538***	0.615***	0.461***	0.547***	0.832***	0.572***	0.555***	6.460***
	(0.029)	(0.040)	(0.032)	(0.038)	(0.035)	(0.038)	(0.025)	(1.360)
Observations	3,551	3,547	3,548	3,546	3,516	3,540	3,530	2,912
R-squared	0.311	0.048	0.416	0.144	0.431	0.020	0.197	0.112

Note: Standard errors in parentheses. Sample: Male and female members of different-sex couples with children under 16. (*** p<0.01, ** p<0.05, * p<0.1)

Table A1. Descriptive statistics (sample of respondents)

All households	
N. of households	5,001
Female respondent	58%
Living with partner	72%
Female partner	45%
University respondent	28%
University partner	34%
Childless household	43%

Households with children	
N. of households	3894
N. of children:	
1	28%
2	24%
3 o more	4%
Child under 6	23%
Child over 6	34%
Avg. age youngest	8.3
Avg. age oldest child	10.8

Table A2. Descriptive statistics, employment regressions

Panel A. All respondents (before and during lockdown)

	N	Mean	St.Dev
Working	9,811	0.66	0.47
Working or furloughed	9,811	0.76	0.43
Lockdown	9,811	0.5	0.5
Female	9,811	0.58	0.49
University degree	9,811	0.28	0.45
Age	9,811	37.3	7.36
Lives with partner	9,811	0.72	0.45
Has child under 5	9,811	0.23	0.42

Panel B. Respondents employed before lockdown

	N	Mean	St.Dev
Working at the workplace	2,267	0.38	0.48
Working remotely	2,267	0.48	0.5
Partially remote	2,267	0.14	0.35
Furlough	3,806	0.22	0.41
Female	3,806	0.54	0.5
University degree	3,806	0.3	0.46
Age	3,806	37.58	7.23
Lives with partner	3,806	0.76	0.43
Has child under 5	3,806	0.24	0.43

Table A3. Descriptive statistics, childcare and household regressions

	N	Mean	St.Dev
Lockdown	3,590	0.5	0.5
Female	3,591	0.54	0.5
University degree	3,592	0.28	0.45
Age	3,593	38.69	6.42
Has child under 5	3,594	0.48	0.5
Works	3,561	0.71	0.46
Household chores			
House cleaning	3,579	0.61	0.26
Shopping	3,576	0.59	0.3
Laundry	3,576	0.61	0.31
Cooking	3,574	0.59	0.3
Repairs	3,544	0.54	0.34
Management	3,568	0.63	0.28
Overall	3,556	0.6	0.21
Hours	2,922	11.45	9.72
Child care			
Physical care	3,525	0.6	0.23
Emotional care	3,548	0.62	0.23
Leisure	3,534	0.58	0.21
Overall	3,554	0.59	0.2
Hours	2,507	30.02	27.71