The Changing Nature of Work: What Can We Learn From Time Use Diaries?

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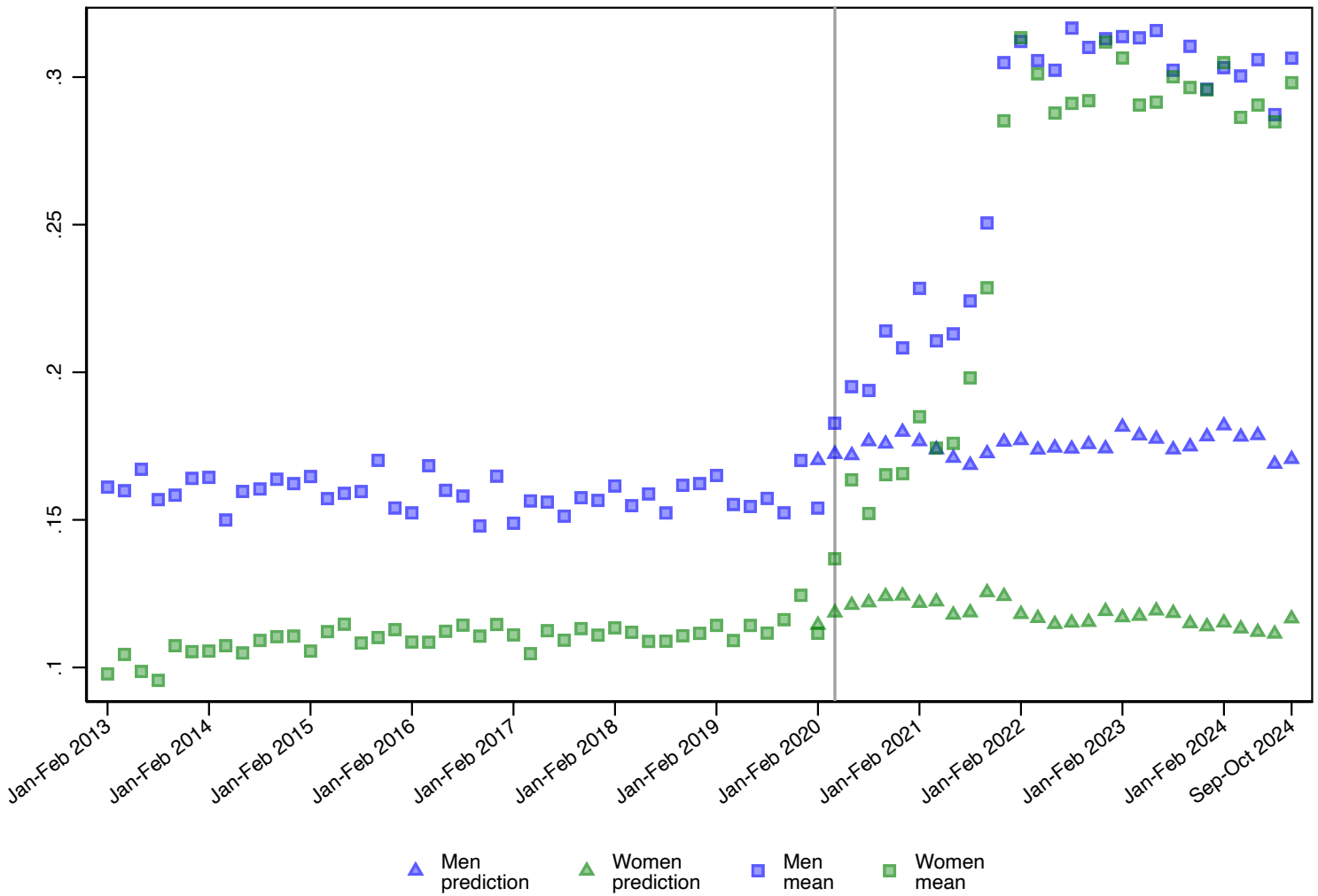
Working from home in the UK



Note: The figure shows the bi-monthly proportion (square markers) of respondents working mainly or partly from home and the prediction out of sample (triangle markers) for the period January 2020 – September/October 2024 based on Annual Population Surey data. By higher education By age

Motivation

- Remote and hybrid work has become a persistent post-pandemic feature, particularly in the US, UK and Canada (Zarate et al. 2024).
- Major implications for:
  - **Wellbeing, work–life balance and mental health** (Yang et al., 2023; Denzer and Grunau, 2024)
  - **Productivity** (Gibbs et al., 2023; Bloom et al., 2023; Aksoy et al., 2025)
  - **Urban structure and housing market** (Ramani et al., 2024)
- Important to understand why workers continue to work remotely.

Research Questions

- How has the prevalence of remote work changed in the UK since before the pandemic?
- How does remote work affect time allocation, multitasking, and daily patterns?
- What are its implications for enjoyment, self-perceived productivity, and, more generally, wellbeing?
- Are there gender differences?

This paper

- We use new time use diary data collected by the UK's Office for National Statistics (ONS) between April 2020 and March 2025
- We compare work patterns on days worked from home with those worked away from home (between-person design).
- We examine how individuals allocate time to various activities when working remotely versus in the workplace, and their enjoyment and self-perceived productivity.

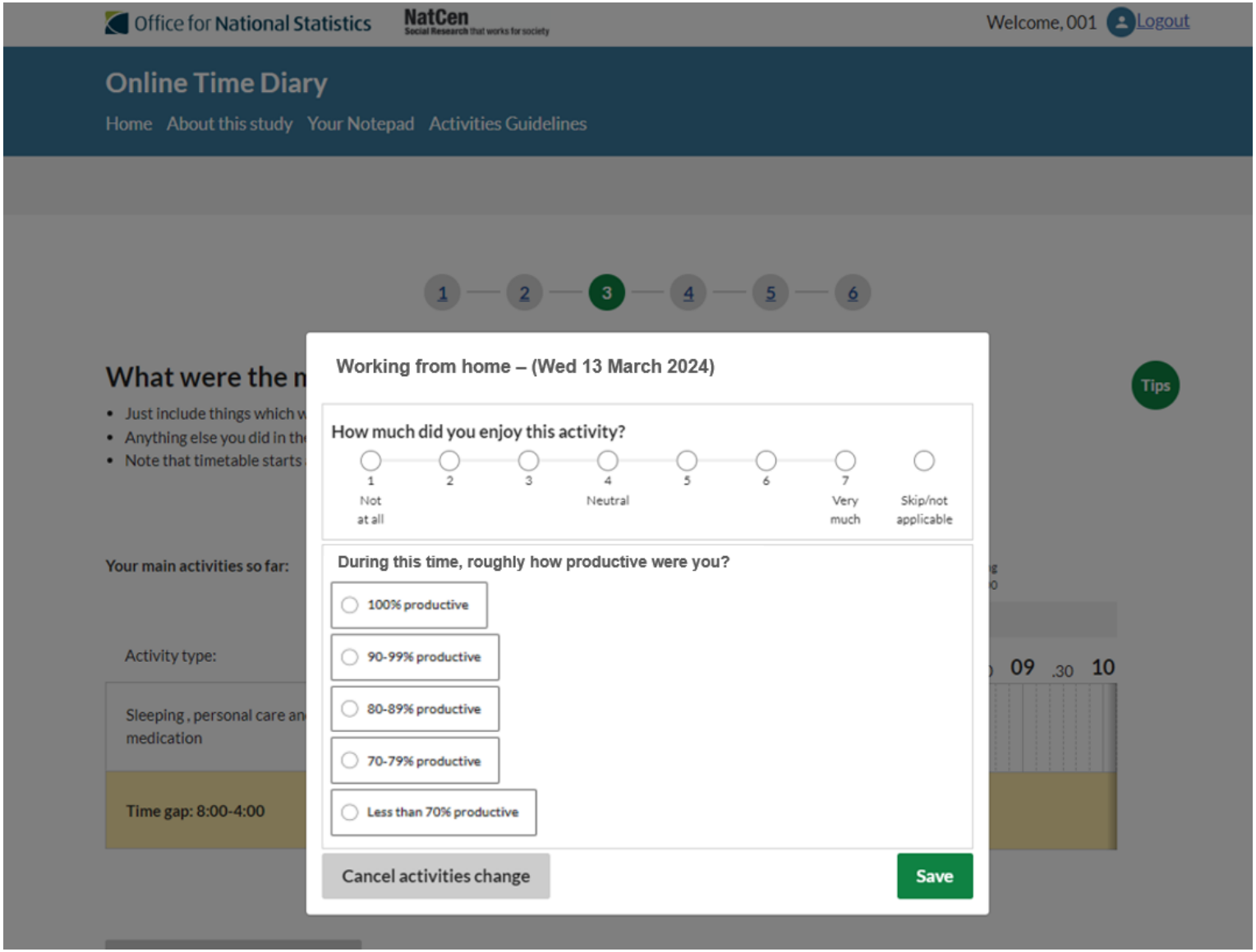
Contributions

- We show that time use data can track remote work trends while also capturing work–life and wellbeing dimensions (Barrero et al., 2024; Buckman et al., 2025; Kmetz et al., 2025).
- Our UK evidence supports early findings that remote work increases leisure, unpaid work and multitasking, but challenges claims of higher wellbeing (Adams et al., 2023; Aksoy et al., 2023; Cowan, 2024; Gimenez Nadal et al., 2024, Denzer and Grunau, 2024).
- Both men and women increase time in unpaid work when WFH well after the pandemic period $\Rightarrow$ gender gap remains, but men's doing more unpaid work may shift norms (Zamarro et al. 2021; Farrè et al., 2024).
- Avoidance of commuting and daily time reallocation are important in explaining WFH preferences (Pabilonia & Vernon, 2025, Cullen et al., 2025).

Data: ONS Online Time Use Survey (OTUS)

- 9 waves (Apr 2020–Mar 2025) from NatCen panel.
- 7,555 weekday diaries of employed adults (4,386 post-pandemic).
- Each diary records:
  - Primary & secondary activities (10-/5-min intervals)
  - Instantaneous enjoyment (1–7 scale)
  - Self-perceived productivity (1–5 scale, since 2024)
  - Socio-economic characteristics
- Treated as repeated cross-sections (not longitudinal).
- Continuous time-use diaries are 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).

OTUS Wave 8/9 – Self-reported productivity



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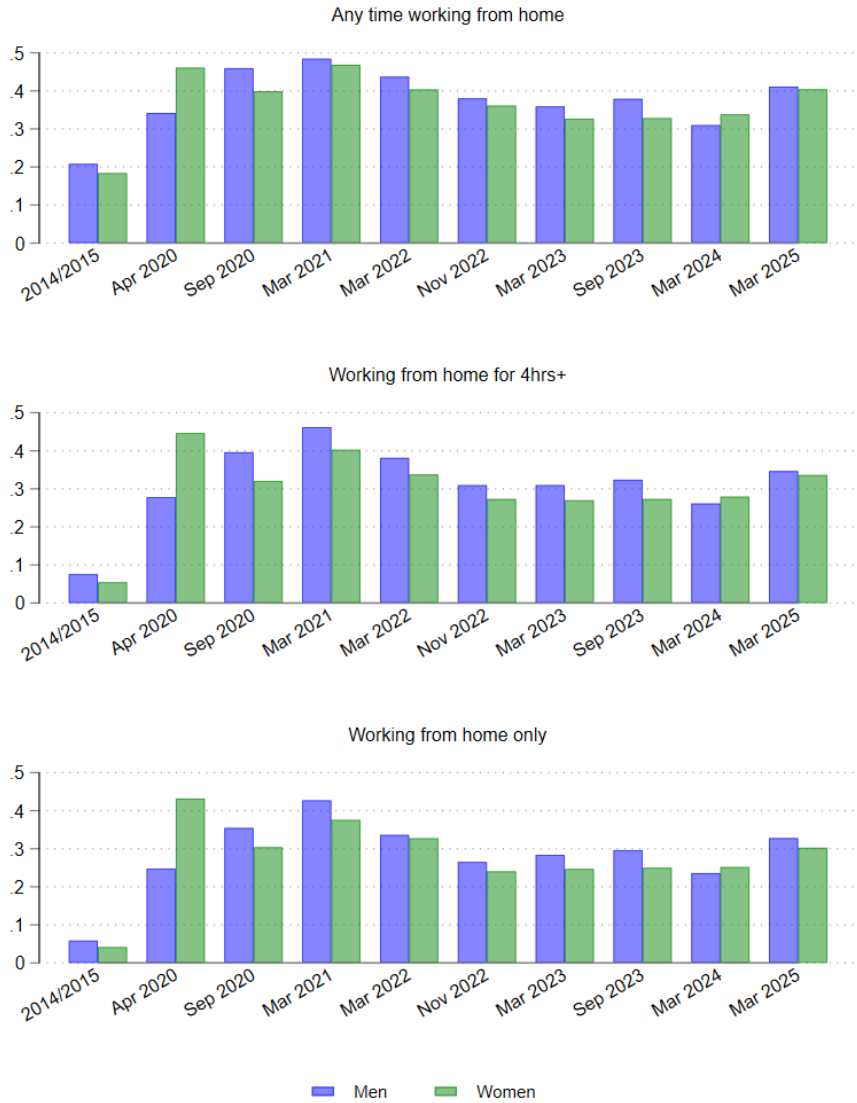
Results: Measuring working from home

Figure 1: Proportion of diaries reporting work from home



Notes: UKTUS 2014/15 and OTUS data 2020-2024

Results: Working from home and main activities

Table 1: Working from home and time across different main activities (November 2022-March 2025)

Activity	Men		Women	
	Baseline On-site workers	WFH (%)	Bseline On-site workers	WFH (%)
Sleeping	482.027	**7.54**	494.654	**4.05**
Personal care	112.987	-2.31	123.431	**-9.81**
Travel	85.461	**-76.76**	76.901	**-71.35**
Unpaid work	67.141	**38.22**	93.693	**24.48**
Unpaid care	14.823	**46.52**	16.188	**45.19**
Watching TV	96.899	-0.57	86.845	**10.61**
Leisure	45.097	3.67	37.789	10.4
Well-being / fitness	11.001	**98.28**	10.548	**79.77**
Social media / Internet	28.134	21.75	35.861	7.3
Paid work	487.559	**-4.28**	453.441	-1.2

Notes: The WFH(%) columns report coefficients from OLS regressions expressed as percentage differences relative to non-WFH workers. For men, this is the coefficient on the WFH dummy; for women, this is the sum of the WFH dummy and the WFH×Female interaction term. The dependent variable is minutes spent in different activity groups, with diary entries as the unit of observation. N=4,386. All regressions include demographic and socio-economic controls, occupation and region fixed effects, and are estimated using survey weights. Robust standard errors in parentheses. Bold estimates are significant at the 1% level.

Results: Working from home and secondary activities

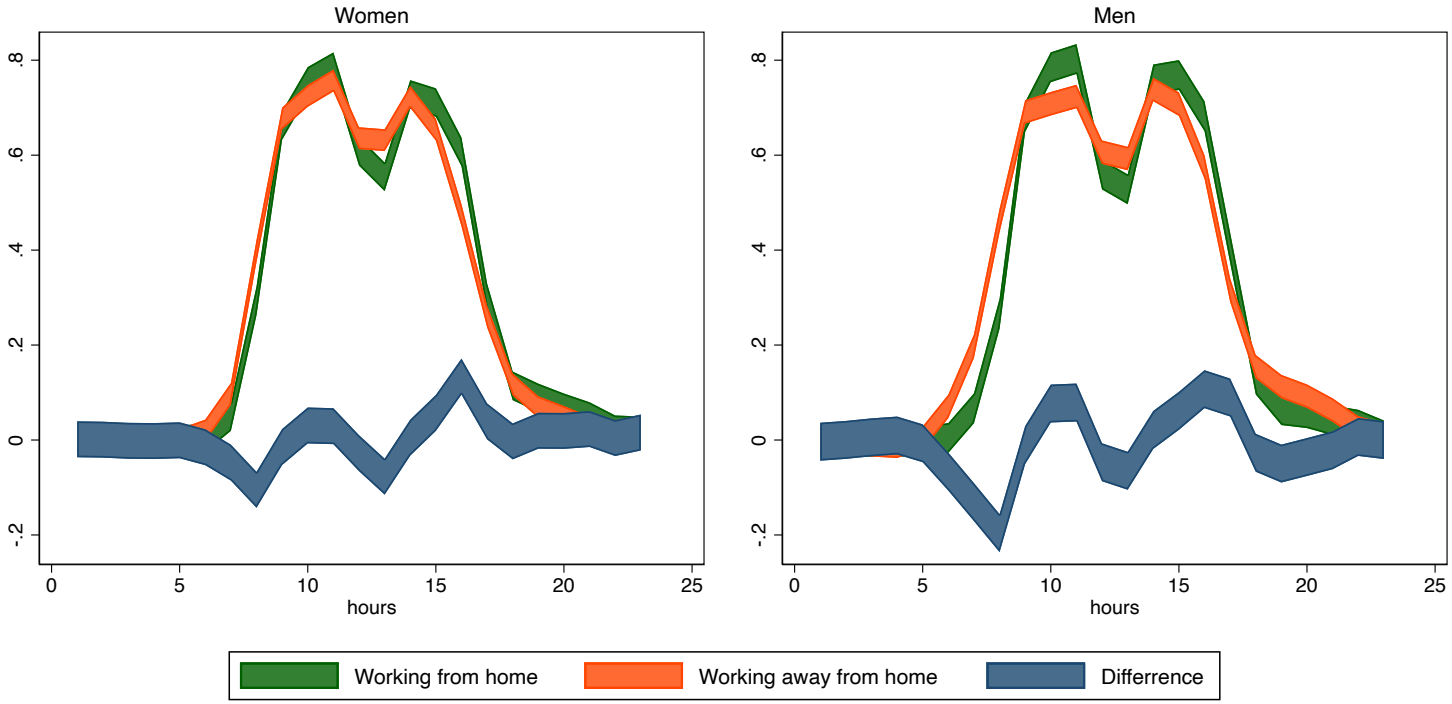
Table 2: Working from home and time across different secondary activities (November 2022-March 2025)

Activity	Men		Women	
	Baseline On-site workers	WFH (%)	Bseline On-site workers	WFH (%)
Sleeping+personal care	10.84	10.69	10.09	15.10
Secondary Unpaid work+unpaid care	2.33	137.77	3.11	**125.02**
Watching TV+Leisure+wellbeing	15.83	**125.81**	13.03	**132.62**
Social media+internet browsing	12.69	8.98	10.91	-0.49

Notes: The WFH(%) columns report coefficients from OLS regressions expressed as percentage differences relative to non-WFH workers. For men, this is the coefficient on the WFH dummy; for women, this is the sum of the WFH dummy and the WFH×Female interaction term. The dependent variable is minutes spent in different activity groups, with diary entries as the unit of observation. N=4,386. All regressions include demographic and socio-economic controls, occupation and region fixed effects, and are estimated using survey weights. Robust standard errors in parentheses. Bold estimates are significant at the 1% level.

Results: Temporal flexibility

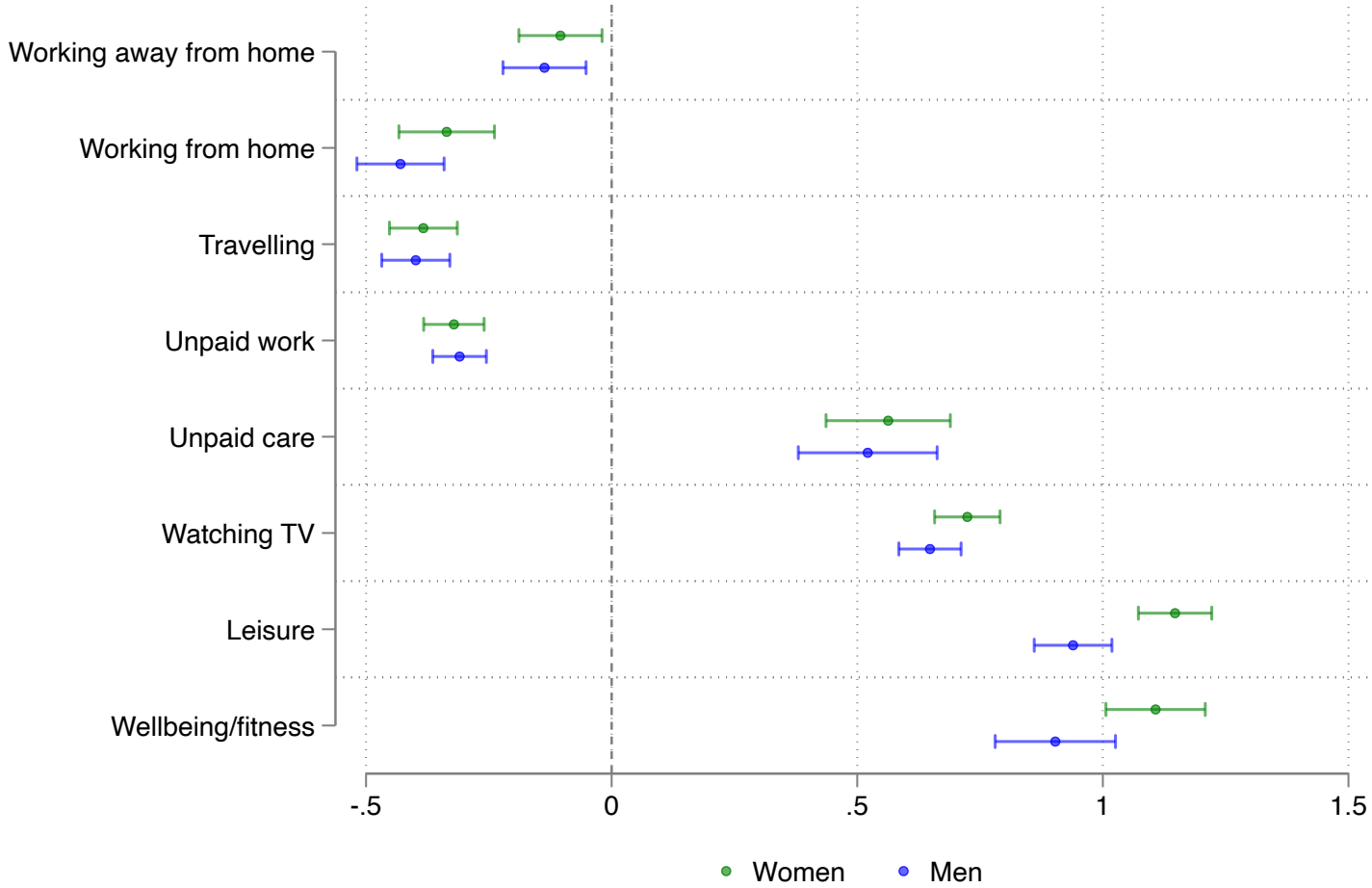
Figure 2: Probability of being in work over 24 hours – November 2022-March 2025



Notes: These figures show the 95% confidence intervals of the estimated probability of engaging in paid work by hour of the day, separately for women (left panel) and men (right panel), comparing those working from home (blue line) and those working away from home (orange line). The green shaded area depicts the 95% confidence intervals of the difference between the two groups. These probabilities are derived from a linear probability model estimated separately by gender, where the dependent variable is an indicator for whether the respondent is working at a given time. The model includes hour-of-day fixed effects, an indicator for working from home, their interaction, and individual fixed effects. Estimates are based on 24-hour time-use diary data.

Results: Working from home and enjoyment

Figure 3: Preferences (instantaneous enjoyment) over activities – All, 2022-2025



Notes: the figure reports coefficients and 95% confidence intervals from regressions estimated by gender at the episode level of instantaneous enjoyment, on episode length and individual fixed effects. The baseline category for these estimates are sleeping and personal care, as they are activities that appears in all diaries. Data from November 2022-March 2025. Wellbeing

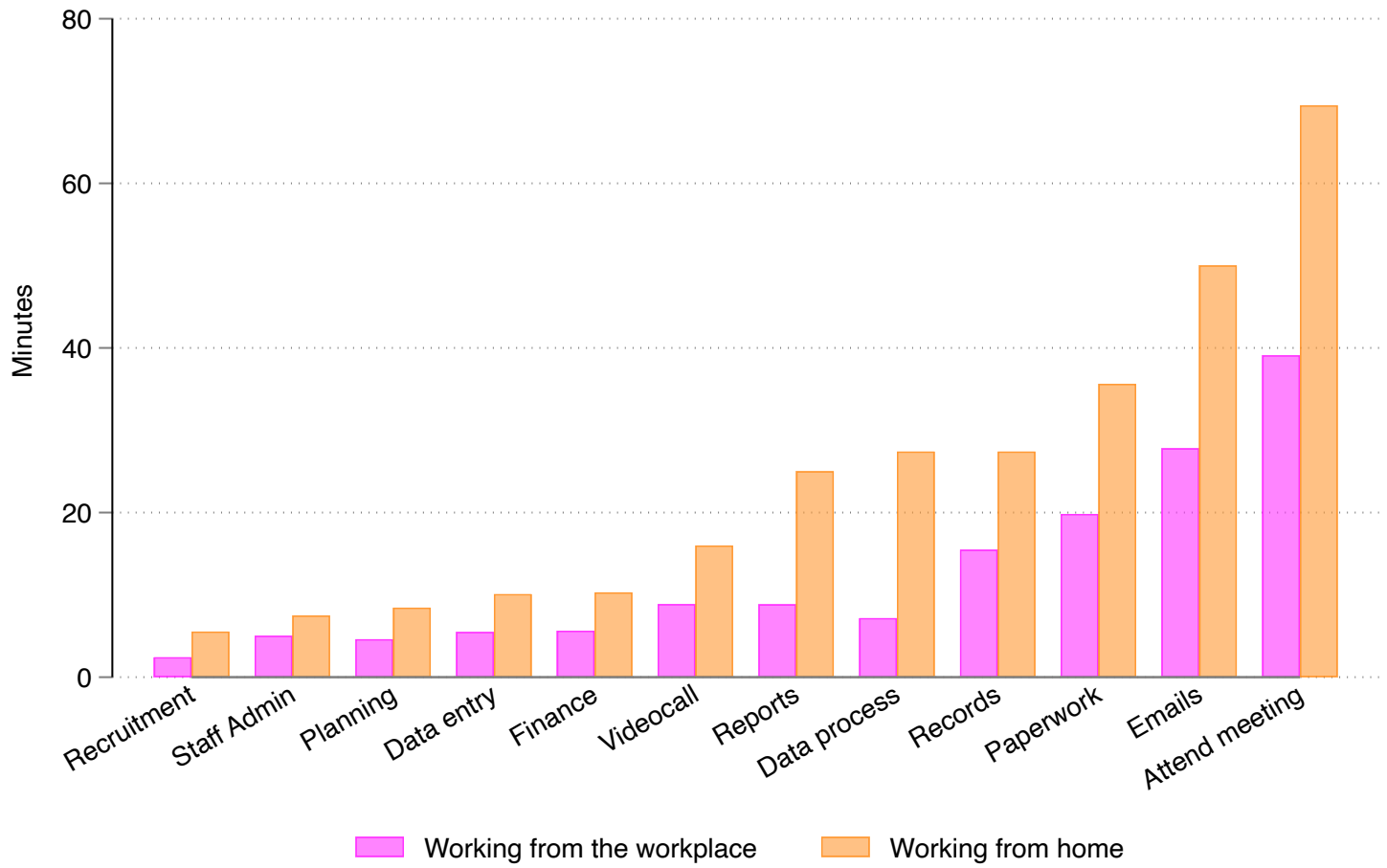
Results: Working from home and productivity

Table 3: Self-perceived productivity, March 2024 and March 2025

	(1) OLS Productivity All	(2) Probit Pr(Prod>=80%)	(3) Probit Pr(Prod>=90%)	(4) Probit Pr(Prod=100%)	(5) OLS Enjoyment
Female	0.160***	0.061***	0.065***	0.024***	0.042***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
WFH	-0.111***	-0.002***	-0.047***	-0.047***	-0.282***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
WFH*Female	0.108***	0.034***	0.044***	-0.002***	0.138***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)
WFH+WFH*Female	-0.003***	0.0320***	-0.0029***	-0.049***	-0.144***
	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.001)
Baseline men		0.811	0.491	0.220	
Baseline women		0.853	0.584	0.250	
N	2937	2937	2937	2937	2937
R^2	0.138				0.161

Notes: observations are episodes of activities reported in diaries by graduate respondents in employment during a weekday. The dependent variable is defined as the self-perceived productivity reported by respondents for each episode. Values are: 5 = 100% productive; 4 = 90-99% productive; 3 = 80-89% productive; 2 = 70-79% productive; 1 = Less than 70% productive. Column 1 reports estimates from an OLS regression, columns 2 to 4 report marginal effects from a set of estimated probit where the dependent variable is defined by different cut-offs respectively as: equal 3 or more, equal 4 or more and equal 5. Finally column 5 reports estimates from an OLS regression where the dependent variable is instantaneous enjoyment reported during paid work. Estimates reported for probit models are marginal effects.

Working from home, tasks and time use (Foliano, Riley and Tonei, 2025)



Notes: Public Sector Time Use Data 2024.

Wellbeing and working from home

Table 4: Wellbeing measures, November 2022-March2025

	(1) Life satisfaction	(2) Happy	(3) Anxious	(4) Worth
Female	0.104	-0.008	0.407***	0.122
	(0.086)	(0.099)	(0.124)	(0.090)
WFH	0.049	-0.144	0.247	-0.002
	(0.106)	(0.118)	(0.154)	(0.103)
Female*WFH	-0.028	0.001	-0.273	0.012
	(0.137)	(0.156)	(0.203)	(0.139)
WFH+ Female*WFH	0.0210	-0.144	-0.0262	0.0106
	(0.0898)	(0.111)	(0.145)	(0.096)
N	4,349	4,349	4,349	4,349
R^2	0.102	0.074	0.075	0.099

Conclusion

- Remote work persistence driven by time savings and flexibility, not enjoyment or productivity.
- Wellbeing benefits arise outside of work time.
- Mental health impacts hinge on how workers balance flexibility vs enjoyment of their time in work/perception of their productivity.
- Future research: larger multi-day diaries, task-level data.

Policy and Employer Implications

- Remote work is here to stay and workers value flexibility more than perceived productivity gains.
- Employers: hybrid models should manage
  - Multitasking.
  - Clear work–life boundaries.
  - Employees' motivation.
- Policymakers: improve commuting efficiency and home-working conditions. What about gender equality?

Thank you very much!

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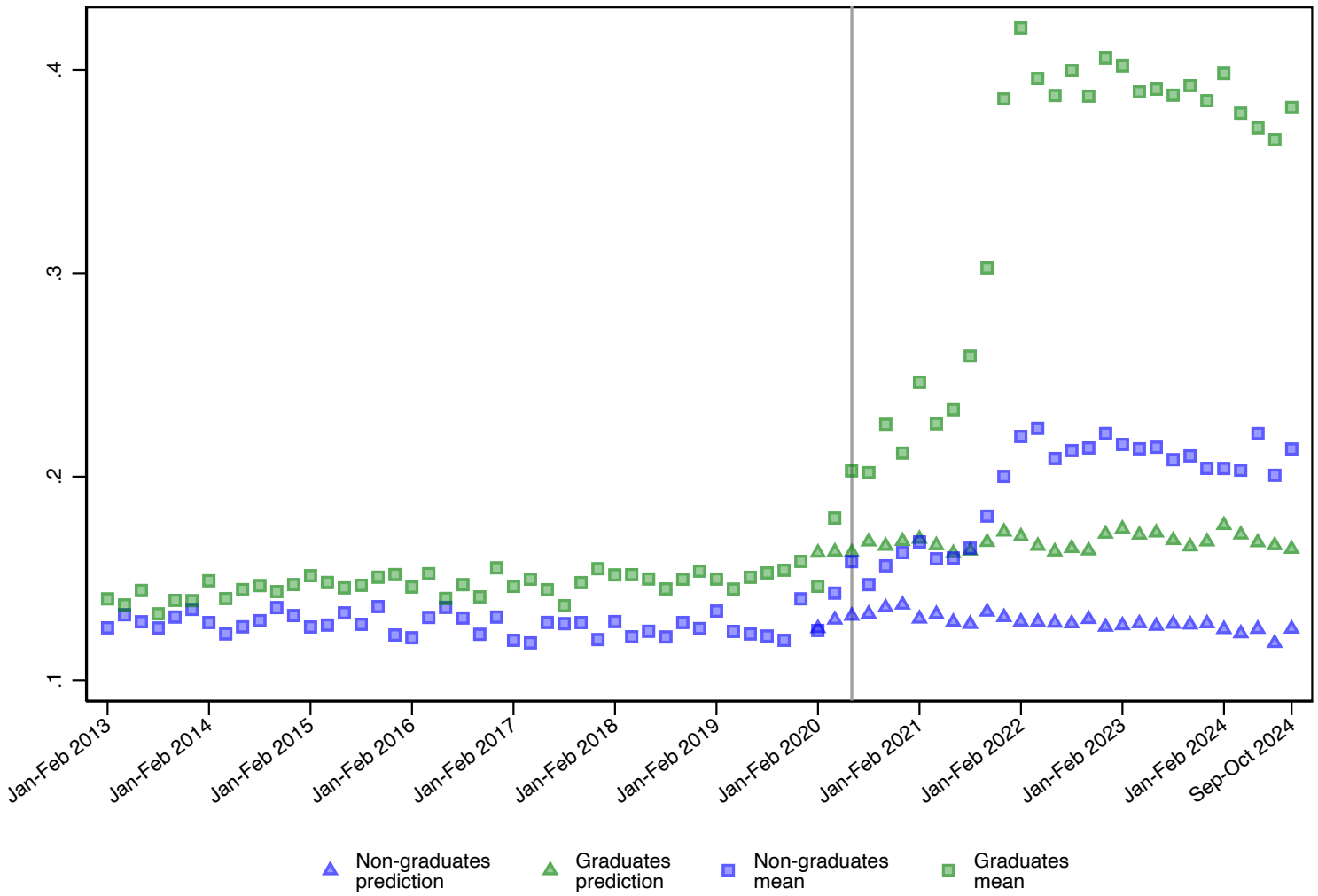
Appendix I: Trends in working from home, graduates and non-graduates



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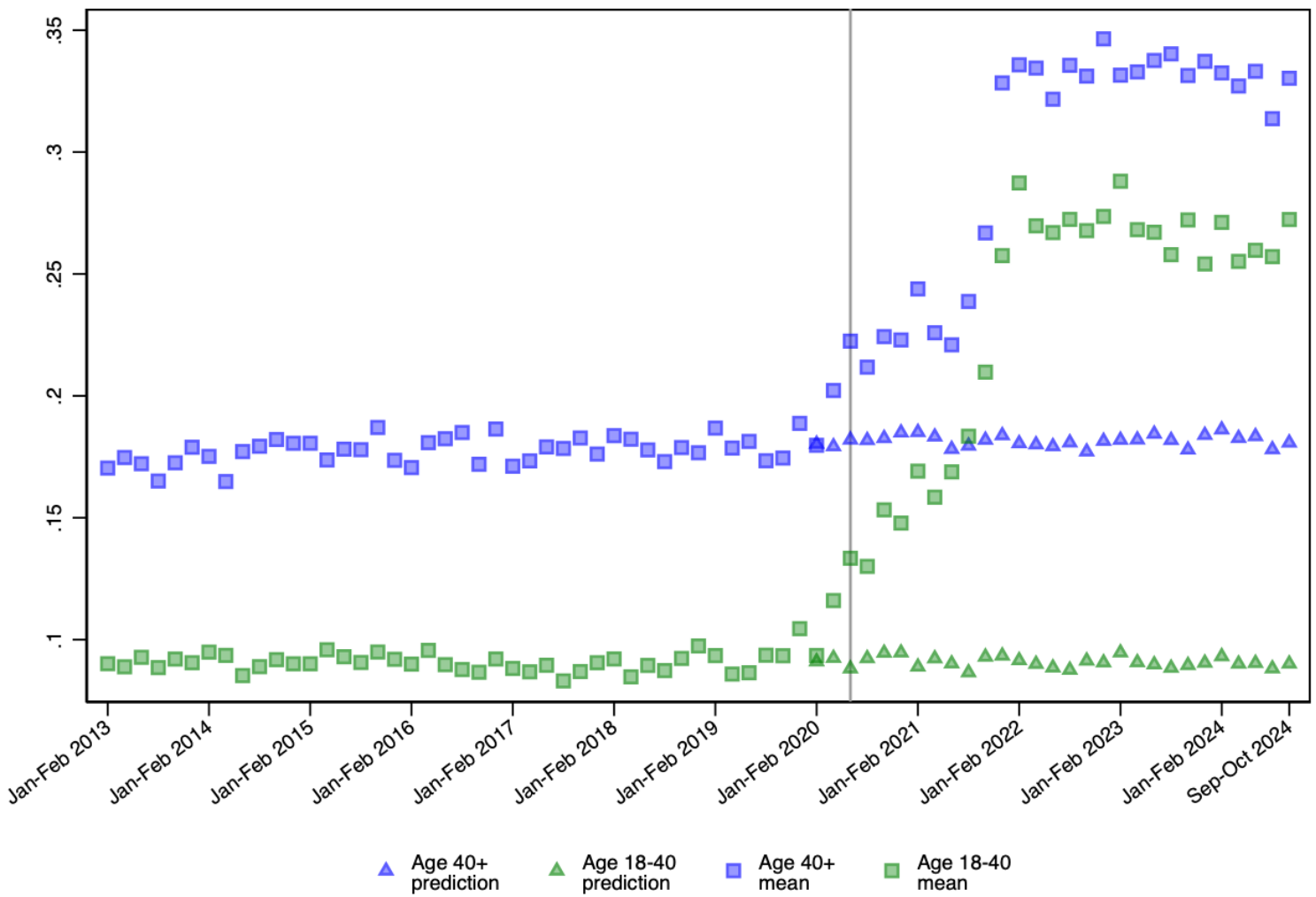
Appendix II: Trends in working from home, by age group



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