Time to Care?

The Causal Effect of Work Time Reduction on Men's Participation in
Unpaid Care Work

submitted by

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List of Abbreviations

DiD Difference-in-differences

ATT Average treatment effect on the treated

SUTVA Stable unit treatment variable assignment

1 Introduction

Unpaid domestic care work is the backbone of capitalism. It reproduces workers by feeding them, providing them with clean homes and clothing and raising their children, who will one day become part of the workforce themselves. Oddly enough, reproductive work is rarely recognized as productive work by policymakers. Aiming to maximize labor force participation - particularly among women - they frequently overlook the empirical fact that unpaid care work is still predominantly performed by women [Schäper et al., 2023, Lippe, 2020]. This raises concerns about gender inequality. Demanding full-time work for everyone without adapting policy frameworks to the realities of unpaid care imposes working hours on women that go far beyond 40 hours.

One potential policy approach to address this issue would be to generally shorten the standard work week, which could create space for a more gender equitable division of unpaid care work. However, it is not clear whether men would actually use the additional time to increase their participation in domestic care activities. Recent literature suggests that men take on more care responsibilities when faced with reduced working hours [Pailhé et al., 2019, Naujoks et al., 2022]. Yet, the effects of work time reduction on couple's division of childcare and housework remain under-explored. The present study aims to contribute to closing this gap. It is - to my knowledge - the first to use a causal inference research design to examine the effects of short-time work on the gendered division of unpaid care.

I do this by looking at the short-time work policy[1] in Germany during the Covid-19 pandemic. Using nationally representative panel data from the German Family Panel (*pairfam*), I perform a difference-in-differences analysis to estimate the causal effects of participating in the *Kurzarbeit* program on men's participation in childcare and housework. A causal inference research design can be implemented because the short-time work scheme was suddenly applied across many sectors - due to the exogenous shock that was the Covid-19 pandemic. These unique circumstances approximate the conditions of a natural experiment. The research question to be answered in the course of this thesis is as follows: *"Does participation in the*

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[1]Throughout this thesis, the terms *Kurzarbeit*, short-time work and furlough are used synonymously.

short-time work program lead to an increase in men's contributions to housework and childcare?".

The results indicate that men who participated in the short-time work program contributed more to housework and childcare compared to men who weren't furloughed. The average treatment effects on the treated (ATT) are positive and statistically significant for both housework and childcare. This evidence supports the claim that reduced working hours could make the division of housework and childcare more gender equitable. While the results for childcare are consistent and statistically robust across all model specifications, the evidence for housework is more mixed and primarily significant in the main model. Differing effects for childcare and housework indicate that there are some structural differences between the two activities, as theorized by *gender construction* approaches. No comparable effects are found for women, highlighting the gender-specific dynamics at play.

This paper is structured as follows: In chapter 2, I explain the context and design of the short-time work program during the Covid-19 pandemic in Germany, followed by an introduction of relevant theoretical concepts and an overview of recent literature. Then, in chapter 3, I explain the difference-in-differences method in the context of my thesis. Subsequently, I present the data in chapter 4, also introducing the treatment as well as the outcome variables and controls. The results are presented in section 5 and discussed in chapter 6.

2 Theory and Literature

This chapter lays the theoretical and empirical foundation for the analysis. It begins with an overview of the short-time work program in the German context. I then present relevant theoretical concepts on the gendered division of unpaid care work, including *time availability theory* , *bargaining power approaches* and *gender construction theory*. Building on these theories, the subsequent literature review synthesizes recent empirical findings on changes in unpaid domestic care work during the Covid-19 pandemic and the effects of reduced working hours. Based on this theoretical and empirical groundwork I derive hypotheses concerning the relationship between participation in the short-time work program and men's involvement in housework and childcare.

2.1 The Short-Time Work Program in Germany

A central element of the German government's labor market response to the Covid-19 pandemic was the expansion of the existing short-time work scheme, known as *Kurzarbeit*. This program allows employers to temporarily reduce employees' working hours while the state compensates a portion of the resulting income loss. By subsidizing wages, *Kurzarbeit* aims to prevent layoffs during periods of economic downturn and to facilitate a rapid reactivation of the workforce once conditions improve.

Financial support under the program is tiered by duration and family status. In the initial three months, employees receive 60% of their lost net income, or 67% if they have children. This rate increases to 70% (or 77% with children) from the fourth month, and to 80% (or 87% with children) from the seventh month onward [Naujoks et al., 2022]. These replacement rates, while lower than full wages, allowed most households to maintain a reasonable income level.

The Covid-19 crisis led to a dramatic expansion of *Kurzarbeit*. In April 2020, approximately six million employees—nearly 18% of all workers in Germany—were on short-time work, spanning almost all economic sectors [Bundesagentur für Arbeit, 2022]. While certain female-dominated industries, such as gastronomy, were particularly affected by the Covid-19 crisis [Hammerschmid et al., 2020], research suggests that sectors with a higher overall share of women were not disproportionately impacted by furlough measures [Schäfer and Schmidt, 2020].

For this thesis, the relevance of *Kurzarbeit* lies in its role as an exogenous and widespread form of work time reduction. It offers a rare natural experiment to examine how sudden decreases in paid working hours affect the division of unpaid labor within households. The program alters both the availability of time and the relative bargaining positions of partners—two key mechanisms discussed in theories on household labor division. While *Kurzarbeit* was already used during the 2008/2009 financial crisis, the Covid-19 context was unprecedented in its scale and duration. Several changes were made to the program for the pandemic, loosening the eligibility criteria and extending duration (see Konle-Seidl [2020] for details).

2.2 Theoretical Approaches

Three main theoretical explanations help account for the gendered allocation of unpaid care work: bargaining theory, time availability, and gender construction approaches such as the concept of "doing gender". The *bargaining power* approach argues that couples negotiate the division of unpaid labor, with the outcome reflecting power relations defined by their relative earnings [Blood and Wolfe, 1965]. A partner with higher income has more leverage and can opt out of care responsibilities. Reduced earnings - such as through short-time work - could thus decrease bargaining power and lead to greater participation in housework or childcare. According to this approach, the division of household labor is purely based on economic reasoning. Voßemer and Heyne [2019], analyzing post-unemployment dynamics of housework division in Germany, find evidence that couples tend to adjust their division of labor in line with relative resources rather than gender ideologies. Furthermore, Carmichael et al. [2010] find a negative relationship between willingness to provide informal care and engagement in paid employment (or relatively low wages). This supports the notion that care decisions are shaped by rational assessments of opportunity costs.

Instead of focusing on relative income and bargaining power, the *time availability* theory states that the contribution of women and men to childcare and housework depends on how much time they spend in paid work [Barnett, 1994, Presser, 1994, Coverman, 1985]. When men's paid working hours are reduced, they are expected to take on more care work. Bünning [2020] finds evidence for this mechanism: fathers working part-time significantly increase their engagement in care work and this effect often disappears when returning to full-time work. However, a limitation to this approach is the empirical fact that in households where both partners work, women still perform more unpaid domestic labor than men [Del Boca et al., 2020, Schäper et al., 2023, Lippe, 2020], making time availability unlikely to be the only determinant of care division.

While the approaches discussed above are "gender-neutral", theories of *gender construction* point to the relevance of norms and gender identities, most pronounced in the concept of *doing gender* [West and Zimmermann, 1987]. Behind this is the idea that gender identities are reproduced through activities that individuals

engage in, such as daily routine tasks including housework and childcare. The approach emphasizes that the division of labor is not merely a product of rational choice or constraints, but also a way to perform and reinforce gender identities. Since short-time work is associated with a reduction in income and less time spent in paid work, both categories stereotypically associated with masculinity, men may feel threatened in their gender identity and not take on additional care work in spite of higher time availability and lower bargaining power. Additionally there might be a gendered component in what household activities men spend the additional time on [Pailhé et al., 2019]. For example, childcare might be preferred by men over housework like some studies suggest [Ishii-Kuntz and Coltrane, 1992, Andreassen et al., 2022, Poortman and Van Der Lippe, 2009], as it is harder to avoid and also less threatening to masculinity than housework.

2.3   Literature Review

Several studies have examined how the Covid-19 pandemic affected the gendered division of unpaid care work, offering insights into whether a retraditionalization has taken place [Allmendinger, 2020]. Overall, the results are ambiguous with no clear evidence of a patriarchal backlash. Jessen et al. [2022] find that gender inequality in childcare responsibility rose in Germany at the beginning of the pandemic, but it returned to the pre-pandemic level shortly after. For the US, Carlson et al. [2022] report a shift towards a more egalitarian division of domestic labor, although the primary responsibility for domestic labor retained female. Hank and Steinbach [2021] observe heterogeneous responses to the pandemic for Germany: the share of couples where female care responsibility increased was almost equal to the share of households where it decreased. They also show that men who increase their contribution to housework and childcare rarely surpass the 50/50 threshold. Kreyenfeld and Zinn [2021] provide evidence that fathers expanded their engagement in childcare during the first lockdown - an effect strongly moderated by education.

The question whether work time reductions for men translate into behavioral change with regard to participation in domestic care responsibilities has also been investigated. Pailhé et al. [2019] use time use data from France to analyze the

gender-specific effects of the introduction of the 35-hour work-week on the division of housework and childcare. Although they find evidence that additional time leads to higher shares of housework and childcare, they also find that the use of this additional time is strongly gendered: while men focus on repairs and gardening, women spend more time on childcare. These findings are compatible with both the time availability hypothesis and the concept of doing gender, as repairs and gardening are perceived as stereotypically more masculine. Leopold and Skopek [2015] find that retirement leads to a significant reduction in the gender gap for household labor, with male breadwinners doubling their household labor hours. Similarly, Herzberg-Druker et al. [2022] show an increase in men's time spent on childcare when their paid work hours decreased during the Covid-19 pandemic. Finally Naujoks et al. [2022] also analyze the relationship of the participation in the short-time work program and the gendered division of child care in Germany.[2] Furloughed fathers were more likely to increase their childcare contributions: 32 percent of fathers on furlough compared to 22 percent of fathers in regular employment moved towards a more equal sharing of childcare.

2.4 Hypotheses

Based on the theoretical considerations and existing empirical findings, I expect that the reduction of working hours through the short-time work program created new opportunities for men to engage in unpaid domestic labor. Both the bargaining power and time availability frameworks suggest that furloughed men—facing reduced paid working hours and lower earnings—would have been more likely to take on greater responsibilities in the household. Given that previous studies have found modest increases in male care involvement during the pandemic, particularly under conditions of reduced working time [Herzberg-Druker et al., 2022, Naujoks et al., 2022], I hypothesize that men who were furloughed during the Covid-19 pandemic assumed a greater share of unpaid labor compared to men who were not furloughed. This leads to the following three hypotheses to be tested in the course of this thesis:

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[2]This is - to my knowledge - the only other academic paper that examines the effects of the short-time work policy during Covid-19 on unpaid care work in Germany.

Hypothesis 1: *Men who were furloughed took on more housework responsibilities compared to men who were not furloughed.*

Hypothesis 2: *Men who were furloughed took on more childcare responsibilities compared to men who were not furloughed.*

At the same time, the literature shows that men's uptake of care work is often incomplete and constrained by persistent gender norms, as highlighted by the concept of *doing gender*. Based on these considerations and on the findings of other studies (such as Pailhé et al. [2019]) I further hypothesize the following:

Hypothesis 3: *The use of additional time is gendered and depends on the respective household activity. Therefore, the effects for housework and childcare are expected to differ.*

This thesis addresses an important research gap by testing these hypotheses. As described above, the effects of reduced working hours on the division of housework and childcare have been investigated in a few studies [Pailhé et al., 2019, Leopold and Skopek, 2015, Herzberg-Druker et al., 2022, Bünning, 2020, Naujoks et al., 2022]. However, some of the mechanisms of reduced working hours that have been explored raise doubts about selection bias. For example, it is likely that fathers who work part-time, have more egalitarian attitudes than the average male population. Unemployment might also pose selection problems. Furthermore, the methods used do not allow conclusions to be drawn about causality. Short-time work provided a widespread natural experiment of work-time reduction that was applied to entire sectors, which creates a unique opportunity for causal inference. My study addresses this research gap by implementing a causal inference research design to examine the effects of *Kurzarbeit* on the gendered division of unpaid domestic care. It thereby makes an important contribution to understanding the possibilities for equal care division resulting from reduced working hours.

3 Methods

In order to test the hypotheses, I conduct a difference-in-differences (DiD) estimation. DiD is a causal inference quasi-experimental research design which aims to examine the effect of a policy (a treatment) introduced in one group but not in another comparable group, without the need for randomization. Hence, it is the

attempt to model a counterfactual [DiTraglia, 2022, Roth et al., 2023, Cunningham, 2021]. The treatment in this study is *Kurzarbeit* for males, differentiating between households with treated males (treatment group) and untreated males (control group). The outcome variable of interest is men's participation in childcare and housework.

Equation 1 shows the mathematical intuition of the DiD-approach in a simple two-period model, b(efore) and a(fter) treatment. The DiD-estimator equals the difference of sample means before and after the treatment for both groups, subtracted from each other, i.e. the difference in differences. In other words, a within-person comparison is combined with a between-person comparison. It reflects how the change in the outcome variable differs between the two groups over time, which is then interpreted as the causal effect of the treatment (the average treatment effect on the treated, ATT).

$$\widehat{DiD} = \left(\bar{Y}_{a,\text{treated}} - \bar{Y}_{b,\text{treated}}\right) - \left(\bar{Y}_{a,\text{untreated}} - \bar{Y}_{b,\text{untreated}}\right) \tag{1}$$

This can also be written as a two-way fixed effects linear regression, as seen in equation 2 where the estimator $\widehat{DiD}$ is represented by θ, the coefficient of the interaction term:

$$Y_{it} = \alpha + \beta D_i + \gamma \text{after}_t + \theta(D_i \times \text{after}_t) + \epsilon_{it} \tag{2}$$

D_i is an indicator for being treated, regardless of the period, and *after* is an indicator for being in the post-treatment period, regardless of treatment-status. The interaction term finally represents the DiD-estimator, reflecting how much larger the gap between the treatment and control group is compared to the pre-treatment period. The model includes time and group fixed effects, which makes controls unnecessary that for example vary over group, but not over time.[3] I use robust standard errors in all estimations.

The difference-in-differences method relies on a set of assumptions that are relevant for identifying a causal effect. The crucial one is the *parallel trends*

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[3]Other authors that address the intra-household care division during Covid-19 such as Naujoks et al. [2022] and Hank and Steinbach [2021] control for time-invariant personal characteristics, like migration-background and higher education. Since the simple DiD model uses person and time fixed effects, these controls are not included in my analysis.

assumption, which requires that the trends of the outcome variables for the two groups should be parallel up to the time of treatment. It means that the group-specific trends of the outcome variable would have been identical without the treatment, requiring the selection of an appropriate control group [DiTraglia, 2022]. Intuitively, this seems plausible for the given data since the treated individuals are drawn from a relatively homogeneous population: German males living with their female partner. Furthermore, because the pandemic presented a major shock that caused many businesses in a wide range of sectors to introduce short-time work, Covid-19 and the short-time work program present a quasi-experimental setting that implies random assignment of the treatment.

Figure 1: Division of Housework and Childcare Trends
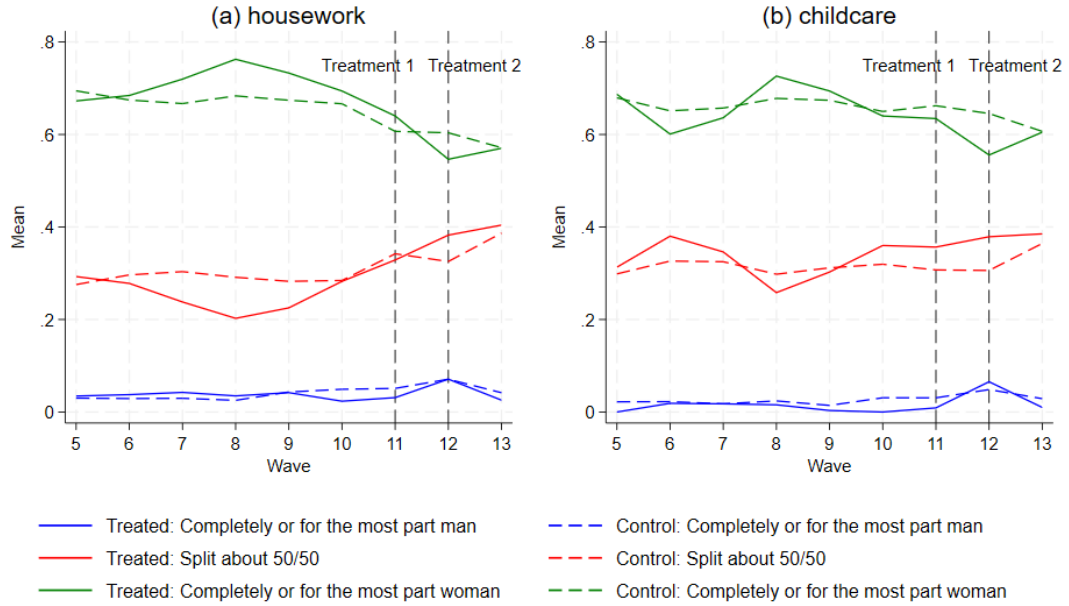
Figures 1 and 2 are suitable for graphically examining the available data with regard to the parallel trends assumption. Figure 1 shows common trends of the two groups in the pre-treatment period wave 11, especially visible for the category of housework. As expected, the trends start diverging after the treatment, suggesting a treatment effect. In figure 2, particularly the trend of the share of households

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with a stable share shows parallel pre-trends followed by a sharp decline after wave 11. Based on the graphical and logical evaluation, we will therefore proceed on the parallel trends assumption.

Figure 2: Change in Men's Housework and Childcare Contribution
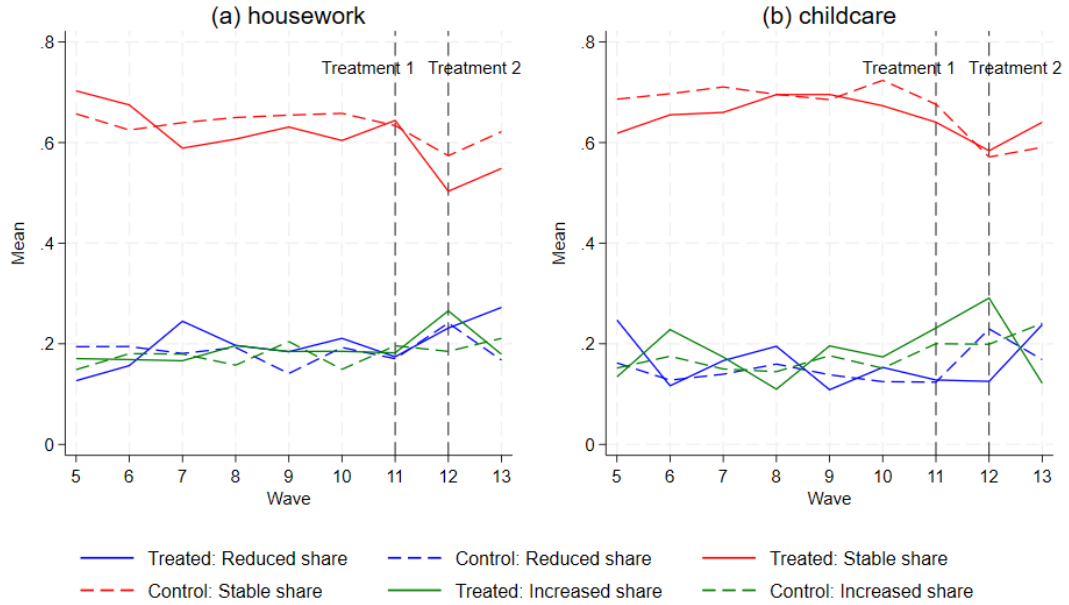
Another important assumption is Stable Unit Treatment Variable Assignment (SUTVA), which means that the individuals are only affected by their own treatment. That is, there are no spillover effects. It is assumed that households do not adapt their care arrangement to the changes in employment of other households. We further have to assume no anticipation of treatment [DiTraglia, 2022], which is reasonable, as the pandemic and its employment effects could not be anticipated.

The simple two-way fixed effects DiD-model also assumes that the treatment occurs at the same time for all individuals and that if someone is treated they stay treated. If the treatment occurs at different times, some methodological issues arise and hence causal effects are more difficult to argue [Callaway and Sant'Anna, 2020, Huntington-Klein, 2021].

Because the data contains two points in time at which individuals are treated (survey waves 12 and 13), this assumption can not be disregarded immediately. There are 43 cases of households that are treated in wave 12 only, but not in wave 13 and 56 cases vice versa.[4] 72 cases have short-time work in both treatment waves. Recent literature offers solutions to the conceptual problems of staggered treatment timing, such as Callaway and Sant'Anna [2020], Sun and Abraham [2020] and Goodman-Bacon [2021]. However these complex methods are beyond the scope of this thesis.

After careful consideration, four approaches are pursued - each based on the canonical two-way fixed effects regression as shown in equation 2. Model (1) uses a sub-sample restricted to the 72 consistently treated individuals (i.e. that received treatment in survey wave 12 *and* 13). Although this means I have to drop a big part of treated individuals[5], it proves to be my preferred model for various reasons: Due to the statistical issues that result from staggered treatment timing, this estimation is expected to have the most robust results. Furthermore, compared to the sample that uses just survey wave 12, this estimation is better fit to capture long term effects. Model (2) uses the full sample, including all treated cases and providing me with the biggest number of treated individuals over the longest time span. Then, in model (3) I analyze survey wave 12 only, also eliminating the issue of inconsistency, but giving up capturing longer-term effects. Finally, for comparison, I examine an all-female sub-sample in model (4).

4 Data

The empirical analysis is based on data from the German Family Panel (*pairfam*, see Huinink et al. [2011]), which consists of a nationally representative sample of three birth cohorts (1971-73, 1981-83 and 1991-93). Launched in 2008 by Kantar Public, pairfam annually conducted interviews with about 12,000 anchor respondents, as well as their partners, children and parents. In 2020 a Covid-19 supplement

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[4]This does not include missing values for the treatment variable. When assuming that a missing value equals *not treated* the distribution is as follows: 115 treated individuals in wave 12 only and 58 treated individuals in wave 13 only.

[5]Without restrictions the sample comprises 187 treated individuals in wave 12 and 130 in wave 13.

was added, as the regular surveys of wave 12 had to be discontinued due to the pandemic (see Walper et al. [2021]). The computer-based survey was carried out between May and July 2020 and covers questions on changes in employment (such as participation in the short-time work program or home office), general well-being and Covid-19 related restrictions. Every respondent included in the pre-pandemic survey wave was asked to be re-interviewed for the pairfam Covid-19 supplement. Of the initial 9,640 respondents, 3,160 participated. As the interrupted wave 12 is not included in this analysis, the Covid-19 supplement will be referred to as wave 12. My sample is restricted to the respondents who were in a heterosexual relationship and living with a partner in both wave 11 and the Covid-19 supplement. I use survey waves from 2015/16 (i.e. pairfam wave 8) onwards. Since the treatment ocurred in 2020, waves 8-11 (2015-2019) are considered pre-treatment waves and waves 12 and 13 (May-July 2020 and November - April 2020/21) are classified as post-treatment.[6] After the deletion of missings, the sample comprises 1372 individuals in wave 11, 1507 in wave 12 and 1008 in wave 13.

The outcome variable is *Male care participation*, covered by two dimensions of unpaid care: housework (defined as washing, cooking and cleaning) and childcare[7]. Two variables are specified in order to capture male participation in unpaid care work. The first is defined as *Division of childcare/ housework*, an ordinal variable that includes 5 possible values: (1) if the work is done (almost) completely by the woman, (2) if it is done for the most part by the woman, (3) if the work is split about 50/50, (4) if it is done mostly by the man and (5) if it is performed (almost) completely by the man. The second is a change variable that indicates whether the male partner (1) reduced his share of care work compared to the previous survey wave, (2) whether his participation stayed the same or (3) whether it was increased. Both outcome variables are tested for housework and childcare, respectively.

The treatment variable is *Male in Kurzarbeit* (or furlough/short-time work). Since the data set contains information on both partners, the male's employment status can be derived for every household. I thus take into account whether the

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[6]Pairfam also includes a survey wave 14 for 2021/22, but it could not be used for the purpose of this thesis, as it does not include information about short-time work.

[7]The data set originally includes 5 categories of household labor: childcare, housework, repare, finance and shopping. However, the analysis is limited to the first two categories, as they are the most labor-intensive and stereotypically (and empirically) female areas of household labor

male partner took part in short-time work and not whether the respondent did so. This indirect information allows me to more than double the sample size of treated individuals, as opposed to using only observations with male respondents, gaining statistical power[8]. In my data set, short-time work can apply to both full-time and part-time employment. Because the survey structures differ between after-treatment survey waves 12 and 13, I have more observations for the former wave.

I control for the *employment status* of both partners, as well as their respective *home office arrangements*.[9] Further controls include the *age of the youngest cohabiting child* and the *month of the interview*. Since I use group-fixed effects in the empirical analysis, I do not control for time-invariant socio-demographic factors.

Table 1 shows summary statistics for respondents of wave 11 (conducted in 2018/19), the Covid-19 supplement (May-July 2020) and wave 13 (November 2020 - April 2021), divided into treatment and control group. The control group comprises between 837 observations and 1283 observations, whereas the treatment group is much smaller with between 171 and 244 treated individuals. The panel is unbalanced. The treatment group consists of all respondents that reported the male partner to be furloughed in at least one of the two possible treatment waves. Accordingly, the control group consists of all households where the man never was in short-time work.

There do not seem to be major systematic differences in the sample composition between the two groups. Males predominantly work full-time (75-93.5% across waves and groups)[10]. Females show much higher rates of part-time work (30-37.4% across waves and groups) while male part-time work is consistently rare (2.1-5.5% across waves and groups).

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[8]For wave 12 the male sub-sample has 610 respondents, whereas the bigger sample including indirect information about the male partners has an n of 1528.

[9]Due to differing survey structures, I can only control for home office in wave 12.

[10]In the treatment group, full-time male employment shows a dramatic V-shaped pattern - dropping from 88.6% in Wave 11 to 42.5% in Wave 12, then rebounding strongly to 93.5% in Wave 13. I would attribute this to the structure of the questionnaire: Although respondents were able to report being furloughed on top of reporting full-time employment, it is likely that furloughed individuals did not indicate full-time employment.

Table 1: Summary statistics for Wave 11 - 13: Treated vs. Control

	Wave 11		Wave 12		Wave 13	
	Treated mean/sd	Control mean/sd	Treated mean/sd	Control mean/sd	Treated mean/sd	Control mean/sd
Female	0.575	0.599	0.570	0.604	0.439	0.494
	(0.496)	(0.490)	(0.496)	(0.489)	(0.498)	(0.500)
Furlough (Kurzarbeit)	0.000	0.000	0.416	0.039	0.524	0.037
	(0.000)	(0.000)	(0.494)	(0.194)	(0.501)	(0.189)
Male in furlough	0.000	0.000	0.771	0.000	0.745	0.000
	(0.000)	(0.000)	(0.421)	(0.000)	(0.437)	(0.000)
Living with children	0.687	0.654	0.655	0.631	0.701	0.665
	(0.465)	(0.476)	(0.476)	(0.483)	(0.459)	(0.472)
Age of youngest child	7.155	7.419	7.522	7.874	7.646	8.323
	(5.870)	(5.787)	(6.087)	(6.017)	(6.149)	(6.271)
Month of interview	6.712	6.425	5.493	5.519	6.788	7.170
	(4.112)	(4.336)	(0.534)	(0.531)	(4.665)	(4.727)
Full time (f)	0.265	0.318	0.291	0.339	0.301	0.316
	(0.443)	(0.466)	(0.455)	(0.474)	(0.460)	(0.465)
Full time (m)	0.886	0.750	0.425	0.796	0.935	0.789
	(0.319)	(0.433)	(0.495)	(0.403)	(0.247)	(0.408)
Part-time (f)	0.368	0.360	0.315	0.338	0.374	0.399
	(0.483)	(0.480)	(0.465)	(0.473)	(0.485)	(0.490)
Part-time (m)	0.035	0.047	0.022	0.043	0.021	0.055
	(0.185)	(0.211)	(0.148)	(0.203)	(0.145)	(0.228)
Home office (full, f)	0.000	0.000	0.188	0.209	.	.
	(0.000)	(0.000)	(0.392)	(0.407)	(.)	(.)
Home office (full, m)	0.000	0.000	0.220	0.233	.	.
	(0.000)	(0.000)	(0.415)	(0.423)	(.)	(.)
Home office (part, f)	0.000	0.000	0.177	0.206	.	.
	(0.000)	(0.000)	(0.382)	(0.405)	(.)	(.)
Home office (part, m)	0.000	0.000	0.224	0.251	.	.
	(0.000)	(0.000)	(0.418)	(0.434)	(.)	(.)
Observations	224	1148	244	1283	171	837

The relatively stable female employment patterns (especially part-time work) might be due to higher levels of females in essential occupations that were hardly affected by layoffs or short-time work [Koebe et al., 2020]. As explained above, information about home office arrangements was only available for wave 12. At that point, between 18% and 25% of individuals had some kind of home-office arrangement. Across all categories, the control group consistently shows slightly higher home office adoption rates (1-3 percentage points higher) than the treatment group. This suggests that households affected by furlough had jobs that were less amenable to remote work. All variables in Table 1 are dummies, except for age of the youngest cohabiting child and month of interview, which are continuous variables.

Figures 1 and 2 (as shown in section 3) present the development of the two outcome variables over time, again for the control group and the treatment group separately: specified first as an absolute ordinal variable and then as a change variable.[11] The numeric means for the four outcome variables are shown in Table 5 and Table 6 in Appendix A.

Figure 1 shows that both childcare and housework are predominantly female. The share of households where the work is completely or for the most part performed by the woman decreases over time. However, it never falls below the mean value of 0.5, implying that at all points in time, more than 50% of surveyed households report a female responsibility for housework and childcare. While the proportion of households in which care work is divided equally increases in both categories after wave 8, the proportion of households in which the man is responsible for care has hardly changes and falls back to its original value of wave 5 in wave 13. Overall, there appears to be a stereotypical division of labor within households, which does not differ significantly between the two categories of domestic care work.

Figure 2 illustrates the change in men's housework and childcare contribution over time, again for the treatment group and control group separately. In particular, the share of households with stable male care participation varies considerably after wave 11. This variation differs between the treatment and control group, indicating a treatment effect.

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[11]In the absolute specification, the two possible expressions "(almost) completely" and "for the most part man/woman" are each combined into one in order to better visualize the trends.

Figure 3: Distribution of Short-Time Work by Wave
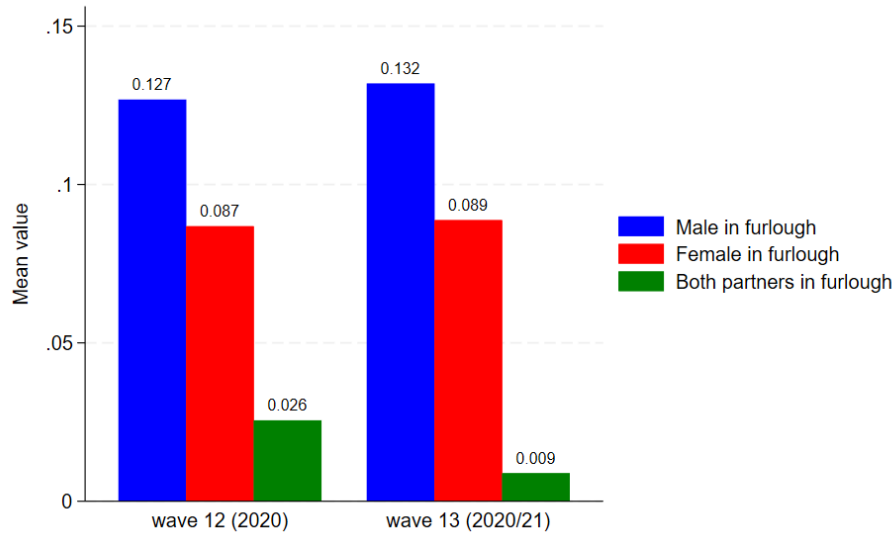
Figure 3 shows the distribution of short-time work at both treatment moments, survey wave 12 and survey wave 13. It shows that short-time work is rather male-dominated: in around 13% of the households surveyed, the man was furloughed, while only around 9% of households reported that the woman was on short-time work. In less than 3% of the cases, both partners were furloughed. There does not seem to be a major difference in the allocation of short-time work between the survey waves. The treatment group is represented by the red bar and makes up about 13% of the sample.

5   Results

This sections presents the results of the main model, using the sample restricted to consistently treated individuals (i.e. the 72 households treated in both survey waves 12 *and* 13). The results are shown in Table 2. First, in section 5.1, I look at the dimension of housework represented in columns (1) and (2) of the output table. In a second step, section 5.2 presents the results for childcare, as shown in columns (3) and (4). Finally, in the robustness section 5.3, the results of the other samples are presented: the full sample (inluding inconsistently treated cases), the sample restricted to wave 12 only and the all-female sub-sample.

5.1   Housework

For the absolute *division of housework* variable (represented in column (1) of Table 2) that ranges from *1 (almost) completely woman* to *5 (almost) completely man*, I find an ATT of 0.364, statistically significant at the 5%-level. This indicates that when men were furloughed, they took on more housework responsibilities compared to men who weren't furloughed. More precisely, when treated, the average household moves 0.364 units on the ordinal 1 - 5 scale towards more male housework responsibility. If the average household is - for instance - at 2.0 on the scale, the households with furloughed males move to approximately 2.364, indicating a shift from "mostly done by women" toward equally shared housework responsibilities.

Short-time work also has an effect on men's participation in housework when looking at the *change* compared to the previous period (represented in column (2) of Table 2 and ranging from *1 reduced male share of housework* over *2 stable male share of housework* to *3 increased male share of housework*). The ATT is 0.444 and statistically significant at the 1%-level. Being furloughed is associated with a 0.444 unit increase in the dependent variable, relative to the control group, implying that men who were furloughed were more likely to increase their share of housework.[12]

The two findings are consistent: treatment has a positive, significant effect on

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[12]The coefficient of the change variable is higher than the coefficient of the absolute specification. However, as the ordinal scale is smaller (1-3 instead of 1-5) one should not jump to the conclusion that the effect is bigger.

Table 2: Difference-in-Differences Estimation: Restricted sample, all specifications

	(1) Divison of housework	(2) Change (hw)	(3) Divison of childcare	(4) Change (cc)
ATT				
Male in furlough	0.364**	0.444**	0.399***	0.370*
	(0.147)	(0.181)	(0.147)	(0.189)
Controls				
Month of interview	-0.00819*	-0.00358	-0.00225	0.00168
	(0.00497)	(0.00621)	(0.00527)	(0.00672)
Age of youngest child	-0.0137	-0.0333**	0.0181	0.0508**
	(0.0134)	(0.0135)	(0.0188)	(0.0237)
Full time (m)	-0.281***	-0.00570	-0.127	0.0733
	(0.0983)	(0.114)	(0.114)	(0.117)
Part-time (m)	0.182	0.0964	0.376*	-0.0606
	(0.268)	(0.231)	(0.218)	(0.179)
Full time (f)	0.107	0.226***	0.356***	0.286***
	(0.0883)	(0.0816)	(0.0849)	(0.0911)
Part-time (f)	0.102*	0.205***	0.154***	0.0861
	(0.0592)	(0.0660)	(0.0537)	(0.0666)
Home office (full, m)	0.0711	-0.0311	0.197*	0.172
	(0.0920)	(0.118)	(0.112)	(0.121)
Home office (part, m)	-0.0885	-0.116	0.103	0.0552
	(0.0986)	(0.0924)	(0.103)	(0.110)
Home office (full, f)	-0.0315	-0.215*	-0.00561	-0.0195
	(0.117)	(0.120)	(0.131)	(0.131)
Home office (part, f)	0.0182	-0.0386	-0.177*	-0.0778
	(0.112)	(0.115)	(0.0967)	(0.127)
Constant	2.347***	1.972***	2.132***	1.629***
	(0.127)	(0.135)	(0.129)	(0.155)
Observations	1773	1741	1639	1524

Standard errors in parentheses

Note: All models include robust standard errors.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

male housework for both variables. They are thus in line with *Hypothesis 1*. As for the theoretical considerations, this finding would be supported by both the *time availability* and the *bargaining power* approach.

The controls mostly have the expected direction and show that the work arrangements of both partners influence the households division of housework. Especially full time employment for males seems to have a large and significant negative effect on the absolute male housework contributions. Female employment - full or part time - weakly increases male housework. Home office arrangements do not seem to have a strong influence.

5.2   Childcare

Being furloughed also positively affects men's participation in childcare. The absolute *division of childcare* variable (as shown in column (3) of Table 2) has an ATT of 0.399, statistically significant at the 1%-level. On average, male participation in childcare is thus increased by an amount of about 0.399 points on the variable's 5-point scale, compared to the non-treatment group. A positive and significant ATT of 0.370 is also found for the outcome variable that captures the *change in male's childcare participation* as shown in column (4) of Table 2. It is statistically significant at the 5%-level. The interpretation of the effect is analogous to the housework specifications: On average, treated households have a 0.370 higher score on the variable's 1-3 scale. The results for the childcare variables are in line with *Hypothesis 2* and would again - at least - support the *time availability* and *bargaining power* theories.

Controls are again overall intuitive: Full-time employment for females results in significantly more male childcare engagement. Female employment is - for both housework and childcare - consistently one of the strongest predictors of male care participation. Women's employment status has even stronger effects on men's childcare than on housework - when women work (especially full-time), men take on significantly more childcare responsibilities. Finally, men's work arrangements affect childcare differently than housework - part-time work and working from home are associated with more childcare participation.

5.3 Robustness

I use three different variations of my sample to check for robustness. First, the full sample including all treated cases is analyzed. This provides me with the highest number of treated individuals: 187 in wave 12 and 130 in wave 13. Table 3 shows the coefficients of the four outcome variables for this sample. Controls are not shown since they are identical with the controls of the main model; for the full tables see Table 9 in Appendix B. Remarkably, both housework variables show much smaller yet still positive ATTs that are no longer statistically significant. In contrast, the ATTs for childcare remain statistically significant and are of a similar magnitude as in the preferred specification. These results suggest that the findings for childcare from the main model are robust, while the effects observed for housework are more sensitive to sample composition.

Table 3: Difference-in-Differences Estimation: Full sample, all specifications

	(1) Divison of housework	(2) Change (hw)	(3) Divison of childcare	(4) Change (cc)
ATT				
Male in furlough	0.165	0.162	0.334**	0.443***
	(0.126)	(0.153)	(0.134)	(0.149)
Observations	1986	1950	1837	1707

Standard errors in parentheses

Note: All models include robust standard errors.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Second, a sample that only includes wave 12 as the single treatment wave is analyzed - also eliminating the issue of inconsistent treatment like in the main sample, while allowing for a higher number of treated individuals to be kept in wave 12.[13] Because the results are identical with the results from the full sample, they are shown in Table 8 in Appendix B. They, again, imply robustness for the childcare results, but are inconclusive for the housework results.

The differing effects and robustness for childcare and housework cannot be explained by the gender-neutral theories of *bargaining power* and *time availability*. However, they can be interpreted as evidence for *Hypothesis 3*: If gender identities

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[13]187 treated individuals as opposed to 72 consistently treated individuals in the main sample.

shape the way individuals contribute to household labor and are reproduced by it, it is likely that the effects differ for the different categories of care work.

For comparison, I conduct a DiD-analysis with a female sub-sample to investigate whether women who were furloughed increased their participation in childcare and housework.[14] Table 4 shows the results of this DiD-estimation: the effects for both housework (-0.068) and childcare (-0.0826) are very small and not statistically significant. Therefore, this finding supports the assumption that the effect I find in the primary analysis is specific to the group of men and not a universal effect that applies to the entire population.

Table 4: Difference-in-Differences Estimation: Female subset

	(1) Divison of housework	(2) Divison of childcare
ATT		
Female in Furlough	-0.00840	-0.0204
	(0.246)	(0.131)
Observations	2080	1861

Standard errors in parentheses

Note: All models include robust standard errors.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

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[14]This analysis is based on the absolute specifications only.

6   Discussion

I find statistically significant and positive ATTs for both the absolute and the change specification of both housework and childcare, suggesting a higher participation in these activities for furloughed men. Because DiD is a causal research design, this effect can be causally attributed to *Kurzarbeit*. These results are robust in all sample specifications for the category of childcare. In contrast, housework is only statistically significant in the main sample - for the full sample as well as the wave 12-only sample the coefficients are not statistically significant. The analysis of the female sub-sample does not produce statistically significant ATTs for the effect of short-time work on female care participation. I find evidence for all three hypotheses.

Various discussion points emerge from these findings. First, the non-significance of the housework variables in the sample that is limited to wave 12 alone raises questions about whether the treatment period limited to the early phase of the pandemic is long enough to capture adjustments in housework behavior. A longer treatment period may be necessary to fully observe the effect of short-time work on the division of housework. This might also be a general limitation of this study: since the data only covers May 2020 through April 2021, it is not possible to examine long-term effects of *Kurzarbeit* on male participation in unpaid care work. However, it is plausible that the division of unpaid care work within couples requires more time to adjust to changes in external circumstances, such as reduced working hours.

Second, the non-significance of the housework variables in the full sample might indicate statistical issues that result from staggered treatment timing as discussed in chapter 3. The fact that housework *is* significant in the preferred sample suggests that the effect for housework shouldn't be dismissed altogether. However, it is noteworthy that childcare is robust in all specifications whereas housework is not. One possible explanation is that men may show a stronger inclination toward participating in childcare than in housework, as suggested by previous research [Ishii-Kuntz and Coltrane, 1992, Poortman and Van Der Lippe, 2009, Andreassen et al., 2022]. Being involved in childcare can enhance men's sense of masculinity [Brandth and Kvande, 2018] and they enjoy childcare as much

as women [Connelly and Kongar, 2017]. Meanwhile men continue to display low preferences for housework [Lachance-Grzela and Bouchard, 2010]. Furthermore, childcare might be harder to avoid at home than housework. Pailhé et al. [2019] find that the men prefer time-flexible tasks over daily routine tasks. These findings indicate that the *doing gender* perspective is highly relevant - the effects that result from higher time availability and lower bargaining power are not the same for the different household activities, as also found by Pailhé et al. [2019]. Therefore gender identities and the way unpaid domestic work interacts with them shows to be a relevant factor for how the additional time is used.

Third, the analysis of the effects for women in the female sub sample show very small and insignificant negative ATTs. Given the already high participation of women in care (as shown in Figure 1), it is unlikely that women would further increase their share of care work. However, this finding supports the assumption that the effect I find in the primary analysis is specific to the group of men and not a universal effect that applies to the entire population.

In general, Covid-19 presents a conceptual challenge for causal inference [Goodman-Bacon and Marcus, 2020], as it represents a widespread, exogenous shock that affected all individuals simultaneously. In isolation, the pandemic would not be a suitable treatment variable, since everyone was "treated" in some way, leaving no clear control group. However, this study addresses this issue by leveraging variation in exposure to short-time work, a policy that was not universally applied. This enables the identification of a treatment and control group, preserving the logic of a Difference-in-Differences (DiD) approach.

Still, there are some limitations to my approach. For one thing, short-time work was not the only form of work time reduction during the pandemic. Employees in sectors not covered by the short-time work program may have also faced reduced hours or job loss—just without income compensation. As such, the treatment in this analysis captures participation in the short-time work program specifically, rather than work time reduction more broadly. This is particularly relevant from a gender perspective: women are overrepresented in so-called "essential" occupations, such as nursing and teaching, which were often excluded from short-time work protections and more exposed to layoffs during the pandemic [Folbre et al., 2021, Kabeer et al., 2021]. Future research should control for working hours and Covid-19-related

job-losses in order to address this caveat.

Furthermore, gender differences in the perception of equal task-sharing likely influence the reported outcomes. In wave 12 of the survey, 24.8 % of male respondents state that childcare responsibilities are equally shared, whereas only 17.2 % of female respondents report the same. The discrepancy is even more pronounced for housework: 39.8 % of men claim an equal division of tasks, compared to only 29.7 % of women. This divergence in perceptions persists in wave 13, where 26.8 % of men report a 50/50 division of childcare, in contrast to 22.9 % of women. For housework, 42.5 % of men perceive an equal split in wave 13, while only 37 % of women do.[15] These descriptive findings suggest that men are more likely to perceive the division of unpaid labor as egalitarian. This pattern has also been documented in previous research, such as Dyer et al. [2014] and Charles et al. [2018] and should be taken into account when interpreting the results.

7 Conclusion

This study provides novel evidence that reduced working hours for men increase male care participation in unpaid care work. Using nationally representative panel data from the German Family Panel (*pairfam*), I pursue a difference-in-differences approach to estimate the causal effects of short-time work on men's participation in housework and childcare. The sudden exogenous shock of Covid-19 imposed the rapid and widespread policy measure of short-time work, creating a quasi-experimental setting that allows me to implement a causal inference research design.

I find positive and statistically significant average treatment effects on the treated (ATT) for all four specifications of housework and childcare, meaning that furloughed men assumed more housework and childcare responsibilities compared to men who weren't furloughed. For childcare, these results are robust in all specifications. In contrast, the effect for housework is only statistically significant in the main model that uses a sample restricted to individuals who were treated at both treatment times. Various explanations for this phenomenon are possible: For

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[15]Data from survey waves 12 and 13, own calculations.

one thing, this might feed into the *gender construction* literature, suggesting that gender identities play a role in how additional time is divided between different domestic tasks. Furthermore, it is conceivable that the change in housework does not become apparent in the short term and that a longer treatment period would be necessary to cover the effects of short-time work on housework. The effects I find are specific to the group of men and do not appear for women: when analyzing the female sub sample, the estimated effects are small and statistically insignificant.

These results highlight that reducing working hours is a political lever for distributing care work more equitably within households. A central policy implication is that a shorter standard workweek could help address persistent gender inequalities in unpaid care labor. Policymakers need to begin formally recognizing care work as productive labor by taking it into account when shaping labor markets and creating labor policy frameworks. The 40-hour workweek reflects the outdated family model of a full-time male breadwinner and a full-time female caretaker. If the political goal is to alleviate labor shortages by increasing female labor market participation, as it is often demanded, the realities of unpaid care work have to be included in these political calculations.

Future research should focus on the long-term effects of short-time work on the gendered division of childcare and housework, possibly using more complex methods of causal inference by estimating dynamic treatment effects [Sun and Abraham, 2020] or group-time treatment effects [Callaway and Sant'Anna, 2020]. The analysis could further be extended to other categories of care work, such as shopping, repairs, or finances. Qualitative methods could also be explored in order to understand the mechanisms of restructuring the division of household labor when faced with reduced working hours. Furthermore future policy interventions that reduce working hours should be transformed into causal inference research designs in order to investigate the effects on the gendered division of unpaid care. Feminist perspectives need to be included in the academic discourse on work time reduction, that has mostly focused on ecological and social sustainability aspects until now.

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A   Appendix A: Summary Statistics

Table 5: Division of Childcare (Wave 11 - 13)

	Wave 11		Wave 12		Wave 13	
	Treated mean/sd	Control mean/sd	Treated mean/sd	Control mean/sd	Treated mean/sd	Control mean/sd
(Almost) completely woman	0.102	0.078	0.121	0.178	0.066	0.079
	(0.304)	(0.269)	(0.327)	(0.383)	(0.249)	(0.270)
For the most part woman	0.533	0.584	0.435	0.468	0.539	0.528
	(0.501)	(0.493)	(0.497)	(0.499)	(0.501)	(0.500)
Split about 50/50	0.357	0.307	0.379	0.306	0.385	0.364
	(0.481)	(0.462)	(0.487)	(0.461)	(0.489)	(0.482)
For the most part man	0.009	0.027	0.058	0.041	0.005	0.029
	(0.094)	(0.161)	(0.234)	(0.199)	(0.071)	(0.168)
(Almost) completely man	0.000	0.004	0.008	0.007	0.005	0.000
	(0.000)	(0.064)	(0.087)	(0.085)	(0.071)	(0.000)
Reduced male share	0.128	0.124	0.125	0.230	0.238	0.169
	(0.336)	(0.330)	(0.332)	(0.421)	(0.428)	(0.375)
Stable male share	0.641	0.676	0.584	0.571	0.640	0.591
	(0.482)	(0.468)	(0.495)	(0.495)	(0.482)	(0.492)
Increased male share	0.231	0.200	0.291	0.199	0.122	0.241
	(0.424)	(0.401)	(0.456)	(0.400)	(0.328)	(0.428)
Observations	148	727	152	780	120	533

Table 6: Division of Housework (Wave 11 - 13)

	Wave 11		Wave 12		Wave 13	
	Treated mean/sd	Control mean/sd	Treated mean/sd	Control mean/sd	Treated mean/sd	Control mean/sd
(Almost) completely woman	0.165	0.180	0.215	0.217	0.140	0.133
	(0.372)	(0.384)	(0.412)	(0.412)	(0.348)	(0.340)
For the most part woman	0.475	0.427	0.332	0.387	0.430	0.439
	(0.500)	(0.495)	(0.472)	(0.487)	(0.497)	(0.497)
Split about 50/50	0.329	0.342	0.382	0.325	0.404	0.387
	(0.471)	(0.475)	(0.487)	(0.469)	(0.492)	(0.487)
For the most part man	0.025	0.039	0.054	0.052	0.014	0.035
	(0.158)	(0.194)	(0.227)	(0.222)	(0.120)	(0.183)
(Almost) completely man	0.006	0.012	0.017	0.019	0.011	0.007
	(0.076)	(0.110)	(0.130)	(0.136)	(0.106)	(0.083)
Reduced male share	0.174	0.170	0.231	0.241	0.272	0.168
	(0.381)	(0.376)	(0.423)	(0.428)	(0.446)	(0.374)
Stable male share	0.644	0.634	0.503	0.574	0.549	0.622
	(0.481)	(0.482)	(0.501)	(0.495)	(0.499)	(0.485)
Increased male share	0.182	0.196	0.265	0.185	0.179	0.211
	(0.387)	(0.397)	(0.443)	(0.388)	(0.385)	(0.408)
Observations	224	1148	243	1281	171	837

Table 7: Summary Statistics (Wave 11 - 13): Control and treatment group combined

	Wave 11 mean/sd	Wave 12 mean/sd	Wave 13 mean/sd
Female	0.594	0.599	0.484
	(0.491)	(0.490)	(0.500)
Living with children in household	0.660	0.635	0.671
	(0.474)	(0.482)	(0.470)
Age of youngest cohabiting child	7.372	7.813	8.199
	(5.799)	(6.027)	(6.250)
Full employment (male)	0.773	0.735	0.815
	(0.419)	(0.442)	(0.389)
Full employment (female)	0.309	0.331	0.313
	(0.462)	(0.471)	(0.464)
Part-time employment (male)	0.045	0.040	0.049
	(0.207)	(0.195)	(0.216)
Part-time employment (female)	0.361	0.334	0.394
	(0.481)	(0.472)	(0.489)
Not working	0.143	0.129	0.095
	(0.350)	(0.335)	(0.294)
Furlough (Kurzarbeit)	0.000	0.101	0.124
	(0.000)	(0.302)	(0.330)
Male in furlough	0.000	0.127	0.132
	(0.000)	(0.333)	(0.339)
Both partners in furlough	.	0.026	0.009
	(.)	(0.158)	(0.094)
Home office full-time (male)	0.000	0.231	.
	(0.000)	(0.421)	(.)
Home office part-time (male)	0.000	0.246	.
	(0.000)	(0.431)	(.)
Home office full-time (female)	0.000	0.206	.
	(0.000)	(0.405)	(.)
Home office part-time (female)	0.000	0.201	.
	(0.000)	(0.401)	(.)
Observations	1372	1527	1008

Note: Mean values are reported with standard deviations in parentheses.

B   Appendix B: Robustness

Table 8: Difference-in-Differences Estimation: Wave 12 only, all specifications

	(1) Divison of housework	(2) Change (hw)	(3) Divison of childcare	(4) Change (cc)
ATT				
Male in furlough	0.165	0.162	0.334**	0.443***
	(0.126)	(0.153)	(0.134)	(0.149)
Controls				
Month of interview	-0.00697	-0.00328	-0.00219	0.000971
	(0.00493)	(0.00616)	(0.00491)	(0.00614)
Age of youngest child	-0.00881	-0.0288**	0.0179	0.0328
	(0.0136)	(0.0145)	(0.0180)	(0.0225)
Full time (m)	-0.266***	-0.0206	-0.0852	0.0924
	(0.0920)	(0.106)	(0.102)	(0.105)
Part-time (m)	0.198	0.165	0.281	-0.0453
	(0.218)	(0.198)	(0.176)	(0.144)
Full time (f)	0.0725	0.206***	0.298***	0.305***
	(0.0904)	(0.0759)	(0.0849)	(0.0839)
Part-time (f)	0.104*	0.190***	0.136***	0.100
	(0.0557)	(0.0601)	(0.0513)	(0.0620)
Home office (full, m)	0.0942	-0.00549	0.221**	0.173
	(0.0867)	(0.111)	(0.105)	(0.113)
Home office (part, m)	-0.103	-0.121	0.0831	0.0452
	(0.0920)	(0.0889)	(0.0955)	(0.102)
Home office (full, f)	-0.0161	-0.140	-0.0327	-0.0448
	(0.109)	(0.116)	(0.127)	(0.122)
Home office (part, f)	0.0322	0.0204	-0.144	-0.105
	(0.111)	(0.113)	(0.0927)	(0.122)
Constant	2.271***	1.946***	2.108***	1.701***
	(0.122)	(0.134)	(0.121)	(0.149)
Observations	1986	1950	1837	1707

Standard errors in parentheses

Note: All models include robust standard errors.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 9: Difference-in-Differences Estimation: Full sample, all specifications, full table

	(1) Divison of housework	(2) Change (hw)	(3) Divison of childcare	(4) Change (cc)
ATT				
Male in furlough	0.165	0.162	0.334**	0.443***
	(0.126)	(0.153)	(0.134)	(0.149)
Controls				
Month of interview	-0.00697	-0.00328	-0.00219	0.000971
	(0.00493)	(0.00616)	(0.00491)	(0.00614)
Age of youngest child	-0.00881	-0.0288**	0.0179	0.0328
	(0.0136)	(0.0145)	(0.0180)	(0.0225)
Full time (m)	-0.266***	-0.0206	-0.0852	0.0924
	(0.0920)	(0.106)	(0.102)	(0.105)
Part-time (m)	0.198	0.165	0.281	-0.0453
	(0.218)	(0.198)	(0.176)	(0.144)
Full time (f)	0.0725	0.206***	0.298***	0.305***
	(0.0904)	(0.0759)	(0.0849)	(0.0839)
Part-time (f)	0.104*	0.190***	0.136***	0.100
	(0.0557)	(0.0601)	(0.0513)	(0.0620)
Home office (full, m)	0.0942	-0.00549	0.221**	0.173
	(0.0867)	(0.111)	(0.105)	(0.113)
Home office (part, m)	-0.103	-0.121	0.0831	0.0452
	(0.0920)	(0.0889)	(0.0955)	(0.102)
Home office (full, f)	-0.0161	-0.140	-0.0327	-0.0448
	(0.109)	(0.116)	(0.127)	(0.122)
Home office (part, f)	0.0322	0.0204	-0.144	-0.105
	(0.111)	(0.113)	(0.0927)	(0.122)
Constant	2.271***	1.946***	2.108***	1.701***
	(0.122)	(0.134)	(0.121)	(0.149)
Observations	1986	1950	1837	1707

Standard errors in parentheses

Note: All models include robust standard errors.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 10: Difference-in-Differences Estimation: Female subset

	(1) Divison of housework	(2) Divison of childcare
ATT		
Female in Furlough	-0.00840	-0.0204
	(0.246)	(0.131)
Controls		
Month of interview	-0.00390	-0.0100**
	(0.00404)	(0.00471)
Age of youngest cohabiting child	-0.00457	0.00784
	(0.0168)	(0.0241)
Full-time employed	-0.0377	0.170*
	(0.0995)	(0.0992)
Part-time employed	0.00601	0.140**
	(0.0727)	(0.0600)
Full-time employed (partner)	-0.146*	-0.195**
	(0.0758)	(0.0758)
Part-time employed (partner)	-0.188	0.157
	(0.120)	(0.148)
Home office full-time	-0.175	-0.187*
	(0.145)	(0.113)
Home office part_time	-0.143	0.202*
	(0.106)	(0.119)
Home office full-time (partner)	0.122	0.180
	(0.134)	(0.118)
Home office part-time (partner)	0.197*	0.0306
	(0.115)	(0.118)
Constant	2.087***	2.196***
	(0.156)	(0.166)
Observations	2080	1861

Standard errors in parentheses

Note: All models include robust standard errors.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$