

RENAISSANCE IN ECONOMICS

MANIFESTO FOR THE NEW ECONOMY

Rethinking Working Time: Can Flexible Work Arrangements (FWAs) Foster Volunteering?

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“Well-being In a Dematerialized Economy (WIDE)”

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Context

Volunteering benefits

- wellbeing, mental health, physical health
- socioeconomic benefits
- sense of community, social cohesion

(Wilson, 2012; Nichol et al., 2024; Davies et al., 2024)

Volunteering: provision of goods and services

(Gomez & Gunderson, 2003; Bartels et al., 2012; Kobayashi et al., 2019)

In the UK

- Stable proportion of population engaged in volunteering
(Lindsey and Mohan, 2018)
...or even declining in recent years (DCMS, 2024)
- Working time has remained stable
 - around 37h weekly hours
- Policies to extend the right to request FWAs and promoting their use
 - Flexible Working Regulations 2002, Children and Families Act 2014, Flexible Working Bill 2023, Employment Rights Bill 2024
 - Potential to strengthen civil society e.g. through voluntary work (Goerlich & Vis, 2024)

Research questions

Does *working time* affect *volunteering* in the UK?

- *Total working hours?*
- *Flexible work arrangements (FWAs)?*



Literature

Working hours and volunteering

- Main theories: time constraint vs. social integration
(Lup & Booth, 2018; Kobayashi et al., 2019; Qvist, 2021)
- Empirical results
 - Working longer hours reduces volunteering in the US, Denmark and Germany
(Taniguchi, 2012; Qvist et al., 2021; Kelle et al., 2024)
 - Longer working hours do not significantly affect volunteering in UK and Canada
(Gomez & Gunderson, 2003; Lup&Booth, 2018)
 - In the US, the unemployed volunteer more than workers (Piatak, 2016),
but part-time workers volunteer more than the unemployed (Einolf, 2011)

Mixed evidence but mainly negative impact

Literature

FWAs and volunteering

- Mitigate time constraints while still retaining the «social» benefits of work
- Potential work intensification and blurring of work/leisure time
(De Spiegelaere & Piasna, 2017; Hanbury et al., 2023)
- Empirical *mixed* results
 - Part-time workers volunteer more in the US (Einolf, 2011; Piatak, 2016)
 - Shifting to part-time does not affect volunteering in US (Mantovan et al., 2021)
 - Flextime and compressed workweek do not affect volunteering, while working from home increases in Canada (Gomez & Gunderson, 2003)
 - Flextime and working from home do not significantly affect volunteering in Denmark (Qvist, 2021)

Our study

- Longitudinal study (2010-2019)
on 3009 individuals – 11,856 observations
data from *UK Household Longitudinal Survey*
 - Waves 2, 4, 6, 8, 10 (no FWAs in odd w.)
 - Exclusion of observations in 2020 (Covid-19 restrictions)
 - Focus on employees
- Impact on both likelihood and frequency of volunteering
- 7 forms of FWAs
- a wide array of volunteering determinants

Dependent variables

Participation in volunteering

- Binary
- Over the last 12 months

Frequency of volunteering

- Monthly hours (continuous)
- Yearly frequency (categorical)
 - a) one-off activity
 - b) just a few times
 - c) at least once a month
 - d) once a fortnight
 - e) once a week
 - f) twice a week
 - g) on 3 or more days a week

Working time and FWAs

- Working time
 - Weekly working hours (incl. overtime, side job)
- FWAs use
 - *Flexible time*:
Flextime (flexible start/end of day)
Compressed workweek (same hours, less days)
Annualised hours (varying distribution over the year)
 - *Flexible space*: regularly working from home
 - *Working time reduction*:
Part-time work (<30h)
Term-time work (not working during school holidays)
Job sharing (pro-rata FT)
 - *Subjective perception*: autonomy over working hours

Other determinants

Time uses

- Housework
- Caregiving
- Commuting time

Job characteristics

- Job type (managerial, routine, ...)
- Job sector
- Pay type (hourly, salaried, ...)

Wellbeing

- Health
- Job satisfaction
- Feeling under strain

Socio-demographic characteristics

- Age
- Marital status
- Household net income
- Number of children (<16 y.o.)

Estimation strategy

Accounting for complex survey design

- sampling weights
- clustering at PSU level

Fixed-effects panel models

- **Participation:** conditional logit model with fixed effects (*clogit*)
- **Monthly hours:** fixed-effects linear model (*xtreg*)
- **Yearly frequency:** ordered logit model with fixed effects (*feologit*)

controlling for unobserved time-invariant heterogeneity (e.g. personality traits), only within-variation

Results: Participation

Working time and FWAs

- WTR and home (+)

Job characteristics

- Routine job, paid by the hour (+)

Time uses

- Housework (+)

Socio-demographics

- Never married, divorced (+)

Wellbeing

- Health (+)

Table 2. Volunteering Among Employees — Estimated Odds Ratios from Conditional Logit with Fixed Effects

	(1) Volunteering	(2) Volunteering
Weekly working hours	0.99* (0.00)	1.00 (0.00)
Working time reduction		
Part-time	-	1.19** (0.11)
Term time	-	1.29** (0.16)
Job sharing	-	1.53** (0.29)
Other FWA		
Compressed week	-	1.28 (0.25)
Flextime	-	1.15 (0.10)
Annualised hours	-	1.08 (0.33)
Working from home	-	1.28** (0.14)
Subjective perception of FWA		
Autonomy over WH	-	1.02 (0.03)
Control variables	✓	✓
Observations	11,856	11,856

Standard errors in parentheses

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

Results: Participation

Odds ratios from Conditional Logit (FE)

Working time and FWAs

- WTR and home (+)

Job characteristics

- Routine job, paid by the hour (+)

Time uses

- Housework (+)

Socio-demographics

- Never married, divorced (+)

Wellbeing

- Health (+)

	(1) Volunteering	(2) Volunteering
Weekly working hours	0.99* (0.00)	1.00 (0.00)
Working time reduction		
Part-time	-	1.19** (0.11)
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Control variables	✓	✓
Observations	11,856	11,856

Standard errors in parentheses

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

Results: Yearly frequency

Odds Ratios from Ordered Logit (FE)

Working time and FWAs

- WH (-)
- FWAs n.s.

Job characteristics

- Paid by the hour (+)

Time uses

- Caregiving (-)

Socio-demographics

- Separated (+)

Table A.2. Yearly

	(2) Volunteering	Odds
Weekly working hours	0.98*** (0.01)	
Working time reduction		
Part-time	1.12 (0.18)	
Term time	1.14 (0.22)	
Job sharing	0.97 (0.34)	
Other FWA		
Compressed week	0.78 (0.26)	
Flextime	1.12 (0.18)	
Annualised hours	1.35 (0.58)	
Working from home	1.34* (0.23)	
Subjective perception of FWA		
Autonomy over WH	0.94 (0.07)	
Control variables	✓	
Observations	7,320	
Standard errors in parentheses		
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$		

Results: Yearly frequency

Odds Ratios from Ordered Logit (FE)

Working time and FWAs

- WH (-)
- FWAs n.s.

Job characteristics

- Paid by the hour (+)

Time uses

- Caregiving (-)

Socio-demographics

- Separated (+)

	(1) Volunteering	(2) Volunteering
Weekly working hours	0.98*** (0.01)	0.98*** (0.01)
Working time reduction		
Part-time	-	1.12 (0.18)
Term time	-	1.14 (0.22)
Job sharing	-	0.97 (0.34)
Other FWA		
Compressed week	-	0.78 (0.26)
Flextime	-	1.12 (0.18)
Annualised hours	-	1.35 (0.58)
Working from home	-	1.34* (0.23)
Subjective perception of FWA		
Autonomy over WH	-	0.94 (0.07)
Control variables	✓	✓
Observations	7,320	7,320

Standard errors in parentheses

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

Results: Monthly hours

Working time and FWAs

- WH and FWAs n.s.

Socio-demographics

- Age (+)
- Separated, living as a couple (+)
- Young children (-)

Table A.5. Monthly Hours of Volunteering Among Employees — Estimated coefficients from fixed-effects within estimator

	(1) Volunteering	(2) Volunteering
Weekly working hours	-0.03 (0.04)	-0.04 (0.04)
Working time reduction		
Part-time	-	-0.83 (0.94)
Term time	-	0.15 (1.19)
Job sharing	-	0.71 (1.10)
Other FWA		
Compressed week	-	-0.19 (1.59)
Flextime	-	0.27 (0.73)
Annualised hours	-	-0.70 (1.44)
Working from home	-	0.44 (0.99)
Subjective perception of FWA		
Autonomy over WH	-	-0.17 (0.35)
Control variables	✓	✓
R-squared	0.019	0.025
Observations	7388	7388
Standard errors in parentheses		
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$		

Results: Monthly hours

Coefficients from FE within-estimator

Working time and FWAs

- WH and FWAs n.s.

Socio-demographics

- Age (+)
- Separated, living as a couple (+)
- Young children (-)

	(1) Volunteering	(2) Volunteering
Weekly working hours	-0.03 (0.04)	-0.04 (0.04)
Working time reduction		
Part-time	-	-0.83 (0.94)
Term time	-	0.15 (1.19)
Job sharing	-	0.71 (1.10)
Other FWA		
Compressed week	-	-0.19 (1.59)
Flextime	-	0.27 (0.73)
Annualised hours	-	-0.70 (1.44)
Working from home	-	0.44 (0.99)
Subjective perception of FWA		
Autonomy over WH	-	-0.17 (0.35)
Control variables	✓	✓
R-squared	0.019	0.025
Observations	7388	7388

Standard errors in parentheses

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

Conclusions

Do total working hours affect volunteering participation in the UK?

- weakly reduce the *likelihood* of volunteering...
but not when controlling for FWAs
- reduce the *yearly frequency* of volunteering...
but do not seem to affect *monthly hours* of volunteering

Do flexible work arrangements (FWAs) affect volunteering participation in the UK?

- increase the *likelihood* of volunteering...
but do not affect the *frequency*
- *Working time reduction* and *flexible space* arrangements...
not *flexible time* arrangements

Further steps

- Robustness checks
- Alternative models
(hybrid models, dynamic specification, Tobit)
- Gender analysis



Thank you for your attention!

Questions?

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Annex

Dependent variables

Participation in volunteering

- «In the last 12 months, have you given any unpaid help or worked as a volunteer for any type of local, national or international organisation or charity? »

Frequency of volunteering

- Monthly hours (continuous)
 - «And in the last 4 weeks approximately how many hours have you spent doing unpaid or voluntary work for any organisation? »
- Yearly frequency (categorical)
 - «Including any time spent at home or elsewhere, about how often over the last 12 months have you generally done something to help any of these organisations?»
 - one-off activity, just a few times, at least once a month, once a fortnight, once a week, twice a week, on 3 or more days a week

Equations

$$Y = a_i + t + WH_{it} + FWA_{it} + X_{it} + u_{it}$$

Where $Y = 1$ if volunteered (participation) (log $p/1-p$, log likelihood)

OR

$Y = n.$ volunteered hours (monthly hours)

OR

$Y =$ frequency category (yearly frequency)

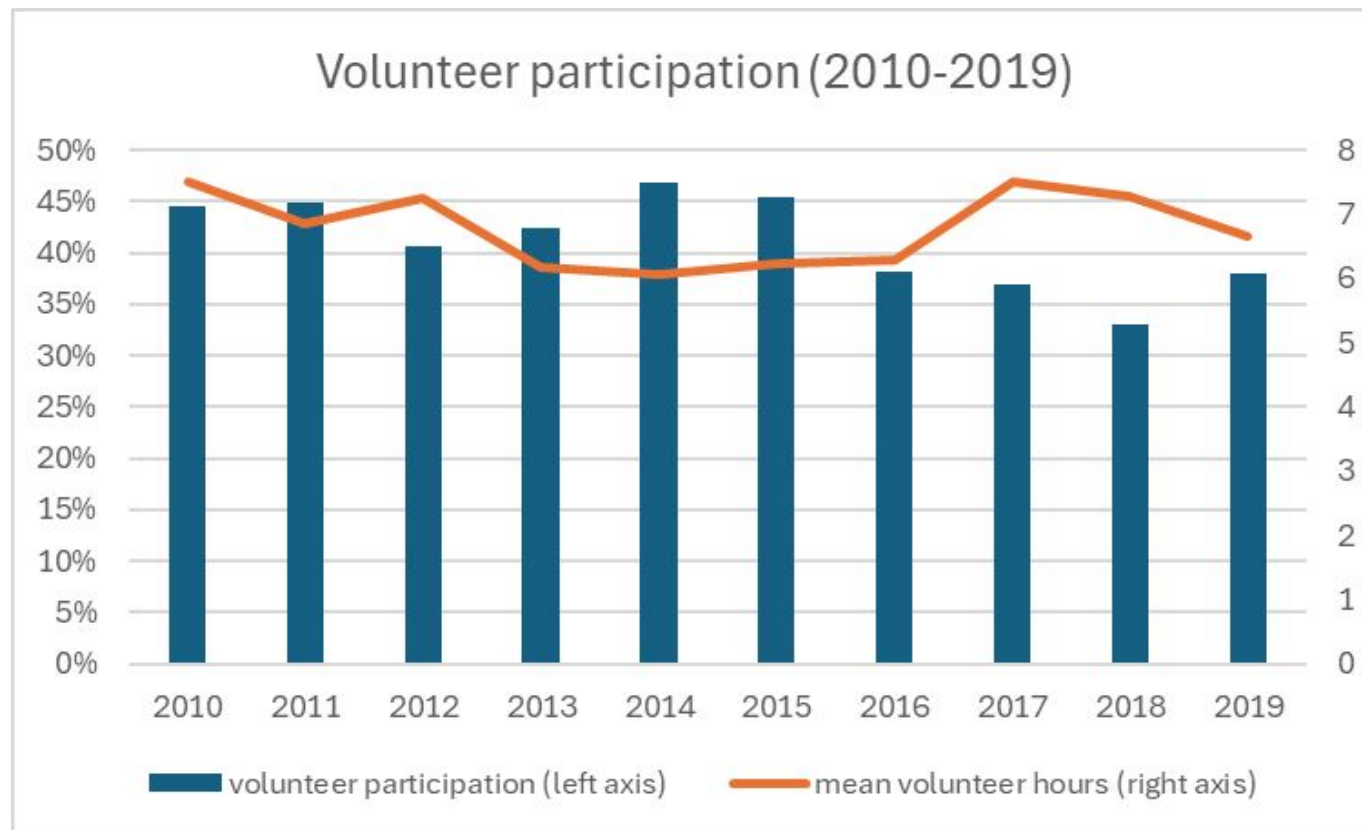
$$OR = p/1-p = \exp B$$

Descriptive statistics

Table 1. Descriptive statistics

	No volunteer	Volunteer	Total
N	6,948 (58.6%)	4,908 (41.4%)	11,856 (100.0%)
Hours spent volunteering in last 4 weeks	-	6.8 (12.0)	6.8 (12.0)
Frequency of volunteering over the year			
Three or more days a week	-	512 (11.9%)	512 (11.9%)
Twice a week	-	915 (21.3%)	915 (21.3%)
Once a week	-	821 (19.0%)	821 (19.0%)
Once a fortnight	-	810 (18.9%)	810 (18.9%)
At least once a month	-	1,041 (24.2%)	1,041 (24.2%)
Just a few time	-	435 (10.1%)	435 (10.1%)
One-off activity	-	289 (6.7%)	289 (6.7%)
Working hours	37.5 (12.4)	36.7 (13.1)	37.2 (12.7)
Working time reduction			
Part-time	1,723 (24.8%)	1,414 (28.8%)	3,137 (26.5%)
Term time	504 (7.3%)	419 (8.5%)	923 (7.8%)
Job sharing	113 (1.6%)	117 (2.4%)	230 (1.9%)
Other FWA			
Compressed week	142 (2.0%)	118 (2.4%)	260 (2.2%)
Flexi-time	1,038 (14.9%)	836 (17.0%)	1,874 (15.8%)
Annualised hours	78 (1.1%)	51 (1.0%)	129 (1.1%)
Working from home	489 (7.0%)	452 (9.2%)	941 (7.9%)
Subjective perception of FWA			
Autonomy over working hours	2.453 (1.173)	2.508 (1.174)	2.476 (1.174)

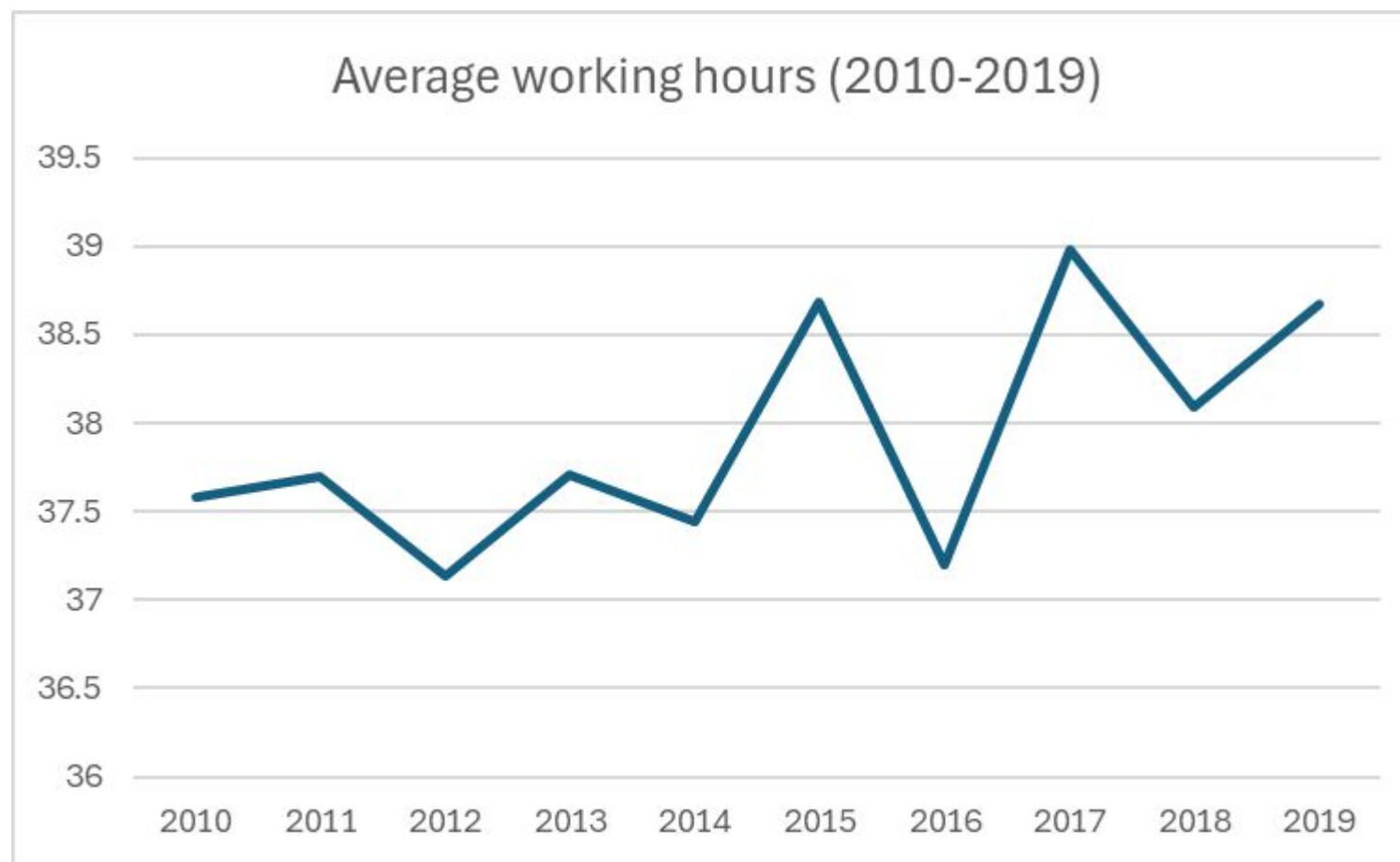
Descriptive statistics



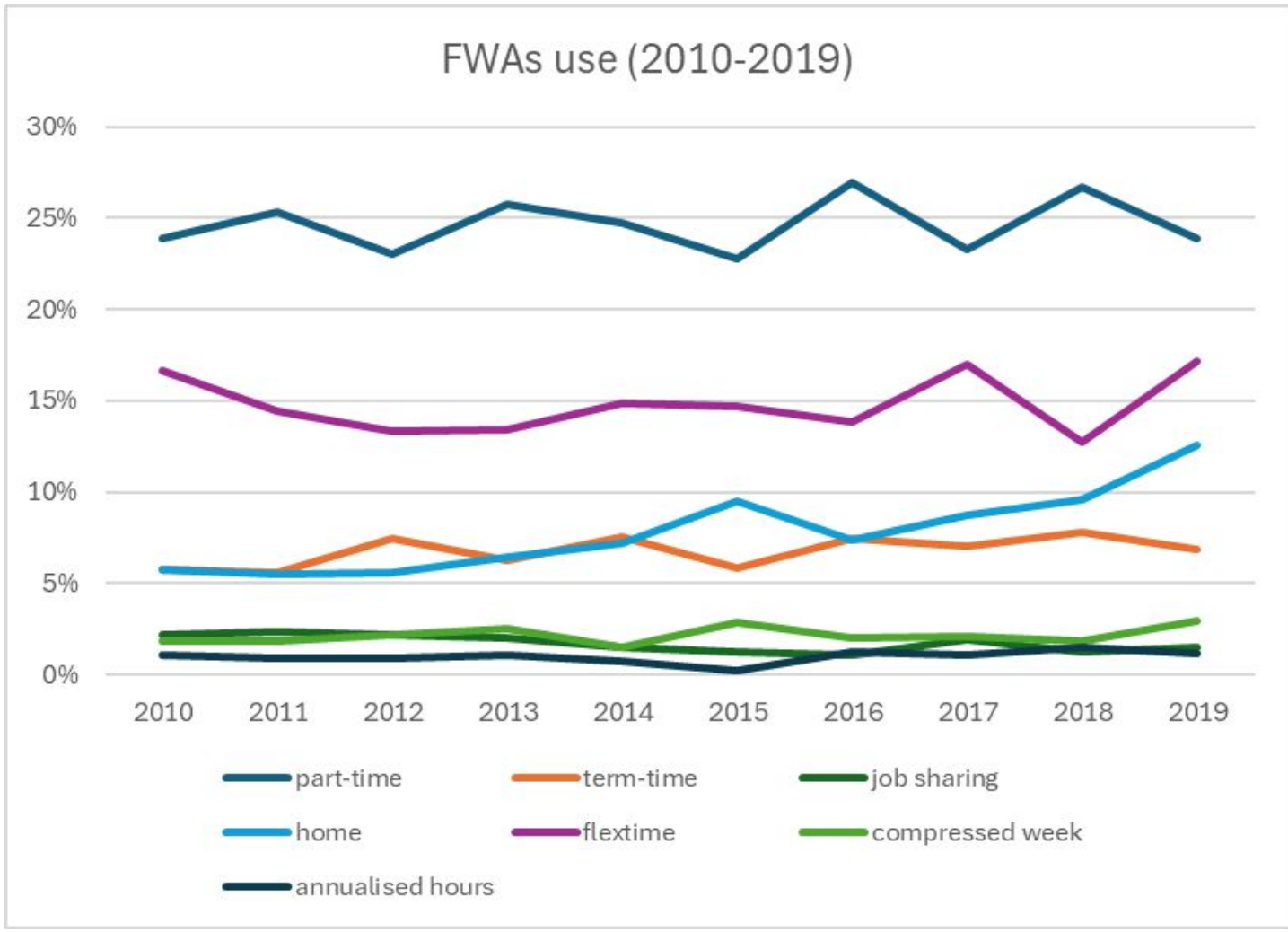
Transition probabilities

- 40% chance of taking up volunteering
- 60% chance of giving up volunteering

Descriptive statistics



Descriptive statistics



Participation

Control variables		
Under Strain	1.02 (0.04)	1.01 (0.04)
Occupational Class (ref: Manager/Professional)		
Intermediate	1.12 (0.14)	1.14 (0.14)
Lower supervisory/technical	1.30 (0.25)	1.30 (0.25)
Semi-routine/routine	1.39** (0.18)	1.39** (0.19)
Public sector (ref: Private firm)	0.93 (0.09)	0.92 (0.09)
Pay type (ref: Salaried)		
Salary plus commission	1.31 (0.40)	1.31 (0.40)
Paid by the hour	1.27*** (0.12)	1.25** (0.12)
Other	1.97** (0.53)	1.93** (0.53)

Weekly hours of housework	1.01** (0.01)	1.01** (0.01)
Weekly hours caring time (ref: 0 hours)		
1-9 hours	1.19* (0.11)	1.18* (0.11)
10-19 hours	0.92 (0.19)	0.92 (0.19)
20-34 hours	0.78 (0.21)	0.77 (0.21)
More than 35 hours	0.91 (0.28)	0.92 (0.28)
Daily Hours Commutingk	0.90 (0.09)	0.89 (0.09)
Age	1.10 (0.10)	1.10 (0.10)
Marital status (ref: Married)		
Living as couple	1.26 (0.20)	1.28 (0.20)
Widowed	1.35 (0.62)	1.36 (0.63)
Divorced	1.72** (0.37)	1.73** (0.38)
Separated	1.57* (0.37)	1.58* (0.37)
Never married	1.63** (0.34)	1.64** (0.34)
Number of children in the household	1.09 (0.06)	1.08 (0.06)
Standardized net household income	1.00 (0.00)	1.00 (0.00)
Subjective Health	1.08* (0.04)	1.09** (0.05)
Job satisfaction	1.04* (0.02)	1.03 (0.02)

Yearly frequency

Control variables

Under Strain	0.99 (0.07)	1.00 (0.07)
Occupational Class (ref: Manager/Professional)		
Intermediate	1.01 (0.25)	1.03 (0.25)
Lower supervisory/technical	1.60 (0.60)	1.54 (0.59)
Semi-routine/routine	1.02 (0.28)	1.00 (0.27)
Public sector (ref: Private firm)	1.13 (0.19)	1.14 (0.19)
Pay type (ref: Salaried)		
Salary plus commission	0.31* (0.20)	0.30* (0.20)
Paid by the hour	1.58** (0.30)	1.59** (0.30)
Other	0.24*** (0.10)	0.24*** (0.10)

Weekly hours of housework	1.01 (0.01)	1.01 (0.01)
Weekly hours caring time (ref: 0 hours)		
1-9 hours	1.14 (0.16)	1.12 (0.16)
10-19 hours	0.87 (0.26)	0.84 (0.25)
20-34 hours	0.43** (0.18)	0.43* (0.19)
More than 35 hours	0.43** (0.18)	0.43* (0.19)
Daily Hours Commuting	1.00 (0.14)	0.99 (0.13)
Age	1.24 (0.20)	1.24 (0.20)
Marital status (ref: Married)		
Living as couple	1.03 (0.40)	1.08 (0.42)
Widowed	1.90 (1.60)	1.74 (1.53)
Divorced	1.46 (0.73)	1.57 (0.78)
Separated	2.44** (1.06)	2.49** (1.10)
Never married	0.87 (0.38)	0.92 (0.41)
Number of children in the household	0.98 (0.10)	0.98 (0.10)
Standardized net household income	1.00 (0.00)	1.00 (0.00)
Subjective Health	0.98 (0.08)	0.98 (0.08)
Job satisfaction	1.01 (0.04)	1.01 (0.04)

Monthly hours

Control variables

Under Strain	-0.46 (0.39)	-0.40 (0.38)
Occupational Class (ref: Manager/Professional)		
Intermediate	-1.45 (1.34)	-1.53 (1.32)
Lower supervisory/technical	-0.98 (2.02)	-0.93 (1.99)
Semi-routine/routine	0.81 (1.53)	0.80 (1.49)
Public sector (ref: Private firm)	0.02 (0.86)	-0.06 (0.83)
Pay type (ref: Salaried)		
Salary plus commission	-4.98 (3.76)	-5.10 (3.80)
Paid by the hour	0.21 (1.07)	0.24 (1.06)
Other	-0.34 (2.13)	-0.40 (2.14)

Weekly hours of housework	0.03 (0.06)	0.04 (0.06)
Weekly hours caring time (ref: 0 hours)		
1-9 hours	1.12 (0.93)	1.15 (0.92)
10-19 hours	1.00 (1.57)	0.98 (1.57)
20-34 hours	4.75 (4.06)	4.92 (4.07)
More than 35 hours	0.25 (2.86)	0.22 (2.92)
Daily Hours Commuting	0.00 (0.39)	0.03 (0.42)
Age	1.66** (0.68)	1.69** (0.68)
Marital status (ref: Married)		
Living as couple	5.32** (2.60)	5.41** (2.52)
Widowed	-3.16 (3.59)	-2.90 (3.78)
Divorced	4.56* (2.58)	4.89* (2.51)
Separated	4.93** (2.05)	5.07*** (1.95)
Never married	5.32* (3.14)	5.56* (3.06)
Number of children in the household	-0.97** (0.48)	-1.05** (0.50)
Standardized net household income	0.00 (0.00)	0.00 (0.00)
Subjective Health	-0.17 (0.41)	-0.20 (0.41)
Job satisfaction	0.06 (0.26)	0.09 (0.25)

Gender analysis: participation

Working time and FWAs

- Women: WH (-), PT (+)
- Men: WT n.s., term-time and home (+)

Job characteristics

- Men: routine (+)

Time uses

- Women: (low) caring time (+)

Socio-demographics

- Women: divorced and never married (+)

Table A.2. Volunteering Among Employees Per Gender — Estimated Odds Ratios from Conditional Logit with Fixed Effects

	Women	Women	Men	Men
Weekly working hours	0.99*** (0.00)	0.99* (0.00)	1.00 (0.00)	1.00 (0.01)
Working time reduction				
Part-time	-	1.23** (0.12)	-	1.03 (0.19)
Term time	-	1.08 (0.15)	-	2.50*** (0.67)
Job sharing	-	1.45* (0.30)	-	1.68 (0.81)
Other FWA				
Compressed week	-	1.26 (0.29)	-	1.48 (0.49)
Flextime	-	1.21* (0.13)	-	1.09 (0.16)
Annualised hours	-	2.16 (1.13)	-	0.65 (0.23)
Working from home	-	1.10 (0.17)	-	1.44** (0.22)
Subjective perception of FWA				
Autonomy over WH	-	0.96 (0.04)	-	1.10* (0.06)
Control variables	✓	✓	✓	✓
Observations	7112	7112	4744	4744

Standard errors in parentheses

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

Gender analysis: frequency

Monthly hours:

- no effect of working time and FWAs

Yearly frequency:

- Working hours reduces only women's frequency

Women: (high) caring (-)

Men: widowed (+)