Family-Friendly Work Schedule Flexibility in Europe: Who Gets Access to It?

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Abstract

Work schedule flexibility has been suggested to be a major linchpin for achieving gender equality on the labor market. Previous research has been largely occupied with the outcomes of work schedule flexibility; the antecedents of work schedule flexibility, especially from a cross-national angle, have hardly been studied. Analyzing Labor Force Survey data of 371,390 workers from 24 European countries with multivariate random effects models, we reveal large social gradients in the availability of flexible work schedules, not only between countries, as in more affluent countries more flexibility is available, but also within them. Within countries, our findings document substantial mismatches in the availability of flexible work schedules between the groups of workers who predominately need flexible schedules and those who have actually access to them.

1 Introduction

Recent years have seen a rise in the prevalence of flexible work arrangements. Flexible work arrangements give workers more discretion and autonomy over the scheduling and number of their hours of work. Several societal trends have been suggested to be at the core of this trend, such as more dual-earner households (Blossfeld and Drobnič, 2001), single parents (Heuveline *et al.*, 2003), more prevalent responsibilities for elderly care (Ruppanner and

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Bostean, 2014), men's greater involvement in family care (Hook, 2006), and the growth in female labor force participation (Goldin, 1990). Also, employers have responded to these factors, as labor markets have changed with greater demand for skilled labor due to more complicated technology (Bekman *et al.*, 1998), moves to deregulation (Esping-Andersen and Regini, 2000), and greater flexibility in production (Davies and Freedland, 2007), resulting in a trend towards a 24-hour economy (Presser, 1999).

Working time flexibility has been praised as part of a strategy for reconciling work and family demands, suggesting that flexible hours and schedule control give workers a better chance to balance their work and family lives. This in turn could result in less work–family conflict, greater female labor force participation, higher fertility, and greater gender equality on the labor market. Goldin (2014) recently argued that it takes a reorganization of working schedules to close the gender gap on the labor market. Employee discretion about working time scheduling has been identified to be an important feature of quality of work (Drobnič *et al.*, 2014). More flexible working hours have also been recommended to cope with the labor market consequences of aging populations (Carstensen, 2011; Moen, 2010; Vaupel and Loichinger, 2006) and to improve population health (Schuster and Chung, 2014). The border theory of the work–family interface (Clark, 2000) argues that individuals regularly cross a border between the domains of work and family life and that these domains are equipped with different resources for attaining work–family balance. According to this theory, working time discretion is a key resource that could facilitate the reconciliation of work, family, and private life, as it is distinct from other aspects of job control by being situated between work and non-work life.

Previous research on flexible work is heavily focused on the consequences of those arrangements (Allen *et al.*, 2013; Kelly *et al.*, 2014, e.g.), studying whether the great hope put into flexible work scheduling is actually justified. What is less known are the predictors of flexible working time, especially from a cross-national perspective. Few studies focus on who gets access to flexible work (Golden, 2008; Masso, 2013). Existing studies often draw on UK or US samples only; however, research has shown that similar working time arrangements can have different consequences depending on the national context (Mills and Täht, 2011).

This paper will focus on what we call perceived family-related work schedule flexibility, that is whether employees report that they are able to modify their working hours (start and ending time of work by at least one hour) and working days (take whole days off) for family reasons. We acknowledge that there are other forms of working time flexibility which can help reconcile work, family, and private life, such as part-time work, compressed work

week schedules, or atypical hours (Plantenga and Remery, 2010); these are, however, beyond the scope of this study.

While the potential benefits of flexible work schedules for reconciling work and family seem substantial, mismatches between the availability of and employees' need for flexible working hours are likely. Employers are more likely to grant discretion about working times to a small number of workers. In organizations, greater flexibility comes with more responsible and less specialized positions. Employees facing a variety of tasks that require much switching such as managers are often granted great discretion, also since monitoring of their work is more difficult. Furthermore, employers grant greater flexibility to employees as rewards for longer tenure, higher commitment, and greater skills and abilities. Lastly, flexibility can come as part of so-called high performance work systems (Ortega, 2009). High performance work systems move away from a work organization as inspired by Frederick Taylor towards a more holistic approach of work, often defined by job rotation, flat hierarchies, self-responsible teams, and greater discretion for workers. It is important to note that the groups who are in need for family-related work schedule flexibility, i.e. people at the age where they might start a family and especially women, might not be able to get them as they are not (yet) in a high-enough career position or are not able to commit themselves sufficiently to their job.

Exploiting the European Union Labor Force Survey 2010 Ad Hoc Module 'Reconciliation between Work and Family Life,' we aim to give an overview of family-related flexible working hours as captured by the possibility to vary start and/or end of the working day and to take whole days off for family reasons in 24 European countries, focusing on differences between countries and between social groups, especially men and women.

2 Background and theoretical framework

2.1 Previous research on flexible work

Existing research on flexible work arrangements is vast, one of the reasons being that it serves as an umbrella term for different features of work organization. Therefore, speaking of flexible work often conflates a number of related concepts. Dimensions of flexibility that are sometimes presented together are temporal versus spatial flexibility, availability versus take-up (Allen *et al.*, 2013), and employer versus employee-centered arrangements (Chung and Tijdens, 2013). Whereas temporal flexibility refers to arrangements such as variable working hours, spatial flexibility refers to practices

such as working from home. Availability of flexible work arrangements gives workers the option to choose for such arrangements, where take-up focuses on those who have chosen for such arrangements and make use of them. Employer-centered arrangements allow organizations to react more flexibly towards external pressures, e.g. fluctuations in demand. Shift work, unusual hours, and overtime on short notice can be seen as examples of employer-centered flexible work arrangements; conversely, leave schemes for family matters (e.g. a sick child) are examples for employee-centered working time flexibility. Previous research has already suggested keeping those dimensions separate in research to be better able to identify the effects of the different forms of flexibility, as they can substantially differ (Allen *et al.*, 2013). As stated before, our study will focus on the perceived availability of temporal, employee-centered work flexibility.

The bulk of previous research on flexible work focused on the outcomes of greater flexibility. For instance, a recent meta-analysis on the effects of flexible working arrangements on work–family conflict was able to identify 58 studies focusing on this outcome alone (Allen *et al.*, 2013). Indeed, studies have suggested that greater flexibility of working time arrangements can be related to desirable outcomes. Halpern (2005) showed that in a large sample of US workers, more flexible working time arrangements were associated with less sickness absence, greater commitment to the employer, and reduced costs to the organization because of fewer absences, fewer days late, and fewer missed deadlines. Kelly *et al.* (2011) conducted a prospective intervention study in an US service sector organization which showed that better work schedule control reduces work–family conflict. Moen *et al.* (2011b) point out that schedule control has a positive effect on health behaviors (almost an extra hour of sleep on work nights, exercising more, going to the doctor when sick, not going to the workplace when ill) and the wellbeing of workers. Furthermore, they showed that greater work-time control can reduce turnover in an organization (Moen *et al.*, 2011a). A group-randomized intervention study by Kelly *et al.* (2014) finds that changing work practices towards more schedule control for employees modestly reduces work–family conflict. Grzywacz *et al.* (2008) provide evidence that greater perceived flexibility is associated with less burnout in employees. Beham *et al.* (2011) showed that in a sample of German service sector workers, use of flexible work arrangements was negatively correlated to work-to-family conflict and positively to work-to-family enrichment. In a cross-national study, Stier *et al.* (2012) found that the average level of working time flexibility in a country does not affect overall levels of work–family conflict, but it can reduce the gender gap in work–family conflict (women consistently reported greater work–family conflict than men). In another cross-national study, Lyness *et al.* (2012) found that workers'

working time autonomy positively affects job satisfaction and organizational commitment (but again, self-reported work–family conflict was not affected).

Research has largely neglected the study of the antecedents of work schedule flexibility. Rather few studies (Golden, 2008; Masso, 2013, e.g.) identified predictors of flexible work practices, however this was rarely done in a cross-nationally comparative fashion. To our knowledge, only three studies (Berg *et al.*, 2004; Lyness *et al.*, 2012; Ortega, 2009) analyze the determinants of working time flexibility using cross-national data. Berg *et al.* (2004) conducted a qualitative study, interviewing managers, public sector policy-makers and administrators, and union leaders from seven Western high-income countries. Ortega (2009) analyzed data from 15 Western European countries (European Working Conditions Survey 2000), but did not pay any special attention to potential country differences in his study. (Lyness *et al.*, 2012) studied work schedule control in 21 mainly Western countries using the International Social Survey Program (ISSP) data from 1997. However, an analysis of a more recent, larger data set (larger both in terms of countries as well as individual respondents) could add substantially to the state of knowledge.

2.2 Micro-level approaches

We take two approaches for explaining the availability of work schedule flexibility. One relates to performance concerns of employers, the other to work–family reconciliation. While these approaches both are not mutually exclusive, they bring about distinct implications for availability of work schedule flexibility (Ortega, 2009).

With respect to family concerns, employers know that workers in different stages of the life course have different needs for work schedule flexibility (Golden, 2008). Motivations for granting workers greater access to family-friendly working hours would be to retain loyal staff in the long run or to keep women from quitting the organization, and the labor market altogether) for family reasons (Blossfeld and Drobnič, 2001). Another reason might be that workers demand greater discretion in terms of work time scheduling, for instance when more women enter the labor market (Ortega, 2009). Another option is that employers respond to the needs of individual workers only when they voice their concerns, thus granting schedule flexibility for those in need. Based on this rationale, we can test the following Hypothesis to assess the family concerns of employers:

> H1: Women (a), younger workers (b), workers with a partner (c), and workers with children (d) have better access to work

schedule flexibility.

With respect to performance concerns, there are a number of reasons employers can grant greater discretion to their workers. Firstly, granting discretion to workers can be instrumental to motivate workers to better performance (Ryan and Deci, 2000), a method that is often used in conjunction with other work arrangements such as job sharing, self-managed teams, and performance pay (Appelbaum *et al.*, 2000). Secondly, employers can grant work schedule flexibility to more able employees. Even within narrow occupational groups, employers can grant more discretion, also in terms of work time, to workers with greater ability (Masso, 2013). Thirdly, supervisors and managers often have to perform a variety of tasks between they have to be able to switch quickly, and for these reasons their work is more difficult to monitor than that of other workers, thus workers with supervisory functions often enjoy greater discretion, also in terms of work scheduling (McGovern *et al.*, 2007). The following Hypothesis can be tested for assessing the performance motivation of employers:

> H2: Better-educated workers (a) and supervisors (b) have greater access to work schedule flexibility.

2.3 Macro-level explanations

Taking into account the national context in studies of work–family reconciliation is pivotal for understanding processes at the individual level (Ruppanner and Huffman, 2014). Lyness *et al.* (2012) and Berg *et al.* (2004) have suggested that there are cross-country differences in work schedule flexibility which could be explained by several sets of factors. Firstly, workers' bargaining position in a country could be positively related to work schedule flexibility. On the one hand, greater institutional power of workers could increase their access to more family-friendly work schedule flexibility by giving them a greater direct impact on government legislation and organizational decisions. On the other hand, a better social safety net might improve the workers' position indirectly, by reducing the risks of unemployment and by increasing reservation wages. We posit that

> H3: Greater union density and collective bargaining coverage (a) and higher social protection expenditure (b) in a country increases access to work schedule flexibility.

Secondly, features of the labor market can have an impact on work schedule flexibility. As laid out in the preceding section, a greater female labor

force participation rate can induce a greater demand for jobs with flexible work scheduling (Lyness *et al.*, 2012; Ortega, 2009).[1] Furthermore, the size of the service sector can be an important driver for greater access to flexible work scheduling. Service sector work allows better for organizing work flexibly and has traditionally been associated with more humane working conditions (Bell, 1974; Fourastié, 1949; Präg *et al.*, 2011). Another institutional feature of labor markets that should affect the access to flexible work scheduling are the legal entitlements to flexible work in a country (Moss and Deven, 2006).

> H4: Greater female labor force participation (a), a greater service sector (b), and greater legal entitlements (c) in a country increases access to work schedule flexibility.

3 Data and Methods

3.1 Data

For our analyses, we exploit the 2010 Ad Hoc Module 'Reconciliation between work and family life' of the European Labor Force Survey (EU-LFS). This module comprises information from 29 European countries for about 400,000 employees between the ages of 15 and 64. Specifically, the 24 countries in our analyses comprise Austria (AT), Belgium (BE), Bulgaria (BG), Cyprus (CY), the Czech Republic (CZ), Germany (DE), Estonia (EE), France (FR), Greece (GR), Hungary (HU), Latvia (LV), Lithuania (LT), Luxembourg (LU), Malta (MT), Ireland (IE), Italy (IT), the Netherlands (NL), Poland (PL), Portugal (PT), Romania (RO), Slovakia (SK), Slovenia (SI), Spain (ES), and the United Kingdom (UK). Individuals who are not active in employment, who are self-employed, or who are not in working age are not included in the data set.

There are a number of restrictions to the data. Firstly, in the Latvian sample, nearly 90 per cent of respondents did not report whether they had the possibility to vary the start/end times of their work day, and for the 10 percent who did answer the question, the results appear to be implausible. For this reason, we have removed the variable from the Latvian sample. Secondly, the Nordic countries (Denmark, Finland, Iceland, Norway, and Sweden) in the EU-LFS only contain very limited household information; thus, we also had to exclude them from our analyses.

The EU-LFS serves as our individual-level data set. In addition, we have supplemented the EU-LFS with country-level information drawn from

a variety of high-quality sources. These are listed below in the section on predictor variables.

3.2 Outcome variables

With respect to family-friendly flexible working hours, the Ad Hoc Module contains two indicators. Firstly, the possibility to vary start and/or end of working day for family reasons (by at least one hour), and secondly, the possibility to organize working time in order to take whole days off for family reasons (without using holidays).[2] For both indicators, three response options were available, namely (1) 'not possible,' (2) 'rarely possible,' and (3) 'generally possible.' It should be noted that these two indicators tap at the availability of these options as perceived by the employees (not as reported by HR departments) and do not measure actual take-up of these policies. We however believe that this is a more accurate approach as reports by HR departments are more likely to inform about formal flextime policies only, whereas a substantial share of flexible work arrangements might be arranged informally between employees and their colleagues or their immediate supervisors (e.g. Hochschild, 1997). Preliminary analyses showed that a distinction between 'generally possible' and the other two options captures the essential variation in the two outcome variables. Therefore, we dichotomized both variables (1 = 'generally possible' and 0 = 'rarely possible' or 'not possible').

3.3 Predictor variables

Individual-level predictors Our analyses draw on a number of individual-level covariates, namely sex (1 = female), age in the form of indicator variables denoting five-year intervals (15–19 years, 20–24 years, ..., 60–64 years, reference category: 30–34 years), marital status (two variables indicating 'married/cohabiting' or 'widowed, divorced, or separated', reference category: 'single'), children in the household in three-year brackets (0–2 years, 3–5 years, ..., 12–14 years, reference category: no children <15 years in household), education (low, tertiary, and reference: medium education)[3], working hours (marginal part-time (< 20 hrs.), substantial part-time (20–34 hrs.), reference: full-time (35+ hrs.), an indicator denoting employees of small firms (1 = 'up to ten persons', reference: 'ten persons and more'), a continuous variable indicating job tenure in years, a set of indicator variables denoting the occupational group of respondents (unskilled, skilled routine services, high-skilled services, reference: skilled manual)[4], and finally, a number of variables indicating the industry a worker is active in (agriculture, market services, mainly non-market services, and reference: industry

and construction)[5].

Country-level predictors In order to explain the between-country variance, we also included predictors at the country-level. GDP per capita (expressed as the natural logarithm of PPS per inhabitant), social protection expenditure (in percentage of GDP), the female labor force participation rate (percentage of women, 20 to 64 years), and service sector size (percentage of workforce in service sector) were all drawn from the Eurostat database. Collective bargaining coverage and union density are taken from the ICTWSS database (Visser, 2013). National legal leave entitlement is drawn from the Council of Europe Family Policy Database (Council of Europe, 2009).

3.4 Method and modeling strategy

Models were estimated in Mlwin v2.27 (Rasbash *et al.*, 2012) using runmlwin (Leckie and Charlton, 2013) within Stata 13. We estimated a three-level random effects binary logit model with two outcomes. The two binary outcomes were treated as repeated measures from the same worker, forming the lowest level (1) in the hierarchy. Level 2 comprises the workers in which the outcomes are nested, and the 24 countries formed the level 3 units (see Figure 1) (Subramanian *et al.*, 2003). The advantages of the multivariate approach comprise a reduction of the Type I error rate, often an increase in statistical power, and allows distinguishing between the correlation of the outcomes at the individual and at the country-level (Snijders and Boskers, 2012).

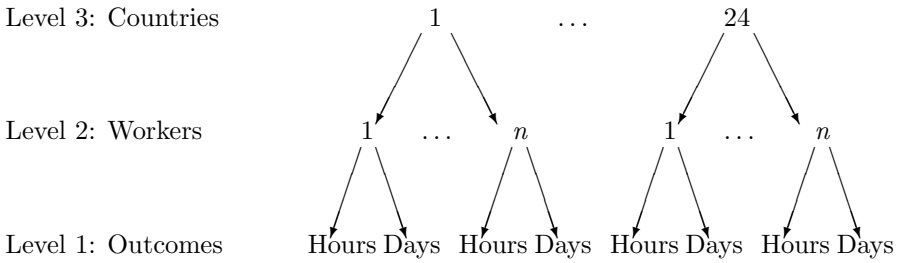

Figure 1: Multivariate multilevel structure of outcomes ('Hours': vary start and/or end of working day; 'Days': take whole days off) at level 1 nested within individuals at level 2 nested within countries at level 3

In the exploratory models, we first ran the estimates using quasi-likelihood methods of second order marginal quasi-likelihood (MQL2), which is the least accurate, but converges faster. In the final models[6], we used the Markov

chain Monte Carlo (MCMC) method with a burn-in period of 500 iterations and monitoring period of 5,000 iterations (Browne, 2012). MCMC is a simulation approach where after assigning starting values and prior distributions for the model parameters a Markov chain is used to sample subsets of parameters from conditional posterior distributions, given current values of other parameters (Leckie and Charlton, 2013). The model produces Bayesian 95% credible intervals, which are analogous to 95% confidence intervals (for more technical details see Goldstein, 2011; Snijders and Boskers, 2012). Furthermore, MCMC produces the Deviance Information Criterion (DIC) (Spiegelhalter *et al.*, 2002), an overall goodness-of-fit measure for MCMC models. As quasi-likelihood models usually do not provide global goodness-of-fit measures, this is an important advantage of the MCMC estimation method. The DIC accounts for both the fit to the data and model complexity, drawing on the deviance statistic to establish the model fit while complexity is a function of the number of degrees of freedom consumed by the model. A more complex model provides a very good fit to the data, but it has fewer degrees of freedom and be of limited utility. The DIC penalizes more complex models, and a larger DIC points at a worse performance of the model and thus discourages over-fitting models. General rules of thumb for the interpretation of the DIC have been developed, such that a difference of less than 2 between models suggests essentially no difference between models; while differences greater than 10 suggest substantial support for the model with the smaller value (Burnham and Anderson, 2002).

4 Results

Figure 2 illustrates that there is substantial variation between countries when it comes to family-friendly work schedule flexibility. The percentage of workers reporting general access to any type of family-friendly work schedule flexibility can be as low ten per cent in Romania, and as high as sixty to eighty per cent in the Netherlands, Austria, and the UK. A general pattern that can be inferred from Figure 2 is that the percentage of workers reporting the availability of family-friendly work schedule flexibility is generally lower in Eastern and Southern European countries, whereas the percentage is much higher in the high-income, Western European countries.

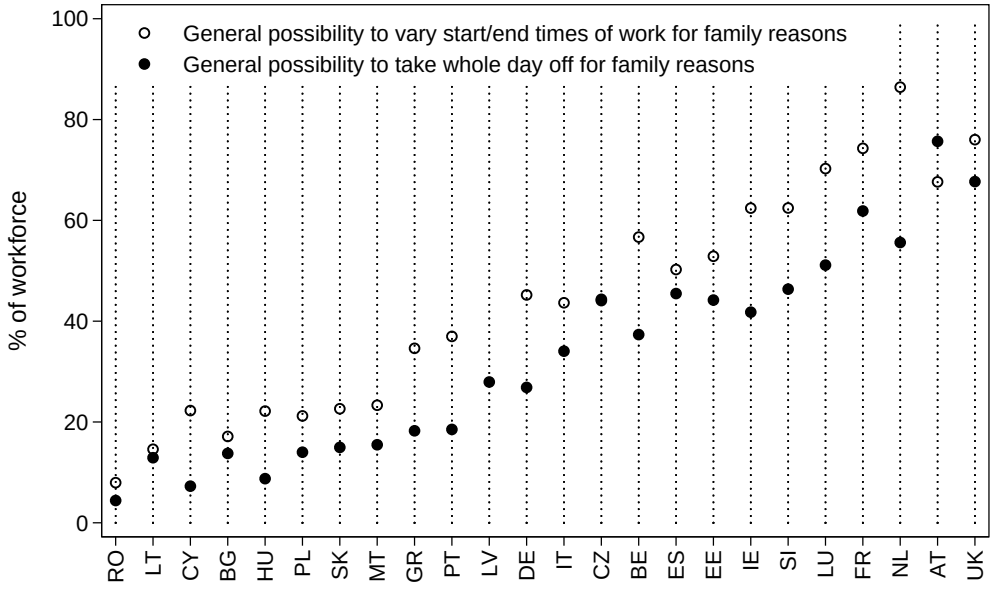

Figure 2: Family-friendly work schedule flexibility across countries

Looking at the estimates of the multivariate multilevel model reported in Table 1, it becomes clear that there is not much to say for the family concerns approach. Women report less access to work schedule flexibility compared to men. Also, younger workers report significantly less access to flexible work schedules compared to older workers. Single and married or cohabiting workers report the same amount of access to work schedule flexibility, only the group of widowed, divorced, or separated workers report somewhat greater access. Also, none of the variables indicating the presence of children under 15 years of age in the household is significantly different from the reference category (having no children under age 15 in the household). Hypothesis 1 had posited that employers' family concerns drive the availability of flexible work schedules, however, the results reveal that this is not the case.

Table 1: Fixed coefficients from multivariate, multilevel logit model, N = 371,390 from 24 countries

Variable	Logit coefficient	Standard error
Intercept vary start/end	−17·77922 * **	3·463111
Intercept take whole days off	−18·28016 * **	3·462584
Female (*Ref.* male)	−0·0876602 * **	0·0076374
Age groups (*Ref.* 30–34 yrs.)		
15–19 yrs.	−0·2984442 * **	0·0272141
20–24 yrs.	−0·1668911 * **	0·0166462
25–29 yrs.	−0·0345037 * *	0·0140588
35–39 yrs.	0·0288116 * *	0·013151
40–44 yrs.	0·0432392 * **	0·0135221
45–49 yrs.	0·0283198*	0·0142103
50–54 yrs.	0·0401418 * *	0·0150848
55–59 yrs.	0·0435385 * *	0·0166008
60–64 yrs.	0·1824603 * **	0·0215619
Marital status (*Ref.* single)		
Widowed, separated	0·0277565*	0·0139905
Married, cohabiting	0·0084307	0·0096657
Children in HH (*Ref.* none)		
Youngest child 0–2 yrs.	0·0162817	0·0126552
Youngest child 3–5 yrs.	0·0222686	0·0138536
Youngest child 6–8 yrs.	0·0220427	0·0145306
Youngest child 9–11 yrs.	0·0082875	0·0143009
Youngest child 12–14 yrs.	−0·0013258	0·0138905
Education (*Ref.* medium)		
Low education	−0·0462712 * **	0·0093872
High education	0·0289797 * *	0·0095952
Working hrs. (*Ref.* full-time)		
Marginal part-time	−0·0693184 * **	0·0102802
Substantial part-time	0·1303141 * **	0·015756
Small firm (*Ref.* large)	0·3245211 * **	0·0079139
Fixed-term contract (*Ref.* perm.)	−0·12964 * **	0·0111374
Job tenure (in yrs.)	0·0004748	0·0004239
Supervisor (*Ref.* not)	0·3407485 * **	0·0087857
Occupational groups (*Ref.* skilled manual)		
Unskilled	0·1889092 * **	0·0131214
Skilled routine services	0·3404906 * **	0·0105463
High-skilled services	0·3730649 * **	0·0136175
Ref. (*Ref.* industry and construction)		
Agriculture	0·4077552 * **	0·0235996
Market services	0·0018623	0·0094303
Non-Market services	−0·0867592 * **	0·0102916
GDP per capita (logged)	1·720566 * **	0·3465838

Note. *** p <.001; ** p <.01; * p <.05

With respect to performance concerns, we do find significant differences in terms of education, with the lower educated and the higher educated reporting less and greater access to flexible working hours. This grants support to Hypothesis 2a. Also, we see that supervisors have a substantial advantage in flexible work scheduling compared to non-supervisors, supporting Hypothesis 2b.

When paying further attention to the overall pattern of results, a social gradient emerges. Disadvantaged groups on the labor market appear to be also disadvantaged with respect to access to work schedule flexibility. The lower educated, those with fixed term contracts, and marginal part-time workers all report less access to flexible work schedules. The fact that unskilled workers still enjoy greater working schedule flexibility than skilled manual workers however adds a nuance to this picture.

When we consider the macro-level explanations, the last line of Table 1 already reveals that GDP per capita increases the access to work schedule flexibility. In Table 2, we test the remaining macro-level explanations in separate models, all net of GDP per capita and controlling for the compositional variables listed in Table 1.

Table 2: Country-level coefficients from multivariate, multilevel logit models, N = 371,390 from 24 countries

Country-level Predictor	Collective bargaining coverage	Union density	Social protection expenditure	Female labor force participation	Service sector size	Legal entitlements
Logit coeff.	0·0052159	−0·023948**	0·07534 * *	0·0444103**	0·0162983	0·00845734
S.E.	0·0059885	0·0097523	0·0309266	0·0179861	0·0252702	0·00897842

Notes. *** p <.001; ** p <.01; * p <.05. All variables in Table 1 controlled in models of this Table. Fixed coefficients not reported as they remain substantially similar across models.

While collective bargaining coverage has no statistically significant effect, union density surprisingly has a negative effect on the access to family-friendly work schedule flexibility. This refutes Hypothesis 3a. With respect to social protection expenditure, we see a clear positive association with work schedule flexibility, supporting Hypothesis 3b. Also, greater female labor force participation in a country goes along with better access to work schedule flexibility, corroborating Hypothesis 4a. When it comes to services sector size, no statistically significant relationship can be found, thus refuting Hypothesis 4b. Surprisingly, there is also no significant relationship between legal entitlements and work schedule flexibility, thus there is no support for Hypothesis 4c.[7]

5 Discussion

Our analysis of the individual-level and country-level determinants of family-friendly work schedule flexibility among representative samples of 371,390 workers from 24 European countries yields a number of key insights.

Firstly, there is substantial variation in the reported availability of work schedule flexibility across European countries. For instance, the share of workers who can generally vary the start and/or end times of their work (by at least an hour) for family reasons ranges from less than ten per cent in Romania to more than 80 per cent in the Netherlands.

Secondly, the prevalence rate of reported availability of flexible work schedule flexibility across countries is patterned by country characteristics, most prominently GDP per capita. The more affluent a society, the higher the prevalence rate of reported access to family-friendly work schedule flexibility. Legal entitlements, however, seem to be a rather ineffective measure for facilitating flexibility. This finding is in line with Goldin (2014), who stresses that government intervention is not necessary for achieving greater work schedule flexibility.

Thirdly, the access to family-friendly work schedule flexibility is also patterned for different social groups, indicating several mismatches between the need for family-related hours and the reported availability. Women report substantially less access to family-related work schedule flexibility. Younger workers (under the age of 30) report less access to family-related work schedule flexibility; older workers (over the age of 60) report substantially greater access. Having young children in the household has hardly any effect on the availability of family-related work schedule flexibility. This might explain why many observational studies report only modest or sometimes no positive outcomes of work schedule flexibility: Those who need flexible work schedules might not be the ones who can make use of them.

Fourthly, there is also evidence for a social gradient in family-friendly work schedule flexibility, as those who do not have fixed-term contracts, who are better educated, and who have supervisor status report greater availability of flexible arrangements. This is an intriguing finding, as Williams (2010) has stressed the importance of social stratification for reconciling work and family for all workers.

Probably the greatest innovation in human resource practices in the last decades has been the proliferation of flexible work practices. This development appears to be highly variable across countries, as the reported availability of family-related work schedule flexibility vary greatly across the 24 countries under study.

Despite the fact that working time flexibility has been suggested as a

solution to the mismatches arising between work and family roles for workers (Christensen and Schneider, 2011), they do not appear to solve the mismatch. Conversely, there is a mismatch in the sense that those groups who likely have the greatest need for family-related working time flexibility: women, younger workers, those with children, appear to not have more and often even less access to flexible working times.

With respect to the social gradient aspect of family-related flexible work schedules, it should be kept in mind that professional workers are often confronted with what has been termed the 'stress of higher status' (Schieman and Glavin, 2011), meaning that workers of higher socio-economic status, though privileged in terms of specific working conditions such as pay, career advancement, and autonomy, are at a disadvantage when it comes to reconcile work and non-work responsibilities and achieve a satisfying level of work–family balance (Beham *et al.*, 2014). This underlines the notion that the link between flexibility in terms of working time and work–family reconciliation might not be a direct one, as for this group of workers greater working time flexibility does not appear to come with the desired outcome of better work–life balance.

Some points should be kept in mind when interpreting the results presented in this paper. Our analyses are based on cross-sectional data, making it difficult to disentangle causal directions for the associations shown. Furthermore, our analyses focus on the availability of family-related flexible working times as reported by employees themselves. This does not necessarily correspond to the actual take-up of these working time arrangements. The reported availability might not correspond to actual take-up. Women might have fewer possibilities, but make better use of them than men. For instance, one study has shown that mothers are more likely than fathers to stay at home when their child is sick even when both parents worked (Maume, 2008), as women's labor supply appears to be more sensitive to work–family obligations, even when both parents are full-time active on the labor market (Maume *et al.*, 2009). Another option might be that men ask less often for an hour or day off for family reasons and are thus more likely to have it granted whereas women ask more frequently and are not being granted leave for family reasons at some point. While being able to assess the actual take-up would be an interesting topic of research, we believe that individuals' perceptions of availability are also crucial as they are important for structuring individual behavior, e.g. the decision to have a(nother) child or to put in more or less hours at work.

Notes

[1]Note that this relationship can actually go in either direction

[2]Unfortunately, it is not possible to say how often this would be possible in a given span of time, as respondents were not asked about this.

[3]Education is based on the International Standard Classification of Education (ISCED) of 1997 (UNESCO, 2006).

- *Low* education refers to ISCED levels 0 to 2 plus ISCED 3c (shorter than two years).
- *Medium* education refers to ISCED levels 3 and 4, but excluding ISCED 3c (shorter than two years).
- *High* education refers to ISCED levels 5 and 6.

[4]Occupational groups were distinguished using a typology as presented by Mau and Verwiebe (2010), based on the International Standard Classification of Occupations (ISCO 88 COM).

- *High-skilled services* comprise the ISCO main groups 1 and 2.
- *Skilled, routine services* comprise the ISCO main groups 3 to 5.
- *Skilled manual jobs* comprise the ISCO main groups 6 to 8.
- *Unskilled jobs* are the ISCO main group 9.

[5]Industries were distinguished according to the Rev. 2 of the Nomenclature statistique des activités économiques dans la Communauté européenne (NACE), the European classification system of economic activities.

- *Agriculture* (section A) comprises Agriculture, forestry, and fishing.
- *Industry and construction* (sections B to F) comprise Mining and quarrying; Manufacturing, electricity, gas, steam, and air conditioning supply; Water supply, sewerage and waste management; and Construction.
- *Market services* (sections G to N) comprise Wholesale and retail trade; Transportation; Accommodation and food service activities; Communication; Financial and insurance activities; Real estate activities; Professional, scientific, and technical activities; Administrative and support service activities.
- *Mainly non-market services* (sections O to U) comprise Public administration; Education; Health; Arts, entertainment, and recreation; Other services activities; Activities of households as employers; Activities of extraterritorial organizations.

[6]Still to be implemented

[7]Still to do:

- Further investigate negative effect of union density
- Models with random slopes and cross-level interactions still running
- Re-estimate everything with MCMC

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