This paper is published as: Chung, H. (2017/forthcoming) "Dualization and the access to occupational family-friendly working-time arrangements across Europe " Social Policy & Administration.

This paper is a part of a Special Issue "Occupational Welfare in Europe: Features, Determinants and Outcomes" with guest editors David Natali, Maarten Keune, Emmanuele Pavolini, and Martin Seeleib-Kaiser

Dualization and the access to occupational family-friendly working-time arrangements across Europe

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Abstract

This paper examines outsider's relative access to occupational level family-friendly policies. I use data from the European Working Condition Survey of 2015 across 30 European countries examining worker's access to two types of family-friendly working-time arrangements; flexitime, time off work for personal reasons. The paper focuses on women with care responsibilities given that their demands for family-friendly policies, as well as their outcomes have been shown to be distinct from other working population. In addition to the outsider definition used in the labour market dualization and occupational segmentation literature, i.e., low-skilled workers, those without a permanent contract, this paper also defines outsiders as those with job insecurity. The results of the analysis show a segmentation between workers in their access to family-friendly policies. Unlike statutory policies, occupational policies seem to be selectively provided mostly to workers where employers have a vested interest, i.e., insiders, resulting in a dualized system for most countries. However, rather than their contract status, the skill-level of the job/workers, and their perceived insecurity was found to be important. The results further shows that although Northern European and some continental European countries are those where family-friendly working-time arrangements are more readily available, it is here where the division between insiders and outsiders are the largest. The results of the paper contribute to the literature by showing a need to move beyond the national level when examining family-friendly policies, and to examine a more diverse definition of outsiders when examining dualization of working conditions.

Key words: Occupational family-friendly policies, working-time arrangements, dualization, temporary employment, skill level, subjective insecurity

Introduction

With the increase of women's labour market participation, and dual-earner families, a large and increasing number of workers across Europe struggle to balance work with family life (Chung, 2017). Given the negative consequence such conflict can have on the individual, their families, company, as well as for society more broadly (Frone et al., 1992), this is an issue that should not be ignored. Accordingly, many studies examine the cross-national variation of family-friendly policies or the extent to which policies support a dual-earner/carer system (e.g., Lewis et al., 2008; Korpi et al., 2013; Saxonberg, 2013) with much of the focus on comparing national level policies – i.e., parental leaves and childcare provision. Although national level policies are important when examining the support available for parents, it is also crucial to examine occupational welfare (see also, Kvist and Greve, 2011; Seeleib-Kaiser and Fleckenstein, 2009). Company level may restrict or expand the existing national level regulations, defining the "final availability" workers actual have towards various arrangements (Chung and Tijdens, 2013; Lambert and Haley-Lock, 2004). In addition, companies may provide various additional arrangements through occupational policies which are not set out in the national level agreements that are crucial in addressing reconciliation needs of workers (Farnsworth, 2004; Davis and Kalleberg, 2006; Kelly et al., 2014). Yet, studies examining occupational welfare have traditionally focused on occupational pensions and other types of arrangements as noted in the introduction of this issue (see also Seeleib-Kaiser and Fleckenstein, 2009).

The question raised in this paper is who has access to occupational level family-friendly policies, and whether we find a segmentation in the labour force in the access. Unlike statutory policies, companies have more discretion over whether to provide occupational family-friendly policies as well as to whom to provide it to. Companies may provide additional arrangements to ensure the recruitment and maintenance of workers with

additional family demands, as well as to maintain worker's loyalty and commitment (Dex and Scheibl, 2001; Wood et al., 2003). The use of such occupational policies may be performance driven (Ortega, 2009) resulting in the stratification within organisations in the access workers get to family-friendly policies (Lambert and Haley-Lock, 2004; Chung, 2017/forthcoming). In other words, employers may only provide family-friendly policies to the select few that employers expect a return from (Swanberg et al., 2005) or those they are willing to keep/recruit (Wood et al., 2003). Using the dualization literature (Schwander and Häusermann, 2013; Emmenegger et al., 2012), and organisation segmentation literature (Lambert and Haley-Lock, 2004), this article examines the access to occupational family-friendly policies of insiders vs outsiders. In addition to the more commonly used definition of outsiders, i.e., those without a permanent contract and low-skilled workers, the paper also defines outsiders as those who feel insecure about their jobs, given the importance of subjective perceptions in detecting the complex condition the worker is actually placed in.

Of the various types of family-friend policies, this paper focuses on two working-time arrangements - i.e., flexitime and time off work for personal reasons. These family-friendly working-time arrangements (WTAs) are unique in that they are used both for performance enhancing and work-family integration goals (Goodstein, 1994), crucial for women in maintaining their labour market position (Chung and Van der Horst, 2017/forthcoming), and are the most commonly used type of occupational level family-friendly arrangements across Europe (Chung, 2017). The paper examines how national level contexts shape worker's access to and the division between workers in their access to family-friendly WTAs.

Finally, this paper contributes to the literature by focusing on women with care responsibilities. Previous literature that examine occupational family-friendly policies examine the working population as a whole. While we know from the literature that women are much more likely to be responsible for household and care roles (Dotti Sani and Treas,

2016) and the use of and the demand for family-friendly arrangements is different for men and women (Singley and Hynes, 2005), and for those with and without care responsibilities (Wanrooy et al., 2013). Thus, it is important to examine women with care demands separately to understand how their work-family integration demands are met through occupational policies.

The main question addressed in this paper is thus of all female workers with care demands, who is able to access family-friendly working-time arrangements, whether there is an access gap between insiders and outsiders, and whether it varies across countries due to institutional contexts. These questions will be answered through the use of the European Working Conditions Survey of 2015 and a multilevel approach. The next section explains what is meant by family-friendly working-time arrangement and examines key literature and theories on the provision of these arrangements. Dualization and organisational segmentation theories are examined to help us understand the segmentation in the access to family-friendly arrangements provided at the occupational level. Section three examines the data, variables used, as well as the methodologies applied in the paper. The fourth section will present the analysis results, before making some final concluding remarks and suggestions for future studies.

Theory

Defining family-friendly working-time arrangements

In this paper, I examine two types of flexible working-time arrangements[1] (WTAs): flexitime – the ability of to alter the times workers start and end work which can lead to the ability to change the number of hours worked; and time off work, that is the ability to take time off during working hours to meet personal demands. Work-family border theory (Clark, 2000) and boundary management theory (Kossek et al., 2005) argue that flexibility in your work can help facilitate the integration of work and home role by allowing workers to adapt the borders of one domain around the demands of others – in this case, adapting the timing of work around family demands. In fact, several empirical studies show how flexible working is used especially by women, to address various family demands (Maume, 2006; Craig and Powell, 2012; Singley and Hynes, 2005). Further, flexible working have been shown to relieve work-family conflict, that is the conflict workers feel due to the competing demands coming from work and family (e.g., Chung, 2011; Kelly et al., 2014), although others have argued that the effect is minimal (Allen et al., 2013; Michel et al., 2011; Chung, 2017). Flexible working-time has also been shown to reduce labour turnover, or turnover intentions of workers (de Menezes and Kelliher, 2011) by increasing the fit between work with family-life (McNall et al., 2009). In fact, family-friendly WTAs are frequently used by employers as a recruitment and maintenance tool to attract and keep workers – especially those with higher skills (Davis and Kalleberg, 2006).

[1] In this paper I use flexible and family-friendly working-time arrangements interchangably, but acknowledge the fact that flexible WTAs encompass a larger variety of arrangements as noted in previous studies (see also, Chung, H & Tijdens, K. 2013)

Flexible WTAs are not only used to increase family friendliness of the company, but also to enhance its performance (Ortega, 2009). Giving workers more control over their work can be used as a part of a high-involvement systems (Wood and de Menezes, 2010) or high performance strategy which aims to increase performance by giving workers more discretion and influence over their work (Appelbaum, 2000; Davis and Kalleberg, 2006). Providing workers with more control over their work has been shown to make workers work harder and longer (Kelliher and Anderson, 2010; Lott and Chung, 2016) and have been linked to increased performance outcomes for companies (de Menezes and Kelliher, 2011).

Dualization and division of working conditions between workers

The main idea behind dual labour market theory (e.g, Doeringer and Piore, 1975; Lindbeck and Snower, 1989) is that labour markets are divided into primary and secondary sectors, with limited mobility between the two (see Davidsson and Naczyk, 2009). The main purposes of this division is to keep a primary workforce that secures the core skills of the company, while relying on the secondary market to adjust to cyclical demands and fluctuations. Thus, workers in the primary workforce, the 'insiders', enjoy high wages, good working conditions, prospects for career advancement and job stability. Workers in the secondary market, the 'outsiders' have jobs with low-pay, bad working conditions, few career advancement prospects, that are unstable with risks of frequent lay-offs (Doeringer and Piore, 1975: : 70-71; Rueda, 2014). It is not surprising that outsiders are less likely to get investment from employers, in regards to work-related training (Arulampalam and Booth, 1998; Lambert and Haley-Lock, 2004) most likely because employers do not expect high returns from this workforce (Osterman, 1999).

It is important to note the different definitions of outsiders in the literature. Some of the earlier works on dual labour markets distinguish between those in and out of employment

(e.g., Blanchard and Summers, 1987; Lindbeck and Snower, 1986). More recently, the focus has been on the relative vulnerability of workers, outsiders defined as those with atypical contracts – that is, temporary and involuntary part-time, and non-unionised workers (e.g. ,Rueda, 2005; Emmenegger, 2009; Eichhorst and Marx, 2011; Burgoon and Dekker, 2010). Some scholars (Schwander and Häusermann, 2013; Biegert, 2014) argue that definitions of outsiders based on employment status are too static and the fluidity of positions and mobility between the two segments should to be taken into account. Schwander and Häusermann (2013) thus propose to use occupational categories to indicate employment biographies. Finally, Chung argues that rather than objective insecurity statuses, subjectively perceived insecurity may be a better indicator of the actual situation the worker is placed in. Although objective insecurity is closely related to subjective insecurity, the latter relates to the psychological reactions to worker's job insecurity which can be affected by personal, organisational and institutional contexts (Chung and Mau, 2014; Greenhalgh and Rosenblatt, 1984). In other words, the same permanent contract status may actually entail very different levels of security and in many cases negotiative power of the worker across organisations and across countries (Chung, 2016) and even across different workers within the same organisation. For the purpose of this study, I define outsiders as workers without permanent contracts, those in lower (and specific) skill occupational groups, and those who feel that their job is insecure. I exclude part-time work from the definition because in many cases in Europe, part-time work is taken up for voluntary reasons, and due to the limitations in the data, it is not possible to distinguish between the voluntary and involuntary part-time workers.

Outsiders and access to family-friendly working-time arrangements

Who gets access to family-friendly WTAs? Unlike statutory policies, where worker's access to family-friendly policies is guided by law, and limiting access may come with legal consequences, provision of occupational level family-friendly policies will largely depend on employers. Previous studies (Swanberg et al., 2005; Lambert and Haley-Lock, 2004) discuss three principles employers use to decide who gets access to family-friendly WTAs; namely, principle of need, equity, and equality. When employers are genuinely interested in addressing the work-family needs of workers, those with the most family demands or most need of family-friendly WTAs are likely to get access. On the contrary, when employers are more interested in the enhanced performance/outcomes gained from introducing the arrangements (the principle of equity), the workers companies believe they will reap more benefit out of by providing family-friendly WTAs will have access. Lastly, when the equality principle takes precedence, access to WTAs will be provided to all workers equally regardless of their care needs or potential performance outcome.

When companies mainly provide flexible WTAs based on the principle of equity, we can assume that outsiders will be less likely to have access (Swanberg et al., 2005). Employers do not usually invest in the outside segment of their labour force. Furthermore, when providing family-friendly WTAs as an incentive for employees as a recruitment/maintenance tool, employers are less likely to use such arrangements for the outer segments of their workforce (Wood et al., 2003). Thus I expect that outsiders are less likely to have access to flexible working-time arrangements (H1).

Empirically, numerous studies show that high-skilled and higher-educated workers are most likely to have access to flexible WTAs (Golden, 2009; Brescoll et al., 2013; Ortega, 2009; Seeleib-Kaiser and Fleckenstein, 2009). Workers in disadvantaged positions – e.g. low wage, low-skilled, lower educated - are least likely to have such access (e.g., Swanberg et al., 2005;

Golden, 2009; Wiß, 2016; Chung, 2017/forthcoming). Similarly, those with fixed-term contracts have also been shown to have less access to flexible WTAs (Präg and Mills, 2014), although other studies say there are no significant differences (Chung, 2017/forthcoming). There is no research to the author's knowledge regarding how subjective insecurity relates to access to family-friendly WTAs. What is more, most of the studies on the division in the access to family-friendly arrangements have been single country case studies, leaving the question whether this division is different across different regimes.

Cross-national variation in the division between insiders and outsiders

Dualization theorist argue that certain institutional configurations make it easier for dual labour market patterns to emerge (Emmenegger et al., 2012; Rueda, 2005; Palier and Thelen, 2010). Accordingly, the degree of segmentation within the labour market, and the insider/outsider divide, varies across welfare regimes where different protection mechanisms are in place (Schwander and Häusermann, 2013; Biegert, 2014; Chung, 2016). Scholars (Schwander and Häusermann, 2013; Yoon and Chung, 2015) also argue that the groups that are most likely to be categorised as "outsiders" are different across countries and welfare regimes, as does the degree to which they are outsiders and insiders. Similarly, I expect a cross-national variation in the gap between insiders and outsiders in their access to flexible WTAs (H2).

Which countries are more likely to have a larger access gap of family-friendly working-time arrangements between insiders and outsiders? There are no established theories on the variation in the segmentation patterns in the access to family-friendly arrangements across countries. Thus, I borrow existing theories that examine the broader issue of variation in the labour markets segmentation patterns. One key argument maintained by Dualization scholars is that corporatist countries with stronger and centralised unions are those where the division between insiders and outsiders are largest. According to the power resource theory, the power

that is mobilized by wage earners can influence welfare state development (Korpi, 1989). Similarly, the power of unions may influence employers in providing family-friendly benefits at the company level. Several studies have shown that collective bargaining coverage rates and union density to be positively correlated to the provision of family-friendly WTAs at the company level (Lyness et al., 2012; Präg and Mills, 2014; Chung, 2009; Berg et al., 2004). Further, Palier and Thelen (2010) argue that traditionally strong coordinated unions contributed to the diffusion, generalisation and institutionalisation of good working conditions to the wider population, reducing inequalities between different groups of workers. Based on this, we would expect a smaller access gap between insiders and outsiders in countries with strong and centralized unions. However, Palier and Thelen (ibid) also note that in recent years, in the midst of liberalisation and external economic pressures, dualism have especially been prevalent in these corporatist countries. On one hand, in corporatist countries unions were successful in protecting the insiders from the pressures of labour shedding strategies through negotiations with employers. However, they also allowed employers to increase flexibility on the secondary market, exposing outsiders to increased insecurity in a so-called "dual reform" (Palier and Thelen, 2010; Davidsson and Emmenegger, 2013; Ebbinghaus and Eichhorst, 2007). Empirically, Biegert (2014) show how compared to liberal countries such as the UK, corporatist countries such as Germany have stronger structural barriers between the insider and outsider markets, with less mobility between the two markets. Similarly, we could expect that countries with stronger more centralised unions/corporatist countries to be where the access gap of family-friendly WTAs between insiders and outsiders to be the largest.

Family policies at the national level may also be relevant in explaining who gets access to family-friendly WTAs. 'Crowding out' theory argues that national-level policies will crowd out lower level welfare engagements (Van Oorschot and Arts, 2005; Etzioni, 1995), i.e.

companies will not provide company-level family-friendly policies when there are generous policies at the national-level. The counter argument to this comes from the 'crowding in' theory (e.g., Künemund and Rein, 1999), arguing a positive, rather than negative, relationship between generous national-level policy and occupational welfare. This can be because institutions, laws, and policies may put pressure on organisations to become similar to national institutions (DiMaggio and Powell, 1983). There is the normative isomorphic pressure, i.e. national-level policies changing the norm and subsequent public demand for companies to be more family-friendly (den Dulk et al., 2013), and mimetic pressures, i.e. where companies imitate or mimic the practices of other (successful) organisations (Davis and Kalleberg, 2006; Been et al., 2017). Based on this theory, we can expect that when there are generous national-level family policies, this will raise the benchmark and change the culture companies operate in, making them more likely to provide company-level family-friendly policies. Been et al. (2017) provide evidence to show that when generous national-level family policies exist, company-level family-friendly arrangements are also considered as more of an general terms of employment, and managers are more likely to provide it across the board equally to all workers. Following from this, we could expect not only more access but also a smaller division in the access to family-friendly WTAs in countries with generous family policies. On the other hand, Chung (2017/forthcoming) provides evidence to show that generous national-level family policies, especially work-facilitating policies (see also, Misra et al., 2011; Korpi et al., 2013) such as childcare provision 'crowd-in' occupational welfare, but not equally for all workers. Rather, companies seem to target the more profitable workers given their added incentive of keeping and recruiting these workers, resulting in a larger division between insiders and outsiders in countries with generous family policies.

Finally, it is important to note that these contexts, family policies and corporatism/union strength, are correlated. It is thus rather difficult to disentangle which of the variables are the driving factors. In fact, examining the correlation matrix of the context variables (online appendix) we can see that all four context variables are highly correlated. In other words, countries with strong centralised unions and more likely to be corporatist countries are also those where family policies are generous and childcare coverage extensive. Thus, I will also take a more case-focused, rather than a variable focused, approach when examining the variance in the gaps between insiders and outsiders looking at the (groups of) countries and their patterns.

Data/Methods

Data

For the purposes of this paper I use the European Working Conditions Survey (EWCS) of 2015. This data is gathered by the European Foundation and aims to provide information on a number of dimensions of working conditions for workers across Europe. Individuals across European Union (EU28) and five candidate countries were included. In this paper for comparability issues, I use the EU28 countries plus Norway and Switzerland. A random stratified sampling procedure was used to gather a representative sample of those aged 15 or over and in employment(minimum 1 hour a week) at the time of the survey and was conducted through face-to-face interviews. Approximately 1000 cases are included per country with varying response rates. Of the total sample, I restrict the analysis to those in dependent employment, and further exclude those in the armed forces, and in agriculture/fishery due to the specific nature of these jobs. Flexible WTAs are used by men and women, as well as those with and without care responsibilities for different purposes (Clawson and Gerstel, 2014), and can also lead to different outcomes (Lott, 2015). Further,

the access gap for flexible WTAs may be different for men and women. Thus I only focus on female workers with care responsibilities. Here care responsibilities are measured through the following variable: In general, how often are you involved in any of the following activities outside work? "Caring for and/or educating your children, grandchildren", and "Caring for elderly/disabled relatives". Those individuals who are caring for children at least several times a week, and those who are caring for elderly/disabled relative at least several times a month are considered those with care responsibilities. The analysis further excludes workers over the retirement age of 65 and excluding all cases with a missing value in any one of the variables in the model results in 7845 cases across 30 countries. For more information see: https://www.eurofound.europa.eu/surveys/european-working-conditions-surveys

Dependent variable

The paper examines worker's access to family-friendly working-time arrangements. The provision of flexitime has been measured through the following question "How are your working time arrangements set?", where the workers can answer 1 – "They are set by the company/organisation with no possibility for changes", 2 – "You can choose between several fixed working schedules determined by the company/organisation", 3 – "You can adapt your working hours within certain limits (e.g. flexitime)", and 4 – "Your working hours are entirely determined by yourself". Those who have answered 3 or 4 to this question are considered to have flexitime. Second, time off work for personal reasons, is measured through the question "Would you say that for you arranging to take an hour or two off during working hours to take care of personal or family matters is..." where respondents could answer "very easy", "fairly easy", "fairly difficult", and "very difficult". I include those who have answered the first two to have the ability to take time off work.

Independent variables

The key independent variables in the analysis are workers' contract status, job insecurity perception, and skill-level of the worker. Based on the ILO definition of skill-levels (ILO, 2012), and based on previous studies (Wiß, 2016; Seeleib-Kaiser and Fleckenstein, 2009), I distinguish those in high general skills occupations – i.e., (associate) professional, and mangerial occupations, from workers in low or specific skills occupations. Here for the sake of simplicity, I do not distinguish between low and specific skills. To distinguish between workers with and without a permanent contract, I use the question "What kind of employment contract do you have in your main job?" where respondents could choose from 1"Contract of unlimited duration/permanent", 2"Contract of limited duration/fixed-term", 3"A temporary employment agency contract" 4 "An apprenticeship or other training scheme", and 5 "No contract". Those who have answered 1 to the question is considered as those with an permanent contract, and all others as those who do not. Finally, to measure worker's perceived job insecurity I use the following question- "To what extent do you agree or disagree with the following statement about your job?...I might lose my job in the next 6 months", where respondents could choose from strongly agree, tend to agree, neither agree nor disagree, tend to disagree, strongly disagree. Those who have chosen the first two are considered to perceive subjective job insecurity[2].

Based on previous studies (e.g. Chung, 2017/forthcoming; Wiß, 2016) I include the following variables as controls; age, whether the respondent lives with a partner, parental status, i.e. whether or not the respondent lives with a child under 18 years of age, and whether the respondent lives with a preschool child under 6 years of age; working hours; whether the

[2] Note that due to large number of missing values, those who have answered that it is not applicable or don't know have also been coded as not feeling insecure.

worker holds a supervisory role; existence of an employee representative at the company; management support; gender of the direct manager; gender dominance of the post; and finally the size and sector (public vs. private, as well as the line of business, reference group: Commerce and hospitality) of the company the respondent works in.

At the national level, to measure union bargaining power and structure, union density and collective bargaining coverage rate are used, both represented as a percentage of wage earners. These variables indicate bargaining power and to a certain degree corporatism. These variables are from the ICTWSS data set 5.1 and is for 2013 or the closest year available due to lack of data. Family policies are multi-dimensional with very different labour market outcomes for women (O'Connor et al., 1999; Korpi et al., 2013). Thus, this paper focuses on two different aspects of family policies. Firstly, general generosity of family policies is measured through public expenditure on family policies as a % of GDP. Secondly, it focuses on 'work-facilitating' measures, which has been shown to be most important in explaining mother's employment and gender gap (Misra et al., 2011) and in determining worker's access to flexible WTAs (see also Chung, 2017/forthcoming) . This is measured through the proportion of children using formal childcare for age group 0-3 years. All data is for 2015 or the closest year available. All context variables have been centred and standardized for the models. For more details of the operationalisation and descriptive analysis of the data, please see the Online Appendix.

Method

Random-slope multilevel regression models are used for the purposes of this paper. Multilevel modelling assumes that the lower level sample – here individuals – is subject to the influences of groupings (Rasbash et al., 2009), here countries. In this paper, I examine the empty model, before moving on to the multivariate analysis to see the influence of individual- (and company-) level characteristics that can explain worker's access to family-

friendly WTA to test hypothesis 1. Next, random slopes models are used to test the varying impact of skill, insecurity and contract status across different countries (H2). A significant variance in the random slope entails that there are countries where the access gap for insiders and outsiders are significantly different from the average gap found across Europe. Finally, I include cross-level interaction terms with the national-level variables and the random slope variables. STATA 14.2 meqrlogit is used for the analysis.

Results

Descriptive

First we examine the percentage of working female carers with access to family-friendly working-time arrangements across different countries. As Figure 1 shows more than a quarter of all female carers have access to flexitime. The Northern European countries – namely, Denmark, Sweden, the Netherlands and Norway, are champions in their provision of flexitime, with half or more of all female workers with care responsibility having access to flexitime. Finland, Belgium, UK and other continental European countries are not far behind with 1/3 of all female carers having access to flexitime. On the other hand, many southern-eastern European countries, such as Bulgaria, Greece, Lithuania, Portugal, Croatia, Cyprus, Romania and Slovakia stand out as those where on average less than 10% of all working female carers have access to flexitime. Examining access to time off work for personal reasons, almost 2/3rds of all workers across Europe have access. Again the Netherlands, Norway, Sweden, Denmark and somewhat Finland rank high, but now countries such as Latvia, Bulgaria, Ireland and UK also come out as countries where female carers feel it is fairly easy to take a couple of hours off of work to tend to personal issues. Again Greece, Slovakia, Cyprus but now with Czech Republic are where female carers do not have access to time off during working hours.

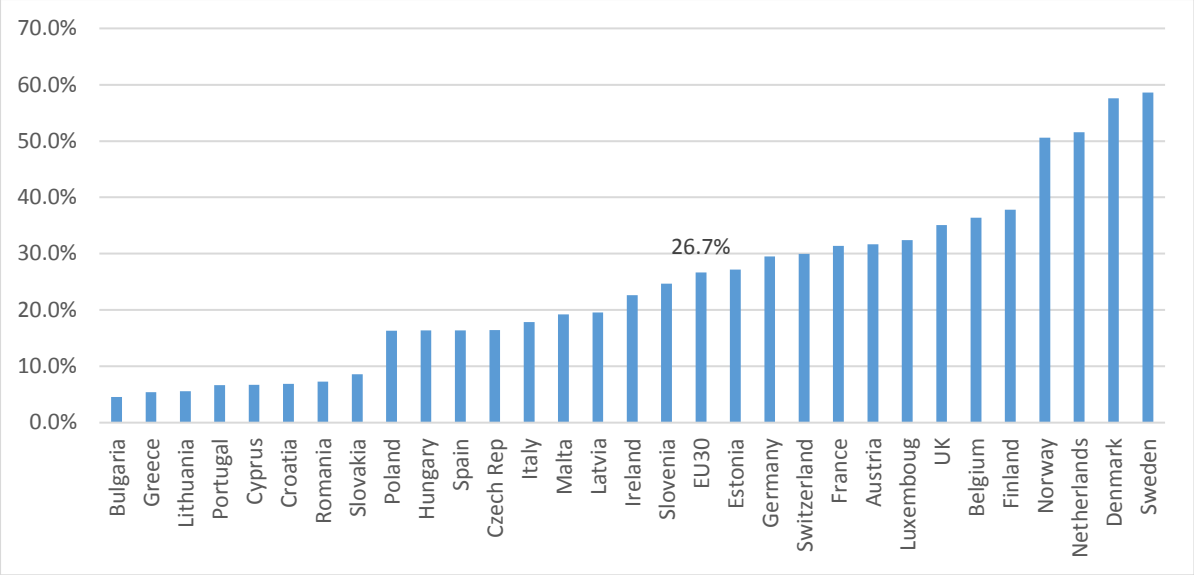

Figure 1. Proportion of female workers with care responsibilities that have access to flexitime across 30 European countries in 2015 (EWCS)

Note: weighted averages, excluding agricultural workers and armed forces

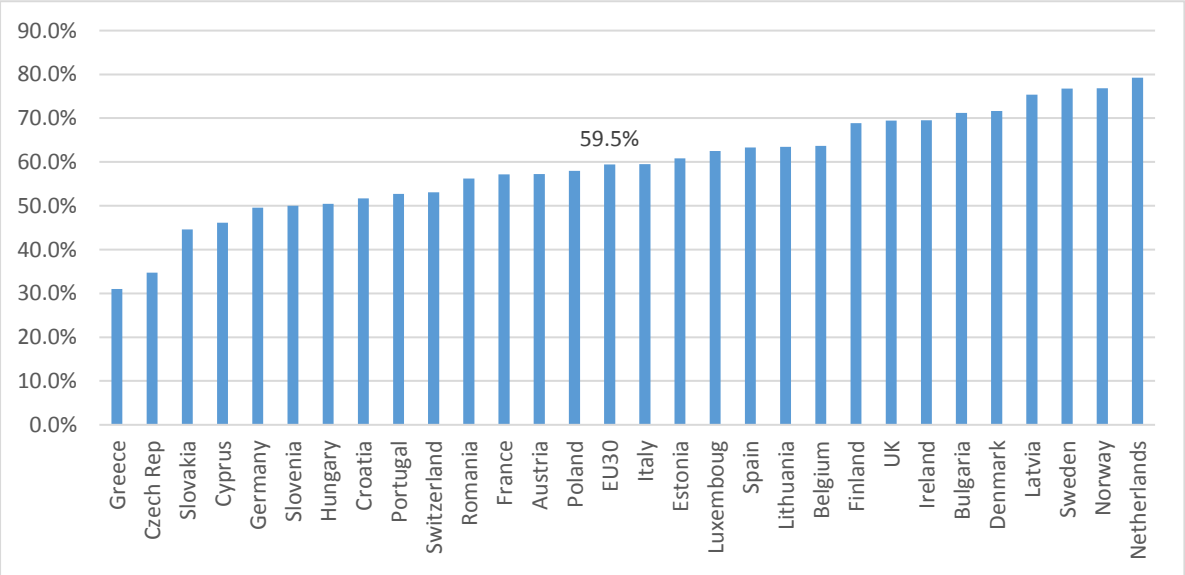

Figure 2. Proportion of female workers with care responsibilities that can take time-off during work for personal reasons across 30 European countries in 2015 (EWCS)

Note: weighted averages, excluding agricultural workers and armed forces

Outsider's access to family-friendly WTA

In our next step we examine whether outsiders' relative access to family-friendly WTAs depends on workers' labour market positions. Table 1 shows the multivariate multilevel regression results. High-skilled female carers are twice as likely as those with low and specific skills to have access to flexitime, and slightly more likely to have access to time-off work, having controlled for a wide range of factors. On the other hand, there is no difference between permanent and non-permanent workers' in their access to flexitime or time-off work, although for the latter permanent workers were slightly more likely to have it ($p<0.010$). On the other hand, those who feel their job is insecure were significantly less likely to have access to both types of family-friendly WTAs although the gap was smaller than that for workers in different skill-level jobs.

In addition, older workers with a preschool child, in supervisory roles, and with management support, working in financial services, public administration, and other service sectors were more likely to have access to flexitime. On the other hand, those working in job post with mostly women, working in small-medium sized, public companies, and in education, health and social services sectors, typical female dominated sectors, were less likely to have access to flexitime. Similarly, those in supervisory roles, with management support, working in construction, financial services, public administration, and other service sectors, now alongside those working in industry sectors were more likely to have access to time-off work. On the other hand, again those working in female-dominated job posts and interestingly, with female direct bosses were less likely to have access to time-off work. Another thing to note in Table 1 is that having taken the composition effects into account, the variance across countries in the access to family-friendly WTAs is larger.

Table 1. Explaining female carer's access to family-friendly working-time arrangements across 30 European countries in 2015

	Flexitime			Time-off work		
	Odds	95% CI		Odds	95% CI	
Managers/Professionals	2.015***	0.568	0.833	1.106+	-0.014	0.215
Permanent	0.901	-0.286	0.078	1.144+	-0.011	0.281
Subjective job insecurity	0.804*	-0.397	-0.039	0.760***	-0.417	-0.132
Age	1.010*	0.002	0.018	1.004	-0.003	0.010
Partner	1.009	-0.125	0.142	1.115+	-0.002	0.220
Youngest child <6	1.388***	0.140	0.516	0.884	-0.280	0.035
Youngest child 6-12	1.093	-0.068	0.245	0.890+	-0.247	0.014
Working hours	1.000	-0.006	0.007	0.987***	-0.018	-0.008
Supervisory role	1.819***	0.430	0.767	1.268**	0.078	0.398
Employee Rep in workplace	1.045	-0.106	0.194	0.937	-0.188	0.059
Management support	1.545***	0.307	0.564	2.120***	0.647	0.855
Direct boss woman	1.031	-0.096	0.157	0.895*	-0.218	-0.005
Mostly men w/ same position	0.959	-0.262	0.179	1.219+	-0.011	0.407
Mostly women	0.653***	-0.558	-0.293	0.843**	-0.287	-0.056
Public company	0.766***	-0.432	-0.103	0.899	-0.248	0.034
Micro company <10	0.943	-0.251	0.134	1.177*	0.001	0.326
SME 10-249	0.704***	-0.490	-0.212	1.098	-0.026	0.213
Industry	1.168	-0.069	0.380	1.573***	0.276	0.630
Transport	0.703+	-0.760	0.056	0.973	-0.334	0.280
Financial Services	2.047***	0.432	1.001	1.725***	0.279	0.812
Public Administration	2.805***	0.746	1.317	2.206***	0.531	1.051
Education	0.693**	-0.633	-0.100	0.910	-0.304	0.116
Health Social Svc	0.747*	-0.517	-0.068	0.896	-0.291	0.071
Other services	2.151***	0.569	0.962	1.978***	0.514	0.851
Cons	0.109***	-2.849	-1.586	1.021	-0.443	0.484
Variance level 2	1.045***	0.288		0.302***	0.085	
ICC (empty model)	0.228			0.071		
Explained variance level 2	-7.6%			-19.5%		
Log Likelihood			-3662.0753			-4831.635

N level 1=7845, N level 2=30 countries, *** = p < 0.001, ** = p < 0.010, *= p < 0.050, += p < 0.100

Variance across countries in outsider's access to family-friendly WTA

Examining the random slopes models, there was no cross-country variance in the effect of contract type as well as job insecurity on the access to both flexitime and time-off work ($p>0.100$ in all cases). In other words, the access gap in family-friendly WTAs for those who feel their job is insecure vs those who do not is relatively stable across all European countries, as the lack of division between permanent and non-permanent workers. The effect of being a high-skilled workers on the access to time-off work is also stable across countries ($p>0.100$). However, the gap between workers with different skill-levels in their access to flexitime varied significantly ($p=0.009$, with significant reduction in log-likelihood). Taking a closer look at the cross-national variance (Figure 3), in the UK, Nordic (Finland, Norway, Sweden, and Denmark), and some Continental European countries (France, Luxemburg, and Belgium), the gap between high-skilled and low-skilled workers are large and significantly different from the European average. On the other hand, in Austria and Malta, the gap is significantly smaller and there is almost no gap between high and low skilled workers. Given that the Nordic and Continental European countries have been noted as the countries with the most prevalent dualization patterns (Rueda, 2005; Palier and Thelen, 2010), the results seem to reflect previous literature which focuses more on labour market insecurity patterns. In addition, with the exception of the UK, the countries with the larger gap are also those where childcare and other family-policies are relatively generous.

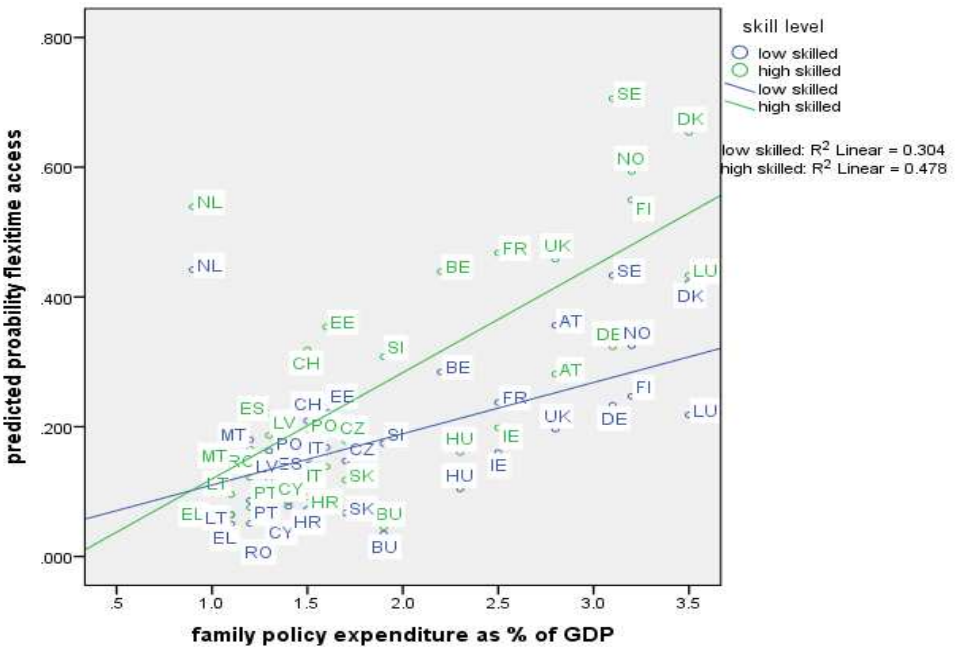

Figure 4. Relationship between national family policies and the predicted probability of flexitime access for high-skilled vs low- and specific skilled workers (authors' calculation)

Note: this likelihood takes into account all controls included in Model 1

This is confirmed in the next step of the analysis, where I examine the cross-level interaction terms with skill-levels and context variables. Looking at the main country context variable effect in Table 2, we can see that countries with strong centralised unions – i.e., high collective-bargaining coverage and high union density, and those with generous family policies – i.e. large family-policy spending, and extensive childcare coverage for young children, are those where in general workers have more access to flexitime. The cross-level interaction terms show that these countries are also those where the gap between high-skilled and lower-skilled workers are largest. Of the context variables, family policy expenditure seems to be the most influential, explaining up to 52% of the cross-national variance in the flexitime access gap between high- and low-skilled worker. It remains significant even when other context variables are included in the model (Model 2-5 and other models available upon request). As shown in Figure 4, countries with generous family-policies at the national level

are where both low and high-skilled female workers with care responsibilities have more access to flexitime. However, this is especially the case for high-skilled female carers making these countries those where the largest gaps between workers in different skill-levels are found. Similar patterns are found for other context variables (available upon request).

Table 2. Multilevel results explaining the cross-national variance between high- &low-skilled female workers with care responsibility in their access to flexitime across 30 European countries in 2015

Flexitime / model	2-1	2-2	2-3	2-4	2-5
Individual level variable[a]					
Managers + (Associate) Professionals (high-skilled)	0.558***	0.538***	0.539***	0.566***	0.557***
Country level variables[b]					
Collective bargaining coverage	0.501***				
Union density		0.385*			
Family policy expenditure			0.461***		0.212
Childcare coverage 0-3				0.576***	0.451***
Interactions					
High-skilled*CB coverage	0.164				
High-skilled*union density		0.179+			
High-skilled*Family exp.			0.319***		0.219*
High-skilled*childcare coverage				0.297***	0.176+
Constant	- 2.016***	-2.088***	-2.059***	-1.989***	-1.987***
Var. random slope	0.217*	0.207*	0.121+	0.123+	0.079
R^2 random slope	12.8%	16.8%	51.5%	50.7%	68.1%
Log likelihood [c]	-3642.2355*	-3644.3467	-3637.2745**	-3634.8716***	-3630.3895***

N level 1=7845, N level 2=30 countries, *** = p < 0.001, ** = p < 0.010, *= p < 0.050, += p < 0.100
a: the models includes all variables included in Model 1 in Table 1
b: all context variables have been standardized
c: significance symbols represents the significant increase in log likelihood scores from the nested model (random slopes without interactions)

Conclusion and discussion

This paper contributes to the existing literature by providing large-scale empirical evidence to show workers' access to one of the most frequented and useful reconciliation tool for working parents, family-friendly working-time arrangements. It focuses only on women with

care responsibilities based on the assumption that their demand for reconciliation policies are different from other workers. The analysis results show that there is a large variation across countries in the extent to which female carers have access to family-friendly working-time arrangements, with good access for women in Northern European countries, while it is not an option that is readily available for those in many Eastern and Southern European countries.

Further, we see a segmentation pattern between workers in the access to the arrangements. Unlike statutory policies, occupational policies seem to be only provided to workers where employers have a vested interest and in better bargaining positions, resulting in a dualized system. Confirming the organisational segmentation and other previous studies (Lambert and Haley-Lock, 2004; Seeleib-Kaiser and Fleckenstein, 2009) I found a division based on the skill-level of the worker. However, unlike previous studies, I found that this gap varied across countries. Similar to previous studies on dualization of labour market insecurity (e.g. Palier and Thelen, 2010; Chung, 2016; Rueda, 2005), it was the Nordic and continental European countries, with stronger more centralized unions, extensive childcare coverage for younger children and high levels of family-policy spending, where the division between high vs low-skilled workers are largest. The results of this study extends this finding to that for the division of organsational level working conditions. However, it should be noted that the level of dualization of working condition is high in these countries only because of the very high provision made to the insiders. These institutional contexts helped both low- and high-skilled workers to gain access to family-friendly working-time arrangements, yet this was especially true for the latter.

Another major contribution of this paper was to show that the more conventional definitions of outsiders may not be applicable in certain countries and/or for different aspects of working conditions and new risk areas (see also Yoon and Chung, 2015). This paper provides evidence to show that it is the subjective insecurity perceptions rather than the objective

contract status that matters in determining access to family-friendly working-time arrangements. This may be because since subjective perceptions are influenced by a wider range of factors, the subjective state may be a better indication of the (bargaining) position of the individual within the workplace. The objective contractual status, on the other hand, may entail different things depending on the context (Chung, 2016). Several recent studies (Working Families, 2017; TUC, 2017) indicate that the fear of negative career consequences and even fears of job loss prohibit workers from taking up family-friendly arrangements. This study provides further evidence that those who fear that they will lose their job are less likely to feel that they have access to flexible working time arrangements. Policy makers should thus ensure to find solutions to address such fears, and ensure that especially the most vulnerable workers can have a genuine right to flexible working regardless of their bargaining positions. Furthermore, future scholars examining labour market segmentation should consider a wider range of definition of segmentation, such as subjective job insecurity, when examining patterns of divisions in the labour market. This study provided evidence to show that the most commonly used definitions may not fully capture the actual divisions taking place when looking at a wider range of labour market segmentation issues.

Funding

This research was supported by funding from Research Councils UK, Economic and Social Research Council Future Research Leader's Scheme (grant number: ES/K009699/1) project "Work autonomy, flexibility and work-life balance".

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Online Appendix

A-1. Variable definitions and data sources

Individual level variables

- Skill-level – Simplified categorisation based on the ISCO-08 2 digit recoded into 2 majors groups ISCO code/group 1. Legislators, senior officials and managers, 2. Professionals and 3. Technicians and associate professionals categorised as high-skilled workers, and the rest – i.e., 4. Clerks, 5. Service workers and shop and market sales workers, 7. Craft and related trades workers, 8. Plant and machine operators, and assemblers, 9. Elementary occupations categorised as low- and specific-skilled workers.
- Contract type: The contract type of the respondent is also included in the analysis divided into those with indefinite contracts coded as 1, and those without (those with a fixed term contract, a temporary employment agency contract, an apprenticeship or other training scheme, or those with no contracts) coded as 0.
- Job insecurity: I use the following question- "To what extent do you agree of disagree with the following statement about your job?...I might lose my job in the next 6 months", where respondents could choose from strongly agree, tend to agree, neither agree nor disagree, tend to disagree, strongly disagree. Those who have chosen the first two are considered to perceive subjective job insecurity. Note that due to large number of missing values, those who have answered that it is not applicable or don't know have also been coded to not feel insecure.

- Gender: dichotomous variable of female (male = reference group)
- Family structures
  - Youngest cohabiting child in pre-school age (< 6)
  - Youngest cohabiting child school age child (6-12)
  - Lives with a partner is also included in the model.
- Age – as a continuous variable ranging from 17 to 64, those 65 and above excluded from the analysis.
- Education – divided into three categories of 1) primary and lower-secondary, 2) upper-secondary and post-secondary(reference), 3) tertiary or above
- Working hours: Working hours is measured as the number of hours worked in the main job – divided into Long-hours (48hours and above), Full-time (35-47 hours), and part-time (34 or below).
- Supervisor role: Based on the question "How many people work under your supervision, for whom pay increases, bonuses or promotion depend directly on you?" where none was coded as 0, anything above 1 coded as 1 = having some sort of supervisory role.
- The existence of an employee representative: "At your workplace is there an employee acting as an employee representative?"
- Management support : "For each of the following statements, please select the response which best describes your work situation…. Your manager helps and supports you", and could answer from 1 –Always, 2 – Most of the time, 3 – Sometimes, 4 – Rarely, and 5 – Never. Respondents who have answered 1 or 2 for this question is considered to have support from management
- Woman boss: The gender of the worker's supervisor is captured through the following variable; "Is your immediate boss a man or a woman?" (0=man, 1=woman).
- Gender dominance of the position: Measured through the following variable: "At your place of work are workers with the same job title as you" – the answer can range from 1 – Mostly men; 2 – Mostly women; 3 – More or less equal numbers of men and women; 4 – Nobody

else has the same job title. Two dummies are made from this question to represent mostly female occupation and mostly male occupation.

- Size of the company: Company size is included as a scale variable: less than 10, 10 to 249, 250+ employees – reflecting the commonly used definition company sizes.
- Public sector: To distinguish those working in the public sector, the following variable is used "Q10 Are you working in the …?" where respondents can answer, 1 – Private sector, 2 – Public sector, 3 – Joint private-public organisation or company, 4 – Not-for-profit sector, NGO, and 5 – Other. Those who have answered 2 or 3, have been coded as being employed in the public sector.

Sectoral grouping

Based on NACE R.2 condensed into 8 categories (based on Eurofound, 2012)

Sector	Corresponding NACE Rev.2 sectors
Agriculture	A Agriculture, forestry and fishing 01–03 (EXCLUDED from the analysis)
Industry	B Mining and quarrying 05–09 C Manufacturing 10–33 D Electricity, gas, steam and air conditioning supply 35 E Water supply; sewerage, waste management and remediation activities 36–39 F Construction 41–43
Commerce hospitality	G Wholesale and retail trade; repair of motor vehicles and motorcycles 45–47 I Accommodation and food service activities 55–56
Transport	H Transportation and storage 49–53
Financial services	K Financial and insurance activities 64–66 L Real estate activities 68
Public admin. and defence	O Public administration and defence; compulsory social security 84
Education	P Education 85
Health	Q Human health and social work activities 86–88
Other services	J Information and communication 58–63: male (33.6%) M Professional, scientific and technical activities 69–75: equal (53.0%) N Administrative and support service activities 77–82: equal (50.2%) R Arts, entertainment and recreation 90–93: equal (51.3%) S Other service activities 94–96: female (66.6%) T Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use 97–98: female (89.7%) U Activities of extraterritorial organisations and bodies 99: equal (44.3%)

Country level variables

- Family policy expenditure : Family policy expenditure as a percentage of GDP for 2015 – derived from the Social protection expenditure data set of Eurostat – sub category Family/Children includes support in connection with the costs of pregnancy, childbirth, childbearing and caring for other family members with the exception of healthcare. Figures are collected from National Statistical Institutes or/and Ministries of Social Affairs.

  For more : http://ec.europa.eu/eurostat/statistics-explained/index.php/Social_protection_statistics
  (Source: Eurostat - http://ec.europa.eu/eurostat/data/database?node_code=spr_exp_gdp)

- Childcare coverage: the proportion of children between the age 0-3 in formal childcare in 2015. This is derived from EU SILC survey data.

  (source: Eurostat: http://ec.europa.eu/eurostat/data/database?node_code=ilc_caindformal)

- Bargaining power/structure (All data from ICTWSS: http://www.uva-aias.net/en/ictwss . Due to lack of data, all data is from 2013 or latest available) Accessed May 25th 2017

- Collective bargaining coverage: employees covered by collective (wage) bargaining agreements as a proportion of all wage and salary earners in employment with the right to bargaining, expressed as percentage

- Union density : net union membership as a proportion of wage and salary earners in employment

A-2. Independent variables Descriptive table

Variable	Obs	Mean	Std.Dev.	Min	Max
Permanent contract	8,781	0.82	0.39	0	1
High-skilled workers	8,782	0.42	0.49	0	1
Perceive job insecurity	8,785	0.15	0.36	0	1
Lives with Partner	8,792	0.71	0.45	0	1
Lives with Preschool child <6	8,792	0.22	0.41	0	1
Lives with young child 6-12	8,792	0.24	0.43	0	1
Supervisory role	8,708	0.11	0.31	0	1
Employee representative at workplace	8,407	0.52	0.50	0	1
Management support	8,509	0.66	0.47	0	1
Direct boss woman	8,601	0.54	0.50	0	1
Mostly men in same position	8,740	0.08	0.26	0	1
Mostly women in same position	8,740	0.62	0.48	0	1
Public company	8,750	0.39	0.49	0	1
Micro company <10	8,354	0.23	0.42	0	1
SME 10-249	8,354	0.43	0.50	0	1
Large company 250+	8,354	0.34	0.47	0	1
Industry	8,762	0.13	0.34	0	1
Commerce hospitality	8,792	0.20	0.40	0	1
Transport	8,792	0.03	0.17	0	1
Financial Services	8,792	0.04	0.20	0	1
Public Administration	8,792	0.06	0.25	0	1
Education	8,792	0.15	0.36	0	1
Health Social Svc	8,792	0.19	0.39	0	1
Other services	8,792	0.19	0.39	0	1
Age	8,792	42.86	9.71	17	64
Working hours	8,682	34.39	10.65	2	60

National level variables

Country	Collective bargaining coverage	Union density	Family policy expenditure	Childcare coverage 0-3
Austria	98.00	27.40	2.8	22.2
Belgium	96.00	55.11	2.2	50.1
Bulgaria	29.00	17.50	1.9	9.0
Croatia	60.00	30.90	1.5	11.8
Cyprus	45.19	45.19	1.4	20.8
Czech	47.29	12.72	1.7	2.9
Denmark	84.00	66.77	3.5	77.3
Estonia	23.00	6.53	1.6	21.5
Finland	93.00	69.04	3.2	32.6
France	98.00	7.72	2.5	41.8
Germany	57.60	17.71	3.1	25.9
Greece	42.00	21.52	1.1	11.4
Hungary	23.00	10.71	2.3	15.3
Ireland	40.49	33.65	2.5	30.6
Italy	80.00	37.27	1.6	27.3
Latvia	15.00	13.12	1.3	22.8
Lithuania	9.89	8.99	1.1	9.7
Luxembourg	59.00	32.82	3.5	51.9
Malta	62.79	52.94	1.2	17.9
Netherlands	84.84	18.03	0.9	46.3
Poland	14.67	12.73	1.5	5.4
Portugal	72.91	18.49	1.2	47.2
Romania	35.00	19.79	1.2	9.4
Slovakia	24.90	13.29	1.7	1.1
Slovenia	65.00	21.25	1.9	37.4
Spain	77.58	16.88	1.3	39.7
Sweden	89.00	67.38	3.1	64
UK	29.50	25.67	2.8	30.4
Norway	67.00	52.08	3.2	52.2
Switzerland	48.65	16.18	1.5	29.8

Correlation between national level variables

	Bargaining cov	U density	Family exp	Childcare coverage
Collective bargaining coverage	1.00			
Union density	0.56**	1.00		
Family policy expenditure	0.38*	0.52**	1.00	
Childcare coverage 0-3	0.67***	0.57***	0.55**	1.00

*** = $p < 0.001$, ** = $p < 0.010$, *= $p < 0.050$