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# Temporal and locational flexibility of work, working-time fit, and job satisfaction

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## Abstract

This study analyses the effects of arrangements that provide temporal and locational flexibility of work (TLF), namely flexi-time, telehomework, and part-time work, on employees' satisfaction with the fit between working time and private life and their overall job satisfaction. TLF arrangements provide employees with more control over their working life and therefore are likely to improve on the match between paid work and private life. Based on Dutch household panel data, the results show that TLF arrangements, flexi-time in particular, are generally associated with sizeable increases in satisfaction with working-time fit and overall job satisfaction. Somewhat surprisingly, the effects hardly differ between male and female employees and between employees with and without children. Temporal and locational flexibility apparently appeals not only to employees with family responsibilities but more general to all employees.

**Keywords:** flexi-time; job satisfaction; locational flexibility; part-time work; telehomework; temporal flexibility; working-time fit

**JEL classification:** J22; J28; M52; M54

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## 1 Introduction

In recent years there has been a shift in many industrialised countries from jobs with fixed schedules carried out on a full-time basis on the premisses of the employer towards more flexible forms of work organisation, where employees can choose and modify – within certain boundaries – when, where, and how long they work. This trend towards temporal and locational flexibility of work (TLF) is the result of an individualizing work force, the need of employees to combine paid work with other (unpaid) activities and thus a growing demand for employee-centred working time arrangements. Employers on the other hand increasingly provide these arrangements to their employees not only to increase their own flexibility and competitiveness but also to attract and retain qualified personnel. This all happens against the backdrop of an ageing society, expectations of labour force shortages, and the proliferation of new information technology, which facilitates this increase in TLF (Plantenga, 2003).

If TLF arrangements indeed improve the fit between paid work and other activities, this should be reflected in employees' overall job satisfaction. This paper assesses whether this is the case by analysing the effects of TLF arrangements on self-reported satisfaction with working-time fit and overall job satisfaction of Dutch employees. We consider three TLF arrangements at the same time, i.e. flexibility in the work schedule (flexi-time), location (telehomework) and duration (part-time). These arrangements often come in bundles and can be substituted and combined (Chung, 2009). Since analysing these arrangements in isolation may lead to biased results, it is important to examine them jointly. In addition this combined approach facilitates the comparison of relative effects of the arrangements. The analysis is based on a large, longitudinal household dataset that makes it possible to study the relation between different TLF arrangements and satisfaction while controlling for various confounding factors.

Identifying job arrangements and characteristics that affect job satisfaction and working-time fit is relevant for various labour market domains. Job satisfaction has thus been on the agenda of economics and sociology since at least the 1970s (Hamermesh, 1977; Kalleberg, 1977; Freeman, 1978; Borjas, 1979). Despite its subjectivity it has increasingly been viewed as a comprehensive measure of employees' utility from the job (Clark, 1996; Clark and Oswald, 1996). Job satisfaction is a predictor for quits, lay-offs and job transitions (Freeman, 1978; Akerlof et al., 1988; Clark, 2001), as well as health and absenteeism (Faragher et al., 2005; Roelen et al., 2008; Fischer and Sousa-Poza, 2009). It is also positively associated with productivity (Argyle, 1989; Judge et al., 2001; Zelenski et al., 2008; Böckerman and Ilmakunnas, 2012) and organisational performance (Ostroff, 1992). Due to its reciprocal impact on overall well-being (Judge and Watanabe, 1993), job satisfaction is also increasingly perceived as an end in itself (Saltzstein et al., 2001).

The results show that TLF is generally associated with better working-time fit and higher job satisfaction scores, with access to flexi-time having the largest impact. Tele-

homework does not significantly increase working-time fit, though. For part-time work we even find a negative association with overall job satisfaction, which is in line with theory but contrasts some previous empirical findings. Interestingly, there are no considerable gender differences in the effects of TLF in general and also no differences in the associations between flexibility, working-time fit, and job satisfaction between employees with and without family responsibilities. TLF apparently appeals not only to employees with family responsibilities but more generally to all employees.

## 2 Theoretical framework

In comparison to the 40 hour working week and 8 hour workdays that constitute the de-facto standard in most industrialized countries today (Bosch, 1999; Parent-Thirion et al., 2007), TLF arrangements make it possible to modify the schedule (e.g. flexi-time), location (telehomework), and duration (part-time) of work. These variations in the organizational aspects of paid work provide (time) autonomy and flexibility to workers and can improve the fit between paid work and other activities (Fagan, 2004; Hill et al., 2008). TLF arrangements are usually not available and used in isolation but in various combinations. They may complement and substitute each other and should therefore be examined jointly to prevent possible biases (Kalleberg et al., 2003; Chung, 2009).

Both the relationships between TLF and satisfaction with working-time fit and between TLF and overall job satisfaction are investigated. The impact of TLF on satisfaction with working-time fit indicates whether TLF arrangements are effective in reconciling work and private life and improving perceived work-life fit. The relation between TLF arrangements and overall job satisfaction shows whether these arrangements have a substantive influence among the whole bundle of factors affecting utility from work. In other words, does TLF play a significant role for overall job satisfaction?

In order to analyse the effect of TLF on an employee's utility from working, a simple bottom-up model (Diener, 1984)<sup>1</sup> is used, which, if only implicitly, has been implemented before in many other economic studies on the determinants of job satisfaction (Sousa-Poza and Sousa-Poza, 2000b). The bottom-up approach used here basically assumes that individual job satisfaction is the net sum of work-role inputs (such as education, working time and effort) and work-role outputs (such as wages, fringe benefits, status, (favourable) working conditions and intrinsic aspects) (Hulin et al., 1985; Judge and Watanabe, 1993; Sousa-Poza and Sousa-Poza, 2000b). Each work-role input (output) is associated with a negative (positive) utility and depending on whether the resulting net

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<sup>1</sup> The corresponding top-down theories assume that an individual's "global features of personality are thought to influence the way a person reacts to events" (Diener, 1984). According to this view "subjective domain satisfactions derive from, rather than cause, overall subjective well-being" (Diener, 1984). Since our aim is to analyze determinants of job satisfaction, a top-down approach is not applicable.

sum is positive or negative, overall job satisfaction (or facets thereof) will be positive or negative. Formally, an individual's utility from work can then be written as:

$$U_w = \sum (W_{output} - W_{input})$$

TLF is expected to have a positive impact on utility from work in general. TLF provides employees with more control and autonomy over their (working) life, and therefore improves on the match between paid work and private life (Hill et al., 2001, 2008). TLF also allows employees to work during times more suited to their personal needs and biological clock and may decrease the amount of work- and commuting-related stress experienced by the employees, thereby optimizing their efforts (Scandura and Lankau, 1997; Baltes et al., 1999). In addition, TLF may signal to employees that their employer cares about their well-being and their responsibilities outside work (Grover and Crooker, 1995; Casper and Harris, 2008). In summary, TLF is expected to provide positive utility from work and should therefore be considered a work-role output.

Previous empirical research on schedule flexibility and flexi-time in particular finds a positive association with job satisfaction and satisfaction with the work schedule (Baltes et al., 1999; Cotti et al., 2013) as well as organisational commitment and satisfaction with the employer (Grover and Crooker, 1995; Scandura and Lankau, 1997; Kelliher and Anderson, 2010). For location flexibility the evidence is more ambiguous. Whereas Bailey and Kurland (2002) find little evidence in their meta-analysis that telehomework increases job satisfaction, Gajendran and Harrison (2007) do find positive impacts on job satisfaction, mostly because it improves perceived autonomy. They argue that "telecommuting indirectly influences job satisfaction, [...] by raising perceptions of control over the location, timing, and means of completing one's work" (Gajendran and Harrison, 2007). These mixed findings hint at a complex, possibly hump-shaped relation between the extent of telehomework utilisation and job satisfaction (Golden and Veiga, 2005; Virick et al., 2010). Telehomework potentially leads to blurring boundaries between work and private life (Kossek et al., 2006), therefore exerting a negative effect on perceived fit between working time and private life and possibly job satisfaction in general (Saltzstein et al., 2001; Peters and van der Lippe, 2007; Peters et al., 2009). Telehomework also reduces direct interaction with colleagues and supervisors and may therefore lead to increased team conflict (Hinds and Bailey, 2003), as well as less organisational commitment and satisfaction with the employer (ten Brummelhuis et al., 2010). These drawbacks most likely increase with the extent of telehomework utilisation (Golden, 2006).

Duration flexibility is expected to have a positive impact on working-time fit, because employees can adjust the number of hours to their needs and more time is available for private activities. With respect to overall job satisfaction, part-time work is generally associated with low occupational status and lower hourly wages (Manning and Petron-

golo, 2008), as well as fewer opportunities for training and career advancement (Sandor, 2011). Since it mainly occurs in marginalised and menial jobs, it further leads to occupational downgrading (Connolly and Gregory, 2008). Part-time work is therefore often considered to be intrinsically unsatisfying and should be associated with lower levels of job satisfaction (Booth and van Ours, 2008, 2009, 2013). These effects may be less relevant in the Netherlands than elsewhere, though, since the majority of part-time work is done voluntarily and has been promoted by public policy (Plantenga, 2002; Visser, 2002; Cousins and Tang, 2004; Portegijs and Keuzenkamp, 2008).<sup>2</sup> Previous empirical results regarding the relation between part-time work and job satisfaction are also ambiguous. Booth and van Ours for example find positive effects for the UK (2008), no or slightly positive effects for Australia (2009)<sup>3</sup>, and negative effects for the Netherlands (2013).<sup>4</sup>

The impact of TLF on satisfaction with working-time fit is likely to be stronger than the impact on overall job satisfaction, since the latter is influenced by many more factors.<sup>5</sup> The effects on overall job satisfaction may in fact be composite: On the one hand TLF may increase satisfaction with the job and the employer through increased autonomy, work-life balance and self-determination. On the other hand TLF may decrease satisfaction through negative effects on the career and a feeling of being a 'lonesome worker' (less team spirit, organisational commitment, etc.).

The considerations above translate into the following hypotheses:

**Hypothesis 1a:** *TLF is positively associated with working-time fit and overall job satisfaction.*

**Hypothesis 1b:** *The size of the associations is strongest for schedule flexibility and weakest for duration flexibility, with location flexibility in between.*

**Hypothesis 1c:** *The associations are stronger for satisfaction with working-time fit than for overall job satisfaction.*

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<sup>2</sup> In the Netherlands, being the "only part-time economy in the world" (Freeman, 1998) part-time employment is not limited to marginal jobs, but rather a widespread feature of mainstream employment (Portegijs and Keuzenkamp, 2008). Part-time employment in the Netherlands nevertheless leads to foregone promotions and lower future wage growth, too (Román, 2006; Russo and Hassink, 2008).

<sup>3</sup> Booth and van Ours (2009) find no effects when using a simple part-time dummy (<35h) and positive effects with more disaggregated hours categories.

<sup>4</sup> For their job satisfaction analysis, Booth and van Ours (2013) also use the Dutch Labour Supply Panel (see below), but with a different time frame (1992-2006) and (almost) no time-variant control variables. Note also that they restrict their samples to married or cohabiting employees in all three studies. Finally, while all results from the three studies are based on fixed-effects ordered logit specifications, they use an estimator based on the one developed by Ferrer-i-Carbonell and Frijters (2004), which has been shown to produce biased parameter estimates in Monte-Carlo simulations (Baetschmann et al., 2011; Dickerson et al., 2012; Riedl and Geishecker, 2012).

<sup>5</sup> Sloane and Williams (2000) for example find that the nature of work itself accounts for most of the overall job satisfaction.

TLF is likely to affect working-time fit and overall job satisfaction differently for different groups. Previous research on job satisfaction for example found a gender gap, i.e. women report on average higher levels of job satisfaction than men (Dalton and Marcis, 1987; Clark, 1997; Sousa-Poza and Sousa-Poza, 2000a). Since females are on average worse-off in the labour market in terms of pay, career opportunities and working conditions, this gender gap seems quite paradoxical. Some authors therefore hypothesized that the gender gap in job satisfaction may be caused by self-selection of women into certain jobs (Bender et al., 2005; Asadullah and Fernández, 2008). In order to combine paid work with family responsibilities, women predominantly prefer jobs that offer TLF and other work-life balance (WLB) policies and therefore choose jobs that offer these. The existing empirical evidence is not fully conclusive though. While not explicitly addressing the gender gap, Scandura and Lankau (1997) observe that flexible work hours lead to higher job satisfaction and organizational commitment for female employees and for employees with family responsibilities. Bender et al. (2005) show that scheduling flexibility and the perception of not having to choose between job and family/personal life is valued more by female employees and eliminates the gender gap in job satisfaction. Asadullah and Fernández (2008) on the other hand do not find significant gender differences in the effect of WLB policies on job satisfaction in general. In any case, these previous findings should prompt us to examine the differences in the effects of TLF for employees with and without family responsibilities.

**Hypothesis 2:** *TLF increases the probability of reporting higher levels of satisfaction with working-time fit and with overall job satisfaction more for employees with family-responsibilities than for those without.*

### 3 Methodology

#### 3.1 Data

For the analysis the Dutch Labour Supply Panel (*Arbeidsaanbodpanel*, AAP), a biennial panel survey of a representative sample of Dutch households.<sup>6</sup> The panel survey is conducted to study developments in labour market behaviour and working conditions in the Netherlands and covers a broad range of work- and life-course-related items. The target population consists of the Dutch labour force aged 16 to 66 years. The AAP has existed since 1985, but questions about (tele-)homework were first asked in 2002, so only the waves from 2002 onwards are suitable for an analysis of TLF. This means that we have five waves available for this analysis, for every other year since 2002 to the last

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<sup>6</sup>The panel was formerly known as the OSA Labour Supply Panel is now conducted on behalf of the Social en Cultureel Planbureau. The data and its documentation are in Dutch and available via <http://easy.dans.knaw.nl> (urn:nbn:nl:ui:13-4js-j13).



publicly available wave from 2010. We restrict the sample to employees (i.e. we exclude self-employed, unemployed, full-time students, etc.), which results in an unbalanced panel of 17,136 observations from 7,771 individuals (gross sample). For further analysis we excluded those observations with missing values on any of the variables used in the analysis (net sample). Table 1 presents an overview and descriptive statistics of the variables used in the analysis.

Self-reported measures of job satisfaction are used as a proxy for the individual utility derived from working. These measures are widely used indicators of well-being and have been shown to be closely related to a range of other – potentially more objective – measures of happiness (Freeman, 1978; Frey and Stutzer, 2002; Kristensen and Westergaard-Nielsen, 2007). In the AAP, the job satisfaction variable is obtained from the following question and measured on a 4-point Likert-scale.

‘How satisfied are you, everything included, with your job?’

The variable on working-time fit is measured on a 5-point Likert-scale and acquired from this question:

“To what extent do you agree with the following statements? [...]  
“I can let my working hours fit in well with my home situation.”

The main independent variables and indicators for TLF are flexi-time, telehomework, and part-time work. Flexi-time and telehomework are coded as dummy variables. The flexi-time variable was obtained from the following survey question:

‘Can you say whether each of the following characteristics does or does not apply to the work you do? [...] “Determine start- and end-time myself”

The telehomework variable was obtained from the following question:

‘Do you work at home every now and then in your current job?’

We only count those respondents as telehomeworkers who state that they work at home once a week on average.<sup>7</sup> On average, 39% of the respondents in the sample can determine the start- and end-times of their work and 17% work at home at least once a week.

The part-time variable contains four categories (small, medium, large part-time and full-time) and was created on the basis of a question on contracted hours:

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<sup>7</sup> Telehomeworkers were asked how often they were working at home on average. From 2004 onwards the answer categories were less than once per month, less than twice per month, once per week or twice or more often per week. We only count the latter two categories as telehomeworkers. In 2002 the answer categories were once per month, twice per month, three times per month, more than three times per month. We include only the latter as telehomeworkers.

‘How many hours do you work according to your contract? Overtime-hours should not be considered.’<sup>8</sup>

A large set of control variables was used, which is outlined in table 1. The controls follow the social sciences literature on job satisfaction and measure observable personal and household as well as job and employer characteristics. Most control variables are measured as dummy or categorical variables.

### 3.2 Statistical model

The starting point of our analysis is the following model:

$$Y_{it}^* = \beta' X_{it} + \alpha_i + \varepsilon_{it} \quad (1)$$

where  $Y_{it}^*$  is a measure of working-time fit or job satisfaction, respectively, of individual  $i$  at time  $t$ ,  $X_{it}$  is a vector of observable characteristics, and  $\beta$  is a vector of parameters to be estimated.<sup>9</sup>  $\alpha_i$  is the time-invariant, individual-specific part of the unobservables, which may be correlated with  $x_{it}$ , and  $\varepsilon_{it}$  is an idiosyncratic error term. Since unobservable personal and job-related traits are likely to be correlated with job satisfaction and working-time fit, we treat  $\alpha_i$  as a fixed effect (Diener, 1984; Ferrer-i-Carbonell and Frijters, 2004).

Job satisfaction and working-time fit are measured as categorical variables, so the observed variable  $Y_{it}$  is related to the latent variable  $Y_{it}^*$  as follows:

$$Y_{it} = k \quad \text{if} \quad \tau_{ik} < Y_{it}^* \leq \tau_{ik+1}, \quad k = 1, \dots, K,$$

where individual-specific thresholds  $\tau_i$  are increasing, i.e. ( $\tau_{ik} \leq \tau_{ik+1} \forall k$ ),  $\tau_{i1} = -\infty$ , and  $\tau_{iK+1} = \infty$ .

We estimate equation (1) with two different specifications. First we utilize a linear fixed-effects (linear FE) specification, which implies that  $Y_{it} = Y_{it}^*$ . This essentially imposes a cardinal interpretation of the dependent variables. While this may be somewhat worrisome for economists, Ferrer-i-Carbonell and Frijters (2004) find that ‘assuming ordinality or cardinality of happiness scores makes little difference’, whereas ‘allowing for fixed-effects does change results substantially’. Whether cardinality may be rightfully assumed probably depends on the aggregation level, i.e. the number of categories, of the outcome variable (Riedl and Geishecker, 2012). Our outcome variables only have 4 or 5 categories, respectively, whereas it had 11 categories in Ferrer-i-Carbonell and Frijters’ (2004) article, so cardinality may still be a strong assumption in our case. The advantage

<sup>8</sup> The literal translation of the survey question is ‘what is the size of your appointment?’ We use a categorical instead of a continuous variable in order to account for potential non-linearities in the effects.

<sup>9</sup> We omit an index to denote the two different outcome variables and the independent variables and parameters associated with it for simplicity.

Table 1: Descriptive statistics

Variables	Gross sample		Net sample		Min	Max
	Mean	S.E.	Mean	S.E.		
Job satisfaction	3.24	(0.005)	3.24	(0.006)	1	4
Work hours fit	3.94	(0.008)	3.93	(0.009)	1	5
Flexi-time	0.37	(0.004)	0.39	(0.004)	0	1
Telehomework	0.17	(0.003)	0.17	(0.003)	0	1
Contracted hours						
Small part-time (1 - 11h)	0.07	(0.002)	0.04	(0.002)	0	1
Medium part-time (12 - 19h)	0.11	(0.002)	0.10	(0.003)	0	1
Large part-time (20 - 35h)	0.31	(0.004)	0.32	(0.004)	0	1
Full-time (36+h)	0.52	(0.004)	0.53	(0.005)	0	1
Marital status						
Married	0.64	(0.004)	0.68	(0.004)	0	1
Cohabiting	0.11	(0.002)	0.11	(0.003)	0	1
Single	0.24	(0.003)	0.20	(0.004)	0	1
Child(ren)	0.53	(0.004)	0.56	(0.004)	0	1
Education						
Primary school	0.03	(0.001)	0.02	(0.001)	0	1
Lower secondary	0.23	(0.003)	0.22	(0.004)	0	1
Higher secondary	0.39	(0.004)	0.38	(0.004)	0	1
Vocational college	0.25	(0.003)	0.27	(0.004)	0	1
Academic	0.10	(0.002)	0.11	(0.003)	0	1
Work experience	20.40	(0.087)	20.97	(0.099)	0	52
Wage per hour	11.85	(0.041)	11.94	(0.043)	1	100
Permanent contract	0.83	(0.003)	0.88	(0.003)	0	1
Supervisor	0.30	(0.003)	0.32	(0.004)	0	1
2nd job	0.07	(0.002)	0.07	(0.002)	0	1
Occupational level						
Elementary	0.06	(0.002)	0.04	(0.002)	0	1
Lower	0.25	(0.003)	0.22	(0.004)	0	1
Medium	0.35	(0.004)	0.37	(0.004)	0	1
Higher	0.26	(0.003)	0.28	(0.004)	0	1
Scientific	0.07	(0.002)	0.08	(0.002)	0	1
Empl. status change	0.35	(0.004)	0.33	(0.004)	0	1
No. of employees (/1000)	0.50	(0.017)	0.53	(0.019)	0	70
Sector						
Agriculture	0.01	(0.001)	0.01	(0.001)	0	1
Industry	0.11	(0.002)	0.12	(0.003)	0	1
Construction	0.04	(0.001)	0.04	(0.002)	0	1
Trade, gastronomy, repair	0.16	(0.003)	0.14	(0.003)	0	1
Transport	0.06	(0.002)	0.06	(0.002)	0	1
Business services	0.16	(0.003)	0.17	(0.003)	0	1
Care, Welfare	0.21	(0.003)	0.20	(0.004)	0	1
Other services	0.05	(0.002)	0.05	(0.002)	0	1
Government	0.09	(0.002)	0.10	(0.003)	0	1

Table 1: Descriptive statistics (*cont.*)

Variables	Gross sample		Net sample		Min	Max
	Mean	S.E.	Mean	S.E.		
Education	0.11	(0.002)	0.11	(0.003)	0	1
2002	0.18	(0.003)	0.14	(0.003)	0	1
2004	0.19	(0.003)	0.21	(0.004)	0	1
2006	0.22	(0.003)	0.22	(0.004)	0	1
2008	0.21	(0.003)	0.24	(0.004)	0	1
2010	0.20	(0.003)	0.19	(0.004)	0	1
Observations	17136		12292			

*Note:* The gross sample comprises the observations of all employees in the sample, the net sample the observations used for estimation after list-wise deletion due to missing values. S.E. is the standard error of the mean.

of such as simple specification, however, is that the parameters can be easily interpreted as marginal effects.

In order to relax the cardinality assumption we also estimate a fixed-effects ordered logit model. In particular we apply the blow-up and cluster (BUC) estimator developed by Baetschmann et al. (2011).<sup>10</sup> The authors provide a comprehensive review of different fixed-effect ordered logit estimators and their Monte-Carlo simulations show that the BUC estimator has the advantage of being consistent, robust in finite samples, and easily implemented. Dickerson et al. (2012) and Riedl and Geishecker (2012) provide further assessments of these estimators and draw similar conclusions.<sup>11</sup>

## 4 Results

Simple cross-tabulations of working-time fit and job satisfaction on the one hand and the three TLF arrangements under consideration on the other already show large differentials in the association of the different types of TLF with working-time fit and job satisfaction. Employees with flexi-time agree considerably more often with the statement that they can fit their working times well with their home-situation (see table 2). In the ‘strongly agree’ category there is an almost 12 percentage points difference between these two groups of employees. Part-time work is also associated with an increase in working-time fit according to these descriptives. The percentages of employees who state that they ‘strongly disagree’, ‘disagree’, or that they are ‘neutral’ with the statement increase with working time. The percentages of employees that ‘strongly agree’ with the statement sharply declines across the working time categories; the difference in

<sup>10</sup> An equivalent estimator was introduced in the biostatistics literature by Mukherjee et al. (2008).

<sup>11</sup> See Frijters and Beaton (2012) and Geishecker et al. (2012) for other applied work using the BUC estimator.

Table 2: Working time fit by TLF arrangements

	Working times fit well with 'home-situation'				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<b>Flexi-time</b>					
No	4.24 (0.27)	8.31 (0.35)	19.05 (0.51)	41.61 (0.65)	26.80 (0.63)
Yes	1.02 (0.15)	3.65 (0.28)	12.54 (0.52)	44.69 (0.80)	38.09 (0.84)
<b>Telehomework</b>					
No	3.05 (0.19)	6.54 (0.27)	16.48 (0.42)	42.64 (0.56)	31.29 (0.58)
Yes	2.67 (0.39)	6.25 (0.56)	16.69 (0.88)	43.63 (1.17)	30.76 (1.15)
<b>Contracted hours</b>					
Small part-time (1-11h)	1.66 (0.55)	4.24 (0.86)	9.23 (1.24)	39.67 (2.33)	45.20 (2.42)
Medium part-time (12-19h)	2.08 (0.42)	4.07 (0.60)	13.10 (1.07)	40.02 (1.52)	40.73 (1.65)
Large part-time (20-35h)	2.81 (0.29)	5.36 (0.39)	14.72 (0.65)	42.89 (0.91)	34.22 (0.94)
Full-time (36+h)	3.38 (0.25)	7.82 (0.37)	18.86 (0.53)	43.55 (0.68)	26.39 (0.66)
<b>Total</b>	<b>2.99 (0.18)</b>	<b>6.49 (0.25)</b>	<b>16.51 (0.38)</b>	<b>42.81 (0.51)</b>	<b>31.20 (0.53)</b>

*Note:* Percentage of employees reporting how working times fit with 'home-situation' by TLF arrangements. Linearized standard errors of percentages in parentheses.

percentages between small-part time employees and full-time employees in this category is 19 percentage points. Telehomework on the other hand does not seem to make a difference with respect to working-time fit, since satisfaction with working-time fit is virtually the same whether employees occasionally work at home or not.

Both flexi-time and telehomework are positively associated with overall job satisfaction (table 3). The share of respondents who state that they are very satisfied with their job is almost seven percentage points higher when they can determine the start- and end-times of their work themselves than when they cannot. The same goes for employees who work at home at least once a week. Telehomework does not seem to make a marked difference at the lower end of the job satisfaction distribution, though, whereas fewer employees with flexi-time seem to be (very) dissatisfied with their job than those without. There are no clear differences in overall job satisfaction with respect to part-time work.

These cross-tabs do not account for any confounding factors like individual and job

Table 3: Job satisfaction by TLF arrangements

	Very dissatisfied	Dissatisfied	Satisfied	Very satisfied
<b>Flexi-time</b>				
No	1.40 (0.15)	8.57 (0.37)	58.29 (0.68)	31.74 (0.67)
Yes	0.90 (0.14)	6.91 (0.41)	53.56 (0.86)	38.63 (0.87)
<b>Telehomework</b>				
No	1.25 (0.12)	8.14 (0.31)	57.41 (0.59)	33.20 (0.59)
Yes	1.00 (0.23)	6.87 (0.62)	51.74 (1.27)	40.39 (1.29)
<b>Contracted hours</b>				
Small part-time (1–11h)	1.29 (0.55)	8.86 (1.29)	59.41 (2.35)	30.44 (2.26)
Medium part-time (12–19h)	0.96 (0.28)	7.91 (0.86)	58.15 (1.62)	32.99 (1.61)
Large part-time (20–35h)	1.62 (0.22)	7.59 (0.45)	54.20 (0.95)	36.60 (0.97)
Full-time (36+h)	0.99 (0.13)	8.05 (0.39)	57.23 (0.73)	33.73 (0.73)
Total	1.20 (0.11)	7.92 (0.28)	56.44 (0.56)	34.43 (0.56)

*Note:* Percentage of employees reporting their job satisfaction by TLF arrangements. Linearized standard errors of percentages in parentheses.

characteristics. We therefore turn to the parameter estimates now. Specifications were estimated for male and female employees jointly and separately. The specification on the total sample is based on the assumption that male and female employees evaluate job characteristics similarly. This assumption may be too strong, however, since earlier studies have shown that men and women often value job and workplace characteristics differently (Sloane and Williams, 2000; Bender et al., 2005). By estimating separate regressions this restriction is relaxed, allowing for different utility functions for males and females regarding their job characteristics.

Table 4 shows the linear FE and BUC estimates of TLF arrangements on working-time fit. Similar to the cross-tabulations, flexi-time is positively associated with working-time fit, i.e. being able to determine the start- and end-times of work increases the probability of being satisfied with one's working time. The coefficients on telehomework are not significantly different from zero at conventional levels of significance, suggesting that working from home at least once a week does not improve working-time fit. This is con-

sistent with the simple cross-tabulations as well. Part-time work is positively associated with working-time fit, small- and medium-sized part-time jobs with up to 20h per week in particular. Here the coefficients are comparable in size with those on flexi-time.<sup>12</sup> Large part-time jobs also increase working-time fit compared to full-time jobs for the total sample, but to a smaller degree than jobs with less than 20h per week.

Next, table 5 presents the parameter estimates of TLF arrangements on overall job satisfaction. Flexi-time again is positively and strongly significantly associated with job satisfaction. The coefficients of the linear FE specifications are about half the size of those on working-time fit and those of the BUC estimator are still a bit smaller. This suggests a smaller impact of flexi-time on job satisfaction than on working-time fit, which, as mentioned above, is expected. For the total sample the telehomework coefficient is positive and significant at the 5% level. It is not statistically significant for the female sample. Finally, part-time work seems to be negatively associated with overall job satisfaction for female employees. The statistical significance is low for the BUC estimator, however. For male employees the part-time coefficients are not significantly different from zero at conventional levels.

In order to test whether there are gender differences in the effects of TLF on working-time fit and job satisfaction, the separate regression models that were estimated with the BUC estimator for male and female employees are combined into one model by seemingly unrelated estimation (Weesie, 1999; StataCorp, 2013).<sup>13</sup> Wald tests for differences in the coefficients are performed then. According to these tests, the null hypothesis of equal coefficients on TLF arrangements is not rejected with respect to working-time fit nor job satisfaction at conventional levels of statistical significance. This implies that there are no gender differences in the association between TLF arrangements and working-time fit or job satisfaction.

For schedule flexibility hypotheses 1a to 1c are therefore not rejected by our data. Flexi-time is positively associated with working-time fit and job satisfaction and the associations are stronger than those of telehomework and stronger or equal to those of part-time work with the two outcome variables. The association of flexi-time with working time fit is also stronger than the one with job satisfaction. For location flexibility, the hypotheses are rejected with respect to working time fit by our data, because we do not find any significant results for telehomework here. Since we 'control' for flexi-time in the regressions, we assume that this variable picks up the schedule flexibility component that may be inherent in telehomework in most jobs. That is, employees may often be able to determine their working time when working from home. Telehomework is positively associated with overall job satisfaction, however, but the the association is weaker than

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<sup>12</sup> The flexi-time coefficients are smaller but these differences are not statistically significant.

<sup>13</sup> Seemingly unrelated estimation combines the parameter estimates and associated variance-covariance matrices of two or more regression models, thereby making it possible to test cross-model hypotheses.

Table 4: TLF arrangements on working-time fit

Variables	Total		Male		Female	
	Linear FE	BUC (OR)	Linear FE	BUC (OR)	Linear FE	BUC (OR)
Flexi-time	0.205*** (0.031)	1.798*** (0.160)	0.185*** (0.044)	1.639*** (0.193)	0.224*** (0.045)	1.973*** (0.273)
Telehomework	-0.028 (0.036)	0.911 (0.092)	-0.043 (0.049)	0.890 (0.121)	-0.005 (0.054)	0.936 (0.142)
Part-time work						
Ref: Full-time (36+h)						
Small part-time (1–11h)	0.308*** (0.114)	2.275*** (0.712)	0.206 (0.324)	1.586 (1.241)	0.295** (0.131)	2.358** (0.874)
Medium part-time (12–19h)	0.283*** (0.082)	1.973*** (0.401)	0.578** (0.254)	3.278** (1.729)	0.268*** (0.100)	1.899** (0.480)
Large part-time (20–35h)	0.116** (0.052)	1.326** (0.184)	0.044 (0.071)	1.086 (0.225)	0.158** (0.075)	1.511** (0.296)
Observations	12292	10614	6369	5739	5923	4875
Individuals	6032	2295	3105	1217	2927	1078

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

Note: Parameter estimates of TLF arrangements on working-time fit. BUC coefficients are odds-ratios; the reference point is therefore one. Clustered standard errors in parentheses. See table 8 for the full specification.

Table 5: TLF arrangements on job satisfaction

Variables	Total		Male		Female	
	Linear FE	BUC (OR)	Linear FE	BUC (OR)	Linear FE	BUC (OR)
Flexi-time	0.087*** (0.023)	1.505*** (0.148)	0.084*** (0.030)	1.528*** (0.204)	0.095*** (0.035)	1.581*** (0.233)
Telehomework	0.061** (0.025)	1.326** (0.153)	0.082** (0.035)	1.469** (0.245)	0.043 (0.035)	1.172 (0.188)
Part-time work						
Ref: Full-time (36+h)						
Small part-time (1–11h)	-0.168** (0.084)	0.586 (0.222)	-0.149 (0.234)	0.581 (0.706)	-0.200** (0.096)	0.504 (0.210)
Medium part-time (12–19h)	-0.132** (0.057)	0.642* (0.147)	0.054 (0.162)	1.458 (0.990)	-0.194*** (0.072)	0.499** (0.142)
Large part-time (20–35h)	-0.072** (0.036)	0.779* (0.118)	-0.045 (0.049)	0.842 (0.205)	-0.117** (0.054)	0.682* (0.142)
Observations	12292	6184	6369	3174	5923	3010
Individuals	6032	1732	3105	881	2927	851

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

Note: Parameter estimates of TLF arrangements on job satisfaction. BUC coefficients are odds-ratios; the reference point is therefore one. Clustered standard errors in parentheses. See table 9 for the full specification.



that between flexi-time and job satisfaction. Hypotheses 1a and 1b are therefore not rejected for location flexibility with respect to job satisfaction. Duration flexibility is positively associated with working-time fit, in about the same order as flexi-time for work durations of up to 20 hours per week. With respect to overall job satisfaction, the hypotheses are rejected, however, since part-time work seems to have a negative effect here for female employees and no effect for male employees. Hypotheses 1a and 1c are therefore not rejected with respect to work duration. Finally, our results are qualitatively the same for both the linear FE and BUC estimators. Assuming cardinality or ordinality with respect to working-time fit and overall job satisfaction therefore does not seem to make much of a difference in this case.

In order to test hypothesis 2, namely that TLF has a higher impact with respect to working-time fit and job satisfaction for employees with family responsibilities than for those without, we also estimated both specifications for employees with and without children (see tables 6 and 7). Once more, the BUC estimator results were combined by seemingly unrelated estimation and again the null hypothesis of equal coefficients is not rejected. The associations between TLF and working-time fit or job satisfaction do not appear to depend on family responsibilities, like having children at home. This result is further supported by the absence of significant gender differences as mentioned above. Hypothesis 2 is therefore rejected by our data.

A few limitations of this analysis need to be mentioned. Even though we control for many individual and job-related characteristics, including fixed effects, the estimates do not allow for a true causal interpretation, since we cannot control for unobserved time-varying factors. A common shock may potentially affect the availability and use of TLF arrangements and job satisfaction at the same time for example. Reverse causality may also potentially bias our estimates (i.e. more satisfied employees can make more use of TLF arrangements), even though previous research has not found this to be a considerable issue (Jonge et al., 2001). A drawback of our data is that we do not measure true location and duration flexibility, i.e. whether employees are able to actively influence and change the work location and duration, but rather the actual use of telehomework and part-time arrangements.<sup>14</sup> Telehomework or part-time work may for example be (partly) determined by the employer, so our data measures the revealed outcome of a bargaining process between employer and employee rather than an employee's actual choice set. From this perspective, our estimates should be interpreted as a lower bound to the true estimates.

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<sup>14</sup> For schedule flexibility we measure whether employees can determine their start- and end-times, i.e. whether employees can make choices in their schedule.

Table 6: TLF arrangements on working-time fit by children at home

	No children		Child(ren) at home	
	Linear FE	BUC (OR)	Linear FE	BUC (OR)
Flexi-time	0.136** (0.056)	1.441** (0.223)	0.202*** (0.040)	1.790*** (0.207)
Telehomework	-0.094 (0.064)	0.730* (0.139)	0.002 (0.047)	0.990 (0.128)
Part-time work Ref: Full-time (36+h)				
Small part-time (1-11h)	0.528*** (0.185)	3.534** (1.738)	0.226 (0.149)	1.865 (0.841)
Medium part-time (12-19h)	0.305 (0.187)	2.110** (0.793)	0.291*** (0.106)	2.121*** (0.603)
Large part-time (20-35h)	0.103 (0.075)	1.281 (0.255)	0.134* (0.079)	1.418 (0.320)
Observations	5402	3608	6890	6076
Individuals	3239	898	3279	1279

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

Note: Parameter estimates of TLF arrangements on working-time fit. BUC coefficients are odds-ratios; the reference point is therefore one. Clustered standard errors in parentheses. See table 10 for the full specification.

Table 7: TLF arrangements on job satisfaction by children at home

	No children		Child(ren) at home	
	Linear FE	BUC (OR)	Linear FE	BUC (OR)
Flexi-time	0.066* (0.038)	1.379* (0.229)	0.078*** (0.030)	1.452*** (0.186)
Telehomework	0.030 (0.042)	1.139 (0.234)	0.069** (0.034)	1.380** (0.215)
Part-time work Ref: Full-time (36+h)				
Small part-time (1-11h)	-0.145 (0.142)	0.671 (0.415)	-0.187* (0.112)	0.473 (0.238)
Medium part-time (12-19h)	-0.148 (0.092)	0.636 (0.239)	-0.117 (0.085)	0.620 (0.210)
Large part-time (20-35h)	-0.114** (0.054)	0.678* (0.150)	-0.054 (0.059)	0.777 (0.199)
Observations	5402	2110	6890	3549
Individuals	3239	672	3279	973

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

Note: Parameter estimates of TLF arrangements on job satisfaction. BUC coefficients are odds-ratios; the reference point is therefore one. Clustered standard errors in parentheses. See table 11 for the full specification.

## 5 Conclusion

Temporal and locational flexibility of work is an important element in current policy debates about working conditions and the combination of work and private life (see e.g. CEA, 2010; Sociaal-Economische Raad, 2011; BMFSFJ, 2012). Flexibility is not only viewed as a means to improve the competitiveness of enterprises, but can also provide employees with a greater scope to reconcile their professional, private, and family lives. Furthermore TLF is expected to increase female labour participation and reduce shortages of qualified personnel in the future.

This paper analyses whether TLF arrangements, namely flexi-time, telehomework, and part-time work, improve the fit between working time and private life and increase employee's overall job satisfaction. The main premise is that TLF provides employees with more control over their working life, leads to a better match between paid work and other activities, decreases the amount of stress experienced by employees and signals to employees that their employer cares about their well-being and their responsibilities outside work. A simple bottom-up model is used under the assumption that utility from work is the sum of work-role inputs and outputs. The items that are employed to measure utility from work are self-reported working-time fit and overall job satisfaction.

The main results of this analysis are the following: Schedule flexibility in the form of flexible, self-determined start- and end-times of work is positively associated with both working-time fit and job satisfaction. Telehomework or location flexibility is also related to higher job satisfaction, although to a smaller extent than flexi-time. It does not seem to affect working-time fit in a significant way, however. Part-time work, i.e. schedule flexibility, finally increases working-time fit much in the same way as flexi-time. Our estimates show no significant association with overall job satisfaction for male employees, however, and sometimes even negative ones for female employees. Apart from that we hardly find any gender differences in the effects of TLF on working-time fit and job satisfaction. TLF also does not seem to be particularly more relevant for employees with family responsibilities, a group of workers who presumably struggle more with the combination of work and private life than other groups of workers. The associations of TLF with working-time fit and job satisfaction for this group are in any case quite similar to those for employees without children at home.

The conclusions that can be drawn from this analysis is that schedule flexibility may be a superior alternative to duration flexibility with respect to the combination of work and private life. It is similarly associated with good working-time fit, seems to have a positive effect on job satisfaction and does not appear to be the career liability that part-time work often is. Location flexibility does not seem to support the combination of work and private life in a significant way – at least not with respect to working-time fit. It presumably improves workers' autonomy, though, and thus increases job satisfaction. Since previous research has shown that higher job satisfaction translates into fewer

job quits, a lower rate of absenteeism and increased general well-being, this would be beneficial to both employers and employees. The result that part-time work is negatively associated with job satisfaction for females is remarkable, because even though it is in line with what theory would predict considering the occupational drawbacks of part-time work (Connolly and Gregory, 2008; Manning, 2003), it contrasts some of the previous empirical results on the supposedly contented part-time worker (Booth and van Ours, 2008, 2009). Seen from this perspective, arrangements such as telehomework and especially flexi-time are suitable alternatives for part-time work in providing employees with more temporal and locational flexibility.

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## Tables

Table 8: TLF arrangements on working-time fit

	Total		Male		Female	
	Linear FE	BUC (OR)	Linear FE	BUC (OR)	Linear FE	BUC (OR)
Flexi-time	0.205*** (0.031)	1.798*** (0.160)	0.185*** (0.044)	1.639*** (0.193)	0.224*** (0.045)	1.973*** (0.273)
Telehomework	-0.028 (0.036)	0.911 (0.092)	-0.043 (0.049)	0.890 (0.121)	-0.005 (0.054)	0.936 (0.142)
Part-time work						
Ref: Full-time (36h+)						
Small part-time (1–11h)	0.308*** (0.114)	2.275*** (0.712)	0.206 (0.324)	1.586 (1.241)	0.295** (0.131)	2.358** (0.874)
Medium part-time (12–19h)	0.283*** (0.082)	1.973*** (0.401)	0.578** (0.254)	3.278** (1.729)	0.268*** (0.100)	1.899** (0.480)
Large part-time (20–35h)	0.116** (0.052)	1.326** (0.184)	0.044 (0.071)	1.086 (0.225)	0.158** (0.075)	1.511** (0.296)
Marital status						
Ref: Married						
Cohabiting	0.146* (0.075)	1.435* (0.286)	0.114 (0.098)	1.394 (0.397)	0.164 (0.108)	1.443 (0.401)
Single	0.337*** (0.102)	2.393*** (0.650)	0.539*** (0.165)	4.756*** (2.290)	0.227* (0.128)	1.619 (0.501)
Child(ren)	-0.112** (0.045)	0.732** (0.093)	-0.098 (0.062)	0.791 (0.135)	-0.130** (0.065)	0.657** (0.123)
Education						
Ref: Primary School						
Lower secondary	0.038 (0.106)	1.054 (0.299)	-0.016 (0.138)	0.931 (0.318)	0.178 (0.152)	1.597 (0.855)
Higher secondary	0.088 (0.111)	1.204 (0.358)	0.020 (0.148)	1.022 (0.373)	0.232 (0.158)	1.842 (0.981)
Vocational college	0.047 (0.123)	1.110 (0.366)	-0.051 (0.165)	0.850 (0.354)	0.238 (0.175)	1.952 (1.117)
Academic	0.121 (0.149)	1.335 (0.536)	0.093 (0.189)	1.259 (0.629)	0.187 (0.236)	1.762 (1.202)
Work experience	-0.002 (0.004)	0.997 (0.010)	0.001 (0.006)	1.005 (0.014)	-0.004 (0.006)	0.989 (0.015)
Wage per hour	-0.001 (0.003)	0.996 (0.010)	-0.003 (0.005)	0.993 (0.013)	0.003 (0.005)	1.007 (0.017)
Permanent contract	-0.037 (0.047)	0.886 (0.108)	-0.059 (0.076)	0.890 (0.159)	-0.013 (0.059)	0.894 (0.150)
Supervisor	0.000 (0.035)	1.009 (0.094)	-0.001 (0.047)	1.004 (0.128)	0.006 (0.053)	1.020 (0.141)
2nd job	-0.113* (0.045)	0.734* (0.093)	-0.064 (0.062)	0.764 (0.135)	-0.144* (0.065)	0.688* (0.123)

Table 8: TLF arrangements on working-time fit (*cont.*)

	Total		Male		Female	
	Linear FE	BUC (OR)	Linear FE	BUC (OR)	Linear FE	BUC (OR)
	(0.064)	(0.122)	(0.098)	(0.201)	(0.084)	(0.147)
Occupational level						
Ref: Medium						
Elementary	-0.100	0.781	-0.138	0.769	-0.038	0.923
	(0.080)	(0.164)	(0.122)	(0.205)	(0.098)	(0.310)
Lower	-0.072**	0.808**	-0.056	0.873	-0.086*	0.732**
	(0.036)	(0.082)	(0.053)	(0.126)	(0.048)	(0.102)
Higher	0.010	1.034	-0.016	0.962	0.063	1.190
	(0.034)	(0.103)	(0.045)	(0.126)	(0.054)	(0.189)
Scientific	0.042	1.104	0.020	1.048	0.086	1.251
	(0.051)	(0.158)	(0.064)	(0.188)	(0.083)	(0.304)
Empl. status change	0.077***	1.223***	0.070*	1.188*	0.078**	1.254**
	(0.026)	(0.084)	(0.036)	(0.113)	(0.038)	(0.128)
No. of employees (/1000)	-0.002	0.997	0.000	1.000	-0.010	0.981
	(0.006)	(0.012)	(0.007)	(0.015)	(0.013)	(0.029)
Sector						
Ref: Agriculture						
Industry	0.073	1.146	0.131	1.308	-0.094	0.693
	(0.162)	(0.482)	(0.195)	(0.616)	(0.275)	(0.573)
Construction	-0.133	0.666	-0.027	0.877	-0.525	0.158*
	(0.170)	(0.298)	(0.198)	(0.429)	(0.322)	(0.152)
Trade, gastronomy, repair	0.047	1.125	0.078	1.198	-0.099	0.696
	(0.168)	(0.492)	(0.204)	(0.599)	(0.292)	(0.586)
Transport	0.032	1.055	0.191	1.605	-0.393	0.269
	(0.188)	(0.515)	(0.225)	(0.893)	(0.332)	(0.257)
Business services	0.081	1.245	0.186	1.586	-0.176	0.564
	(0.167)	(0.546)	(0.201)	(0.787)	(0.294)	(0.481)
Care, Welfare	0.062	1.199	0.283	1.948	-0.213	0.521
	(0.181)	(0.564)	(0.252)	(1.123)	(0.302)	(0.455)
Other services	0.047	1.166	0.228	1.879	-0.314	0.384
	(0.183)	(0.575)	(0.219)	(1.062)	(0.323)	(0.357)
Government	0.154	1.590	0.145	1.476	0.089	1.360
	(0.180)	(0.767)	(0.220)	(0.823)	(0.308)	(1.260)
Education	0.117	1.381	0.234	1.663	-0.144	0.658
	(0.187)	(0.674)	(0.234)	(0.966)	(0.319)	(0.599)
Constant	3.704***	-	3.630***	-	3.763***	-
	(0.227)		(0.301)		(0.361)	
Observations	12292	10614	6369	5739	5923	4875
Individuals	6032	2295	3105	1217	2927	1078

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

Note: Parameter estimates of TLF arrangements on working-time fit. BUC coefficients are odds-ratios; the reference point is therefore one. Year (wave) dummies included. Clustered standard errors in parentheses.

Table 9: TLF arrangements on job satisfaction

	Total		Male		Female	
	Linear FE	BUC (OR)	Linear FE	BUC (OR)	Linear FE	BUC (OR)
Flexi-time	0.087*** (0.023)	1.505*** (0.148)	0.084*** (0.030)	1.528*** (0.204)	0.095*** (0.035)	1.581*** (0.233)
Telehomework	0.061** (0.025)	1.326** (0.153)	0.082** (0.035)	1.469** (0.245)	0.043 (0.035)	1.172 (0.188)
Part-time work						
Ref: Full-time (36+h)						
Small part-time (1–11h)	-0.168** (0.084)	0.586 (0.222)	-0.149 (0.234)	0.581 (0.706)	-0.200** (0.096)	0.504 (0.210)
Medium part-time (12–19h)	-0.132** (0.057)	0.642* (0.147)	0.054 (0.162)	1.458 (0.990)	-0.194*** (0.072)	0.499** (0.142)
Large part-time (20–35h)	-0.072** (0.036)	0.779* (0.118)	-0.045 (0.049)	0.842 (0.205)	-0.117** (0.054)	0.682* (0.142)
Marital status						
Ref: Married						
Cohabiting	-0.035 (0.046)	0.891 (0.183)	-0.071 (0.064)	0.799 (0.260)	-0.003 (0.065)	0.973 (0.261)
Single	0.056 (0.061)	1.355 (0.396)	0.124 (0.089)	2.079 (0.996)	0.016 (0.081)	1.002 (0.363)
Child(ren)	0.017 (0.028)	1.111 (0.154)	-0.009 (0.038)	1.006 (0.203)	0.049 (0.042)	1.239 (0.257)
Education						
Ref: Primary School						
Lower secondary	-0.072 (0.076)	0.674 (0.272)	-0.142 (0.093)	0.478 (0.251)	0.070 (0.127)	1.527 (0.939)
Higher secondary	-0.089 (0.081)	0.610 (0.257)	-0.143 (0.100)	0.450 (0.251)	0.031 (0.131)	1.247 (0.775)
Vocational college	-0.103 (0.089)	0.573 (0.267)	-0.166 (0.113)	0.398 (0.248)	0.017 (0.142)	1.186 (0.822)
Academic	-0.126 (0.101)	0.513 (0.276)	-0.179 (0.131)	0.366 (0.260)	-0.014 (0.158)	1.000 (0.837)
Work experience	-0.004 (0.003)	0.983 (0.011)	-0.005 (0.004)	0.983 (0.015)	-0.002 (0.004)	0.989 (0.017)
Wage per hour	0.007*** (0.002)	1.031** (0.012)	0.009*** (0.003)	1.037** (0.017)	0.004 (0.004)	1.017 (0.020)
Permanent contract	-0.062* (0.034)	0.826 (0.108)	-0.075 (0.053)	0.788 (0.152)	-0.049 (0.044)	0.843 (0.155)
Supervisor	0.060*** (0.023)	1.299** (0.140)	0.068** (0.030)	1.421** (0.206)	0.052 (0.037)	1.179 (0.193)
2nd job	-0.095** (0.044)	0.668** (0.131)	-0.024 (0.063)	0.887 (0.269)	-0.134** (0.061)	0.590** (0.149)
Occupational level						
Ref: Medium						
Elementary	0.000	1.058	0.029	1.188	-0.027	0.914

Table 9: TLF arrangements on job satisfaction (*cont.*)

	Total		Male		Female	
	Linear FE	BUC (OR)	Linear FE	BUC (OR)	Linear FE	BUC (OR)
	(0.050)	(0.291)	(0.064)	(0.391)	(0.080)	(0.443)
Lower	0.001	0.994	-0.022	0.872	0.018	1.075
	(0.023)	(0.112)	(0.033)	(0.150)	(0.031)	(0.164)
Higher	0.064***	1.315***	0.080***	1.435***	0.045	1.181
	(0.023)	(0.138)	(0.030)	(0.194)	(0.037)	(0.199)
Scientific	0.051	1.221	0.054	1.253	0.052	1.170
	(0.036)	(0.202)	(0.045)	(0.277)	(0.061)	(0.297)
Empl. status change	0.116***	1.688***	0.088***	1.516***	0.139***	1.872***
	(0.018)	(0.137)	(0.026)	(0.177)	(0.025)	(0.215)
No. of employees (/1000)	-0.002	0.992	-0.002	0.998	-0.005	0.970
	(0.003)	(0.014)	(0.003)	(0.014)	(0.006)	(0.032)
Sector						
Ref: Agriculture						
Industry	0.015	1.209	0.093	1.627	-0.180	0.667
	(0.123)	(0.530)	(0.116)	(0.909)	(0.307)	(0.551)
Construction	-0.068	0.803	-0.034	0.855	-0.057	1.059
	(0.129)	(0.411)	(0.122)	(0.521)	(0.338)	(1.082)
Trade, gastronomy, repair	-0.031	0.993	0.002	1.066	-0.128	0.939
	(0.127)	(0.455)	(0.117)	(0.622)	(0.318)	(0.766)
Transport	0.129	1.892	0.180	2.400	0.015	1.427
	(0.136)	(0.955)	(0.129)	(1.534)	(0.339)	(1.312)
Business services	0.035	1.269	0.157	1.989	-0.186	0.639
	(0.123)	(0.560)	(0.116)	(1.130)	(0.310)	(0.511)
Care, Welfare	0.127	1.844	0.065	1.413	0.059	1.896
	(0.133)	(0.887)	(0.145)	(0.941)	(0.317)	(1.577)
Other services	0.156	2.087	0.245*	2.952*	-0.011	1.502
	(0.134)	(1.031)	(0.131)	(1.843)	(0.326)	(1.340)
Government	0.055	1.355	0.048	1.211	0.015	1.485
	(0.132)	(0.659)	(0.126)	(0.758)	(0.324)	(1.278)
Education	0.271*	3.279**	0.222	2.950	0.244	3.650
	(0.140)	(1.700)	(0.139)	(1.992)	(0.330)	(3.212)
Constant	3.209***	-	3.216***	-	3.235***	-
	(0.172)		(0.202)		(0.354)	
Observations	12292	6184	6369	3174	5923	3010
Individuals	6032	1732	3105	881	2927	851

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

Note: Parameter estimates of TLF arrangements on job satisfaction. BUC coefficients are odds-ratios; the reference point is therefore one. Year (wave) dummies included. Clustered standard errors in parentheses.

Table 10: TLF arrangements on working-time fit by children at home

	No children		Child(ren) at home	
	Linear FE	BUC (OR)	Linear FE	BUC (OR)
Flexi-time	0.136** (0.056)	1.441** (0.223)	0.202*** (0.040)	1.790*** (0.207)
Telehomework	-0.094 (0.064)	0.730* (0.139)	0.002 (0.047)	0.990 (0.128)
Part-time work Ref: Full-time (36h+)				
Small part-time (1-11h)	0.528*** (0.185)	3.534** (1.738)	0.226 (0.149)	1.865 (0.841)
Medium part-time (12-19h)	0.305 (0.187)	2.110** (0.793)	0.291*** (0.106)	2.121*** (0.603)
Large part-time (20-35h)	0.103 (0.075)	1.281 (0.255)	0.134* (0.079)	1.418 (0.320)
Martial status Ref: Married				
Cohabiting	0.218** (0.103)	1.777** (0.510)	-0.021 (0.152)	0.936 (0.350)
Single	0.458*** (0.126)	3.320*** (1.179)	0.012 (0.214)	1.035 (0.609)
Education Ref: Primary School				
Lower secondary	0.011 (0.165)	1.120 (0.595)	-0.004 (0.122)	1.022 (0.393)
Higher secondary	0.166 (0.171)	1.604 (0.886)	0.008 (0.134)	1.082 (0.430)
Vocational college	0.174 (0.194)	1.756 (1.061)	-0.062 (0.153)	0.889 (0.396)
Academic	0.153 (0.224)	1.571 (1.083)	0.163 (0.194)	1.607 (0.890)
Work experience	-0.010 (0.007)	0.975 (0.018)	0.001 (0.006)	1.003 (0.013)
Wage per hour	-0.005 (0.005)	0.984 (0.017)	0.000 (0.004)	1.000 (0.014)
Permanent contract	-0.088 (0.071)	0.791 (0.141)	-0.065 (0.067)	0.816 (0.152)
Supervisor	-0.037 (0.058)	0.904 (0.149)	0.010 (0.048)	1.023 (0.128)
2nd job	-0.145 (0.106)	0.625* (0.174)	-0.090 (0.084)	0.813 (0.179)
Occupational level Ref: Medium				
Elementary	-0.221* (0.117)	0.583* (0.174)	-0.048 (0.115)	0.865 (0.275)
Lower	-0.073	0.809	-0.084*	0.770*

Table 10: TLF arrangements on working-time fit by children at home (*cont.*)

	No children		Child(ren) at home	
	Linear FE	BUC (OR)	Linear FE	BUC (OR)
	(0.057)	(0.129)	(0.050)	(0.110)
Higher	0.071	1.217	-0.047	0.881
	(0.057)	(0.202)	(0.044)	(0.113)
Scientific	0.074	1.235	0.021	1.070
	(0.083)	(0.301)	(0.066)	(0.200)
Empl. status change	0.056	1.152	0.066*	1.187*
	(0.043)	(0.139)	(0.034)	(0.108)
No. of employees (/1000)	-0.008	0.979	0.000	1.001
	(0.007)	(0.020)	(0.009)	(0.018)
Sector				
Ref: Agriculture				
Industry	0.263	2.359	0.117	1.243
	(0.269)	(1.826)	(0.214)	(0.666)
Construction	0.090	1.263	-0.135	0.735
	(0.282)	(1.058)	(0.231)	(0.407)
Trade, gastronomy, repair	0.337	2.843	0.066	1.156
	(0.283)	(2.248)	(0.219)	(0.640)
Transport	0.382	3.757	0.082	1.186
	(0.298)	(3.320)	(0.250)	(0.733)
Business services	0.381	3.347	0.101	1.306
	(0.273)	(2.618)	(0.223)	(0.738)
Care, Welfare	0.187	2.332	0.147	1.453
	(0.295)	(1.909)	(0.244)	(0.899)
Other services	0.500*	4.541*	-0.089	0.699
	(0.299)	(3.848)	(0.247)	(0.470)
Government	0.390	3.417	0.131	1.427
	(0.285)	(2.832)	(0.242)	(0.902)
Education	0.355	3.386	0.248	2.017
	(0.312)	(2.875)	(0.246)	(1.296)
Constant	3.516***	-	3.703***	-
	(0.384)		(0.291)	
Observations	5402	3608	6890	6076
Individuals	3239	898	3279	1279

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

Note: Parameter estimates of TLF arrangements on working-time fit. BUC coefficients are odds-ratios; the reference point is therefore one. Year (wave) dummies included. Clustered standard errors in parentheses.



Table 11: TLF arrangements on job satisfaction by children at home

	No children		Child(ren) at home	
	Linear FE	BUC (OR)	Linear FE	BUC (OR)
Flexi-time	0.066*	1.379*	0.078***	1.452***
	(0.038)	(0.229)	(0.030)	(0.186)
Telehomework	0.030	1.139	0.069**	1.380**
	(0.042)	(0.234)	(0.034)	(0.215)
Part-time work				
Ref: Full-time (36h+)				
Small part-time (1–11h)	-0.145	0.671	-0.187*	0.473
	(0.142)	(0.415)	(0.112)	(0.238)
Medium part-time (12–19h)	-0.148	0.636	-0.117	0.620
	(0.092)	(0.239)	(0.085)	(0.210)
Large part-time (20–35h)	-0.114**	0.678*	-0.054	0.777
	(0.054)	(0.150)	(0.059)	(0.199)
Marital status				
Ref: Married				
Cohabiting	-0.038	0.806	-0.036	0.885
	(0.066)	(0.258)	(0.093)	(0.300)
Single	0.111	1.728	-0.112	0.574
	(0.091)	(0.741)	(0.100)	(0.294)
Education				
Ref: Primary School				
Lower secondary	-0.099	0.431	-0.027	0.889
	(0.094)	(0.328)	(0.117)	(0.438)
Higher secondary	-0.090	0.446	-0.097	0.625
	(0.107)	(0.343)	(0.122)	(0.326)
Vocational college	-0.165	0.291	-0.067	0.726
	(0.125)	(0.244)	(0.132)	(0.424)
Academic	-0.262*	0.176*	-0.017	1.024
	(0.143)	(0.163)	(0.149)	(0.786)
Work experience	-0.003	0.991	-0.003	0.989
	(0.005)	(0.021)	(0.004)	(0.015)
Wage per hour	0.009**	1.040*	0.004	1.022
	(0.004)	(0.021)	(0.003)	(0.016)
Permanent contract	-0.081	0.758	-0.058	0.823
	(0.053)	(0.141)	(0.048)	(0.157)
Supervisor	0.098**	1.596**	0.053*	1.235
	(0.040)	(0.292)	(0.030)	(0.177)
2nd job	-0.116	0.551*	-0.064	0.737
	(0.079)	(0.191)	(0.055)	(0.180)
Occupational level				
Ref: Medium				
Elementary	0.002	0.922	-0.012	1.001
	(0.087)	(0.404)	(0.061)	(0.369)
Lower	0.027	1.149	-0.015	0.918

Table 11: TLF arrangements on job satisfaction by children at home (*cont.*)

	No children		Child(ren) at home	
	Linear FE	BUC (OR)	Linear FE	BUC (OR)
	(0.038)	(0.241)	(0.030)	(0.134)
Higher	0.080**	1.334	0.040	1.200
	(0.040)	(0.256)	(0.031)	(0.166)
Scientific	0.105*	1.537	0.019	1.025
	(0.063)	(0.466)	(0.047)	(0.225)
Empl. status change	0.121***	1.619***	0.099***	1.609***
	(0.032)	(0.234)	(0.023)	(0.167)
No. of employees (/1000)	0.003	1.010	-0.006*	0.979
	(0.005)	(0.025)	(0.003)	(0.019)
Sector				
Ref: Agriculture				
Industry	-0.003	1.252	-0.051	0.821
	(0.253)	(0.829)	(0.146)	(0.468)
Construction	-0.022	1.240	-0.140	0.598
	(0.263)	(0.995)	(0.164)	(0.382)
Trade, gastronomy, repair	-0.102	0.879	-0.046	0.842
	(0.267)	(0.590)	(0.149)	(0.509)
Transport	0.197	2.821	0.105	1.798
	(0.278)	(2.110)	(0.162)	(1.227)
Business services	0.072	1.781	-0.024	0.943
	(0.256)	(1.172)	(0.143)	(0.536)
Care, Welfare	0.031	1.471	0.165	1.951
	(0.270)	(1.045)	(0.157)	(1.226)
Other services	0.249	4.117*	0.045	1.211
	(0.268)	(3.083)	(0.161)	(0.777)
Government	0.106	2.109	-0.016	0.958
	(0.265)	(1.505)	(0.159)	(0.630)
Education	0.346	6.245**	0.188	2.086
	(0.268)	(4.736)	(0.181)	(1.472)
Constant	3.180***	-	3.278***	-
	(0.324)		(0.218)	
Observations	5402	2110	6890	3549
Individuals	3239	672	3279	973

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

Note: Parameter estimates of TLF arrangements on job satisfaction. BUC coefficients are odds-ratios; the reference point is therefore one. Year (wave) dummies included. Clustered standard errors in parentheses.