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ABSTRACT

Teleworking and Life Satisfaction during COVID-19: The Importance of Family Structure*

We carry out a difference-in-differences analysis of a representative real-time survey conducted as part of the German Socio-Economic Panel (SOEP) study and show that teleworking had a negative average effect on life satisfaction over the first two years of the COVID-19 pandemic. This average effect hides considerable heterogeneity reflecting genderrole asymmetry: lower life satisfaction is only found for unmarried men and women with school-age children. The negative effect for women with school-age children disappears in 2021, suggesting adaptation to new constraints and/or the adoption of coping strategies.

JEL Classification: I31, M5

Keywords: life satisfaction, teleworking, work from home, gender, childcare, COVID-19, SOEP

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1. Introduction

As the COVID-19 crisis seems to be receding somewhat as a public-health threat in 2022, the question of what the 'new normal' life will look like is on everyone's mind. One of the major changes imposed by the pandemic was the pervasive and wide-ranging introduction of social distancing, which radically extended the practice of working from home, especially during the lockdown episodes in 2020. A relevant question is whether this practice will 'stick' (Barrero *et al*., 2021) in post-pandemic times, and if so with which consequences on productivity and worker wellbeing. We here consider the second of these two consequences. We identify the impact of switching to work from home on the level of self-declared life satisfaction, which is the canonical measure of subjective well-being (Barrington-Leigh, 2022), using data from the German Socio-Economic Panel (SOEP). As the panel nature of the SOEP allows the same individuals to be followed over time, we have information on individuals both before and during COVID-19, and in particular during their different working arrangements.

The COVID-19 pandemic has acted as an exogenous shock that unexpectedly pushed many people into work from home overnight (if their job allowed it) for public-health reasons that are independent of the labour market. This sudden shock to working arrangements allows us to isolate the causal impact of this working arrangement on workers' subjective wellbeing, independently of confounding factors such as self-selection into work from home due to personal traits, skills, preferences or constraints. The panel nature of the SOEP data also permits us to control for individual heterogeneity (via the introduction of individual fixed effects into the empirical analysis), as well as to separate the impact of the COVID-19 crisis in general (on anxiety, economic uncertainty, and so on) from the pure effect of working from home rather than on-site.

With its sudden and unexpected outbreak, the quasi 'natural experiment' of COVID-19 does provide the opportunity to analyse the exogenous impact of work from home on subjective wellbeing, but also imposes some limits as to the generality of this analysis. These are: (1) the fact that all telework was imposed on workers meant that it was free of any notion of privilege or stigma that may apply in 'normal' times; (2) individuals worked from home in the literal sense, as opposed to other forms of distant work; (3) more than one member of the same household often worked from home at the same time; and (4) children were also at home during the day in the time periods when distance learning was imposed. If work from home does indeed stick post-pandemic, these particular features will probably be attenuated, but at the same time not disappear completely. It would thus seem to be important to consider the impact of the family structure as a mediator of the relationship between work from home and subjective wellbeing.

Even before COVID-19, it had been suggested that working from home may be of particular importance for women, regarding its potentially-beneficial effect on work-life balance, and the reconciliation between family and job constraints in the presence of children. However, empirical work has tended to come to the opposition conclusion. In the pre-COVID-19 period, the meta-analysis in Oakman *et al.* (2020) reveals that women were overall less likely than men to enjoy better health outcomes when working at home, which was attributed to the blurring of work-home boundaries. During the COVID-19 period, Bertoni *et al.* (2021) uncovered negative effects of telework on depression for women (but not men) with children at home. Lyttelton *et al.* (2020) found that mothers who telecommute more frequently report feelings of anxiety, loneliness and depression than do telecommuting fathers; they attribute this result to the burden of childcare that more frequently impinges upon mothers' work time. Cheng *et al.* (2021) analysed the situation of working parents using UKHLS panel data, revealing worse mental health for working parents,

especially mothers, due to the time they spend on childcare and home schooling. Given this heterogeneity in existing work, we explore whether the impact of work from home on life satisfaction depends on gender and the presence of children in the household.

On average, we find that working from home reduced the life satisfaction of German workers, and especially that of men without a partner and women with school-aged children, but not that of women with below-school aged children. This pattern for women is consistent with the burden of home-schooling that was predominantly borne by mothers (Petts *et al.*, 2021); this negative impact was smaller in 2021, perhaps as mothers adapted to the new situation or developed coping arrangements. As noted above, as home-schooling was a particular feature of COVID-19 due to the associated social-distancing policies, this pandemic-related conclusion may not be a general feature of work from home. However, this does suggest that work from home is likely to be associated with work-family conflicts of some kind and a blurring of boundaries that is particularly salient for women, especially in the presence of children. The empirical results here can be argued to reveal the extent of the asymmetry of gender roles within German households with respect to housework and childcare.

This paper is one of only few that are able to disentangle the effect of telework from other confounding factors, thanks to the panel data that is analysed, with observations on the same individual both before and during COVID-19. Both Felstead and Reuschke (2020) and Gueguen and Senik (2021) considered the switch to work from home in the UK using data from the UKHLS panel. They find a fall in the mental health of workers who switched to working at home during the lockdown, although this negative effect seems to attenuate over time. Other contributions have also concluded that work from home reduced well-being during COVID-19, although the data analysed does not include all of the features that would be desirable to completely distinguish the

impact of work from home from that of the health crisis itself. For example, Lyttelton *et al.* (2022) and Xiao *et al.* (2021) analyse cross-sectional data, and hence do not have information on the same individual when they do and do not work from home. Schifano *et al.* (2022) do have panel information, and are able to follow a sample of individuals in five European countries over the May-November 2020 period, but the panel data does not include any pre-COVID-19 waves. Bertoni *et al.* (2021) use the SHARE longitudinal survey on older Europeans, which includes some measures of mental health, but not information on life satisfaction (Perelman *et al.*, 2021, analyse data from the last cross-section wave of this same survey). Our work here is the first, to our knowledge, to make use of a longitudinal dataset to assess the effect of teleworking, which provides information on the life satisfaction of the same individuals both pre- and during the pandemic, and to explore in depth the moderating role of the family structure.

The remainder of the paper is organised as follows. Section 2 describes the data and the empirical strategy. The main results are shown in Section 3, and Section 4 concludes.

2. Data and Empirical Strategy

2.1. Data

Our empirical analysis is based on the German Socio-Economic Panel (SOEP) and its complementary COVID-19 survey (SOEP-CoV: see www.soep-cov.de). The SOEP is a large, long-running representative panel survey, recognised for its high standards of data quality and research ethics. The SOEP contains information on a broad set of individual- and household-level characteristics, such as household composition, health and education, income and wealth. The SOEP-CoV survey covers a random sub-sample of SOEP respondents, and was fielded during the pandemic to understand the effects of the pandemic on households in Germany. The SOEP-CoV 2020 field phase started in March 2020 and finished in July of the same year. The SOEP-CoV

2021 was then fielded between January and February 2021, on the same sample of respondents as in SOEP-CoV 2020. Respondents were asked to provide information on the following topics: *a)* Within-household COVID-19 prevalence, health behaviour, and health inequality; *b)* Labour-market activity and gainful employment; *c)* Social life, networks, and mobility; *d)* Mental health and well-being; and *e)* Attitudes towards social cohesion.

There are two key variables in our analysis. The first is teleworking. This is measured in 2020 via the question *"In the course of the Corona crisis, have there been the following short-term changes in your work situation?"*. Among the different work situations that are proposed to the respondents, we consider here that a worker started teleworking if she replied *"started working from home full-time"* or *"started working from home part-time"*. We combine these two responses into one dummy variable showing whether an individual had started working from home in 2020.[1] The SOEP-CoV 2021 question about work situations is worded differently: *"Which of the following work situations currently apply to you?".*[2]. However, it does have the same type of response categories as those in the 2020 wave.

The second key variable is life satisfaction. In the SOEP this comes from the question: "*How satisfied are you with your life in the current situation, all things considered?*", with replies on a Likert-scale ranging from 0 to 10. The reliability of the answers to this life-satisfaction question, and to self-declared wellbeing measures in general, has been the subject of ongoing debate. Personality traits and reporting styles may be suspected of having blurred the association between

[1] We did carry out our analyses separately for full-time and part-time work from home, but did not find any significant difference between the two in terms of their effect on subjective well-being.

[2] The questions about teleworking are originally written in German and we reported in the main text the English translation. The 2020 question was worded as follows*: "Gab es im Zuge der Corona-Krise folgende kurzfristige Änderungen in Ihrer Arbeitssituation?"*. The 2021 question was worded as follows: *"Welche der folgenden Arbeitssituationen treffen derzeit auf Sie zu?".*

the latent variable that the question aims to measure and the reported score on a discrete and bounded scale (see Bond and Lang, 2019, for example). However, panel data, such as the SOEP, which follow the same individuals over time, can be used to control, at least partly, for these sources of individual heterogeneity, and, in practice, subjective well-being measures have been shown to display stable structure, predict subsequent behaviour by the same individual, and be consistent over time and robust to test-retest analyses. Subjective variables are now starting to be considered as more mainstream by researchers in the social sciences, and are often used for policy evaluation (Barrington-Leigh, 2022). Among these measures, life satisfaction has become the standard for subjective wellbeing, which is used to evaluate the circumstances of individuals' lives (see for instance Deaton, 2008, Kahneman and Krueger 2006, Kahneman and Deaton, 2010, and Layard, 2005). Some large representative surveys also collect short-run positive and negative emotions, and measures of the meaningfulness of life (also called eudaimonia). All of life satisfaction, emotions and eudaimonia appear in the UK Office of National Statistics' headline Annual Population Survey, as well as in the Gallup World Poll, the data from which is used in the annual World Happiness Report.[3]

2.2. Empirical Strategy

We wish to establish the effect of working from home during the pandemic on subjective well-being. To do so, we estimate the following regression via OLS with and without individual fixed effects:

$$LS_{it} = \alpha Treat_{i20/21} + \beta Post_t + \gamma Treat_{i20/21} * Post_t + \delta X_{it} + \gamma X_{it} * Post_t + \mu_i + \lambda_t + \epsilon_{it} \quad (1)$$

[3] https://worldhappiness.report/ed/2022/.

where LS_{it} is the life satisfaction of individual *i* in year *t* (standardised so that the mean is equal to zero and the standard deviation is equal to one). The variable $Treat_{i20/21}$ is a dummy for those who started working from home in 2020 and were still working from home a year afterwards in 2021, and is equal to zero for those who continued to work at their workplace during the pandemic. $Treat_{i20/21}$ thus captures the influence of any unobserved time-invariant differences between those who teleworked during the COVID-19 pandemic and those who did not. $Post_t$ is a dummy for observations in 2020 onwards: it will then pick up any general impact of the pandemic on the life satisfaction of both those who work from home and those who do not. Hence, our identification strategy takes the form of a standard difference-in-differences regression. Since the treatment group is made of those who started working from home in 2020 and continued to do so in 2021 and the control group of those who did not switch to working from home, the coefficient γ on the interaction term $Treat_{i20/21} * Post_t$ will then capture the effect of having switched to work from home because of the pandemic.

The sign of γ is *a priori* ambiguous. Working from home is usually considered to be desirable by workers (see, for instance, Mas and Pallais, 2017). Not having to spend time commuting, the greater autonomy and flexibility in time arrangement, and potentially a smoother work-life balance are arguments in favour of this hypothesis. Conversely however, working from home may entail a loss of social connectedness and work identity, and affect workers' career prospects. In addition, as noted above, work from home may be detrimental for wellbeing if it excessively blurs the boundaries between home and the office. As such, we are agnostic about the estimated sign of γ.

The identification assumption that allows γ to be read as the causal impact of working from home on life satisfaction is that working from home was not chosen by the individual but rather imposed on them. This assumption appears plausible, as most of the SOEP 2020 survey interviews were

fielded in the early stages of pandemic (between March and June). This assumption of the exogeneity of working from home may be less evident in 2021. Therefore we also estimate separately the effect of teleworking in 2020 and 2021 with the following regression:

$$LS_{it} = \alpha Treat_{i20/21} + \sum_{t=2017}^{2021} \gamma_t \, Treat_{i20/21} * Year_t + \delta X_{it} + \gamma X_{it} * Post_t + \mu_i + \lambda_t + \epsilon_{it}$$

(2).

The greater flexibility of Equation (2) has also the advantages of providing a test for the parallel trend assumption and an estimate in 2021 showing potential adaptation to teleworking.

Equations (1) and (2) include a vector of socio-demographic characteristics X_{it}, including gender, age categories, net monthly household income equivalised using the square root of family size, the size of the house, and dummy variables for post-secondary education, marital status, family size, the number of health conditions diagnosed before the pandemic, employment (assignment to the treatment implies that all our observations come from individuals who were employed in 2020 and 2021, although we are agnostic about the employment status beforehand), and blue-collar employment. As $Treat_{i20/21}$ may not be orthogonal to X_{it}, we interact X_{it} with $Post_t$, which ensures that the γ (in Equation (1)) and γ_{2020} and γ_{2021} (in Equation (2)) only capture the effect of teleworking and are not spuriously driven by the behaviour of certain socio-demographic groups following the pandemic. Year times Month-of-interview dummies, λ_t, control for seasonality. We first estimate our models as a pooled regression, and then make use of the panel dimension of the SOEP and introduce individual fixed-effects (μ_i) in our preferred specification to control for any remaining unobserved individual heterogeneity. The introduction of individual fixed effects leads to the dropping of the $Treat_{i20/21}$ variable, as the two are multicollinear. It also leads to the

dropping of the time invariant control variables. Standard errors are clustered at the individual level.

Our main results come from a balanced sample of individuals who are observed between 2016 and 2020 in SOEP, who had a job in 2020 and provide information on teleworking. This produces a sample of 10,940 observations on 2,188 individuals (853 teleworked and 1,335 did not in 2020). The use of a balanced sample ensures that the results are not affected by any changes in sample composition between 2016 and 2020. The 2021 wave of SOEP-CoV allows us to add 1,693 individuals who did not report a change in their teleworking status in 2021 to our estimation sample.[4] In total, our estimation sample is made of 12,633 observation on 2,188 individuals.

Table 1 lists the descriptive statistics of our estimation sample. Average life satisfaction is around 7.5 and the treatment group (those who switched to teleworking during the pandemic) represents 35% of our observations. Figure 1 depicts the distribution of life satisfaction in the estimation sample before and during the pandemic. As with most self-reported measures of well-being, both distributions are left-skewed. We also unsurprisingly see a clear reduction of average life satisfaction during the pandemic.

We will estimate the differential impact of work from home on women and men, depending on the presence of children above- or below-school age, where school starts at age 6 (see http://gpseducation.oecd.org/CountryProfile?primaryCountry=DEU for a detailed description of the German schooling system). This analysis relies on separate regressions for sub-samples of

[4] The small number of individuals who started to work from home in 2020 but then did not so in 2021 (or vice-versa) are dropped from the analysis. Including these "partial" treated groups via in the analysis does not change the results: see Appendix Table A1. In a similar vein, restricting our analysis to the individuals who are observed every year from 2016 to 2021 produces results that are very similar to our baseline estimates: see Appendix Table A2.

women and men, rather than interactions. These separate regressions allow the estimated coefficients on all of the right-hand side variables to differ between all of the relevant analysis groups.

3. Main Results

3.1. Teleworking and Well-being in Germany

Table 2 shows the effect of teleworking on the standardised value of life satisfaction during the pandemic (*i.e.* the estimated coefficient on the $Treat_{i20-21} * Post_t$ interaction in Equation (1)). The estimated coefficients on the control variables appear in Table A2. There are no other controls in column (1), and here teleworking is estimated to have statistically-significantly reduced average life satisfaction by almost 15% of a standard deviation.

However, assignment to the treatment here (*i.e.* teleworking during the pandemic) may not be random. We investigate in Table A4 by predicting the probability of telework in 2020 using 2019 observable socio-demographics $X_{i\,2019}$. This shows that, unsurprisingly, white-collar workers are more likely to telework, as are men, those with post-Secondary education, and those with higher equivalised household incomes. As such, we should control for both X_{it} and $X_{it} * Post_t$ to ensure that the $Treat_i * Post_t$ variable is only picking up the effect of teleworking during the pandemic. Controlling for X_{it} in column (2) has barely any effect on the teleworking coefficient. However, the addition of $X_{it} * Post_t$ in column (3) does produce a lower estimated coefficient on $Treat_i * Post_t$. This drop mostly reflects that workers with higher equivalised household incomes are more likely to both report lower life satisfaction during the pandemic (see Table A3), as in Clark and Lepinteur (2021), and be in the treated group (see Table A4). Nevertheless, the estimated teleworking coefficient remains significantly. The last column of Table 2 adds individual fixed effects: this has no effect on the estimated γ coefficient, which continues to suggest that

teleworking significantly reduces life satisfaction by just under 10% of a standard deviation. From the income coefficient in Table A3, we can calculate that this drop in life satisfaction would be compensated by higher equivalised household net monthly income of 45% (=exp(.087/0.235))-1.

In the difference-in-differences analyses, we have assumed that workers who did not switch to teleworking during the pandemic are a valid counterfactual for those who did so. Although this hypothesis cannot be explicitly tested, Figure 2 plots the life-satisfaction trend for these two groups in the years before and after the COVID-19 outbreak. The two groups differed in their levels of pre-2020 life satisfaction, but with a fairly-similar trend. The parallel trend assumption is formally tested in Figure 3, which shows the estimated interaction coefficients between *Treat* and all the wave fixed effects (with the difference between the treatment and control groups in 2016 being the reference category) that correspond to the Equation (2). None of the pre-2020 trend differences is significant: the evolution of life satisfaction for those who switched to teleworking and those who did not was identical pre-pandemic. This evidence is in favour of our hypothesis that non-switchers do provide a valid counterfactual for switchers. Figure 3 also shows that the negative impact of teleworking on life satisfaction is the same in 2020 and 2021, suggesting no adaptation to teleworking in 2021.

3.2. The importance of Family Structure

We have so far estimated the average effect of teleworking for all workers. However, working from home involves significant changes in work-life balance, and so likely has different effects by gender and family structure (especially during the periods when schools were shut).

We explore this heterogeneity by carrying out a separate analysis for men (left panel) and women (right panel)in Table 3. The drop in life satisfaction from teleworking during the pandemic is always larger for men, and in the most-complete specifications teleworking is uncorrelated with

women's life satisfaction. This gender difference may reflect an adherence to traditional gender norms, where the mixing of work and home spheres turns out to be more difficult for men. This is confirmed to an extent by the results in Table 4, where teleworking is interacted with dummies for marriage and having children below- and above-school age. In column (1), the life satisfaction of married men is much less affected by teleworking. The tension from mixing work and home life may be limited for married men if, due to traditional gender norms, women take care of the bulk of household chores. Alternatively, having a partner might reduce the feelings of loneliness associated with teleworking. One piece of evidence in favour of the first of these explanations is that the drop in life satisfaction for teleworking men with children (who should arguably feel less lonely) is similar to that experienced by their counterparts without children (see the second column of Table 4).

The results for women in the right panel of Table 4 are strikingly different. The zero average teleworking effect in Table 3 hides sharp differences according to the presence and age of children in the household. In column (7) of Table 4, the life satisfaction of women with below-school age children actually rises significantly with teleworking (by one quarter of a standard deviation: 0.032+0.206). Working from home may well alleviate childcare difficulties and make work-life balance simpler. However, women with above-school age children do not benefit from teleworking (the interaction coefficient is negative, but insignificant, in column (7)). When we consider working from home in 2020 only (in the last column of Table 4), when education was seriously disrupted by the pandemic, the life satisfaction of mothers with school-age children is significantly lower (with there being no such effect for men in column (4)). The start of the pandemic then seems to have exacerbated the well-being penalty of 'second shift' mothers (Flèche *et al.*, 2018 and 2020). As school closing was recommended by the government during both SOEP-CoV

waves, this 2020-2021 difference may not reflect only the institutional context. The lack of a significant effect in 2021 may reveal that mothers had adapted to the new constraints and/or adopted coping strategies (such as asking grandparents for help).

4. Conclusions

Long-running German panel data allows us to separate the effect of working from home during the pandemic from the effect of the pandemic itself and other observed and unobserved individual characteristics. We show that working from home overall reduces life satisfaction. This negative impact is driven by men, and by women with school-aged children in 2020. Women with below-school age children are on the contrary more satisfied with their life when they telework. In 2021, the presence and age of children composition ceased having a statistically-significant effect on life satisfaction, probably due to adaptation or coping strategies. Taking COVID-19 as a natural experiment that uncovers causal relations, our results here underline the strength of traditional gender norms in Germany, in particular with respect to childcare.

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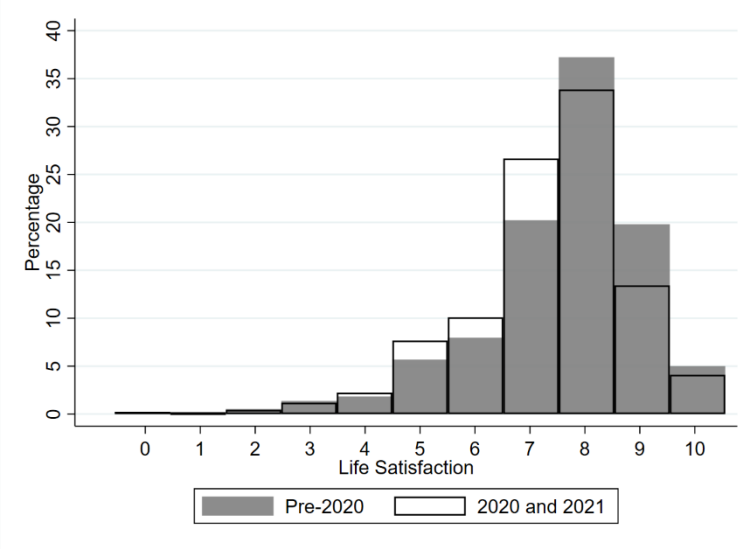
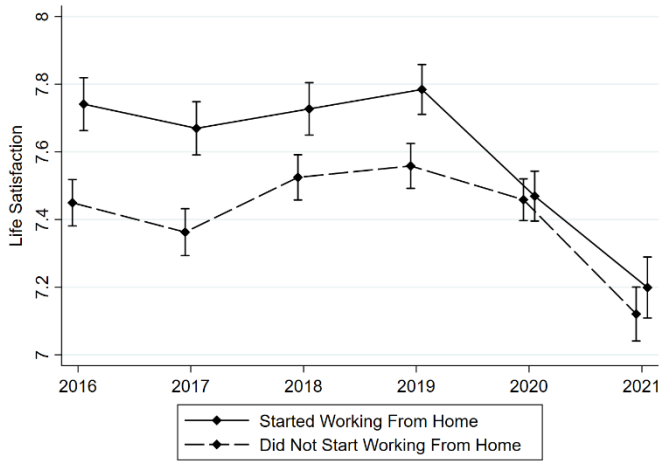
Figures and Tables

Figure 1: Distribution of Life Satisfaction



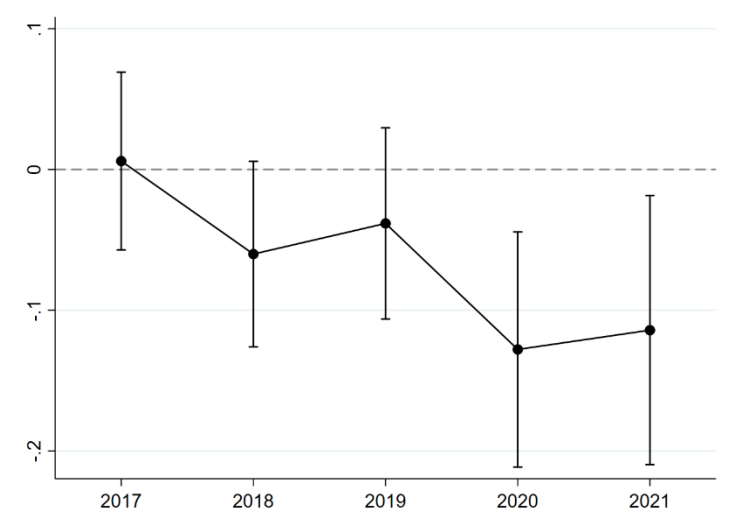
Note: This figure refers to our estimation sample of 12,633 observations (2,188 individuals) coming from the database SOEP and its complementary survey SOEP-CoV.

Figure 2: Parallel Trend Assumption – Evolution of the Mean Life Satisfaction per Treatment Group



Notes: This figure refers to our estimation sample of 12,633 observations (2,188 individuals) coming from the database SOEP and its complementary survey SOEP-CoV. Each dot shows the yearly average life satisfaction of the workers who started working from home in 2020 and continued to do so in 2021, and of those who never did not. 95% confidence intervals are reported.

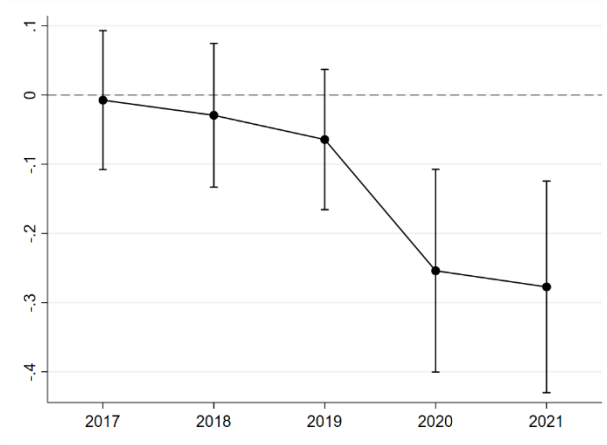
Figure 3: Parametric Parallel Trends – Difference-in-Differences Estimates per Year



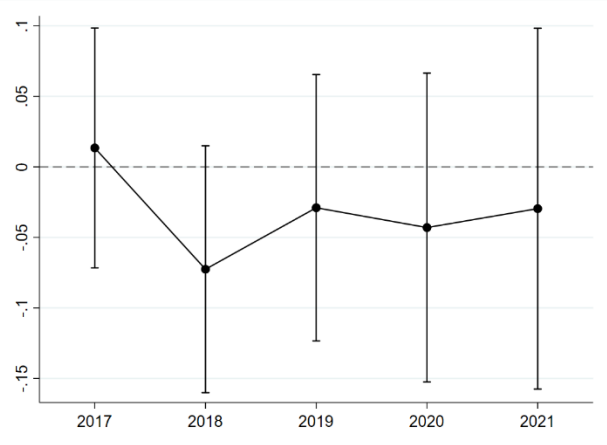
Notes: This figure refers to our estimation sample of 12,633 observations (2,188 individuals) coming from the database SOEP and its complementary survey SOEP-CoV.. Each dot shows the yearly effect of belonging to the treatment group using the difference between the treated and control group in 2016 as the reference period. The treatment group is made of all the workers that started working from home in 2020 and continued to do so in 2021, and the control group is made of those who never did telework . 95% confidence intervals are reported.

Figure 4: Parametric Parallel Trends – Difference-in-Differences Estimates per Year (Reference Period: 2016)

Panel A: Men



Panel B: Women



Notes: These figures refer to our estimation sample of 12,633 observations (2,188 individuals) coming from the database SOEP and its complementary survey SOEP-CoV. The estimation sample made of men only contains 4,594 observations (for 794 individuals) and the estimation made of women only contains 8,039 observations (for 1,394 individuals). Each dot shows the yearly effect of belonging to the treatment group using the difference between the treated and control group in 2016 as the reference period. The treatment group is made of all the workers that started working from home in 2020 and continued to do so in 2021, and the control group is made of those who never did telework . 95% confidence intervals are reported.

Table 1: Descriptive Statistics

	Mean	SD	Min	Max
Current Life Satisfaction	7.49	1.50	0	10
Treat	0.37		0	1
Post	0.31		0	1
Female	0.64		0	1
Age	45.93	10.14	18	66
East Germany	0.20		0	1
High Education	0.29		0	1
Partnered	0.56		0	1
Household Size	2.94	1.42	1	10
Total conditions – pre-COVID-19	0.78	0.92	0	6
Net Monthly HH Income (log)	8.09	0.53	5.08	11.76
Blue Collar	0.14		0	1
Employed	0.94		0	1
Sq. Metres per head	43.61	23.54	6.25	282

Notes: This table refers to our estimation sample of 12,633 observations (2,188 individuals) coming from the database SOEP and its complementary survey SOEP-CoV. "Treat" and "Post" are respectively a time-invariant dummy variable for all the workers that started working from home in 2020, and the latter is a dummy variable equal to one in 2020 and 2021.

Table 2: Working from home during the pandemic – Pooled and panel results

	Life satisfaction (std)			
	(1)	(2)	(3)	(4)
Working from home	-0.141***	-0.152***	-0.087**	-0.087**
	(0.036)	(0.037)	(0.044)	(0.043)
Observations	12633	12633	12633	12633
Controls	No	Yes	Yes	Yes
Controls interacted with Post dummy	No	No	Yes	Yes
Individual FE	No	No	No	Yes

Notes: These are linear regressions and our estimation sample of 12,633 observations (2,188 individuals) comes from the database SOEP and its complementary survey SOEP-CoV. Standard errors in parentheses are clustered at the individual level. All regressions include month-of-interview*year fixed effects and the Treat and Post dummies. "Working from home" is the interaction between the "Treat" and "Post" dummies. The former is a time-invariant variable for all the workers that started working from home in 2020, and the latter is equal to one in 2020 and 2021. The interaction "Working from home" captures the effect of teleworking during the pandemic. The controls are age categories, gender, dummies for living in East Germany, post-Secondary education, and a partner, household size, the number of health conditions pre-COVID-19, equivalised net monthly household income (in logs), dummies for being employed and a blue-collar worker, and square metres per head. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3: Working from home during the pandemic by gender – Pooled and panel results

	Life satisfaction (std)							
	Men				Women			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Working from home	-0.214***	-0.224***	-0.207***	-0.235***	-0.111**	-0.124***	-0.023	-0.009
	(0.058)	(0.058)	(0.076)	(0.074)	(0.048)	(0.048)	(0.055)	(0.053)
Observations	4594	4594	4594	4594	8039	8039	8039	8039
Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Controls*Post dummy	No	No	Yes	Yes	No	No	Yes	Yes
Individual FE	No	No	No	Yes	No	No	No	Yes

Notes: These are linear regressions and our estimation sample of 12,633 observations (2,188 individuals) comes from the database SOEP and its complementary survey SOEP-CoV. The estimation sample made of men only contains 4,594 observations (for 794 individuals) and the estimation made of women only contains 8,039 observations (for 1,394 individuals). Standard errors in parentheses are clustered at the individual level. All regressions include month-of-interview*year fixed effects and the Treat and Post dummies. "Working from home" is the interaction between the "Treat" and "Post" dummies. The former is a time-invariant variable for all the workers that started working from home in 2020, and the latter is equal to one in 2020 and 2021. The interaction "Working from home" captures the effect of teleworking during the pandemic. The controls are age categories, gender, dummies for living in East Germany, post-Secondary education, and a partner, household size, the number of health conditions pre-COVID-19, equivalised net monthly household income (in logs), dummies for being employed and a blue-collar worker, and square metres per head. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 4: Working from home during the pandemic by gender, marriage and children – panel results

	Life satisfaction (std)							
	Men				Women			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Working from home	-0.391***		-0.260***		0.005		0.032	
	(0.114)		(0.0907		(0.077)		(0.075)	
Interacted with:								
Married	0.258**				-0.022			
	(0.123)				(0.094)			
Children below-school age			0.099				0.206*	
			(0.132)				(0.118)	
Children above-school age			0.015				-0.140	
			(0.112)				(0.096)	
Working from home in 2020		-0.401***		-0.239**		0.008		0.086
		(0.129)		(0.107)		(0.087)		(0.084)
Interacted with:								
Married		0.293**				-0.047		
		(0.139)				(0.105)		
Children below-school age				0.078				0.203
				(0.176)				(0.126)
Children above-school age				-0.096				-0.279***
				(0.122)				(0.104)
Working from home in 2021		-0.391***		-0.284**		-0.012		-0.076
		(0.135)		(0.113)		(0.099)		(0.099)
Interacted with:								
Married		0.222				0.013		
		(0.157)				(0.129)		
Children below-school age				0.078				0.245
				(0.176)				(0.180)
Children above-school age				0.062				0.074
				(0.148)				(0.135)
Observations	4594	4594	4594	4594	8039	8039	8039	8039

Notes: These are linear regressions and our estimation sample of 12,633 observations (2,188 individuals) comes from the database SOEP and its complementary survey SOEP-CoV. The estimation sample made of men only contains 4,594 observations (for 794 individuals) and the estimation made of women only contains 8,039 observations (for 1,394 individuals). Standard errors in parentheses are clustered at the individual level. All regressions include month-of-interview*year fixed effects and the Treat and Post dummies. "Working from home" is the interaction between the "Treat" and "Post" dummies. The former is a time-invariant variable for all the workers that started working from home in 2020, and the latter is equal to one in 2020 and 2021. The interaction "Working from home" captures the effect of teleworking during the pandemic. The controls are age categories, gender, dummies for living in East Germany, post-Secondary education, and a partner, household size, the number of health conditions pre-COVID-19, equivalised net monthly household income (in logs), dummies for being employed and a blue-collar worker, and square metres per head. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Online Appendix

Table A1: Working from home during the pandemic – including those who reported a change in their teleworking status between 2020 and 2021

	Life satisfaction (std)			
	(1)	(2)	(3)	(4)
Working from home	-0.141***	-0.146***	-0.098**	-0.101**
	(0.036)	(0.036)	(0.042)	(0.041)
Observations	13501	13501	13501	13501
Controls	No	Yes	Yes	Yes
Controls interacted with Post dummy	No	No	Yes	Yes
Individual FE	No	No	No	Yes

Notes: These are linear regressions and our estimation sample of 13,501 observations (2,304 individuals) comes from the database SOEP and its complementary survey SOEP-CoV. Standard errors in parentheses are clustered at the individual level. All regressions include month-of-interview*year fixed effects and the Treat and Post dummies. "Working from home" is the interaction between the "Treat" and "Post" dummies. The former is a variable for all the workers that reported working from home at least once in either 2020 or 2021, and the latter is equal to one in 2020 and 2021. The interaction "Working from home" captures the effect of teleworking during the pandemic. The controls are age categories, gender, dummies for living in East Germany, post-Secondary education, and a partner, household size, the number of health conditions pre-COVID-19, equivalised net monthly household income (in logs), dummies for being employed and a blue-collar worker, and square metres per head. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A2: Working from home during the pandemic – using the 2016-2021 balanced sample

	Life satisfaction (std)			
	(1)	(2)	(3)	(4)
Working from home	-0.194***	-0.191***	-0.127***	-0.114**
	(0.040)	(0.040)	(0.047)	(0.046)
Observations	10158	10158	10158	10158
Controls	No	Yes	Yes	Yes
Controls interacted with Post dummy	No	No	Yes	Yes
Individual FE	No	No	No	Yes

Notes: These are linear regressions and our balanced estimation sample of 10,158 observations (1,693 individuals) comes from the database SOEP and its complementary survey SOEP-CoV. Standard errors in parentheses are clustered at the individual level. All regressions include month-of-interview*year fixed effects and the Treat and Post dummies. "Working from home" is the interaction between the "Treat" and "Post" dummies. The former is a time-invariant variable for all the workers that started working from home in 2020, and the latter is equal to one in 2020 and 2021. The interaction "Working from home" captures the effect of teleworking during the pandemic. The controls are age categories, gender, dummies for living in East Germany, post-Secondary education, and a partner, household size, the number of health conditions pre-COVID-19, equivalised net monthly household income (in logs), dummies for being employed and a blue-collar worker, and square metres per head. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A3: Working from home during the pandemic – Full results from Table 2

	Life satisfaction (std)			
	(1)	(2)	(3)	(4)
Working from home	-0.141***	-0.152***	-0.087**	-0.087**
	(0.036)	(0.037)	(0.044)	(0.043)
Treat	0.178***	0.046	0.027	
	(0.034)	(0.036)	(0.036)	
Post	-0.110***	-0.140***	0.829**	1.187***
	(0.037)	(0.029)	(0.412)	(0.383)
Female		-0.000	0.039	
		(0.030)	(0.033)	
Age category [ref category: 18-29]				
30-39		-0.177***	-0.235***	-0.102
		(0.056)	(0.058)	(0.070)
40-49		-0.227***	-0.287***	-0.134
		(0.057)	(0.059)	(0.086)
50-59		-0.240***	-0.337***	-0.109
		(0.058)	(0.061)	(0.095)
60+		-0.161**	-0.276***	-0.252**
		(0.074)	(0.086)	(0.112)
East Germany		0.020	0.023	0.056
		(0.036)	(0.039)	(0.205)
Post-Secondary Education		-0.006	0.010	
		(0.034)	(0.037)	
Married		0.154***	0.215***	0.052
		(0.035)	(0.039)	(0.071)
Family Size		-0.016	-0.038**	-0.058**
		(0.015)	(0.017)	(0.027)
Total health conditions pre-COVID-19		-0.158***	-0.178***	
		(0.018)	(0.020)	
Net Monthly HH Income (log)		0.282***	0.332***	0.235***
		(0.036)	(0.040)	(0.044)
Blue collar		0.022	0.037	0.012
		(0.041)	(0.046)	(0.041)
Employed		0.138**	0.144**	0.131**
		(0.059)	(0.066)	(0.052)
Sq. Metres per head (std)		0.007	0.001	-0.046*
		(0.017)	(0.019)	(0.027)
Controls interacted with Post:				
Female			-0.136***	-0.135***
			(0.038)	(0.037)
Age category [ref category: 18-29]				
30-39			0.242***	0.257***

			(0.100)	(0.096)
40-49			0.251***	0.302***
			(0.097)	(0.094)
50-59			0.362***	0.365***
			(0.097)	(0.095)
60+			0.361***	0.398***
			(0.118)	(0.111)
East Germany			-0.007	-0.011
			(0.045)	(0.044)
Post-Secondary Education			-0.058	-0.036
			(0.043)	(0.042)
Married			-0.187***	-0.184***
			(0.046)	(0.047)
Family Size			0.062***	0.057***
			(0.020)	(0.020)
Total health conditions pre-COVID			0.069***	0.075***
			(0.023)	(0.022)
Net Monthly HH Income (log)			-0.156***	-0.192***
			(0.053)	(0.049)
Blue collar			-0.052	-0.038
			(0.064)	(0.060)
Employed			-0.048	-0.168
			(0.126)	(0.113)
Sq. Metres per head (std)			0.012	0.040*
			(0.021)	(0.021)
Observations	12633	12633	12633	12633
Individual FE	No	No	No	Yes

Notes: These are linear regressions. Standard errors in parentheses are clustered at the individual level. All regressions include month-of-interview*year fixed effects $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A4: The Probability of Working from Home in 2020

	P(Treatment group)
Female	-0.113***
	(0.020)
Age category [ref category: 18-29]	
30-39	0.046
	(0.042)
40-49	0.018
	(0.040)
50-59	-0.042
	(0.040)
60+	-0.058
	(0.049)
East Germany	-0.031
	(0.023)
Post-Secondary Education	0.269***
	(0.021)
Married	-0.054*
	(0.024)
Family Size	-0.022*
	(0.010)
Total health conditions pre-COVID-19	-0.002
	(0.010)
Equivalised Income (in log)	0.230***
	(0.024)
Blue collar	-0.279***
	(0.028)
Employed	0.060
	(0.046)
Sq. Metres per head (std)	0.009
	(0.017)
Observations	2188

Notes: This is a linear-probability model. All control variables are measured in 2019. Standard errors are in parentheses. The regression includes month-of-interview fixed-effects. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.