# The Changing Nature of Work: What can we learn from Time Use Diaries?

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## Abstract

The shift to remote work has reshaped the nature of work, persisting well beyond the immediate effects of the COVID-19 pandemic. While much research has focused on its short-term consequences, less is known about why workers continue to prefer remote arrangements and how this impacts time use, productivity, and well-being. Using data from the Centre for Time Use Research and the UK's Office for National Statistics (ONS) spanning 2016–2024, this study examines changes in total working time and time spent working from home, the emergence of a new equilibrium in work patterns, and the factors driving the sustained prevalence of remote work. Our findings reveal that remote workers generally allocate commuting time savings to additional work rather than leisure and report lower enjoyment across daily activities compared to office workers. Additionally, perceived productivity in remote settings is slightly lower, suggesting that preferences for home-based work are largely driven by commuting avoidance rather than efficiency gains in work. These insights contribute to ongoing debates on the future of work, highlighting implications for employers designing hybrid policies and policymakers addressing commuting inefficiencies and work-related costs.

**Keywords**: working from home, instantaneous enjoyment, productivity, time use diaries.

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## 1. Introduction

The rise of remote work has fundamentally reshaped labour markets and daily life, particularly in the wake of the COVID-19 pandemic. What initially emerged as a temporary response to global health restrictions has now solidified into a long-term shift in how work is structured for employees and employers (Aksoy et al, 2022; Hansen et al, 2023; Buckman et al, 2025). This transformation has significant implications for workers, employers, and policymakers, as it affects productivity, commuting behaviours, work-life balance, and economic efficiency (see Lee, 2023, for a review). While remote work has been extensively discussed in relation to short-term pandemic effects, its sustained presence and the motivations behind workers' preferences warrant further investigation.

A major area of interest is understanding why workers continue to choose remote work, even in cases where it may involve trade-offs such as reduced wages (Barrero et al, 2021; Nagler et al, 2022) and wage growth (Barrero et al, 2022). The ability to work from home is often associated with greater flexibility, reduced commuting time, and potential cost savings (Aksoy et al, 2023). However, the broader impact of remote work on time use, well-being, and productivity a few years after the pandemic remains an open question. Existing studies have explored some aspects of these issues for the US and UK, in particular up to one to two years after the social restrictions imposed to limit the COVID-19 contagion (Restrepo and Zeballos, 2022; Pabilonia and Vernon, 2022; Giménez-Nadal et al, 2024; Cowan, 2024), but new data allow for a deeper understanding of the underlying motivations that drive workers to prefer remote arrangements in the new work landscape.

This study examines three key research questions. First, we ask how time in work has changed between 2016, the time of the COVID-19 pandemic, and the three years after the pandemic when social restrictions were lifted and as the “new normal” of increased remote working settled. Specifically, we investigate how total time in work and time spent working from home has changed over time between 2016 and 2024. Using information on time-use, co-presence, location and digital device usage we characterise the extent and nature of the shift to remote working. Second, we study why remote working remains more prevalent than before the pandemic. We ask whether remote workers are more likely to multitask, spend more time on activities they value more, and enjoy their time in work and in other activities more than their counterparts in the workplace. Third, we assess whether workers believe they are more productive in remote settings compared to office work environments.

To address these questions, we analyse two complementary surveys of time use collected by the Centre for Time Use Research and the UK’s Office for National Statistics (ONS) between 2016 and 2024,

offering a comprehensive view of evolving work behaviours. These datasets allow us to compare work patterns across different time periods and examine how individuals allocate time to various activities when working remotely versus in the workplace, and their enjoyment. We extend the most recent wave of the ONS collection to elicit information on workers' self-perceived productivity during detailed work episodes and under different working arrangements. By leveraging these extensive datasets, we provide empirical insights into the factors that contribute to workers' decisions to continue working remotely and draw attention to potential implications for policymakers and employers.

Our findings reveal several important trends. First, remote work has remained a stable feature of the labour market beyond the immediate effects of the pandemic. Many workers continue to report time in remote working three years after the relaxation of social restrictions. The mean number of minutes in remote working reported across time use diaries has remained stable since November 2022. This result contributes to the literature on measuring working from home (Barrero et al, 2024; Buckman et al, 2025; Kmetz et al, 2025) showing that time use data can be used to establish trends in work patterns while also providing detailed information on co-presence, location and device usage.

Second, we find that remote workers use the time saved from commuting to do more work and generally report lower enjoyment across most daily activities, including paid work, compared to their counterparts in an office. These new findings for the UK, based on time use data, contribute to the literature on time use and wellbeing of remote workers by challenging the assumption that remote work inherently leads to more multitasking, leisure or unpaid work (Adams et al, 2023; Aksoy et al, 2023b; Cowan, 2024; Gimenez Nadal et al, 2024), and that it enhances wellbeing (Denzer and Grunau, 2024).

Third, workers' perceived productivity is marginally lower with remote work, suggesting that the choice to work from home may not be primarily driven by efficiency gains in work, as sometimes suggested. These results point to the avoidance of commuting and its associated financial and time costs as playing a central role in remote work preferences and bring new evidence based on novel data to the literature on workers' incentives for remote work (Bloom et al, 2023; Ramani et al, 2023; Fenizia and Kirchmaier, 2025).

These insights contribute to the ongoing literature about the future of work by offering a data-driven perspective on how workers allocate time and what motivates their choices. The study highlights the need for employers to carefully evaluate the benefits and challenges of remote work policies, particularly when designing hybrid work models. For policymakers, our findings emphasise the

importance of addressing commuting inefficiencies and work-related expenses, which appear to be important drivers in the decision to work from home.

The rest of the paper is organised as follows. Section 2 sets out the UK context. Section 3 presents the data. Our analytical approach is illustrated in Section 4 and main results shown in Section 5. Our findings and conclusions are discussed in Section 6.

## 2. UK Context

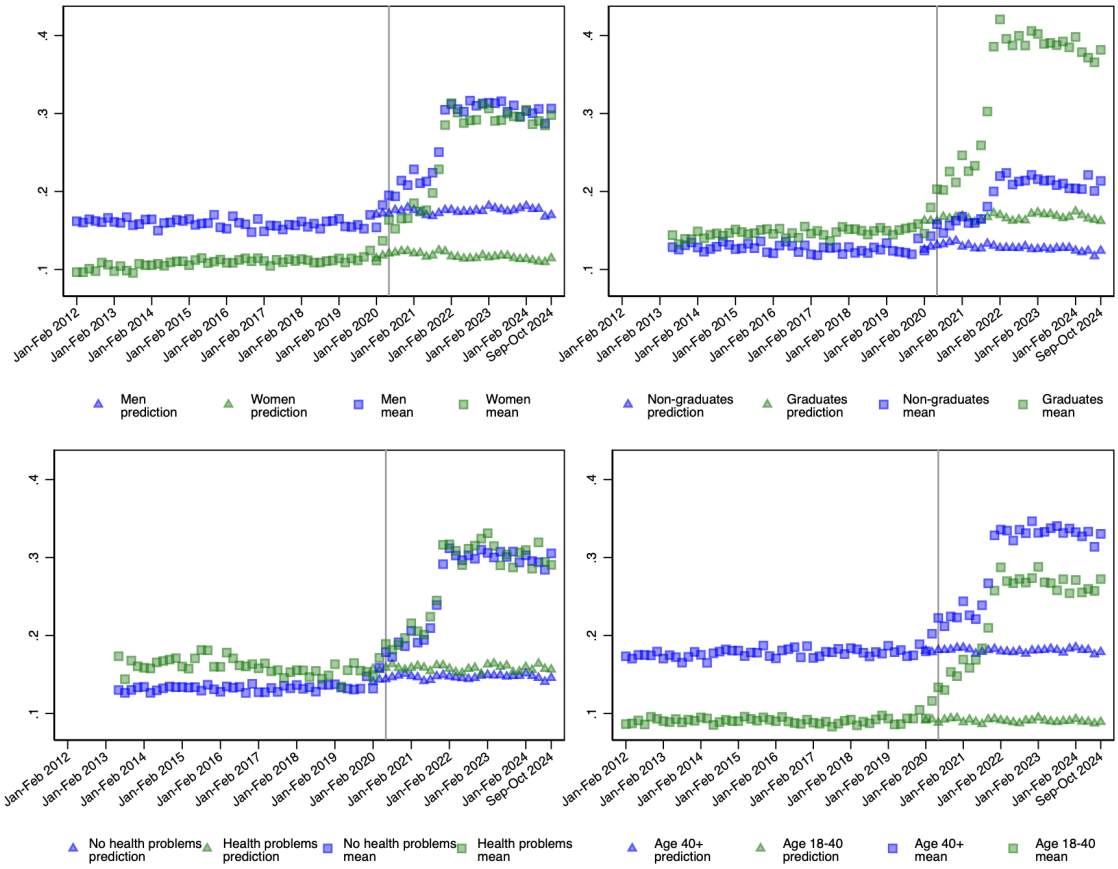
As it did in many countries, the COVID-19 pandemic triggered an unprecedented disruption to the UK labour market, reshaping working patterns through strict public health measures and government intervention. The UK experienced three national 'strict' lockdowns - March to July 2020, November 2020, and January to March 2021 - that forced many workers to operate remotely while the Coronavirus Job Retention Scheme (furlough) sustained employment for those unable to work from home. These measures, while essential in mitigating economic collapse and reducing contagion, introduced profound shifts in work organisation, the effects of which continue to shape the post-pandemic landscape of work arrangements.

The most significant shift was the widespread adoption of remote working. Figure 1 shows the proportion of respondents in work who reported working mainly or partly from home in the Annual Population Survey (APS), broken down by gender, highest qualification, health status, and age. The proportion of all workers working mainly or partly from home rose from 14% in 2019 to 30% in 2022 and remained stable at that level after that.[1] This reported increase is compared to the predicted proportion based on probit estimates for the period 2012–2019. Notably, this shift led to a gender convergence in remote work, with women, who were less likely to work from home before 2020, experiencing a sharper rise compared to men (top left panel). The shift to remote work was primarily driven by graduate workers (top right panel) rather than older workers (bottom right panel) or those with pre-existing health conditions (bottom left panel). The likelihood of transitioning to remote work was higher for those with a college degree, as observed by Barrero et al. (2023) for the US and for

[1] As reported in Aksoy et al (2022), the UK was one of the countries with the highest number of paid, planned and desired full days working from home at the end of 2021 and beginning of 2022.

other countries, reflecting occupational differences between knowledge-based roles and jobs requiring physical presence.

**Figure 1: Proportion working mainly or partly from home and predictions – by gender, college degree, health status and age**




*Notes*. The figure shows the bi-monthly proportion (square markers) of respondents working mainly or partly from home (WFH) and the prediction out of sample (triangle markers) for the period January 2020 – September/October 2024 based on APS data. The binary variable WFH is one when respondents report working from their own home, from the same grounds or building or different places with home as a base. Predicted proportion of WFH for the years 2020 - 2024 was obtained by first estimating, separately by sub-sample, a probit for the reported working from home on age, highest qualification, economic activity, occupations, region of residence, marital or cohabiting status, a time trend, a squared and cubic time trend and month dummies for the years 2012-2019 and then averaging the out-of sample individual predictions by sub-sample and time. Predictions and means are obtained using the individual weights provided in the APS.

Figures A1 and A2 in Appendix A show that the increase in remote work was largely concentrated among workers in professional, managerial, associate professional, and administrative roles (SOC codes 1 to 5). It was also more prevalent in London and South East England, where these jobs are more likely to be located. Transport data from major cities further corroborate the shift to remote work, with a decline in weekday commuters - particularly train, underground, and, to a lesser extent, bus

passengers - between 2019 and 2023 (Figures A4 and A5, Appendix A). Moreover, comparing observed patterns in the prevalence of working from home with pre-pandemic predictions confirms that this shift was a structural break rather than a mere acceleration of existing trends.[2]

While conventional survey data covering labour market topics provide valuable insights into shifting work patterns, a deeper understanding requires examining how individuals allocated their time before, during, and after the pandemic. Surveys capture broad trends in remote work adoption and working hours but fail to reveal the nuances of how work was structured within daily routines or the extent to which professional, domestic, and leisure activities overlapped or changed in their time allocation and their enjoyment - factors that could have implications for productivity, worker well-being and their preferences. To address this gap, we turn to time-use data, which offer granular insights into how work is integrated with other activities. Continuous time-use diaries are widely regarded as the best tools for tracking behavioural changes, as they minimize recall bias and are less influenced by social desirability bias compared to survey questions (Gershuny et al., 2019; Sullivan et al., 2021). Our approach allows us to assess not only changes in total working hours and time allocated to other activities but also shifts in work location, co-presence of family members and multitasking. New time use data are also a tool to capture the enjoyment of workers for different activities and their self-reported productivity for each spell of work.

## 3. Time Use Data

We use two sets of nationally representative data from the United Kingdom, collected with time use diary surveys prior to, during and after the COVID-19 pandemic. The first set, collected with the Click-and-Drag Diary Instrument (CaDDI, Gershuny et al, 2022), was gathered in 2016 and then again seven times from May 2020. Due to the absence of real-time representative data, researchers have relied on commercial survey panels to assess the impacts of the pandemic, given their ability to collect rapid responses (e.g., Adams-Prassl et al., 2020; Andrew et al., 2020). The respondents for CaDDI were drawn from the Dynata agency's large market research panel, with participants selected based on quotas for age, gender, socioeconomic status, and region to ensure representativeness relative to the

[2] Figure A3 in Appendix A shows the proportion of APS respondents who report working mainly from their own home. The gaps in this proportion across socio-demographic groups are small or non-existent before 2019. After the COVID-19 pandemic this proportion shifted from .5 to .20, mostly driven by graduate workers.

UK population in 2016.[3] Respondents voluntarily participated in surveys conducted across seven cross-sectional waves: May and October 2016 (to control for seasonal effects); May–June 2020, during the UK's first lockdown; August 2020, a period of relaxed restrictions; November 2020 and January 2021, corresponding to the second and third national lockdowns; August–September 2021, when most restrictions had been lifted, and March 2023. By tracking individuals' daily activities over time, CaDDI provides valuable insights into shifts in work patterns and location of work and co-presence. While this survey includes a relatively small number of diaries, it offers a unique perspective on these changes by capturing detailed information on time use across the pre-pandemic period, the height of lockdowns, and the post-pandemic recovery.

Respondents were asked to fill in online time-use diaries, which provide detailed records of participants' daily activities, their locations, co-presence, instantaneous enjoyment and device use, over a 24-hour period, for at least two days: a weekday and a weekend day.[4] Activities were collected using a predefined list of 36 activity codes.[5] A picture of the online tool used to collect time use diaries is provided in figure B1, Appendix B. CaDDI time use diaries are then integrated with an individual-level survey that collects socio-demographic and economic characteristics of the respondents as well as information on satisfaction on different aspects of life.

The final sample of CaDDI data used in the descriptive analysis includes 3,731 individuals in employment at the time of the data collection, with a total of 4297 completed diary entries recorded during weekdays. Appendix B (Table B1) presents the main demographic and socioeconomic characteristics of the sample of respondents in employment. A comparison of sample characteristics across waves indicates that the respondent pool is balanced in terms of gender, with half identifying as female. Between 30% to 35% are not in a partnership, with the exception of the last wave of data, where the proportion of singles was lower (23%). The proportion of the respondents that resides with at least one child under 16 years old varies between 39% to 60% across waves. Around half of respondents hold a post-secondary qualification. Respondents in 2016, September 2021 and March 2023 were, on average, older than those in other waves. Additionally, comparing the 2016 CaDDI

[3] The seventh wave of time use data was collected by drawing respondents from the NatCen Opinion Panel and with a slightly different tool called Extended Light Digital Diary Instrument (ELiDDI, Gershuny et al, 2025).
[4] Respondents in the CaDDI time use survey are asked to report *where* (home, office or other) and *with whom* (alone, partner, child under 12 from own household, young person 12-16 from own household, other person from own household, child/young person age <16 from other household, other person not from own household) they were over the 24-hours diary, as well as their level of enjoyment (between 1, didn't enjoy at all, and 7, enjoyed very much) and electronic devices used (computer, screen, tablet and phone).
[5] Listed in table XX, Appendix XX. For the seventh wave of CaDDI the list was extended to include over 100 activities (listed in table XX, Appendix XX).

sample with the UK's 2016 APS reveals that CaDDI respondents in employment tend to be more likely to hold post-secondary qualifications, but otherwise exhibit similar demographic characteristics (Appendix B, Table B2). To account for these differences, the analysis applies weights to align the joint distribution of education, age, and gender with that of the working age population in the APS 2016.

In this study we focus on multiple measures of time in paid work recorded over the seven waves of the CaDDI data: total time in paid work, time in work at home, time in work with co-presence of household members and time in secondary activities recorded while the main activity is paid work. Additional measures of time considered are total time in work while using computers and smartphones and by location. Descriptive statistics for these measures are presented in table B3 Appendix B. Table B4 instead compares the mean of diary time spent in work, work from home and work with the co-presence of household members in CaDDI 2016 and in the UK Time Use Survey (UKTUS) 2014–15, a nationally representative dataset on time allocation. Both datasets show similar means, with the primary difference being a higher reported allocation of time at home while working in the CaDDI data. This difference may be driven by the distinct design and data collection method of the UKTUS survey that also presents a bigger proportion of missing time compared to CaDDI data.

The second dataset utilised in this study, the OTUS data, was developed by the Office for National Statistics (ONS). OTUS was designed to enhance the measurement of unpaid household production and caregiving, offering a more comprehensive understanding of their economic contributions. The survey collects nationally representative data on UK adults aged 18 and over, drawing respondents from the NatCen Opinion Panel. Data collection took place across eight waves between 2020 and 2024. The first three waves were conducted in March–April 2020 during the first COVID-19 lockdown, September–October 2020 as most restrictions were lifted, and March 2021 amid the vaccine rollout. From wave 3 onward, time-use data collection followed a more regular pattern, with subsequent waves in March 2022, November 2022, March 2023, September–October 2023 and March 2024. The most recent wave was collected in March 2025 however it is not included in this study. Participants completed two diary days—one on a weekday and one on a weekend. Activities were recorded using a predefined list of 72 activity codes. Primary activities were reported in 10-minute intervals, while up to five secondary activities were captured in five-minute intervals. Co-presence and location for each activity are not recorded, however respondents are asked to select different activity codes for work from home and work from the workplace. A follow up question appearing in a pop-up window after each activity collects information about instantaneous enjoyment over a 24-hours period. A picture of

the online instrument used by the ONS to collect time use diaries is provided in figure B2, Appendix B. To enable us to better understand the relationship between remote work and productivity, we introduced in March 2024 another, and *experimental*, follow-up question on self-perceived productivity that was asked every time respondents selected a spell of paid work. The question asked was "During this time, roughly how productive were you?" and the possible choices were "1 = 100% productive; 2 = 90-99% productive; 3 = 80-89% productive; 4 = 70-79% productive; 5 = Less than 70% productive" as shown in Figure B3, Appendix B.

The final sample of OTUS data used in this analysis includes 8,406 weekday diaries collected between April 2020 and March 2024. Appendix C (Table C1) presents the main demographic and socioeconomic characteristics of the sample. A comparison across waves indicates that the respondent pool remains balanced; however, women and individuals with a college degree are overrepresented compared to national averages. To account for these differences, we apply sample weights provided by the ONS.

We use OTUS data to construct measures of time spent working, allowing us to examine how work patterns evolved during the pandemic, across lockdown periods, and in the post-pandemic "new normal." Specifically, we focus on total working time, time spent working from home, enjoyment of work, and engagement in secondary activities while working. Additionally, for March 2024, we are able to consider, alongside the enjoyment of work episodes, contemporaneous self-perceived productivity and its relationship with remote work. Table C2 in Appendix C provides descriptive statistics for time-use measures from OTUS diaries of employed respondents. Lastly, Appendix C (Figures C1 and C2) presents the distributions of self-reported productivity and work enjoyment for the last wave of OTUS data during weekdays.

## 4. Analytical approach

To study the changing nature of work arising with the shift to remote work we first consider how work patterns evolved during and after the COVID-19 pandemic, with a particular focus on the implications of the widespread shift to remote working. Second, we investigate how remote working is associated with patterns of time use across different activities, instantaneous enjoyment and self-reported productivity. Using CaDDI data, we analyse changes in total working time, work location, co-presence and device use between 2016 and subsequent periods including periods of national lockdowns, softer

social restrictions and two post-pandemic times. To assess both the immediate impact of COVID-19 policy responses and their lasting effects after social restrictions were lifted, we employ an event-study design comparing time use patterns between our 2016 baseline and various pandemic phases characterised by different levels of social restrictions in the United Kingdom. Our event-study approach is formalised in the following specification:

$$Time_i = \alpha_0 + \delta W_i + \alpha_1^M May20_i + \alpha_2^M Aug20_i + \alpha_3^M Nov20_i + \alpha_4^M Jan21_i + \alpha_5^M Sep21_i + \\ + \alpha_1^W May20_i * W_i + \alpha_2^W Aug20_i * W_i + \alpha_3^W Nov20_i * W_i + \alpha_4^W Jan21_i * W_i + \\ + \alpha_5^W Sep21_i * W_i + \alpha_6^W Mar23_i * W_i + X_i\boldsymbol{\gamma} + \varepsilon_i \quad (1)$$

Where the dependent variable $Time_i$ represents the reported measures of time for individual *i* and $May20_i, Aug20_i, Nov20_i, Jan21_i$ and $Mar23_i$ are binary indicators for each period of the pandemic covered by our data. $X_i$ includes economic and sociodemographic characteristics and indicators for region of residence. $W_i$ is a dummy taking value 1 if the respondent is a woman and 0 otherwise. Finally, $\varepsilon_i$ is an idiosyncratic error term.

Our coefficients of interest are $\alpha_k^g$ (where $k = 0,..,5$ and $g = M, W$) as they capture changes in time use as a response to the pandemic and beyond. We complement this analysis with OTUS time use diary data to examine work pattern changes between the pandemic period (April 2020 through March 2022, spanning the first through third lockdowns) and the post-pandemic phase. Using November 2022 as our baseline, we apply an event-study specification analogous to the one presented in equation 1 to compare preceding and subsequent periods.

In addition, we use OTUS data to investigate instantaneous enjoyment for different groups of activities (while considering working from the workplace and working from home as distinct types of activities) by estimating the following equation while controlling for socio-economic characteristics:

$$Enj_{ij} = \beta_0 + \beta_1 W + \beta_2^M Leisure_{ij} + \beta_3^M Unpaid\ Work_{ij} + \beta_4^M Travel_{ij} + \\ + \beta_5^M Work\ from\ office_{ij} + \beta_6^M Work\ from\ home_{ij} + \beta_2^F Leisure_{ij} + \\ + \beta_3^F Unpaid\ Work_{ij} + \beta_4^F Travel_{ij} + \beta_5^F Work\ from\ office_{ij} + \beta_6^F Work\ from\ home_i + X_i\eta + \\ \gamma T_{ij} + \varepsilon_{ij} \quad (2)$$

The dependent variable $Enj_{ij}$ is the reported instantaneous enjoyment by individual *i* for episode *j*. The binary indicators $Leisure_{ij}, Unpaid\ Work_{ij}, Travel_{ij}, Work\ away\ from\ home_{ij}$ and

$Work\ from\ home_{ij}$ *re*present five main groups of activities where the baseline is *Personal Care*; $T_{ij}$ is the total time of the episode and $X_i$ are socio-economic characteristics.[6] Here our coefficients of interest are $\beta_k^g$ (where $k = 1,..5$ and $g = M, W$) as they reflect differences in enjoyment for different activities compared to personal care, that is a group of activities reported by everyone in the samples. The aim of this analysis is to capture whether respondents in the surveys express a clear preference for working from home over working from the office.

We employ regression analysis to examine how remote and non-remote workers allocate their time across different activities. This approach allows us to assess the relationship between work arrangements and time use while controlling for key demographic and socioeconomic factors. Finally, we focus on work episodes reported in the last wave of the OTUS data (March 2024) and estimate the empirical association between working from home and the self-perceived productivity (as well as enjoyment) by estimating the following equation:

$$Prod_{ij} = \gamma_0 + \gamma_1 W + \gamma_2^M WfH_{ij} + \gamma_2^W WfH_{ij} + X_i\boldsymbol{\delta} + \delta T_{ij} + \varepsilon_{ij} \quad (3)$$

The dependent variable $Prod_{ij}$ is the measure of self-perceived productivity collected by OTUS only for episodes of work and is defined on a five-point scale where 1 is the highest productivity and 5 is the lowest. For the analysis we revert this scale such that a positive estimate for $\gamma_2^g$ would imply that respondents perceive a higher productivity when working from home.

## 5. Results

### 5.1 Before and during the pandemic

In this section we examine how time use changed before, during, and after the COVID-19 pandemic using data from the CaDDI continuous diary study. The analysis focuses on key changes in total work time, the distribution of work across different locations - such as home, the workplace, and other places - co-presence and device use. Comparing data from different periods allows us to assess both the short-term disruptions and the long-term transformations in work and mobility habits.

[6] We identify episodes of work from home in CaDDI by using the activity code and the location reported by the respondent. In OTUS data, where respondents are not asked to report their location, there are two different activity codes for whether the respondent is in work at home or in work at the workplace.

Table 1 presents regression results showing how total time spent working and by location, changed during and after the COVID-19 pandemic. The estimates are reported separately for men and women, with the reference category representing the pre-pandemic period.

**Table 1: Changes in Time in Work by Location**

| | (1) Time in work | (2) Time in work at home | (3) Time in work at workplace | (4) Time in work in other places | (5) Time in work not at home |
|---|---|---|---|---|---|
| Constant | 351.978*** | -14.726 | 361.353*** | 5.350 | 366.704*** |
| | (22.450) | (16.315) | (22.700) | (5.340) | (22.877) |
| Women | -86.731*** | -11.378 | -75.444*** | 0.091 | -75.353*** |
| | (22.995) | (12.937) | (23.830) | (2.975) | (24.104) |
| **Panel A: Men** | | | | | |
| May 2020 | -129.896*** | 107.647*** | -236.757*** | -0.786 | -237.543*** |
| | (21.434) | (15.773) | (20.265) | (3.186) | (20.336) |
| August 2020 | -58.410*** | 134.385*** | -195.596*** | 2.801 | -192.795*** |
| | (21.806) | (17.098) | (21.413) | (3.777) | (21.574) |
| November 2020 | -53.632*** | 136.515*** | -188.752*** | -1.395 | -190.147*** |
| | (19.662) | (15.243) | (20.210) | (2.988) | (20.277) |
| January 2021 | -81.807*** | 157.076*** | -239.055*** | 0.172 | -238.883*** |
| | (21.152) | (16.909) | (20.340) | (3.362) | (20.489) |
| September 2021 | -49.251** | 85.523*** | -136.495*** | 1.721 | -134.774*** |
| | (21.143) | (16.033) | (22.092) | (3.197) | (22.177) |
| March 2023 | 23.413 | 97.400*** | -79.296*** | 5.309* | -73.987*** |
| | (18.170) | (12.889) | (20.045) | (3.212) | (20.078) |
| **Panel B: Women** | | | | | |
| May 2020 | -111.2*** | 85.77*** | -193.2*** | -3.769** | -197*** |
| | (23.31) | (16.77) | (20.89) | (1.600) | (21.17) |
| August 2020 | -15.83 | 122.5*** | -147.2*** | 8.818 | -138.4*** |
| | (23.77) | (17.76) | (21.87) | (5.552) | (22.58) |
| November 2020 | 11.00 | 163.1*** | -153.7*** | 1.564 | -152.1*** |
| | (21.79) | (16.52) | (20.96) | (4.286) | (21.53) |
| January 2021 | -19.28 | 138.2*** | -153.9*** | -3.566** | -157.5*** |
| | (22.68) | (16.78) | (21.59) | (1.611) | (21.85) |
| September 2021 | -67.64*** | 79.38*** | -144.4*** | -2.594 | -147*** |
| | (24.36) | (17.64) | (22.26) | (1.829) | (22.55) |
| March 2023 | 56.71*** | 83.57*** | -34.53* | 7.675*** | -26.86 |
| | (18.94) | (12.19) | (19.75) | (2.810) | (20.02) |
| N diaries | 4,297 | 4,297 | 4,297 | 4,297 | 4,297 |
| R-squared | 0.079 | 0.084 | 0.115 | 0.009 | 0.117 |

Notes: Data come from the 2016, May 2020, August 2020, November 2020, January 2021, September 2021, and March 2023 CaDDI time diary surveys. Observations are diaries of respondents in work interviewed in the seven waves of the CaDDI surveys. The dependent variables measure minutes spent in a day at work by location (at home and away from home). The table reports OLS estimates of changes in time allocation during and after the COVID-19 pandemic (with respect to the pre-pandemic period, i.e., 2016) while controlling for sociodemographic and economic characteristics, which include age, an indicator for whether there is a child aged 16 or under in the household, highest qualification, marital status, household income and a set of regional dummies for the following 12 regions: North East, North West, Yorkshire and the Humber, East Midlands, West Midlands, East London, South East, South West, Wales, Scotland, and Northern Ireland. Panel A reports coefficients for men while Panel B reports the coefficients for women ($\alpha_k^M + \alpha_k^W$) from Equation 1. Robust standard errors are in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1. ***.

Overall, total work time declined significantly during the pandemic. In May 2020, men worked approximately 130 minutes less than before the pandemic, while women worked about 111 minutes less. Although work time partially recovered by August 2020, it remained lower than pre-pandemic levels throughout 2020 and early 2021. By March 2023, total work time had returned to pre-pandemic levels, as the estimates were no longer significantly different from the reference period; in a continuation of an upward trend over time before the pandemic, women were working more by March 2023 than prior to the pandemic.

The most notable change was the shift toward working from home. Before the pandemic, people spent minimal time working remotely, but this changed dramatically during lockdowns. In May 2020, men worked 108 minutes more at home compared to pre-pandemic levels, and this increase reached 157 minutes by January 2021. A similar pattern was observed for women, with remote work increasing by 86 minutes in May 2020 and peaking at 163 minutes in November 2020. Although some workers returned to offices in 2021 and 2022, by March 2023, time spent working from home remained significantly higher than before the pandemic, with men and women still working around 97 and 84 minutes more from home, respectively.

As remote work increased, time spent working at the workplace declined sharply. In May 2020, men spent 237 minutes less working at their workplace compared to the pre-pandemic period, while women spent 193 minutes less. Although workplace work increased again after lockdowns, it remained lower than pre-pandemic levels even in March 2023, with men and women still working 79 and 34 minutes less at the workplace, respectively. Work in other locations did not change significantly, apart from minor fluctuations over time.

The data also reveal gender differences in work patterns. Women consistently worked fewer total minutes than men, with a baseline difference of 87 minutes. The pandemic-induced increase in remote work was similar for both genders. While men experienced a slightly larger drop in workplace work time, women had a relatively smaller decrease, possibly due to differences in occupation types or job responsibilities, and reflecting a general upward trend in work time that started before the pandemic.

Results about changes in co-presence during work time are presented in Table 2. Before the pandemic, individuals primarily worked alongside colleagues in workplaces. However, as remote work became

widespread, there was a notable increase in time spent working alone and in the presence of household members, particularly partners and children.

For men, time spent working with household members increased significantly during the early pandemic months, peaking in August 2020. Specifically, in May 2020, men spent approximately 47 more minutes working in the presence of household members compared to the pre-pandemic period, and this rose to about 76 additional minutes in August 2020. This increase was primarily driven by time spent working with partners and, to a lesser extent, children. Notably, time spent working with children increased by around 26 minutes in August 2020, reflecting the overlap between remote work and childcare responsibilities. By March 2023, although the increase in co-presence had diminished, men were still spending about 28 additional minutes working with household members compared to pre-pandemic levels, around half of which were with children.

For women, the changes followed a similar pattern. In May 2020, women spent about 46 additional minutes working alongside household members, increasing to approximately 85 minutes in January 2021; in March 2023 women were still spending 36 minutes more working in the presence of a family member compared to before the pandemic. The data indicate that similarly to men women experienced a rise in time working with children, with an increase of around 32 minutes in January 2021, falling to an additional 13 minutes in March 2023 compared to before the pandemic, and with partners. However, unlike men, women also saw a significant increase in time spent working alone during certain periods of the pandemic and after. In March 2023, men and women worked about 38 and 28 minutes more in isolation than pre-pandemic.

The pandemic also led to a substantial decline in time spent working with individuals outside the household. In May 2020, men and women spent around 156 and 159 fewer minutes, respectively, working with non-household individuals. This change narrowed over time and by March 2023, disappeared.

Table B5 in Appendix B reports an additional set of results showing how the share of time in work with computer or smartphones has changed since 2016. The main result from this table is that the share of time in work at home with these devices has increased for men mainly after the end of the COVID-19 emergency (while women only increased time with smartphones in 2023). This finding may reflect a greater effort from men to create a more stable home office environment once hybrid working became more common, but also a changing composition of remote workers.

**Table 2. Changes in Time in Work, by Co-presence**

| | (1) Time in work with household members | (2) Time in work alone | (3) Time in work with child | (4) Time in work with partner | (5) Time in work with other household members | (6) Time in work with others |
|---|---|---|---|---|---|---|
| Constant | 31.002** | 90.343*** | -15.234** | 39.912*** | 6.324 | 209.862*** |
| | (15.313) | (22.171) | (6.630) | (11.366) | (5.151) | (21.474) |
| Women | -10.466 | -62.097*** | 1.179 | -15.728** | 4.083 | -13.157 |
| | (11.978) | (19.835) | (4.364) | (7.958) | (6.389) | (23.275) |
| | | | **Panel A: Men** | | | |
| May 2020 | 46.744*** | -8.529 | 8.955 | 33.390*** | 4.399 | -156.061*** |
| | (15.118) | (19.914) | (5.593) | (11.099) | (5.226) | (18.723) |
| August 2020 | 75.698*** | 24.485 | 25.559*** | 40.751*** | 9.388 | -139.988*** |
| | (17.676) | (20.909) | (7.707) | (12.053) | (6.516) | (19.403) |
| November 2020 | 41.006*** | 36.394* | 1.626 | 34.057*** | 5.323 | -122.958*** |
| | (13.538) | (19.293) | (4.284) | (10.450) | (5.086) | (19.187) |
| January 2021 | 55.705*** | 33.427 | 14.779** | 34.396*** | 6.530 | -152.953*** |
| | (16.167) | (20.519) | (6.409) | (11.369) | (6.011) | (19.016) |
| September 2021 | 49.408*** | 20.145 | 13.845** | 21.125** | 14.437** | -108.185*** |
| | (15.901) | (20.515) | (5.831) | (10.434) | (6.511) | (20.128) |
| March 2023 | 28.112** | 37.973** | 13.086*** | 11.996 | 3.029 | -31.361 |
| | (12.290) | (17.967) | (4.570) | (8.843) | (4.637) | (19.748) |
| | | | **Panel B: Women** | | | |
| May 2020 | 45.53*** | 17.73 | 21.92*** | 29.85*** | -6.247 | -159.3*** |
| | (16.60) | (18.21) | (7.907) | (9.292) | (6.472) | (19.12) |
| August 2020 | 33.06** | 73.03*** | 11.29* | 27.01*** | -5.232 | -119*** |
| | (13.60) | (19.77) | (6.701) | (8.624) | (5.747) | (20.42) |
| November 2020 | 60.38*** | 79.51*** | 9.046* | 51.97*** | -0.628 | -123.3*** |
| | (14.14) | (18.56) | (5.353) | (9.872) | (6.271) | (19.60) |
| January 2021 | 84.89*** | 55.99*** | 31.74*** | 53.87*** | -0.718 | -138.4*** |
| | (17.72) | (18.45) | (8.338) | (10.27) | (6.945) | (19.77) |
| September 2021 | 0.304 | 48.48** | -1.355 | 10.90 | -9.237* | -118.6*** |
| | (10.45) | (20.08) | (3.922) | (7.365) | (5.308) | (20.47) |
| March 2023 | 36.39*** | 27.94* | 12.56*** | 24.59*** | -0.761 | 2.825 |
| | (10.15) | (14.57) | (3.822) | (6.257) | (5.766) | (19.02) |
| N diaries | 4,297 | 4,297 | 4,297 | 4,297 | 4,297 | 4,297 |
| R-squared | 0.079 | 0.084 | 0.115 | 0.009 | 0.117 | 0.068 |

Notes: Data come from the 2016, May 2020, August 2020, November 2020, January 2021, September 2021, and March 2023 CaDDI time diary surveys. Observations are working-age (18–69 years old) individuals interviewed in the seven waves of the CaDDI surveys. The dependent variables measure minutes spent in a day in work by co-presence. The table reports OLS estimates of changes in time allocation during and after the COVID-19 pandemic (with respect to the pre-pandemic period, i.e., 2016) while controlling for sociodemographic and economic characteristics, which include age, an indicator for whether there is a child aged 16 or under in the household, highest qualification, marital status, household income and a set of regional dummies for the following 12 regions: North East, North West, Yorkshire and the Humber, East Midlands, West Midlands, East London, South East, South West, Wales, Scotland, and Northern Ireland. Panel A reports coefficients for men while Panel B reports the coefficients for women ($\alpha_k^M + \alpha_k^W$) from Equation 1. Robust standard errors are in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1. ***.

Overall, the findings from time diaries confirm that the pandemic triggered a lasting shift in work habits, particularly the widespread adoption of remote work. While total work time eventually returned to pre-pandemic levels (or trends in the case of women), the way people worked changed significantly, spending more time at home alone or with the co-presence of household members while reducing interactions with colleagues and others outside the home. Even after the pandemic, co-presence with household members remained higher than pre-pandemic levels, reflecting the persistence of remote and hybrid work arrangements.

### 5.2 During and after the pandemic

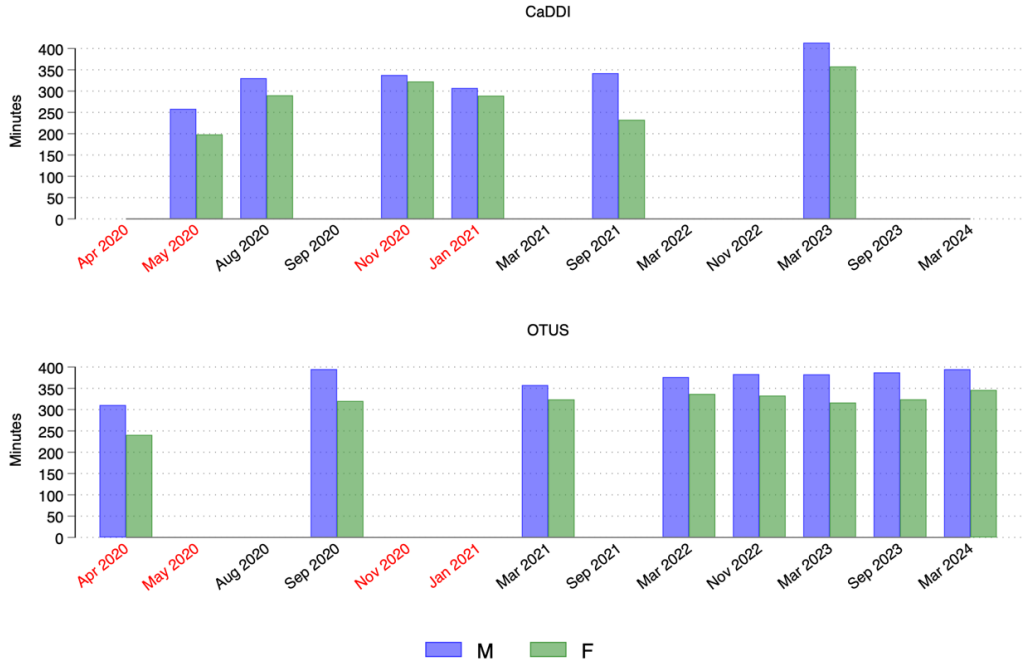
Before analysing time use at work during and in particular after the pandemic using OTUS diaries, we first compare time-use patterns between the CaDDI and OTUS datasets. This comparison provides context for the OTUS findings within the broader framework of time-use changes observed during the pandemic. As discussed in section 3, these surveys have taken different approaches to eliciting time use. By examining both datasets, we gain a more comprehensive understanding of how work patterns evolved from the pre-pandemic period to the post-pandemic era.

Figure 3, panel (a), compares total time spent working as recorded in the CaDDI and OTUS time-use diaries across different collection periods. Both datasets indicate a significant decline in total work time compared to pre-pandemic estimates, which were approximately 370 (380) minutes for men and 285 (300) minutes for women, based on earlier time-use collections available in UKTUS 2014/15 and CaDDI 2016 data, respectively. This reduction aligns with broader trends observed during the pandemic.

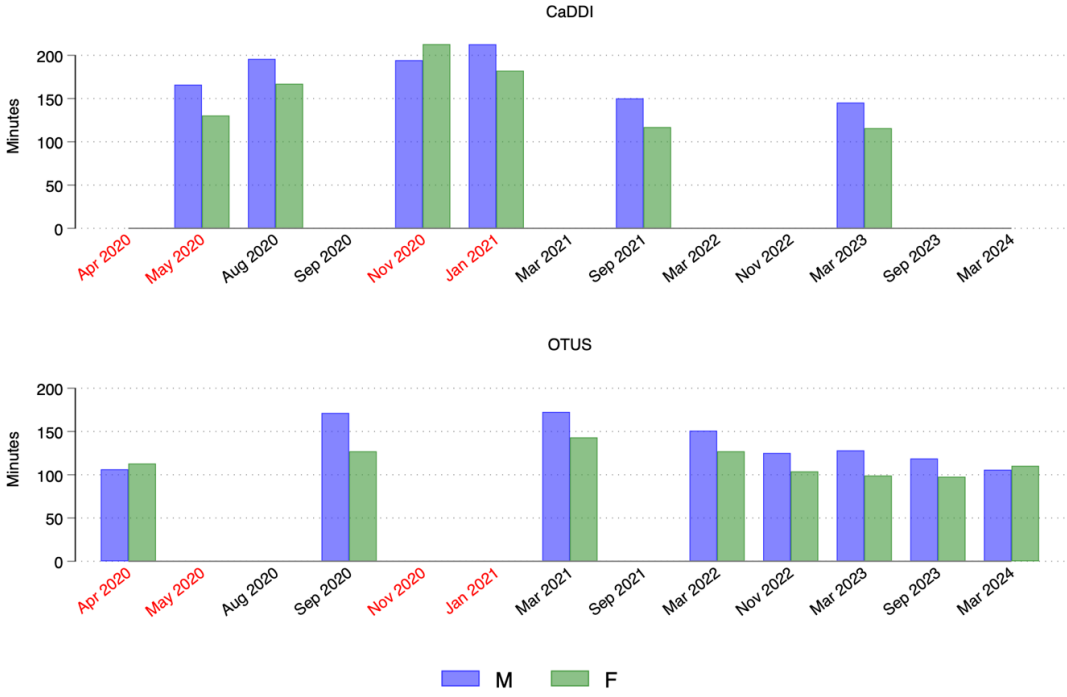
The CaDDI dataset, collected from May 2020 to January 2021, captures time use during the strict lockdown periods (dates shown in red in the figure), reflecting the immediate impact of these measures on work patterns. In contrast, the OTUS dataset includes data from the very beginning of the first lockdown, when workers were still adjusting to the new reality, as well as from September 2020 (a period without lockdowns) and March 2021 (at the tail end of the third lockdown). These differences in timing likely explain the variations observed between the two datasets during the pandemic years.

## Figure 3: Comparison CaDDI-OTUS data

### (a) Total time in work




### (b) Time in work from home

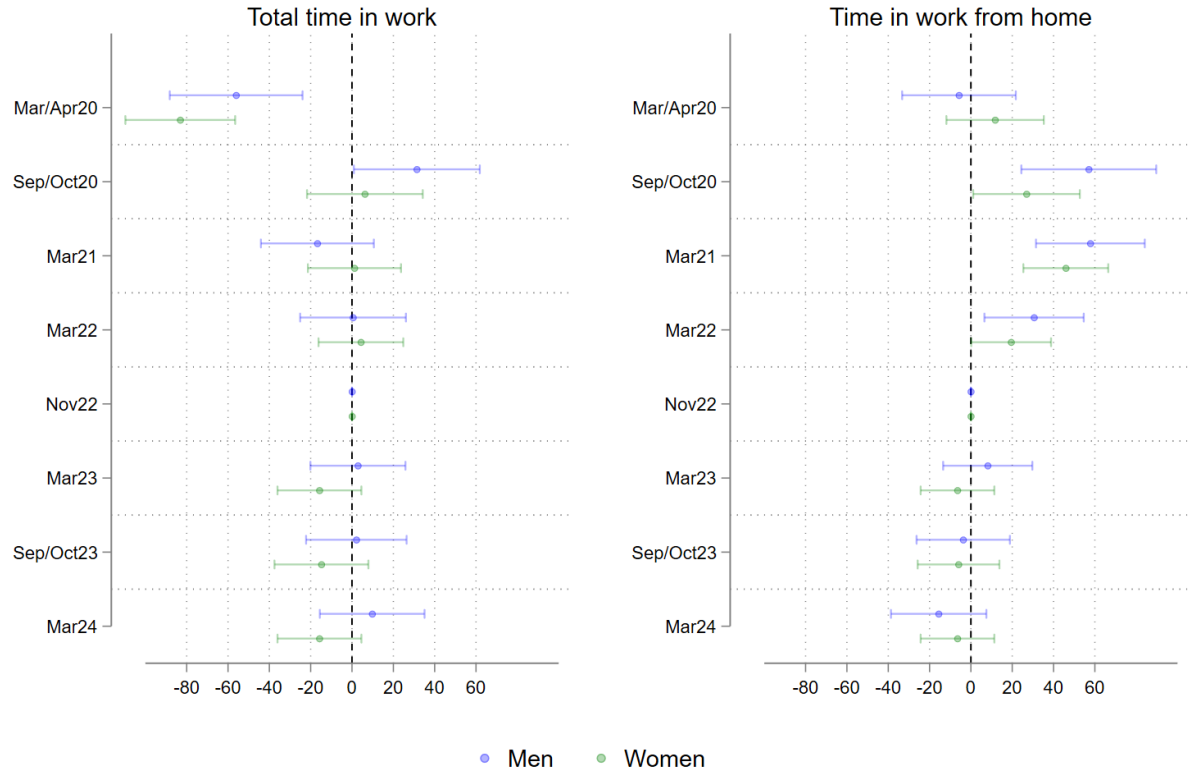



*Note*: total time in work (panel a) and time in work from home reported by male and female respondents in CaDDI and OTUS time use diaries. Dates in red highlight the survey waves that were collected during strict lockdowns implemented in the UK during the COVID-19 pandemic.

In the post-pandemic period, a key finding emerges from the CaDDI dataset in September 2021, where total work time remains notably lower than pre-pandemic levels, particularly for women. This may reflect the impact of the COVID-19 Delta variant in the UK and higher risk aversion among women (Galasso et al., 2020; Ferrin, 2021). The CaDDI dataset for March 2023 suggests work time then returned to pre-pandemic levels. This is more robustly confirmed in the OTUS data, which was collected more frequently in 2022 and 2023, and which indicate a stabilization of work time. From March 2022 onward, in the post-pandemic years, total time spent working gradually returned to levels closer to those observed before COVID-19.

Panel (b) of Figure 3 presents the time spent working from home for men and women, as recorded in the CaDDI and OTUS datasets. Both datasets reveal a significant increase in remote work compared to pre-pandemic levels, the latter of which are reported in Table B4. However, differences in the timing of data collection explain key differences between the two datasets, which together provide us with a comprehensive picture of the trend in remote work.

**Figure 4: Changes in total time in work and time in work from home**




*Notes*: Data from eight waves of OTUS time diary surveys (March 2022 to March 2024). Observations are diaries of activities reported in diaries by graduate respondents in employment during a weekday. The dependent variable is defined as the instantaneous enjoyment reported by respondents for each episode. Controls include socio-demographic characteristics of the respondents (age, marital status, household size, household income, number of children by age group) and a set of region dummies. Baseline Nov 2022.

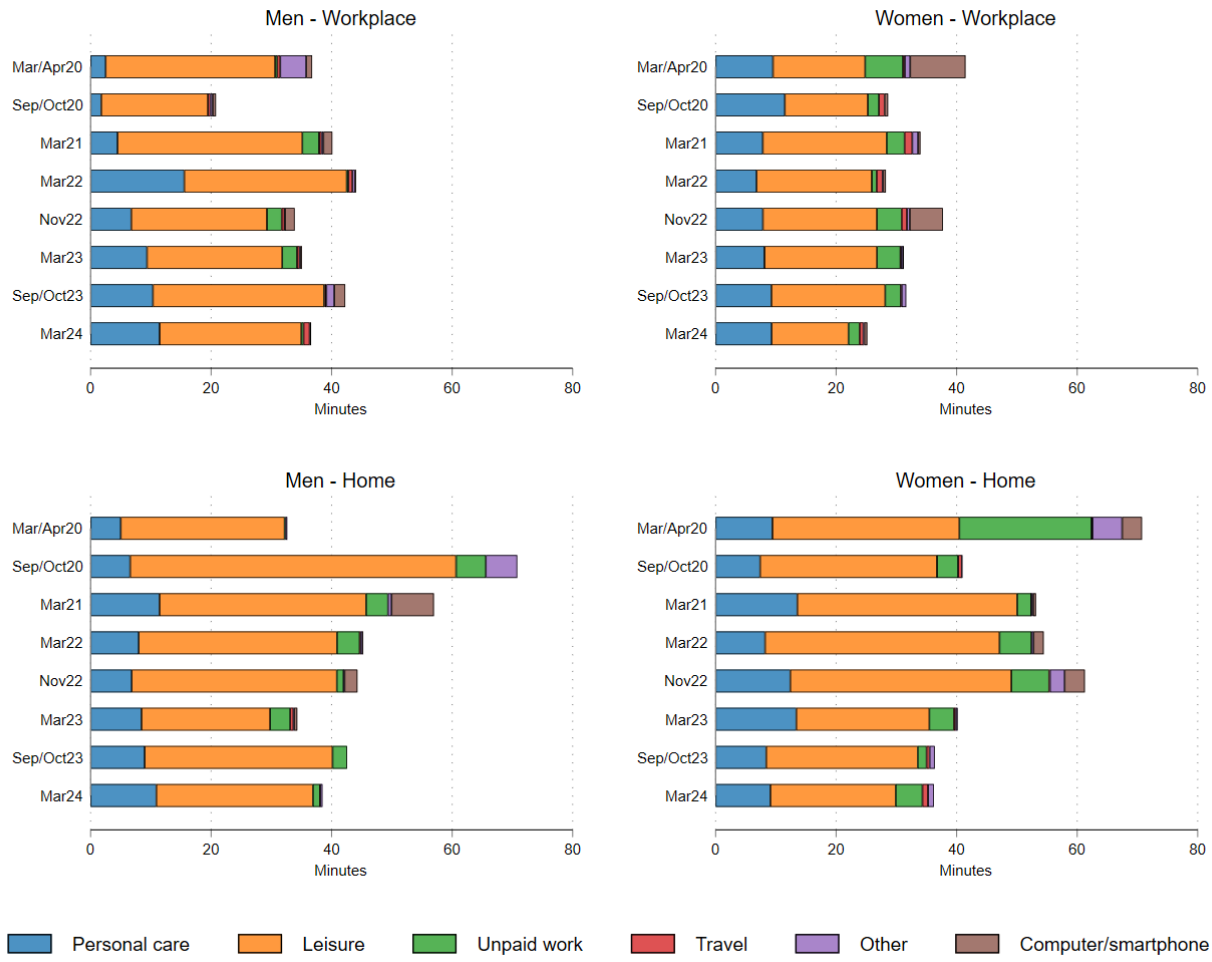
The CaDDI dataset, collected during strict lockdowns from 2020 to January 2021, captures the peak of remote work adoption, with a sharp rise in time spent working from home. In contrast, the OTUS diaries from September 2020 show a temporary reduction in remote work as some employees returned to offices, while the March 2021 data reflect a more stabilized yet declining trend as lockdowns eased. In the post-pandemic period, the CaDDI dataset for September 2021 shows a notable decline in remote work, driven by a reduction in total time worked. From March 2022 onward, the OTUS diaries indicate a stabilization of remote work, with time spent working from home remaining above pre-pandemic levels but exhibiting little fluctuation. This trend is further confirmed by CaDDI data from 2023.

Figure 4 presents estimates and confidence intervals for changes in total work time (left panel) and remote work time (right panel) over the eight waves of the OTUS diary collection. The baseline is November 2022, when social restrictions had been lifted and COVID-19 transmission was under control following an intensive vaccination campaign. These results show that total work time has remained stable since March 2021, while the time spent in remote work has not changed since November 2022 for both men and women.

Since the reported time spent on primary activities has shown a stable and persistent pattern in remote work since November 2022, we examine whether working from home is preferred by employees due to its flexibility in allowing engagement in multiple activities simultaneously - potentially influencing productivity. Figure 5 presents the mean time spent on secondary activities while working, including personal care, leisure, unpaid work, travel, and computer/smartphone use, comparing respondents who reported an episode of work from home with those who reported an episode of work from the workplace.[7] We note that this provides only suggestive evidence on differences in multitasking, as only one-third of respondents reported engaging in secondary activities during work hours. Nevertheless, the data provide an interesting perspective on how work location may influence time use.

[7] Activities within these groups are listed in table C3, Appendix C.

**Figure 5: Time in secondary activities while working**




The data shows that both men and women's time spent on secondary activities fluctuates over time. Until November 2022, those working remotely generally spent more time on secondary activities, such as leisure and personal care, compared to their 'office'-working counterparts. However, starting in March 2023, the gap in time spent on secondary activities between remote and 'office' workers began to shrink. This shift suggests that, as remote work patterns became more established, the work location itself may no longer be the primary factor influencing the allocation of time to secondary activities during work hours.

To further understand the incentives behind the new normal of remote work, we compare how individuals working from home allocate their time throughout the day relative to those working away from home and whether their instantaneous enjoyment of these activities differs. Table 4 presents the estimated differences in time use, as reported in OTUS diaries, across five main activity categories for

remote and office-based workers. The estimating equation is specified as in Eq 3, but with the dependent variable being time in a particular activity.

**Table 4: Reported time in all activities during the pandemic (2020-2021) and after (2022-2024)**

| | (1) Personal care | (2) Leisure | (3) Unpaid work | (4) Travel | (5) Paid work |
|---|---|---|---|---|---|
| | | | 2020-2021 | | |
| WFH | -14.417 | -48.599*** | -30.404*** | -45.124*** | 140.572*** |
| | (10.806) | (12.973) | (8.713) | (10.009) | (17.449) |
| Female | 27.772*** | -25.687** | 34.506*** | -7.908 | -35.145* |
| | (9.762) | (12.652) | (8.917) | (7.407) | (18.763) |
| Female*WFH | -18.415 | 27.829* | -2.632 | 12.676 | -21.552 |
| | (14.458) | (15.928) | (11.504) | (10.312) | (24.306) |
| Constant | 740.111*** | 334.078*** | 141.388*** | 10.656* | 187.690*** |
| | (17.429) | (20.335) | (18.901) | (5.802) | (34.723) |
| N diaries | 2,164 | 2,164 | 2,164 | 2,164 | 2,164 |
| R-squared | 0.074 | 0.076 | 0.184 | 0.150 | 0.138 |
| | | | 2022-2024 | | |
| WFH | 20.425*** | -6.018 | -2.456 | -42.350*** | 38.877*** |
| | (6.313) | (6.854) | (4.505) | (3.431) | (8.946) |
| Female | 43.506*** | -5.217 | 50.653*** | -8.594*** | -75.639*** |
| | (5.507) | (5.670) | (4.160) | (2.784) | (8.734) |
| Female*WFH | -49.279*** | -7.342 | -23.976*** | 8.083* | 56.302*** |
| | (8.958) | (8.920) | (6.223) | (4.382) | (12.094) |
| Constant | 671.183*** | 288.769*** | 93.820*** | 55.352*** | 303.822*** |
| | (12.651) | (11.352) | (9.529) | (5.700) | (17.463) |
| N diaries | 6,242 | 6,242 | 6,242 | 6,242 | 6,242 |
| R-squared | 0.033 | 0.073 | 0.165 | 0.076 | 0.072 |
| | | | 2022-2024 – Graduates only | | |
| WFH | 13.303* | -8.731 | -2.157 | -49.034*** | 47.981*** |
| | (8.036) | (9.343) | (6.094) | (4.790) | (12.407) |
| Female | 34.074*** | -3.883 | 48.027*** | -9.635** | -71.547*** |
| | (7.407) | (8.125) | (6.046) | (4.231) | (12.639) |
| Female*WFH | -37.009*** | -8.334 | -23.415*** | 12.187** | 50.796*** |
| | (11.034) | (11.881) | (8.293) | (6.078) | (16.309) |
| Constant | 640.264*** | 308.980*** | 76.012*** | 80.806*** | 313.877*** |
| | (8.360) | (9.940) | (7.094) | (5.152) | (14.923) |
| N diaries | 3,611 | 3,611 | 3,611 | 3,611 | 3,611 |
| R-squared | 0.026 | 0.082 | 0.167 | 0.093 | 0.073 |

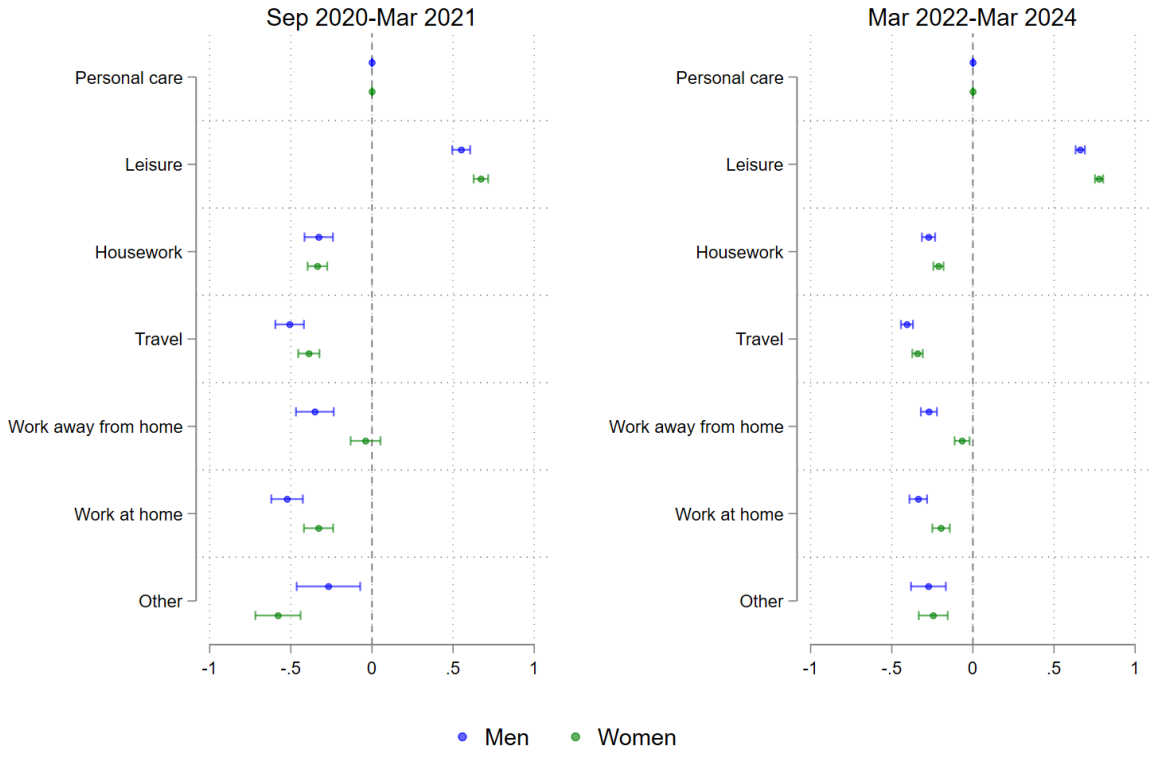
*Notes*: Data from five waves of OTUS time diary surveys (March 2022 to March 2024). Observations are diaries of activities reported in diaries (by all or graduate respondents) in employment during a weekday. The dependent variable is defined as time in an activity. Controls include socio-demographic characteristics of the respondents (age, marital status, household size, household income, number of children by age group) and a set of region dummies.

During the COVID-19 pandemic, both men and women working from home spent less time on leisure, unpaid work, and travel, while devoting over two additional hours to paid work. This higher time in work possibly reflects occupational differences between workers who could carry on working from home without disruption and workers whose job was affected by social restrictions. In the post-pandemic period, a different pattern emerges. Men working from home spend approximately 20 minutes more on personal care, whereas women spend 30 minutes less. For men, remote work does not significantly alter the time spent on leisure and unpaid work compared to their office-based counterparts; however, they save around 43 minutes on commuting and work approximately 40 minutes longer. For women, remote working is also not associated with a change in leisure time, but is associated with less time on unpaid work and travel (20 and 35 minutes, respectively), and an additional 1.5 hours in paid work.

Some of these gaps in time allocation between remote and office-based workers may be influenced by the different nature of their occupations, as remote workers are more likely to be employed in high-skilled jobs, possibly implying longer hours. However, when restricting the sample to graduates, a similar pattern persists, as shown in the bottom panel of Table 4.

The analysis of OTUS diary data suggests that, following an initial shock caused by social restrictions and a gradual re-establishment of work patterns, remote workers have increasingly integrated remote work as a regular aspect of their employment. However this shift does not appear to be associated with an increase in leisure time during or outside of work. Both men and women working from home engage in similar levels of leisure as their office-based counterparts. Instead, they reallocate the time saved on commuting - and, in the case of women, on unpaid work and personal care - towards additional paid work.

**Figure 6: Instantaneous enjoyment by type of activity – OTUS**




*Notes*: Data from eight waves of OTUS time diary surveys, April 2020- March 2022 (left) and March 2021 to March 2022 (rights). Observations are episodes of activities reported in diaries by respondents in employment during a weekday. The dependent variable is defined as the instantaneous enjoyment reported by respondents for each episode. Controls include socio-demographic characteristics of the respondents and length of the episode.

A key question that arises is whether the preference for remote work is driven by greater enjoyment of working from home compared to working in an office setting. To address this, we leverage data on individuals' time allocation alongside self-reported enjoyment levels for each activity. We estimate differences in instantaneous enjoyment across activities, distinguishing between remote work and work conducted outside the home. This analysis is conducted separately for the periods 2020–2021 and 2022–2024 using a regression framework at the episode level, controlling for episode length, individual characteristics, and regional fixed effects as in equation (2). The baseline category for these estimates is personal care, as it encompasses a set of universally performed activities (such as sleeping, eating, and washing) that appear in all diaries.

Figure 6 illustrates that, across both periods, respondents—particularly women—report higher enjoyment when working from the office. This finding appears to contradict the notion that workers are willing to forgo part of their wages in exchange for the ability to work from home. However, it is

possible that remote work enhances the enjoyment of other activities, such as leisure and unpaid work, by reducing the stress and time constraints associated with commuting.

**Table 5: Enjoyment in other activities by work location**

| | Full sample | | | | Graduates | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) Personal Care 2022-2024 | (2) Leisure 2022-2024 | (3) Unpaid work 2022-2024 | (4) Travel 2022-2024 | (5) Personal Care 2022-2024 | (6) Leisure 2022-2024 | (7) Unpaid work 2022-2024 | (8) Travel 2022-2024 |
| WFH | -0.054** | -0.066** | -0.065 | -0.020 | -0.118*** | -0.128*** | -0.131** | -0.115* |
| | (0.024) | (0.032) | (0.051) | (0.047) | (0.030) | (0.040) | (0.061) | (0.060) |
| Female | -0.032 | 0.075*** | 0.019 | 0.076** | 0.008 | 0.084*** | 0.013 | 0.093** |
| | (0.019) | (0.026) | (0.038) | (0.032) | (0.026) | (0.032) | (0.049) | (0.044) |
| Female*WFH | 0.050 | 0.071* | 0.070 | -0.022 | 0.059 | 0.154*** | 0.051 | 0.032 |
| | (0.033) | (0.042) | (0.062) | (0.060) | (0.041) | (0.051) | (0.075) | (0.077) |
| N episodes | 46,385 | 22,022 | 15,694 | 12,108 | 27,339 | 13,518 | 10,018 | 7,167 |
| R-squared | 0.002 | 0.011 | 0.038 | 0.016 | 0.002 | 0.011 | 0.033 | 0.029 |

*Notes*: Data from five waves of OTUS time diary surveys (March 2022 to March 2024). Observations are episodes of activities reported in diaries by respondents in employment during a weekday. The dependent variable is defined as the instantaneous enjoyment reported by respondents for each episode. Controls include socio-demographic characteristics of the respondents (age, marital status, household size, household income, number of children by age group) and a set of region dummies.

To explore this further, we estimate differences in enjoyment between remote and office-based workers across key activity categories, including personal care, leisure, housework, and travel. Table 5 presents the results for the full sample (columns 1–4) and for graduates only (columns 5–8). Among the full sample, men working from home report lower enjoyment in personal care and leisure, while women experience lower enjoyment in personal care alone. When restricting the analysis to graduates, the findings indicate that remote work is generally associated with lower enjoyment across all activities, with the exception of leisure for women.

Finally, we investigate whether remote workers perceive their working time as more productive. To address this question, we utilize the experimental measure of self-perceived productivity that we collected in the most recent wave of the OTUS time-use diaries from March 2024. Each time respondents recorded a period of paid work in their diary, they were asked to assess their productivity on a five-point scale, as well as their enjoyment on a seven-point scale.

Table 6 presents estimates of the differences in self-reported productivity and enjoyment between remote and office-based workers (as per equation 3). Results are reported separately for the full sample

(top panel) and for graduates only (bottom panel). Self-reported productivity is analysed both as a continuous measure (column 1) and as a dichotomous variable with varying cut-offs (columns 2–3). Finally, column 4 reports the estimated difference in instantaneous enjoyment for the same work episodes.

Respondents who report time working from home in their diaries perceive their time as being less productive as shown in columns 2, 3 and 4, and they enjoy it less (column 4). Estimates from the full sample are in line with those based on a sample of only graduates.

**Table 6: Self-reported productivity during work spells**

| | (1) Self-reported Productivity | (2) Probit Pr(Prod<89%) | (3) Probit Pr(Prod<99%) | (4) Enjoyment |
|---|---|---|---|---|
| | Full sample | | | |
| WFH | -0.196** | 0.173* | 0.388*** | -0.248** |
| | (0.091) | (0.102) | (0.116) | (0.106) |
| Female | 0.256*** | -0.308*** | -0.133 | 0.065 |
| | (0.078) | (0.093) | (0.100) | (0.091) |
| Female*WFH | 0.024 | 0.036 | -0.085 | -0.016 |
| | (0.118) | (0.141) | (0.163) | (0.139) |
| Constant | 3.113*** | -0.502** | -0.350 | 5.028*** |
| | (0.307) | (0.247) | (0.264) | (0.278) |
| N episodes | 1,651 | 1,651 | 1,651 | 1,638 |
| R-squared | 0.072 | | | 0.070 |
| | Graduates | | | |
| WFH | -0.225** | 0.281** | 0.419*** | -0.368*** |
| | (0.112) | (0.135) | (0.160) | (0.129) |
| Female | 0.281** | -0.305** | -0.352** | 0.018 |
| | (0.115) | (0.133) | (0.148) | (0.124) |
| Female*WFH | 0.080 | -0.236 | 0.086 | 0.079 |
| | (0.155) | (0.185) | (0.217) | (0.174) |
| Constant | 3.666*** | -0.362 | -0.043 | 5.878*** |
| | (0.268) | (0.238) | (0.260) | (0.320) |
| N episodes | 902 | 902 | 902 | 902 |
| R-squared | 0.118 | | | 0.144 |

*Notes*: Data from five waves of OTUS time diary surveys (March 2022 to March 2024). Observations are diaries of activities reported in diaries by graduate respondents in employment during a weekday. The dependent variable is defined as the instantaneous enjoyment reported by respondents for each episode. Controls include socio-demographic characteristics of the respondents (age, marital status, household size, household income, number of children by age group) and a set of region dummies. Estimates reported for probit models are marginal effects.

## 5. Discussion and Conclusions

The first findings of this study confirm that work from home is not merely a temporary response to the COVID-19 pandemic but rather a lasting transformation in work patterns in the UK. The sustained increase in home-based work and in the presence of household members, even after pandemic-related restrictions were lifted, suggests that many workers and employers perceive remote work as a viable and often preferable alternative to traditional office-based arrangements. Additionally, the growing reliance on electronic devices for remote work indicates a shift in the composition of remote workers, as they establish stable home office setups to support long-term remote work.

Existing literature has found that workers are willing to accept a pay cut in order to work remotely (Barrero et al, 2021). The second part of our study sought to explore the underlying reasons for this preference by exploiting new time use data collected by the ONS in the UK over the last four years. While one potential explanation is that remote work allows for more multitasking and engagement in secondary activities, our findings do not provide strong support for this hypothesis. Additionally, we considered whether the reduction in grooming and commuting time might translate into increased leisure or unpaid work, but our results indicate that this is not a significant driver either.

Another possible explanation is that people simply enjoy working from home more than working in the office or that remote working allows greater enjoyment of other activities. However, our findings suggest that this is not the case: the ranking of individuals' preferences on time allocation, obtained by estimating the mean instantaneous enjoyment for each activity, shows that working away from home is preferred to remote working. Furthermore, remote workers report lower levels of enjoyment across all activities, except for leisure among women, where enjoyment levels are comparable to those of women working in-office. This suggests that remote work does not necessarily enhance enjoyment in a straightforward manner. Finally we use an experimental measure of self-reported productivity that we include in the most recent wave of the OTUS data to test whether remote workers perceive their time in work as being more productive. Our results show that this is not the case, as remote workers report marginally lower productivity than their counterparts working from the office.

One possibility that emerges from these results is that commuting, and its associated costs, are driving remote work preferences. In 2019 in the UK, the average commute exceeds 60 minutes (Aksoy et al., 2022), and our study shows that commuting is disliked by workers, who may perceive remote working as a way to eliminate an unpleasant and time-consuming aspect of their daily routines. Beyond the direct time savings, the financial costs of commuting—such as transportation expenses—and other

out-of-pocket costs linked to working outside the home, such as childcare and meals, may also contribute to the preference for remote work. These economic and logistical considerations appear to outweigh the relatively lower enjoyment of remote work itself, making it an attractive option despite its potential drawbacks.

This study provides new insights into the long-term persistence of remote work and the factors influencing workers' preferences for remote working. While past research has highlighted workers' willingness to accept lower wages in exchange for remote work, our findings suggest that this is not necessarily due to increased enjoyment of working from home, the ability to multitask during work hours and the ability to enjoy more leisure or housework. Instead, the avoidance of commuting and its associated costs—both financial and non-financial—could be a primary motivator for remote work adoption.

The results have important implications for employers and policymakers. Employers considering hybrid or fully remote work arrangements should recognise that remote work is not inherently more enjoyable or indeed productive, but is valued primarily for the flexibility and cost savings it offers. Policymakers aiming to support workers in a remote-first world may need to focus on improving the infrastructure for home-based work and rethinking urban commuting policies to make in-office work more attractive.

Our study highlights the complex interplay between work location, time use, and economic trade-offs, reinforcing the need for nuanced discussions around the future of work. It complements recent research exploring the trade-offs workers face when choosing remote work, particularly in relation to productivity, mental well-being, and long-term career development (Emanuel and Harrington, 2024; Gibbs et al., 2023; Denzer and Grunau, 2024; De Fraja et al, 2022). Studies that examine whether improvements in commuting conditions or cost subsidies for in-office work might influence workers' preferences, could provide further valuable insights.

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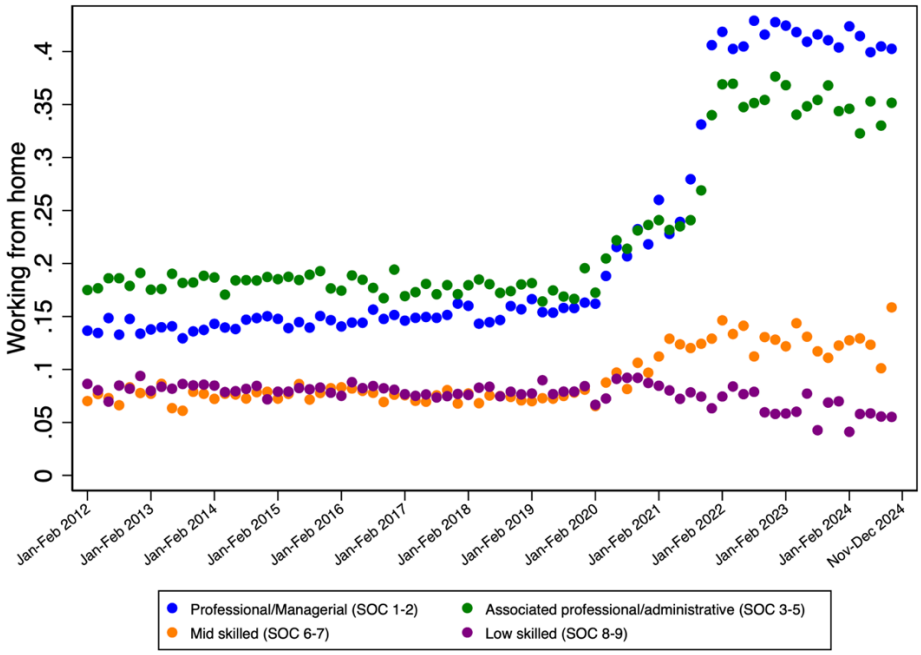

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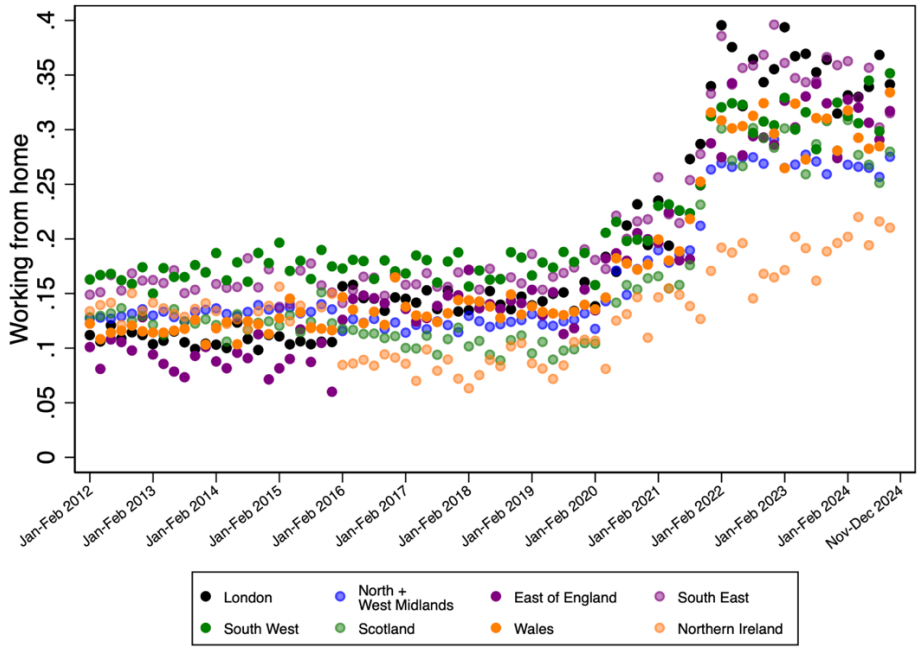
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## Appendix A – Additional APS results

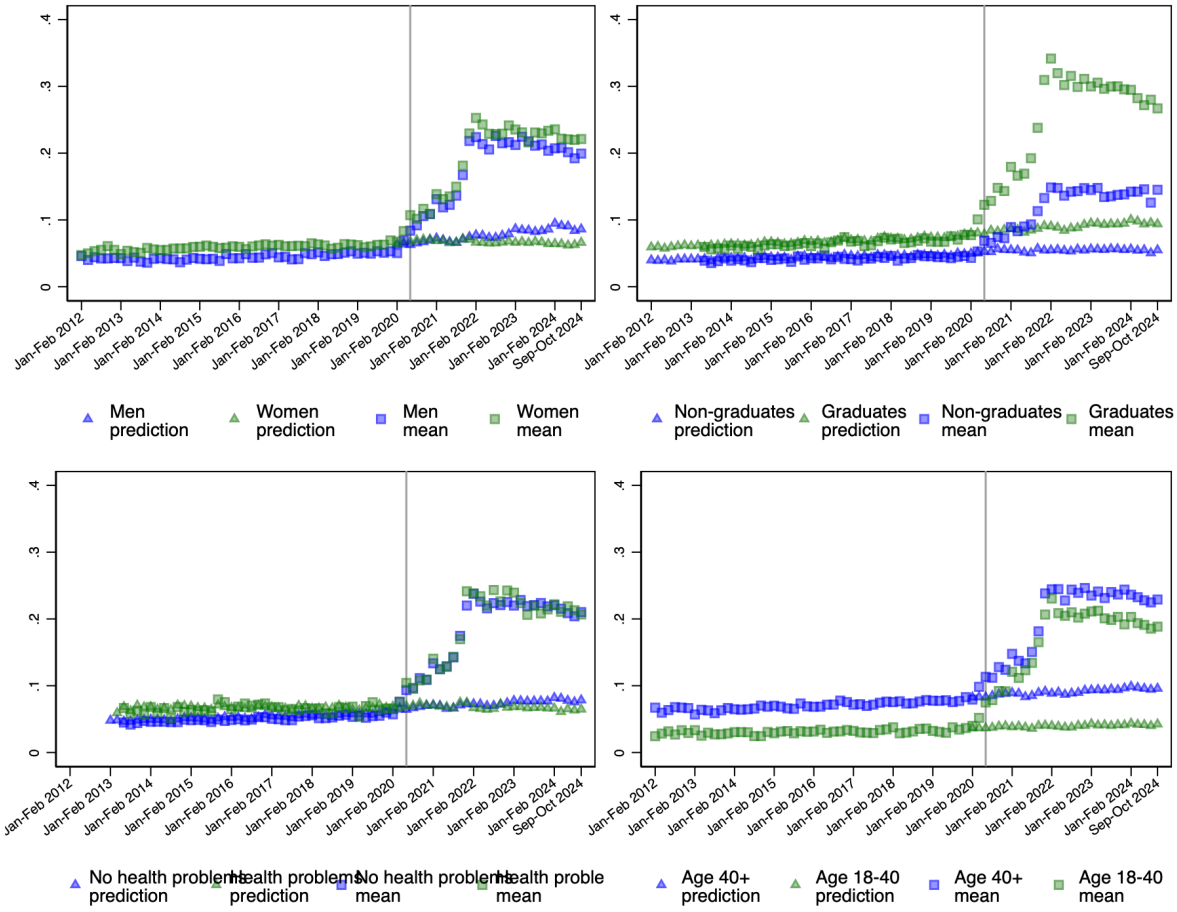
### Figure A1: Proportion working from home – occupations




### Figure A2: Proportion working from home – regions



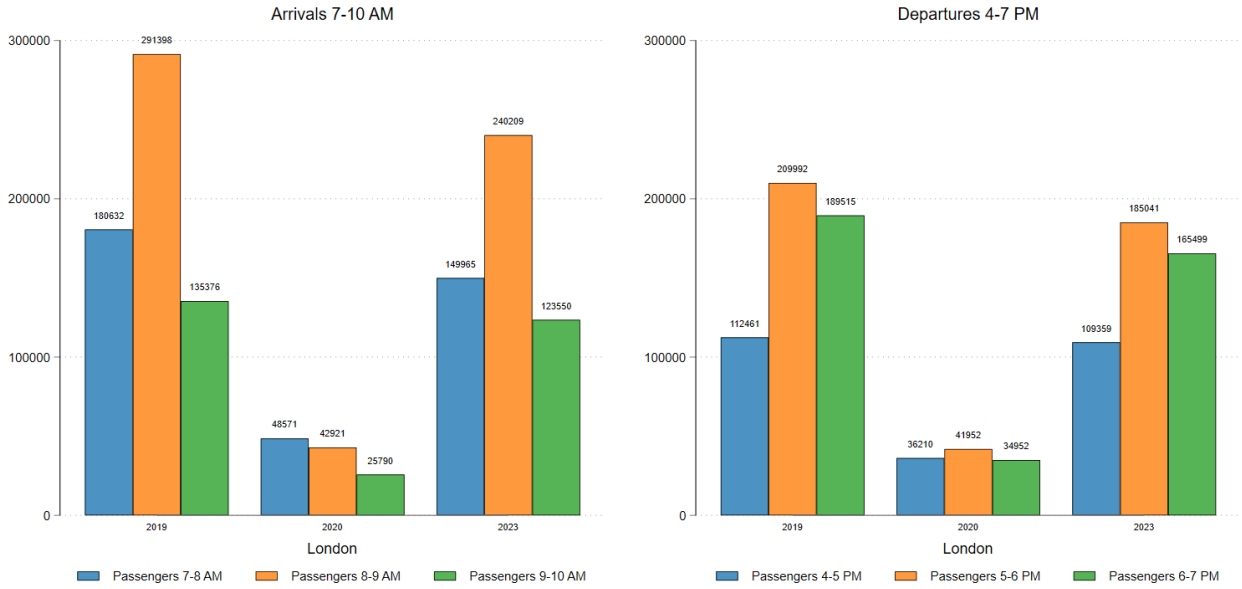
## Figure A3: Proportion working *mainly* from home



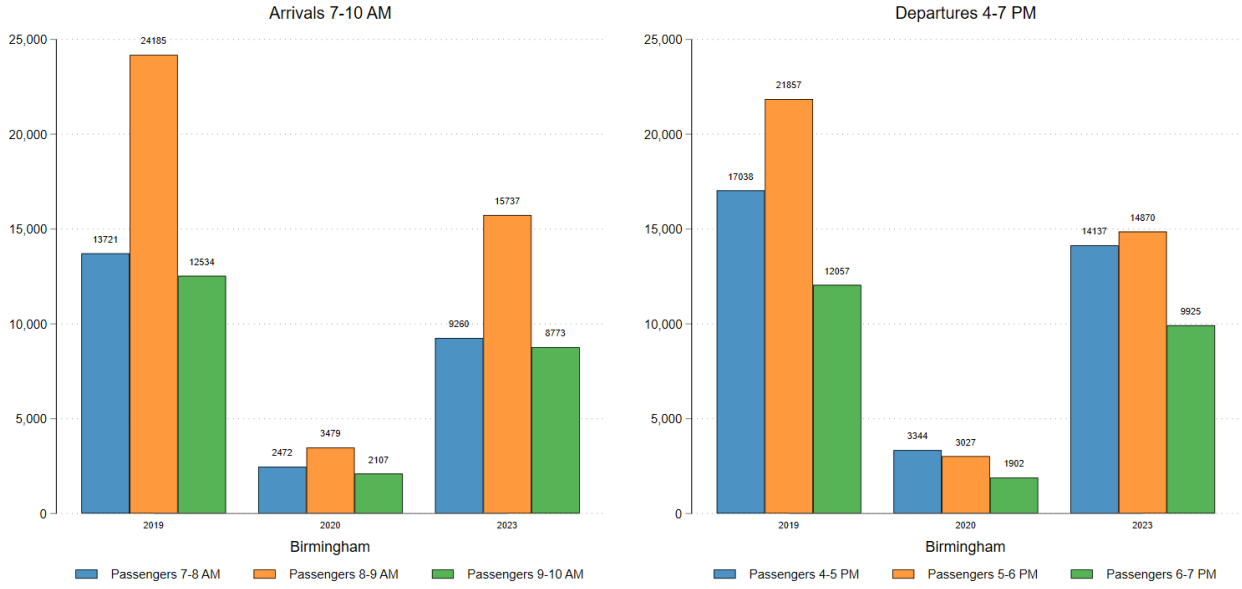

Notes. The figure shows the bi-monthly proportion (square markers) of respondents working *mainly* from home and the prediction out of sample (triangle markers) for the period January 2020 – September/October 2024 based on APS data. Predicted proportion of WFH for the years 2020 - 2024 was obtained by first estimating, separately by sub-sample, a probit for the reported working *mainly* from home on age, highest qualification, economic activity, occupations, region of residence, marital or cohabiting status, a time trend, a squared and cubic time trend and month dummies for the years 2012-2019 and then averaging the out-of sample individual predictions by sub-sample and time. Predictions and means are obtained using the individual weights provided in the APS.

**Figure A4: Train passengers flows during rush hours: London, Birmingham and Manchester**

(a) London




(b) Birmingham



(c) Manchester

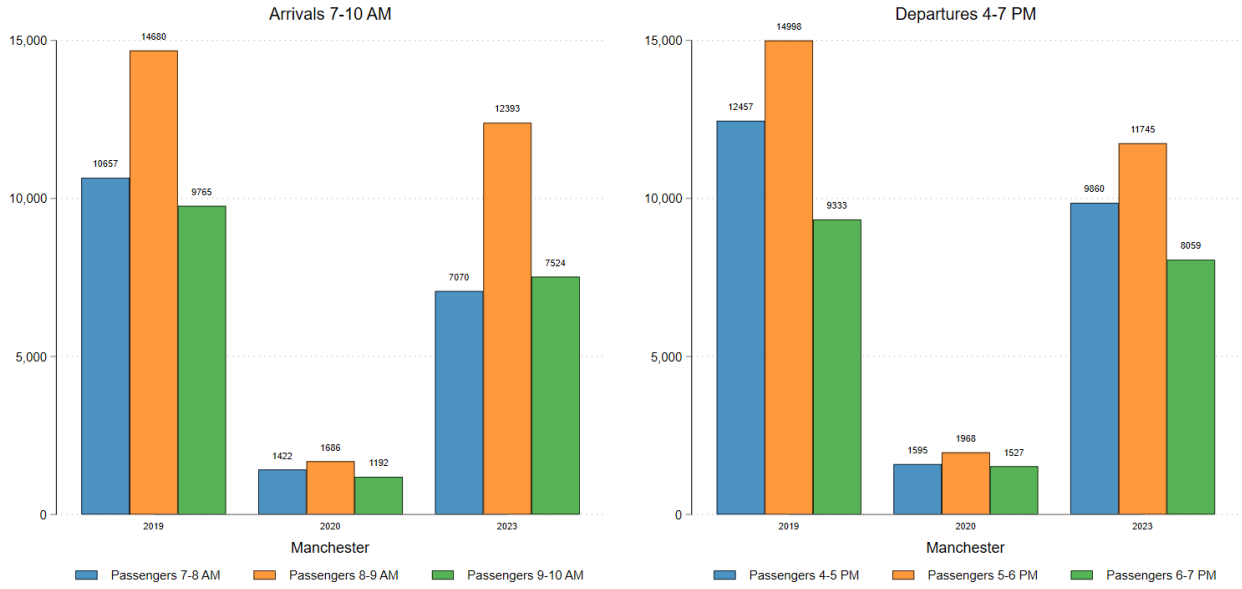
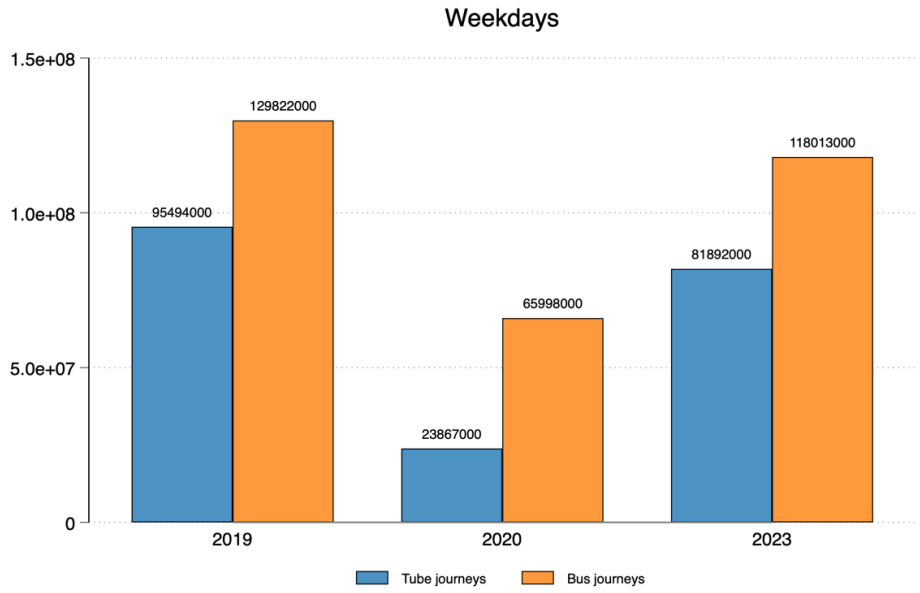


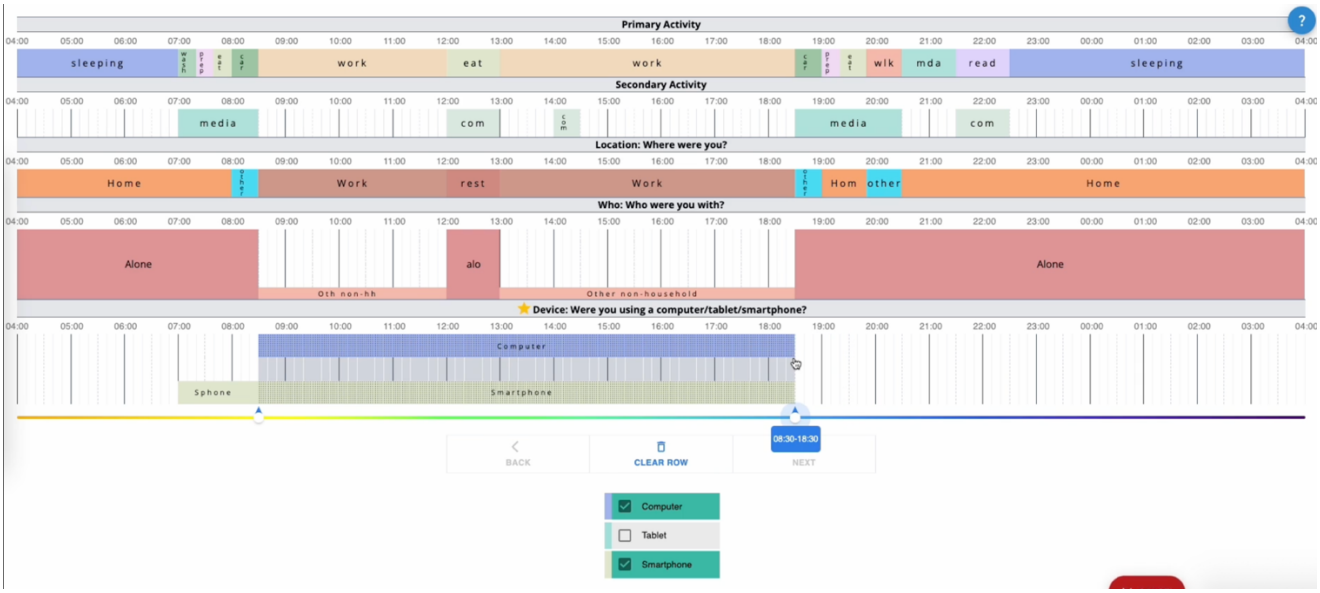

**Figure A5: TFL journey counts**




Note: total weekday journeys for buses and underground in November 2019, 2020 and 2023 in London as recorded by TFL. Data available from: https://tfl.gov.uk/corporate/publications-and-reports/network-demand-data

## Appendix B: CaDDI and OTUS data

### Figure B1: CaDDI instrument




### Figure B2: OTUS instrument

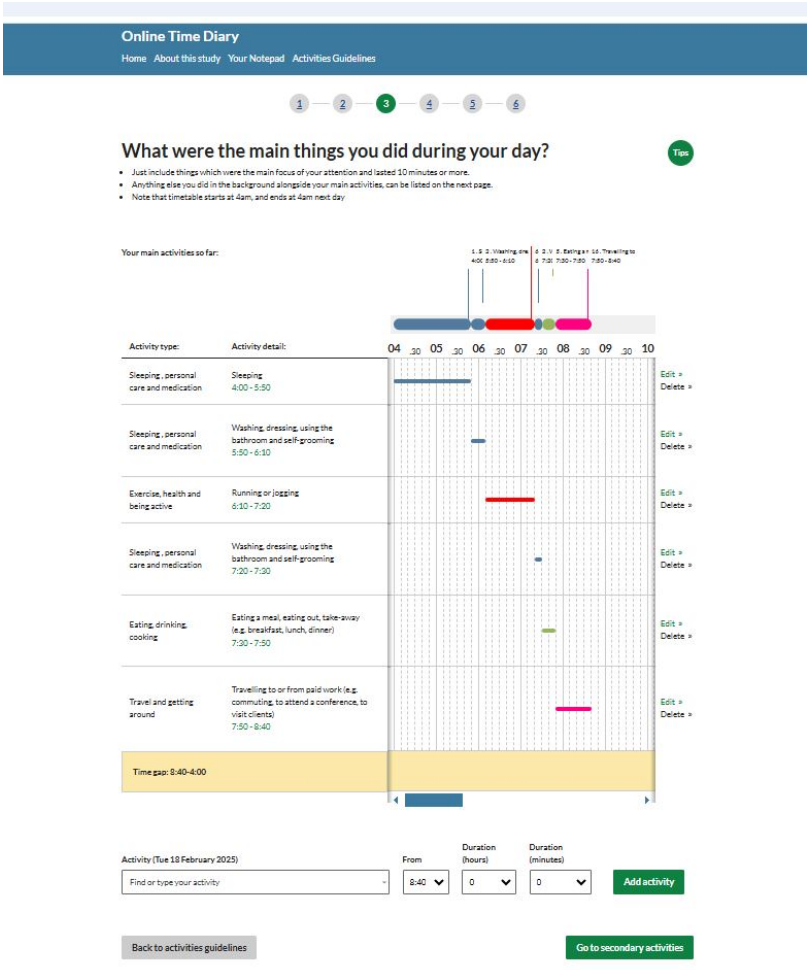
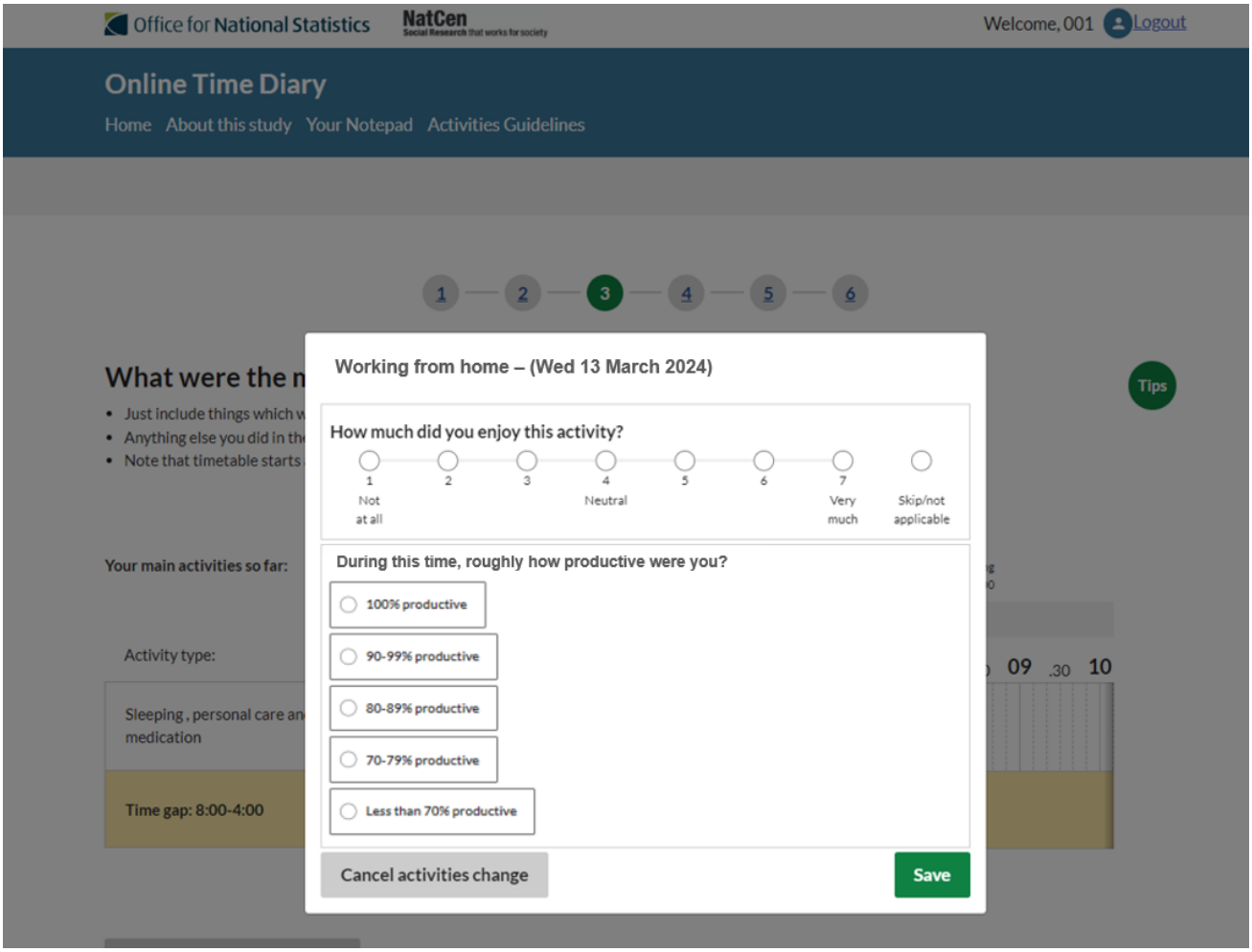


**Figure B3: OTUS Wave 8 – Self-reported productivity**



## Table B1: Summary Statistics of socio-economic characteristics in CaDDI data

| | *2016* | *May 2020* | *Aug 2020* | *Nov 2020* | *Jan 2021* | *Sep 2021* | *Mar 2023* | *Total* |
|---|---|---|---|---|---|---|---|---|
| *Female* | 0.484 | 0.435 | 0.472 | 0.437 | 0.481 | 0.406 | 0.535 | 0.474 |
| | (0.500) | (0.496) | (0.500) | (0.496) | (0.500) | (0.492) | (0.499) | (0.499) |
| *Age: less than 30* | 0.196 | 0.205 | 0.138 | 0.129 | 0.217 | 0.120 | 0.147 | 0.160 |
| | (0.398) | (0.404) | (0.346) | (0.335) | (0.413) | (0.326) | (0.354) | (0.367) |
| *Age: 30 to 40* | 0.243 | 0.276 | 0.296 | 0.319 | 0.266 | 0.243 | 0.243 | 0.267 |
| | (0.429) | (0.447) | (0.457) | (0.466) | (0.442) | (0.429) | (0.429) | (0.443) |
| *Age: 40 to 50* | 0.220 | 0.258 | 0.242 | 0.255 | 0.231 | 0.252 | 0.245 | 0.244 |
| | (0.414) | (0.438) | (0.429) | (0.436) | (0.422) | (0.435) | (0.430) | (0.430) |
| *Age: 50+* | 0.341 | 0.262 | 0.324 | 0.298 | 0.286 | 0.384 | 0.365 | 0.328 |
| | (0.475) | (0.440) | (0.468) | (0.458) | (0.452) | (0.487) | (0.482) | (0.470) |
| *Higher Education* | 0.486 | 0.608 | 0.606 | 0.630 | 0.575 | 0.588 | 0.497 | 0.562 |
| | (0.500) | (0.489) | (0.489) | (0.483) | (0.495) | (0.493) | (0.500) | (0.496) |
| *Single/divorced/widowed* | 0.318 | 0.356 | 0.296 | 0.334 | 0.335 | 0.332 | 0.231 | 0.302 |
| | (0.466) | (0.479) | (0.457) | (0.472) | (0.472) | (0.471) | (0.422) | (0.459) |
| *At least 1 child <=16 y.o.* | 0.549 | 0.632 | 0.610 | 0.549 | 0.564 | 0.586 | 0.389 | 0.529 |
| | (0.498) | (0.483) | (0.488) | (0.498) | (0.496) | (0.493) | (0.488) | (0.499) |
| *Income less than £30K* | 0.379 | 0.291 | 0.236 | 0.268 | 0.250 | 0.258 | 0.229 | 0.264 |
| | (0.486) | (0.455) | (0.425) | (0.443) | (0.434) | (0.438) | (0.420) | (0.441) |
| *Income £30k-50k* | 0.334 | 0.311 | 0.322 | 0.319 | 0.342 | 0.295 | 0.260 | 0.304 |
| | (0.472) | (0.463) | (0.468) | (0.466) | (0.475) | (0.457) | (0.439) | (0.460) |
| *Income £50k-70k* | 0.117 | 0.183 | 0.193 | 0.173 | 0.180 | 0.144 | 0.170 | 0.168 |
| | (0.322) | (0.387) | (0.395) | (0.379) | (0.385) | (0.351) | (0.376) | (0.374) |
| *Income £70k+* | 0.171 | 0.215 | 0.250 | 0.239 | 0.227 | 0.303 | 0.150 | 0.212 |
| | (0.377) | (0.411) | (0.433) | (0.427) | (0.419) | (0.460) | (0.357) | (0.409) |
| *Income missing* | 0.0748 | 0.0354 | 0.0390 | 0.0261 | 0.0313 | 0.0408 | 0.191 | 0.0810 |
| | (0.263) | (0.185) | (0.194) | (0.159) | (0.174) | (0.198) | (0.394) | (0.273) |
| *East Anglia* | 0.110 | 0.0807 | 0.0780 | 0.0920 | 0.0822 | 0.0816 | 0.0675 | 0.0817 |
| | (0.313) | (0.273) | (0.268) | (0.289) | (0.275) | (0.274) | (0.251) | (0.274) |
| *East Midlands* | 0.100 | 0.0866 | 0.0858 | 0.0445 | 0.0646 | 0.0602 | 0.0957 | 0.0782 |
| | (0.301) | (0.282) | (0.280) | (0.206) | (0.246) | (0.238) | (0.294) | (0.269) |
| *London* | 0.0841 | 0.108 | 0.0780 | 0.204 | 0.168 | 0.177 | 0.124 | 0.136 |
| | (0.278) | (0.311) | (0.268) | (0.403) | (0.374) | (0.382) | (0.330) | (0.343) |
| *North East* | 0.129 | 0.154 | 0.142 | 0.0368 | 0.0333 | 0.0447 | 0.0427 | 0.0745 |
| | (0.335) | (0.361) | (0.350) | (0.188) | (0.180) | (0.207) | (0.202) | (0.263) |
| *North West* | 0.0771 | 0.0925 | 0.101 | 0.0828 | 0.117 | 0.134 | 0.128 | 0.108 |
| | (0.267) | (0.290) | (0.302) | (0.276) | (0.322) | (0.341) | (0.334) | (0.311) |
| *Northern Ireland* | 0.0467 | 0.0453 | 0.0448 | 0.0107 | 0.0274 | 0.0155 | 0.0256 | 0.0291 |
| | (0.211) | (0.208) | (0.207) | (0.103) | (0.163) | (0.124) | (0.158) | (0.168) |
| *Scotland* | 0.0117 | 0.0157 | 0.0175 | 0.0782 | 0.0685 | 0.0680 | 0.0701 | 0.0524 |
| | (0.108) | (0.125) | (0.131) | (0.269) | (0.253) | (0.252) | (0.255) | (0.223) |
| *South East* | 0.112 | 0.118 | 0.0955 | 0.155 | 0.159 | 0.155 | 0.135 | 0.134 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | (0.316) | (0.323) | (0.294) | (0.362) | (0.366) | (0.363) | (0.342) | (0.341) |
| *South West* | 0.0841 | 0.0669 | 0.0838 | 0.0966 | 0.0665 | 0.101 | 0.100 | 0.0882 |
| | (0.278) | (0.250) | (0.277) | (0.296) | (0.249) | (0.302) | (0.300) | (0.284) |
| *Wales* | 0.0467 | 0.0374 | 0.0370 | 0.0383 | 0.0509 | 0.0252 | 0.0385 | 0.0389 |
| | (0.211) | (0.190) | (0.189) | (0.192) | (0.220) | (0.157) | (0.192) | (0.193) |
| *West Midlands* | 0.110 | 0.102 | 0.168 | 0.0920 | 0.0881 | 0.0699 | 0.0744 | 0.0961 |
| | (0.313) | (0.303) | (0.374) | (0.289) | (0.284) | (0.255) | (0.262) | (0.295) |
| *Yorkshire* | 0.0888 | 0.0925 | 0.0682 | 0.0690 | 0.0744 | 0.0680 | 0.0983 | 0.0822 |
| | (0.285) | (0.290) | (0.252) | (0.254) | (0.263) | (0.252) | (0.298) | (0.275) |
| N | 428 | 508 | 513 | 652 | 511 | 515 | 1170 | 4297 |

*Notes*: The table shows the average demographic characteristics of individuals in employment interviewed in CaDDI/ELiDDI. Standard deviations are reported in parentheses. Unweighted.

## Table B2: Comparison of Annual Population Survey and CaDDI

| | **APS 2016** | **All** | **2016** | **May 2020** | **Aug 2020** | **Nov 2020** | **Jan 2021** | **Sep 2021** | **Mar 2023** |
|---|---|---|---|---|---|---|---|---|---|
| Female | 0.468 | 0.474 | 0.484 | 0.435 | 0.472 | 0.437 | 0.481 | 0.406 | 0.468 |
| | (0.499) | (0.499) | (0.500) | (0.496) | (0.500) | (0.496) | (0.500) | (0.492) | (0.499) |
| Higher education qual. | 0.436 | 0.562 | 0.486 | 0.608 | 0.606 | 0.630 | 0.575 | 0.588 | 0.436 |
| | (0.496) | (0.496) | (0.500) | (0.489) | (0.489) | (0.483) | (0.495) | (0.493) | (0.496) |
| Less than 30 years | 0.254 | 0.160 | 0.196 | 0.205 | 0.138 | 0.129 | 0.217 | 0.120 | 0.254 |
| | (0.435) | (0.367) | (0.398) | (0.404) | (0.346) | (0.335) | (0.413) | (0.326) | (0.435) |
| 30 to 40 years | 0.228 | 0.267 | 0.243 | 0.276 | 0.296 | 0.319 | 0.266 | 0.243 | 0.228 |
| | (0.420) | (0.443) | (0.429) | (0.447) | (0.457) | (0.466) | (0.442) | (0.429) | (0.420) |
| 40 to 50 years | 0.241 | 0.244 | 0.220 | 0.258 | 0.242 | 0.255 | 0.231 | 0.252 | 0.241 |
| | (0.428) | (0.430) | (0.414) | (0.438) | (0.429) | (0.436) | (0.422) | (0.435) | (0.428) |
| 50 to 69 years | 0.277 | 0.328 | 0.341 | 0.262 | 0.324 | 0.298 | 0.286 | 0.384 | 0.277 |
| | (0.447) | (0.470) | (0.475) | (0.440) | (0.468) | (0.458) | (0.452) | (0.487) | (0.447) |
| Single | 0.320 | 0.302 | 0.318 | 0.356 | 0.296 | 0.334 | 0.335 | 0.332 | 0.320 |
| | (0.467) | (0.459) | (0.466) | (0.479) | (0.457) | (0.472) | (0.472) | (0.471) | (0.467) |

*Notes*: The table shows the average demographic characteristics of individuals in employment interviewed in 2016 for the Annual Population Survey and in CaDDI. These means are calculated using the frequency weights provides in the APS 2016, while the unweighted averages of these demographic variables are presented for the CaDDI surveys. Standard deviations are reported in parentheses.

## Table B3: Summary Statistics of time use measures in CaDDI data

| | 2016 | May 2020 | Aug 2020 | Nov 2020 | Jan 2021 | Sep 2021 | Mar 2023 | All |
|---|---|---|---|---|---|---|---|---|
| Total work | 341.7 | 232.2 | 311.2 | 331.2 | 298.6 | 297.6 | 383.7 | 324.6 |
| | (240.1) | (249.4) | (253.6) | (233.7) | (239.7) | (258.4) | (212.2) | (241.4) |
| WFH | 39.93 | 150.5 | 182.3 | 202.4 | 198.1 | 136.7 | 129.5 | 149.5 |
| | (126.4) | (219.1) | (240.8) | (236.0) | (233.1) | (223.1) | (204.2) | (220.2) |
| Work away from home | 297.7 | 79.78 | 119.6 | 124.6 | 98.02 | 156.7 | 243.7 | 169.1 |
| | (247.2) | (190.9) | (217.1) | (214.9) | (199.2) | (237.0) | (249.4) | (238.0) |
| Work alone | 108.8 | 124.5 | 161.4 | 177.7 | 164.1 | 155.9 | 130.5 | 145.5 |
| | (204.8) | (211.6) | (237.6) | (233.1) | (223.4) | (237.4) | (202.8) | (220.8) |
| Work with partner | 17.34 | 50.02 | 56.20 | 62.70 | 61.04 | 37.81 | 42.25 | 47.16 |
| | (81.90) | (142.0) | (149.7) | (156.7) | (153.2) | (121.2) | (124.6) | (135.6) |
| Work with child | 5.607 | 23.88 | 29.16 | 11.50 | 29.61 | 14.87 | 14.22 | 17.78 |
| | (42.88) | (96.01) | (108.5) | (64.15) | (111.5) | (72.67) | (68.92) | (82.21) |
| Work with oth hh | 8.411 | 8.681 | 10.88 | 10.03 | 10.35 | 11.98 | 9.274 | 9.877 |
| | (65.21) | (61.31) | (68.96) | (62.22) | (75.58) | (72.92) | (60.22) | (65.74) |
| Work with smartphone | 19.39 | 12.87 | 20.12 | 13.51 | 14.11 | 22.68 | 70.04 | 31.37 |
| | (90.14) | (77.42) | (94.00) | (59.36) | (71.11) | (96.54) | (158.1) | (110.4) |
| Work with smartphone | 0.421 | 4.587 | 4.483 | 4.172 | 4.990 | 2.777 | 26.10 | 9.786 |
| at home | (3.909) | (40.08) | (34.33) | (32.36) | (40.99) | (21.48) | (99.80) | (59.64) |
| Work with computer | 186.6 | 143.0 | 183.7 | 210.0 | 178.3 | 162.6 | 233.7 | 193.6 |
| | (236.2) | (215.0) | (230.8) | (232.8) | (224.3) | (226.5) | (231.7) | (230.7) |
| Work with computer | 24.39 | 102.6 | 133.3 | 147.8 | 136.4 | 97.07 | 111.2 | 111.0 |
| at home | (99.39) | (188.0) | (214.1) | (213.4) | (208.6) | (192.7) | (193.5) | (196.1) |
| *N* | *428* | *508* | *513* | *652* | *511* | *515* | *1170* | *4297* |

## Table B4: Comparison UK Time Use Survey 2914/15 and CaDDI 2016

| | *UKTUS 2014/15* | | *CaDDI 2016* | |
|---|---|---|---|---|
| | Men | Women | Men | Women |
| *Total time in paid work* | 368.3 | 284.6 | 378.1 | 302.8 |
| | (232.5) | (230.9) | (233.0) | (242.1) |
| *Time in paid work at home* | 32.97 | 21.31 | 40.09 | 39.76 |
| | (110.6) | (77.91) | (130.1) | (122.6) |
| *Time in paid work with hh members* | 24.61 | 21.28 | 34.12 | 28.41 |
| | (89.10) | (78.59) | (134.7) | (103.7) |
| N | 2,034 | 2,062 | 221 | 207 |

*Notes*: The table shows the weighted average number of minutes spent during weekdays in work, work at home and work with co-presence of household members for respondents in employment in the UK Time Use survey. Similar unweighted statistics are reported for the CaDDI 2016 respondents. Standard deviations are reported in parentheses

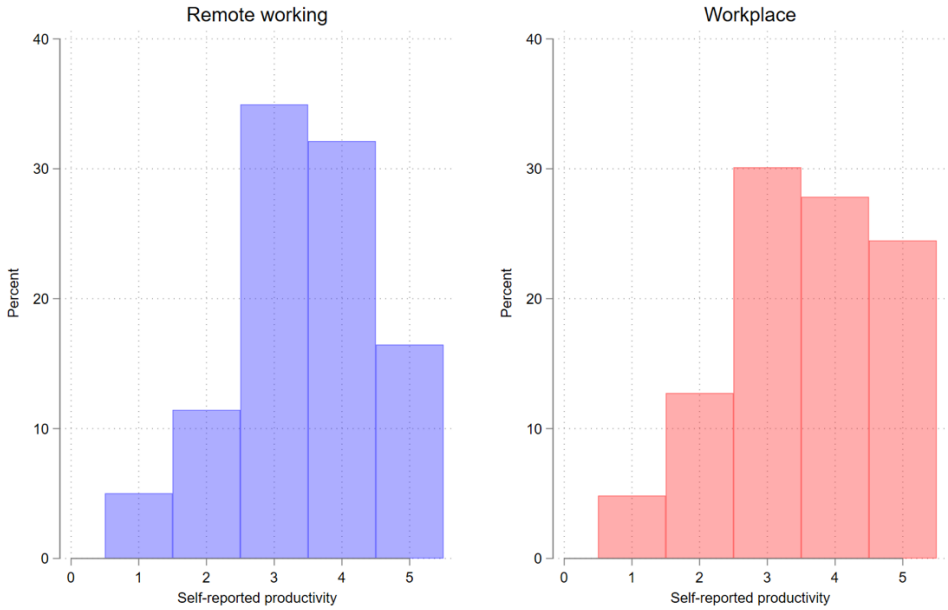
**Table B5: Changes in Share of Time in Work with Device Use by Location**

| | (1) Time in work with computer | (2) Time in work with smartphone | (3) Time in work with computer at home | (4) Time in work with smartphone at home | (5) Time in work with computer at work | (6) Time in work with smartphone at work |
|---|---|---|---|---|---|---|
| Constant | 0.329*** | 0.060** | 0.383*** | 0.016 | 0.355*** | 0.069* |
| | (0.051) | (0.026) | (0.097) | (0.032) | (0.062) | (0.038) |
| Women | 0.085 | 0.010 | 0.143 | 0.023 | 0.054 | 0.010 |
| | (0.052) | (0.021) | (0.113) | (0.033) | (0.058) | (0.025) |
| **Panel A: Men** | | | | | | |
| May 2020 | 0.053 | -0.005 | 0.154* | -0.003 | -0.062 | 0.034 |
| | (0.051) | (0.020) | (0.091) | (0.015) | (0.074) | (0.040) |
| August 2020 | 0.089* | 0.023 | 0.183** | 0.035* | -0.073 | 0.068* |
| | (0.048) | (0.020) | (0.089) | (0.021) | (0.066) | (0.036) |
| November 2020 | 0.063 | 0.003 | 0.128 | 0.016 | -0.084 | 0.020 |
| | (0.045) | (0.016) | (0.086) | (0.014) | (0.060) | (0.026) |
| January 2021 | 0.047 | 0.013 | 0.095 | 0.026 | -0.072 | 0.045 |
| | (0.048) | (0.019) | (0.089) | (0.017) | (0.072) | (0.038) |
| September 2021 | -0.028 | 0.049** | 0.156* | 0.059** | -0.189*** | 0.081** |
| | (0.048) | (0.022) | (0.090) | (0.025) | (0.055) | (0.032) |
| March 2023 | 0.104** | 0.163*** | 0.257*** | 0.207*** | -0.039 | 0.158*** |
| | (0.041) | (0.021) | (0.084) | (0.027) | (0.047) | (0.026) |
| **Panel B: Women** | | | | | | |
| May 2020 | 0.0599 | -0.017 | 0.0438 | -0.016 | -0.029 | 0.066 |
| | (0.0581) | (0.0256) | (0.0944) | (0.0388) | (0.0935) | (0.0538) |
| August 2020 | -0.006 | -0.024 | 0.0722 | -0.021 | -0.165** | 0.0249 |
| | (0.0533) | (0.0234) | (0.0911) | (0.037) | (0.0729) | (0.0428) |
| November 2020 | 0.0507 | -0.020 | 0.0554 | -0.016 | -0.040 | 0.0191 |
| | (0.0499) | (0.0216) | (0.0881) | (0.0357) | (0.0735) | (0.0378) |
| January 2021 | 0.0011 | -0.036* | 0.0742 | -0.038 | -0.156** | -0.001 |
| | (0.0524) | (0.0216) | (0.0905) | (0.0351) | (0.0736) | (0.0389) |
| September 2021 | 0.0149 | -0.008 | 0.0211 | -0.017 | -0.014 | 0.0153 |
| | (0.0583) | (0.0242) | (0.0979) | (0.0378) | (0.0772) | (0.0406) |
| March 2023 | 0.0232 | 0.122*** | 0.0372 | 0.153*** | -0.038 | 0.115*** |
| | (0.0438) | (0.0227) | (0.0855) | (0.041) | (0.0517) | (0.0272) |
| Observations | 3035 | 3035 | 1682 | 1682 | 1586 | 1586 |
| R-squared | 0.059 | 0.08 | 0.05 | 0.113 | 0.081 | 0.061 |

Notes: Data come from the 2016, May 2020, August 2020, November 2020, January 2021, September 2021, and March 2023 CaDDI time diary surveys. Observations are diaries of respondents interviewed in the seven waves of the CaDDI surveys. The dependent variables measure the shares of minutes spent at work by device use and location. The table reports OLS estimates of changes in time allocation during the COVID-19 pandemic (with respect to the pre-pandemic period, i.e., 2016) while controlling for different sets of covariates such as the sociodemographic characteristics, which include age, an indicator for whether there is a child aged 16 or under in the household, and highest qualification, economic characteristics covariate which include household income and the regional dummies, which include the following 12 regions: North East, North West, Yorkshire and the Humber, East Midlands, West Midlands, East London, South East, South West, Wales, Scotland, and Northern Ireland. Panel A reports coefficients for men while Panel B reports the coefficients for women ($\alpha_k^M + \alpha_k^W$) from Equation 1. Robust standard errors are in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1. ***.

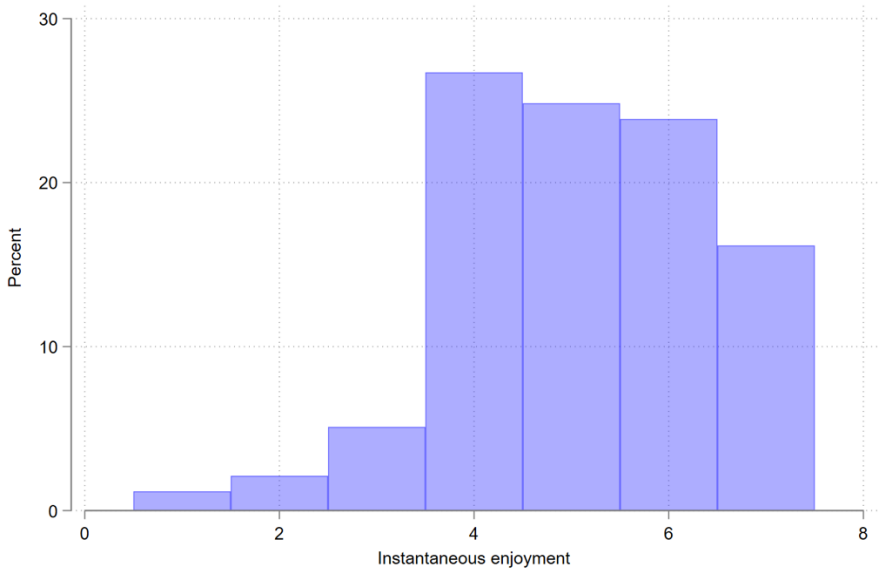
## Appendix C: OTUS data

### Figure C1: Distribution of the self-reported measure of productivity




Notes: unweighted measure of self-reported productivity in wave 8 over 1,651 episodes of work.

### Figure C2: Distribution of the instantaneous enjoyment across all episodes and waves




Notes: unweighted measure of enjoyment across all episodes in the 8 waves of OTUS data.

## Table C1: Summary Statistics of socio-economic characteristics in OTUS data

| | *Wave 1* | *Wave 2* | *Wave 3* | *Wave 4* | *Wave 5* | *Wave 6* | *Wave 7* | *Wave 8* | *All* |
|---|---|---|---|---|---|---|---|---|---|
| Female | 0.597 | 0.597 | 0.608 | 0.615 | 0.560 | 0.546 | 0.516 | 0.512 | 0.564 |
| | (0.491) | (0.491) | (0.489) | (0.487) | (0.497) | (0.498) | (0.500) | (0.500) | (0.496) |
| College degree | 0.597 | 0.634 | 0.553 | 0.639 | 0.607 | 0.594 | 0.523 | 0.512 | 0.580 |
| | (0.491) | (0.482) | (0.497) | (0.480) | (0.489) | (0.491) | (0.500) | (0.500) | (0.494) |
| GCSE-A level | 0.355 | 0.336 | 0.401 | 0.318 | 0.352 | 0.361 | 0.424 | 0.428 | 0.373 |
| | (0.479) | (0.473) | (0.490) | (0.466) | (0.478) | (0.480) | (0.494) | (0.495) | (0.484) |
| Other or no qual. | 0.0474 | 0.0296 | 0.0455 | 0.0427 | 0.0409 | 0.0456 | 0.0534 | 0.0602 | 0.0465 |
| | (0.213) | (0.170) | (0.209) | (0.202) | (0.198) | (0.209) | (0.225) | (0.238) | (0.211) |
| Age: less than 34 | 0.157 | 0.201 | 0.147 | 0.216 | 0.209 | 0.199 | 0.214 | 0.249 | 0.202 |
| | (0.364) | (0.401) | (0.355) | (0.412) | (0.407) | (0.400) | (0.410) | (0.433) | (0.402) |
| Age: 35 to 44 | 0.237 | 0.235 | 0.242 | 0.260 | 0.244 | 0.259 | 0.257 | 0.234 | 0.249 |
| | (0.426) | (0.424) | (0.429) | (0.439) | (0.430) | (0.438) | (0.437) | (0.424) | (0.432) |
| Age: 45 to 55 | 0.321 | 0.285 | 0.306 | 0.246 | 0.270 | 0.252 | 0.259 | 0.256 | 0.268 |
| | (0.467) | (0.452) | (0.461) | (0.431) | (0.444) | (0.434) | (0.438) | (0.437) | (0.443) |
| Age: 55+ | 0.284 | 0.279 | 0.304 | 0.277 | 0.277 | 0.290 | 0.271 | 0.261 | 0.281 |
| | (0.451) | (0.449) | (0.460) | (0.448) | (0.448) | (0.454) | (0.444) | (0.439) | (0.449) |
| N of Children age 0-4 | 0.0981 | 0.113 | 0.102 | 0.126 | 0.116 | 0.122 | 0.123 | 0.138 | 0.119 |
| | (0.298) | (0.317) | (0.302) | (0.332) | (0.321) | (0.327) | (0.329) | (0.345) | (0.324) |
| N of Children age 5-10 | 0.195 | 0.174 | 0.181 | 0.185 | 0.177 | 0.170 | 0.177 | 0.155 | 0.175 |
| | (0.396) | (0.379) | (0.385) | (0.388) | (0.381) | (0.376) | (0.382) | (0.362) | (0.380) |
| N of Children age 11-15 | 0.179 | 0.168 | 0.190 | 0.160 | 0.191 | 0.160 | 0.180 | 0.163 | 0.173 |
| | (0.384) | (0.374) | (0.392) | (0.367) | (0.393) | (0.367) | (0.384) | (0.370) | (0.378) |
| Single | 0.421 | 0.473 | 0.455 | 0.442 | 0.439 | 0.417 | 0.406 | 0.412 | 0.430 |
| N | 591 | 541 | 1032 | 1266 | 1076 | 1711 | 1142 | 1047 | 8406 |

Notes: unweighted socio-demographic characteristics in OTUS data.

## Table C2: Summary Statistics of time use in OTUS data

| | Wave 1 | Wave 2 | Wave 3 | Wave 4 | Wave 5 | Wave 6 | Wave 7 | Wave 8 | All waves |
|---|---|---|---|---|---|---|---|---|---|
| Total work | 272.3 | 353.0 | 340.6 | 352.7 | 360.0 | 349.7 | 356.5 | 374.9 | 349.2 |
| | (222.4) | (211.8) | (221.3) | (210.4) | (207.7) | (212.3) | (210.6) | (208.8) | (213.7) |
| Work from home | 110.3 | 148.7 | 155.4 | 138.8 | 118.1 | 114.3 | 111.1 | 110.5 | 124.5 |
| | (180.8) | (211.0) | (214.0) | (202.2) | (188.2) | (188.8) | (186.6) | (191.3) | (195.6) |
| Personal care | 693.1 | 649.8 | 648.2 | 645.8 | 648.6 | 665.7 | 663.5 | 662.2 | 658.6 |
| | (128.9) | (111.1) | (112.6) | (125.4) | (122.9) | (133.7) | (130.8) | (122.9) | (125.7) |
| Leisure | 289.9 | 247.3 | 277.7 | 255.8 | 245.1 | 235.1 | 230.9 | 227.2 | 247.8 |
| | (155.8) | (138.0) | (149.2) | (143.7) | (141.8) | (137.1) | (143.0) | (137.0) | (143.7) |
| Unpaid work | 139.6 | 109.2 | 107.4 | 102.8 | 99.69 | 103.7 | 94.87 | 87.95 | 103.2 |
| | (142.6) | (124.6) | (119.2) | (119.2) | (120.6) | (118.7) | (116.3) | (108.2) | (120.2) |
| Travel | 20.85 | 59.45 | 42.08 | 60.61 | 65.69 | 65.91 | 76.43 | 74.79 | 61.11 |
| | (41.12) | (68.44) | (58.76) | (70.53) | (70.63) | (74.68) | (80.24) | (77.36) | (72.14) |

Notes: unweighted number of minutes in work and time in work at home from OTUS data.

**Table C3: Activities Included in Personal Care, Leisure, Unpaid Work, Paid Work and Computer - OTUS data**

| Personal Care | Leisure | Unpaid Work | Travel | Paid work | Computer |
|---|---|---|---|---|---|
| Sleeping | Walking dog | Cleaning/tidying | Travel (e.g. walking, driving) | Working | Writing open-source software |
| Washing/getting ready | Watching TV/DVDs | Washing up | Commuting (e.g. to work, conference, clients) | Paid childcare/cleaning/odd jobs | Creating/coding website |
| Medication/health care | Streaming videos | Ironing/laundry | Travel for unpaid work (e.g. volunteering) | Renting out personal items | Writing online/content creation |
| Eating/takeaway | Watching TV/DVDs | Repairs (home/vehicle) | Shopping travel | Using private vehicle for work | Assisting others online |
| Cooking/washing up | Work break | Caring for pets | Social travel (e.g. pub, park) | Selling personal items | Supporting causes online |
| Cooking | Listening to audio | Feeding/caring for pets | Escorting kids to school/childcare | Using device for directions | |
| Snacking | Browsing internet | Packing for travel | Other travel (e.g. holiday, medical, gym) | Finding guidance online | |
| Drinking (tea, coffee, alcohol) | Checking email | Organizing household items | General computer use | | |
| Appointments/errands (e.g. doctor, bank) | Social media | Fireplace maintenance | Working from home | Computer (no main purpose) | |
| | Reading (books, magazines) | DIY/gardening | | Using computer/laptop | |
| | Socializing | Volunteering | | Other computer use (e.g. coding, writing, helping online) | |
| | Calling/texting family & friends | Caring for children | | | |
| | Gaming | Comforting/cuddling children | | | |
| | Attending events (e.g. cinema, concert, museum) | Helping with homework | | | |
| | Hobbies/leisure | Reading to children | | | |
| | Resting/lying in bed | Playing with children | | | |
| | Talking with family/friends | Homeschooling | | | |
| | Religious event | Watching/attending child's event | | | |
| | Political meeting | Teaching children life skills | | | |
| | Other meeting/event | Teaching child development (e.g. writing, counting, baking) | | | |
| | Checking phone/tablet | Childcare (secondary activity) | | | |
| | Chatting | Adult care (secondary activity) | | | |
| | Exercise (gym, class, jogging) | Caring for adults | | | |
| | Team sports | Shopping | | | |

| Personal Care | Leisure | Unpaid Work | Travel | Paid work | Computer |
|---|---|---|---|---|---|
| | Other sports/exercise (hiking, cycling) | Browsing/window shopping | | | |
| | Walking for exercise | Queueing/waiting | | | |
| | Meditation/well-being | Banking/household tasks | | | |
| | Health/well-being activity | Financial/admin tasks | | | |
| | Fun course | Document completion (e.g. applications, forms) | | | |
| | Praying | Household admin | | | |
| | Smoking/vaping | DIY | | | |
| | Chatting | Gardening | | | |
| | Writing/texting/emailing | | | | |