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## **'Women’s work penalty' in the access to flexible working arrangements across Europe**

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<http://www.wafproject.org>

## **Abstract**

Do women and workers in female dominated workplaces have better access to flexible working arrangements? Given women's roles in caregiving and due to the 'flexibility stigma' that may come with the use of flexible working arrangements, women and workers in female-dominated workplaces are expected to have greater access. However, flexible working arrangements are also used for performance enhancing purposes, hence, following the gendered rewards/organisation literature, men and workers in male-dominated workplaces may actually have greater access. I examine workers' access to schedule control across 27 European countries using the European Working Conditions Survey of 2010 to examine this question. I find that there are no discernible differences between men and women in their access to schedule control when individual and company level characteristics are taken into account. Men are less likely to have access to schedule control in male-dominated sectors/jobs, but for both men and women, especially for the latter, female-dominated jobs/sectors provided the least access. This 'women's work penalty' found in female dominated sectors varies across European countries to a certain degree but in no country was the access better compared to sectors where both genders are equally represented. This raises concerns regarding the provision of good working conditions in disadvantaged workplaces, as well as the prevalence in gender gap in favourable working conditions in addition what is found for pay.

## **Key Words**

Flexible working arrangements, schedule control, Gender, Europe, women's work penalty

## **1. Introduction**

An increasing number of companies are providing flexible working arrangements, that is giving workers with more control over when and where they work, to their workforces and an increasing number of governments are providing workers with the right to request flexible working (Hegewisch, 2009). Much of the discussion surrounding flexible working has been on its ability to allow a better work-life balance for workers. Flexible working can allow a better work-life balance by allowing workers adapt their work demands to fit around the demands of their family (Jacobs and Gerson, 2004; Golden, 2001; Lott, 2015). Since women tend to have primary responsibility for providing care and domestic tasks (Eurofound, 2013), it is assumed that women will request and benefit most from such arrangements. Some scholars argue that the persisting gender wage gap can be somewhat explained by the fact that women trade off access to flexible working for additional pay. Thus, the lower pay in female dominated jobs is justified through their better access to flexible working arrangements and other working conditions (Filer, 1985).

If this is true and flexible working arrangements are provided to workers in most demand of such arrangements, women and female dominated workplaces should have better access. Yet, the results of studies empirically examining gender differences in the access to schedule control (e.g., Kelly and Kalev, 2006; Golden, 2009; Swanberg et al., 2005), and those examining how female dominated workplace/occupations fare in providing workers with flexible working arrangements (e.g., Minnotte et al., 2010; Glass, 1990; Wood et al., 2003; Adler, 1993; Glauber, 2011) are rather mixed. In addition, most studies focus on the proportion of women in the company or the occupation, leaving out sectoral variations or variations in job positions. Furthermore, most have been based in the US using data from the 1990s or earlier. This raises the question whether similar patterns can be found in the European context, with different institutional and normative structures. We could also expect

a variation across Europe due to the diverse contexts across different countries. Also, the use of schedule control has increased in Europe over the past couple of decades (Chung, 2014) and increasingly the work life balance demands of workers are gaining greater attention. Thus an examination of recent data is necessary.

This paper focuses on the access workers have to schedule control using data from 27 European countries from the 2010 European Working Conditions Survey. This data is matched with national level data sets to examine whether women, and workers in female dominated workplaces have better access to schedule control, and/or whether this depends on the country. The next section will examine the definition of schedule control and the theories that explain the gender differences in the access and provision of schedule control, and the relevance of country contexts. In the third section, the data and methods will be examined. This is followed by the analysis, results, and lastly some discussion and policy implications will be presented.

## **2. Definitions and theory**

### **Defining flexible working and schedule control**

The concept of flexible working builds on the job demands–control model developed by Karasek (1979) but focuses on control over where and when work is done rather than how it is done (Kelly and Moen, 2007). In this paper I focus on schedule control, that is providing workers with the ability to alter their schedule, and includes flexitime; the control workers have on the starting and ending times of work, and working-time autonomy; workers' full autonomy of their work hours and schedules.

Work-family border or boundary theory (Clark, 2000) and boundary management theory (Kossek et al., 2006) suggest that having control over one's schedule can help facilitate the integration of work and home roles. Schedule control provides workers with the flexibility in

the time border between work and family domains, allowing workers to adapt the timing of work around family demands (Clark, 2000). Given that normal fixed working hours (e.g. 9am to 5pm) and family schedules/demands (e.g. school pick up times at 3pm) are not necessarily compatible, the control over when you work may help workers resolve potential arising conflict. Such control over time borders may also allow families to use tag-team parenting to extend family time, allowing parents to care for children without reducing their working hours (Craig and Powell, 2012). Thus a large number of studies have shown that schedule control help relieve workers' work-family conflicts, that is the conflict felt from the demands coming from the work and home spheres (e.g., Chung, 2011; Allen et al., 2013; Kelly et al., 2014).

One reason why employers may be more willing to provide schedule control to address the work-family issues of workers is because it is linked to increased performance outcomes. Schedule control can be used as a part of high-involvement systems (Wood and De Menezes, 2010) or high performance strategy, i.e. a system that allows workers more discretion and influence over their work to help increase performance (Appelbaum, 2000). On the one hand, performance enhancement can be enabled through a decrease in sickness and absenteeism, and an increase in motivation and loyalty due to a better work-life balance for workers (see for a review de Menezes and Kelliher, 2011). On the other hand, studies have shown that productivity is gained because workers increase their work intensity and working hours when using schedule control (Kelliher and Anderson, 2010; Lott and Chung, 2016), possibly due to the gift exchange dynamic, because workers are better able to work harder and longer, or because of enforcement of work intensity by the employer through the back door.

### **The question of access to flexible working arrangements and gender**

Who is given access to flexible working arrangements will depend on the company's main

purpose for introducing the policy. Swanberg et al. (2005) discuss three principles from which these can take form; principle of need, equity, and equality. When employers see meeting the work-family needs of workers as the main goal for providing flexible working arrangements, those with the most family demands, e.g. parents/workers with care responsibilities, are likely to get access. Given that women still take the bulk of responsibility for care and household work (Bianchi et al., 2000; Eurofound, 2013), we can expect that women will have more access to flexible working arrangements compared to men (H1a). Previous studies show some evidence to this, where workers with more family demands (Golden, 2009) and women have been shown to be likely to request and access schedule control (Golden, 2008; Allen, 2001; Kelly et al., 2011).

In addition to the gender of the worker, the gender composition of the workplace is important. Constituent theory argues that female-dominated organizations are more likely to have increased internal pressure for the firm to be responsive to work-family issues (Goodstein, 1994), pressuring employers to make flexible working more available for workers. The gender dominance of a workplace may also influence the extent to which flexible working is normalised within the company. Studies have shown that workers can face ‘flexibility stigma’ (Williams et al., 2013) when using flexible working and other family-friendly arrangements. This is because the use of family-friendly arrangements makes workers deviate from the image of the ‘ideal worker’ – i.e. a worker that works perpetually and without any other obligations outside of work (Williams, 1999; Acker, 1990). Minnotte et al. (2010) using American data show evidence of how in female-dominated occupations flexible working becomes more of a norm than an exception, especially for women in these environments due to the gendered assumptions employers have towards their roles as caregivers. On the other hand, male-dominated occupations and sectors may be especially prejudiced towards workers using such arrangements (Cech and Blair-Loy, 2014) since such

environments tend to follow the ‘ideal worker’ culture. There is also evidence to show that for men in male-dominated occupations there may be a further ‘femininity stigma’ as the use of family-friendly arrangements deviates from the masculine worker’s image of being the provider rather than the carer (Williams et al., 2013; Cha and Grady, 2014). This can explain why many studies have shown a positive relationship between the proportion of women in the workplace and the provision of schedule control and other flexible working arrangements (Wood et al., 2003; den Dulk et al., 2013; Bardoel et al., 1999). In sum, we can expect that workers, especially women, working in female-dominated workplaces are more likely to have access to schedule control (H2a).

However, flexible working can also be introduced to the workplace primarily for potential productivity gains, i.e. the principle of equity. In this case, employers will grant more access to those who are likely to increase work intensity/hours or contribute to the performance outcomes for the organisation through flexible working (Swanberg et al., 2005). Due to the lack of competing demands coming from the family/household, men are more likely to increase their work intensity compared to women when using schedule control (Lott and Chung, 2016). Even if they do not, due to the gendered assumptions accorded to women and their care roles, men are more likely to be perceived as those who will contribute more to the organisation (Acker, 1990). In addition, when flexible working arrangements are used as a part of a high performance strategy, its use may not carry a ‘flexibility stigma’. The ability to use these arrangements may in fact enforce the ‘ideal worker’ image due to the performance enhancing goals it aims to achieve and the increase in work intensity it can result in, especially for higher occupational groups (Cech and Blair-Loy, 2014). Further, men are generally rewarded better than women in terms of working conditions and pay (Schieman et al., 2013; Eurofound, 2007). This can explain why employers are more likely to accept men’s request for flexible working (Brescoll et al., 2013) even when requested for care purposes

(Munsch, 2016). In this respect, we can expect that women are less likely to have access to schedule control compared to men (H1b). In fact, a number of empirical studies have shown that men are more likely to have access to schedule control compared to women (e.g., CIPD, 2012; Golden, 2009; Plantenga and Remery, 2009).

In a similar vein, male-dominated workplaces may have better access to schedule control. According to dual labour market theories (Schwander and Häusermann, 2013) women are more likely to be in a secondary market with poorer working conditions and higher turnovers, a labour market segment not usually invested in by employers. In addition to the relatively weak positions women may have in the labour market, feminist and gender theorists argue that women's labour is generally valued less, and accordingly, work done in female-dominated workplaces will be considered of lower value (Acker, 1990; Anker, 1997). In fact, in Europe, women still tend to occupy low wage sectors and low status occupations offering lower pay (Bettio and Verashchagina, 2009). Employers in these sectors may be less inclined to adopt high performance strategies and provide flexible working arrangements to their workers. Similar to that found for pay penalties workers experience in female-dominated workplaces (Cohen and Huffman, 2003), workers in female-dominated workplaces may face a 'women's work penalty' in their access to flexible working arrangements. When looking at job autonomy in a more broader sense - for example, individual controls over the conceptual aspect of the work, 'flexibility' and 'unsupervised breaks' – studies using US data have shown that increased feminization of occupations led to reduced levels of autonomy (Adler, 1993; Jaffee, 1989; Glass, 1990). Given the gendered nature of organisations and the advantages in career progression and promotion that accrue to men (Acker, 1990), men may experience 'glass escalator' advantages (Williams, 2013) – i.e., being faster in gaining promotions and likely to be in a position of power in female-dominated workplaces. Based on this, the 'women's work penalty' in access to flexible working arrangements may not be applicable to

men. Several studies show that the limited access to good working conditions and pay as a result of the 'women's work penalty' is more evident for women in these workplaces (Jaffee, 1989; Glass, 1990; Cohen and Huffman, 2003). Thus, we can expect that workers, especially women, in female-dominated workplaces are less likely to have access to schedule control (H2b).

### **Variance across countries**

The relationship between gender and gender dominance of the work place and the access to schedule control may depend on the country (H3). The cross-national variance in the occupational sex segregation (Charles, 1992), the gender pay gap (Mandel and Semyonov, 2005), and motherhood penalties (Budig et al., 2012), and the role national level policies play in this variance are well documented. In addition to direct impact of national level policies, institutional theories (DiMaggio and Powell, 1983) argue that national institutions can change corporate culture and policies, which can influence who has access to flexible working arrangement indirectly. More specifically, national level family policies have been shown to explain worker's access to schedule control and the access gap in schedule control between different groups of workers (den Dulk et al., 2013; Chung, 2017); workers in countries with generous family policies are more likely to have access to schedule control, yet this positive effect is stronger for certain groups of workers – those in higher occupations, or working in public sectors and in large companies. Furthermore, it has also been shown that the influence of schedule control on individual's perception of time adequacy between work and family life depends on the gender of the worker and on the national context (Lott, 2015). As mentioned, most studies on the gender gap and gender dominance of the workplace and its relation to access to schedule control are based on US data, which varies significantly in terms of its institutional context to Europe. Even within Europe, there may be variation within the

relationship. There are also large differences in the institutional contexts and employment regimes in Europe (Esping-Andersen, 1990; Hall and Soskice, 2001), more specifically in relation to family policy configurations (Korpi et al., 2013). The variance also exist in relation to working time regimes, i.e., the extent to which countries differ in the working hours patterns observed for men and women across different life stages (Anxo et al., 2007), in their use of employer vs employee-oriented working time flexibility (Chung and Tijdens, 2013), the flexibility in the number of hours worked as well as the gender discrepancy (Figart and Mutari, 2000). Furthermore, there are differences across countries in the extent to which working time and work-life balance arrangements are discussed in collective agreements (Eurofound, 2017). In this paper, due to lack of existing theoretical assumptions about the cross-national variance, I do not set out concrete hypotheses regarding why these variances exist. What is of interest for this paper is to see whether the relative access women and workers in female dominated workplaces have to schedule control is significantly different across different countries.

### **3. Data and Methods**

To examine access to schedule control the 5<sup>th</sup> wave of the European Working Conditions Survey (EWCS) from the European Foundation is used. The EWCS aims to provide information on a number of dimensions of working conditions for workers across Europe. Individuals across 34 European countries were included in the survey: the EU 27 plus Albania, Croatia, Kosovo, Montenegro, Norway, Republic of Macedonia and Turkey. The survey was conducted using a face-to-face method at the respondent's home in the first half of 2010. A random stratified sampling procedure was used where a representative sample was gathered of those aged 15 or over and in employment (minimum 1 hour a week using the ILO definition) at the time of the survey. Of the total sample, I restrict the analysis to the EU 27

and those in dependent employment, and further exclude those in the armed forces and in agricultural/fishery sectors due to the specific nature of these jobs. See

<http://eurofound.europa.eu/european-working-conditions-surveys-ewcs> for more details.

The dependent variable in this paper is schedule control, measured through the question 'How are your working time arrangements set?' Workers could 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 answered either 3 or 4 to this question are considered to have schedule control, without distinguishing between the two. The latter group, considered here as those with working-time autonomy, is very small, especially when restricting the sample to dependent employees. Responses 3 and 4 are phrased rather broadly, meaning different interpretations can be possible. However, the first two responses less ambiguously refer to fixed schedules. Thus, I assume that respondents who selected answer 3 or 4 capture those with access to different types of schedule control, also encompassing those with informal agreements. However, later as a robustness check I also examined the access to flexitime, excluding working-time autonomy from the analysis. Note that the access a worker has to schedule control is measured in this data, rather than the actual use of it.

The main independent variable of our analysis is gender, the gender dominance of the job and workplace, i.e. occupation/sector. Gender is coded with men as the reference category and women coded 1. Gender dominance of one's job post is 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 a mostly female job post and a mostly male job post. In addition,

national averages of the proportion of women in each occupation and sector are derived based on the EU Labor Force Survey, and then matched with the EWCS data set. These indicators provide information as to the extent to which one gender dominates the occupation or sector. ISCO-08 1 digit code is used to categorise occupational levels of workers into eight different occupational groupings and based on the 21 NACE Rev.2 categories, with sectors condensed into 10 categories – see online appendix. Based on previous studies (Glauber, 2011), I expect a non-linear relationship between the gender dominance of the occupations/sector and schedule control access. Thus two dummies are used to indicate a male-dominated occupation/sector (with 60% or more men) and female-dominated occupation/sector (with 60% or more women) with the reference category being an equally represented occupation/sector (40-60% men and women).

Based on previous studies (Chung, 2017; Wiß, 2016) other individual characteristics included are: the worker's education level (lower secondary and below, upper secondary, and tertiary or above); age; whether they are in a supervisory role; their occupational skill level (four categories based on ILO definitions – high, medium, lower medium (reference) and elementary skills); working hours (part-time (below 32), full-time and long hours (48+)) and contract type (open ended vs others); whether the respondent lives with a child under the age of 18; a pre-school child (<6); a young child (<12) or a partner. Organisational level characteristics include establishment size; whether the company is in the public sector or not; existence of an employee representative; gender of the supervisor and perceived manager support. Details of the operationalisation of the variables and their descriptive statistics are in the online appendix.

### **Modelling techniques**

A two-level multilevel regression model is used for the purposes of this paper. A multilevel

modelling technique is used when individuals are considered to be nested within countries, to account for country level clustered errors (Hox, 2002). Several models are examined. First model only includes gender without other variables, to examine the gender differences in workers' access to schedule control. I then add the gender dominance of the workplace variables, and other control variables step by step. I run the final model for men and women separately to see how gender dominance of workplaces have different influences for men and women in to respond to H2a and H2b. Next, I run random slopes models to see whether the influence of gender and the gender dominance of the workplace have on workers' access to schedule control varies across countries. STATA 15.0 is used.

#### **4. Results**

##### **Descriptive analysis**

As Figure 1 shows, approximately 23% of all men in our sample and 22% of women have access to schedule control. There are very large cross-national variations across Europe. Northern European countries - Sweden, the Netherlands, Denmark and somewhat Finland - are the forerunners in workers' access to schedule control. Some continental European countries, including Germany and Austria, are not far behind. On the other hand, the Southern European countries and some Eastern European countries, such as Cyprus, Bulgaria, Greece, Portugal, Lithuania, and Spain are the ones where there is little provision of schedule control. Examining the gender gap, not a lot of can be seen and it does not cluster clearly into the conventional regime clusters. However at first glance, with the exception of Sweden, the Netherlands, the UK and Estonia, men generally have more access to schedule control.

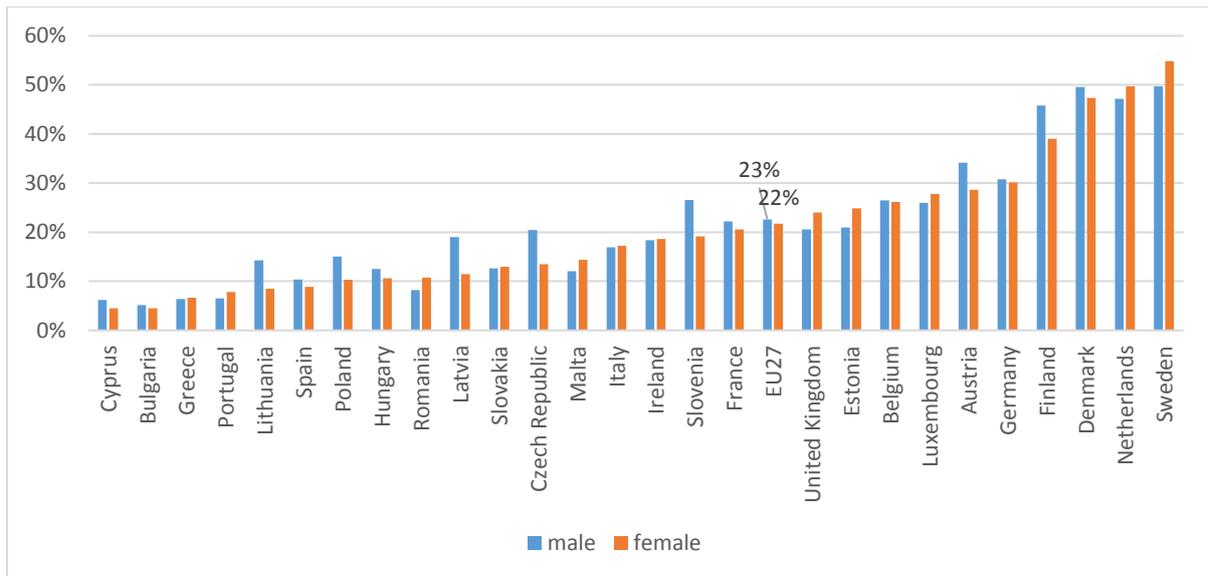


Figure 1. Access to flexible schedules across 27 European countries for men and women in 2010 (weighted averages)

### Gender, gender dominance of the workplace and access to schedule control

In the first model, I examine the gender differences in the access to schedule control when no other variables are taken into account. As shown in Model 1-1, and mirroring what was found in Figure 1, there is a small gender gap and men on average have more access to schedule control. However, when gender dominance of the workplace is taken into account the gender of the worker becomes insignificant (Model 1-2), indicating that rather than the gender of the worker it is the gender dominance of the workplace that matters. When various individual and company level variables are taken into account (Model 1-3), again there are no gender differences in the access workers have to schedule control. In sum, we can conclude that men and women have about the same access to schedule control, especially once other factors are controlled for rejecting both H1a and H1b. Turning to gender dominance of workplaces, workers in job posts, occupations and sectors with about equal amount of men and women in them (40-60%) are most likely to have access to schedule control. Job posts, occupation and sectors with mostly men somewhat reduce workers' access to schedule control – about 0.9 times as likely. However, those working where mostly women have the same job title or in

female-dominated sectors are the least likely to have access to schedule control – about 0.7 times as likely for the former and almost half as likely for the latter, partially confirming hypothesis 2b. Female-dominated occupations seem to be as good as equally represented occupations in worker's access to schedule control when other individual and company level characteristics are taken into account.

Hypotheses 2a and 2b suggested that the gender dominance in the job, occupation or sector may have different impacts for men and women. When modelling for men and women separately (Table 1 Model 1-4 Model 1-5), we can see that working in jobs where mostly men hold the same job title entails lower access to schedule control for men, but not for women. Similarly, the reduced access workers have to schedule control in male-dominated sectors can only be seen for men. This provides evidence to show that there may be some sort of 'flexibility stigma' in male-dominated jobs and sectors but only for men. On the other hand, the lower likelihood of workers in male-dominated occupations to access schedule control can only be seen for women, contradicting what has been found for job posts and sectors. However, female-dominated sectors and job posts are bad for *both* men and women. Having reverse coded the variables (online appendix table A-2), I find that female dominated job posts and sectors are also significantly worse compared to male dominated ones. This is true especially for women, while for men female dominated sectors were just as bad as male dominated ones. This partially supports hypothesis H2b. Full models with control variables can be found in the online Appendix Tables A-1.

**Table 1.** Explaining access to schedule control across Europe (odds ratios)

Model	1-1 Gender only	1-2 + Gender dominan ce of workpla ce	1-3 + Individu al level controls	1-4	1-5
	ALL	ALL	ALL	Men	Women
Female	<b>0.925*</b>	0.957	1.002		
Gender dominance of job/occupation and sector (ref: equal)					
Mostly men with the same job		<b>0.717***</b>	<b>0.855**</b>	<b>0.868*</b>	0.952
Mostly women with the same job		<b>0.599***</b>	<b>0.690***</b>	<b>0.671***</b>	<b>0.715***</b>
Male dominated occupations		<b>0.538***</b>	<b>0.816***</b>	0.951	<b>0.772***</b>
Female dominated occupations		<b>0.584***</b>	1.020	1.085	0.940
Male dominated sectors		<b>0.722***</b>	<b>0.784***</b>	<b>0.697***</b>	0.977
Female dominated sectors		<b>0.637***</b>	<b>0.545***</b>	<b>0.598***</b>	<b>0.564***</b>
constant	0.203***	0.466***	0.085***	0.086***	0.078***
Log Likelihood	-10978.032	-10713.695	-9985.1839	-4572.926	-5398.1783
Variance country level	0.876***	0.888**	0.893***	0.864***	0.942***

\*\*\* =  $p < 0.001$ , \*\* =  $p < 0.01$ , \* =  $p < 0.05$ , N1=23685(total), 11055(Men), 12630 (Women)

The results above are rather contradictory regarding the relationship found for female dominated job/sector versus those found for female dominated occupation. One reason for this is because of rather than the gender dominance of the occupations, occupational levels may be more important in its representation of the skill levels of the job. Previous studies (e.g., Chung, 2017; Wiß, 2016) show that the occupational level of the worker, in relations to high vs low-skilled occupations, is the most important determinant explaining access to flexible working arrangements. Thus, the fact that many of the higher occupational level jobs are equally represented (e.g., (associate) professionals) or female dominated (clerks and service and sales workers), may explain for the contradictory findings in the previous models. To test for this, I ran the model excluding gender dominance of the occupation from the model replacing it with occupational levels – i.e., ISCO-08 1 digit categories. Examining the results in Table 2, we can see that occupational levels are indeed one of the most important factor explaining access to schedule control. Managers are up to 3.5 times more likely to have

access to schedule control compared to service and sales workers (the reference group), while (associate) professionals are about 2.5 times more likely. There is a very clear link with the skill-level of the occupation with the access workers have to schedule control, with the exception of elementary occupations where the likelihood is at par with service and sales workers, despite being a lower-skill occupation. This division across occupational groups is starker for men. The other gender dominance of the workplace variables their directions and significance do not change even when occupational level variables are replaced. Again female dominated jobs and sectors are worst in terms of access to schedule control for both men and women, while male dominated sectors are only bad for men. One difference from the previous model is that male dominated job posts do not seem to be significantly worse in their access to schedule control even for men when occupational levels are controlled for, even further supporting hypothesis H2b.

**Table 2.** Explaining access to schedule control across Europe (odds ratios) – model replacing gender dominance of occupations with ISCO-08 1 digit occupational levels

Model	2-1	2-2	2-3
	ALL	Men	Women
Female	0.965		
Gender dominance of job (ref: equal)			
Mostly men with the same job	0.915 <sup>+</sup>	0.908	0.988
Mostly women with the same job	<b>0.711***</b>	<b>0.670***</b>	<b>0.742***</b>
Occupational level (ref: Service and sales)			
Managers	3.468***	3.755***	3.427***
Professionals	2.307***	2.921***	1.871***
Technicians and associate professionals	2.575***	3.023***	2.229***
Clerical support workers	1.702***	1.688***	1.627***
Craft and related trades workers	0.744**	0.856	0.609*
Plant and machine operators	0.620***	0.785 <sup>†</sup>	0.356***
Elementary occupations	1.069	0.773 <sup>†</sup>	1.368**
Male dominated sectors	<b>0.800***</b>	<b>0.696***</b>	1.036
Female dominated sectors	<b>0.567***</b>	<b>0.609***</b>	<b>0.576***</b>
constant	0.078***	0.087***	0.065***
Log Likelihood	-9924.5886	-4557.3959	-5350.2936
Variance country level	0.888***	0.857***	0.944***

\*\*\* = p < 0.001, \*\* = p < 0.010, \* = p < 0.050, <sup>+</sup> = p < 0.100, N1=23685(total), 11055(Men), 12630 (Women) N2=27

### **Cross-national variation**

The third hypothesis of the paper expected a cross-national variance in how the gender dominance of workplaces influenced workers' access to schedule control. To check for this, I ran random slopes models to see whether gender, gender dominance of the workplace variables varied significantly across countries in explaining access to schedule control. The results show that the influence of gender (variance= 0.019,  $p > 0.100$ ), gender dominance of the job post (male job post variance=0.004,  $p > 0.100$ ; female job post variance=0.030,  $p > 0.100$ ) and occupation (male occupations variance=0.000,  $p > 0.100$ , female occupations variance=0.043,  $p > 0.100$ ) did not vary significantly across different countries (full results available upon request). Although workers' access to schedule control when working in a male dominated sector did not vary across countries (variance=0.100,  $p > 0.100$ ), the relative access workers' had when working in a female dominated sector varied significantly across countries (variance=0.133,  $p < 0.05$ ), although no clear patterns emerged that mirror country clusters found in previous studies. As Figure 2 shows in countries such as Germany, Spain, and to a certain extent Slovakia, working in female dominated sectors were much worse compared to what was found for the European average. In Spain for example, workers in female dominated sectors are predicted to be only about 1/3 as likely to have access to schedule control compared to workers in sectors where both genders are equally represented. On the other hand, in the Baltic countries, namely, Estonia, Lithuania, and Latvia, and to some extent Hungary, working in female dominated sectors was not as bad compared to what was found for the European average. However, even for these countries, the access workers had in female dominated sectors was at best similar to sectors where both genders were equally represented, and in no country was the access better in female dominated sectors. Even when ISCO 1 digit occupational levels are included in the model, the influence of working in a female dominated sector is the only factor that varies significantly across

countries (variance=0.125,  $p=0.051$ ), but again in all countries female dominated sectors generally fared worse compared to sectors where both genders were equally represented.

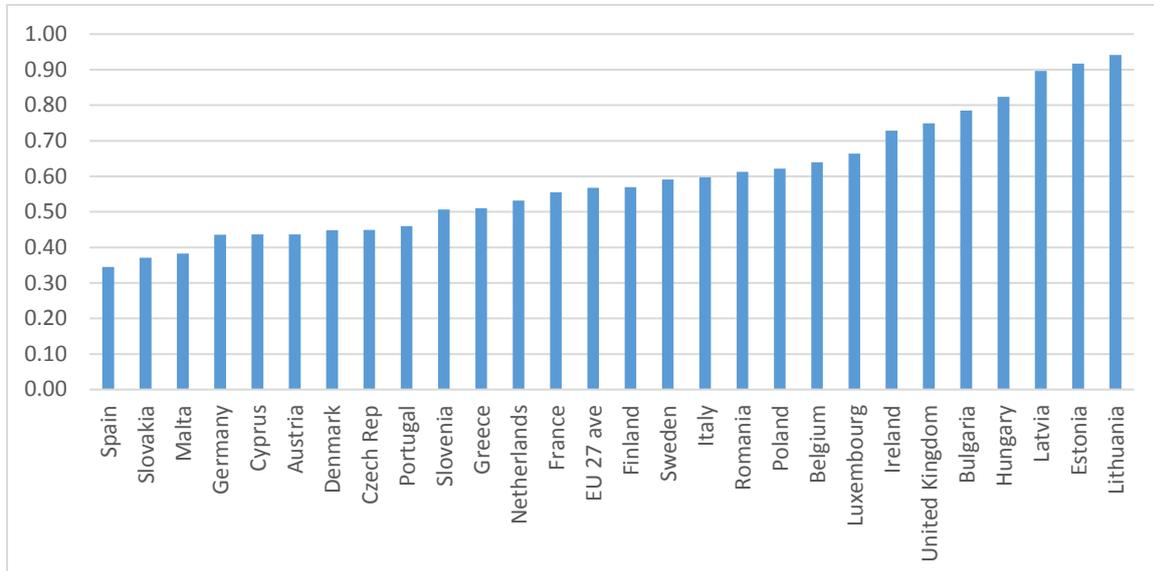


Figure 2. Relative access workers in female dominated sectors have to schedule control compared to those in sectors with equal representation across Europe in 2010 (odds ratios)  
 Note: having controlled for a range of control variables in Table A-1.

### Robustness checks

I ran a series of robustness checks to see whether the choices made in the design of the paper influenced the results found in the previous section (all tables available in the online appendix). Firstly, I checked to see whether the inclusion of working-time autonomy as a part of schedule control influenced the results. This was done by removing working-time autonomy from the schedule control definition, and from the analysis sample. As Table A-2 shows, the results of the paper does not change when we exclude working-time autonomy from the model. Secondly, I examined whether not controlling for public sector changes the results of the model. In many countries, public sectors are female dominated. Thus, the influence of working in female dominated workplaces may be underestimated by including public sector as a control variable. Having re-modelled the analysis excluding public sectors as a control (Table A-3), female dominated sectors and job post do seem to be even worse in

the provision of schedule control but not to a large degree and the results remain relatively stable.

Some may argue that these results are found because it is more difficult to implement schedule control in typically female-dominated sectors such as education, healthcare and social services due to the nature of the work carried out in these sectors. However, when examining the access workers have in the education sector across Europe, this explanation seems to hold limited validity. As Figure 3 shows, in countries such as Sweden and Denmark, 55% and 54% of workers have access to schedule control in the education sector respectively, comparable to other sectors in these countries. Further, what constitutes as a female-dominated job and sector varies across countries— e.g. the education sector is a gender-neutral sector in Denmark and Luxemburg, while 'women's work penalty' remains relatively stable. Thus, the nature of the work alone cannot be the explanation as to the 'women's work penalty' found in this paper.

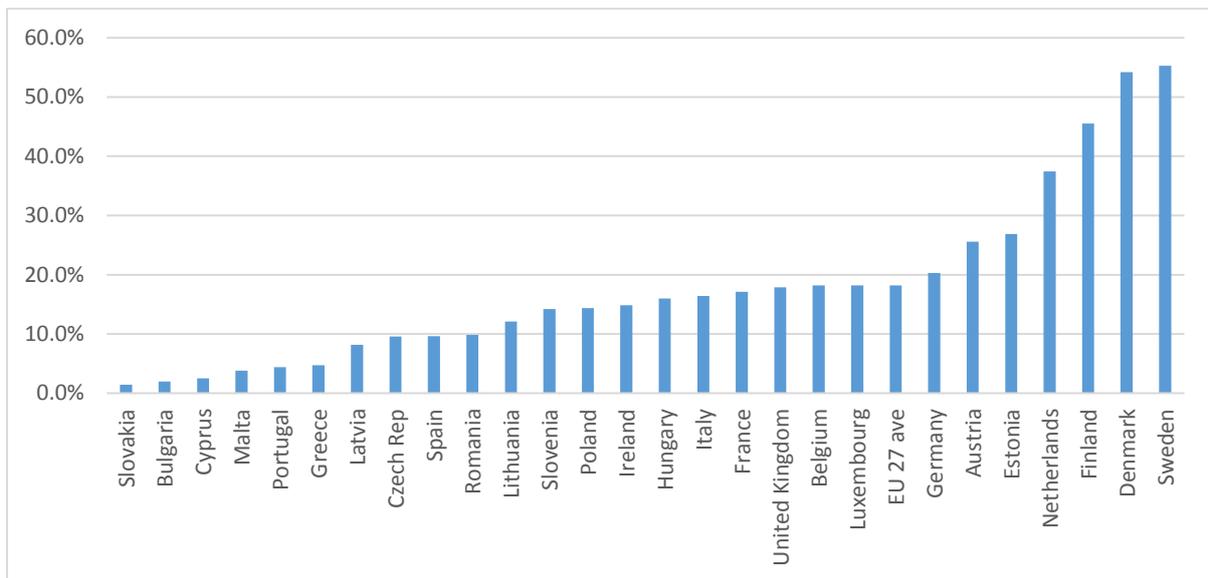


Figure 3. Workers' access to schedule control in Education sectors across Europe in 2010 (weighted averages)

## **5. Conclusion and discussion**

Flexible working is increasingly used by both employers and employees, on the one hand to address workers' work-life balance demands, and on the other as a means to increase workforce productivity. These distinct rationales for the use of flexible working arrangements have implications for our understanding of how gender and the gender dominance of the workplace may impact worker's access to it. Based on recent European data, results show that once individual and company level characteristics are taken into account there were no clear gender differences in the access to schedule control. However, gender dominance of the workplace played a role in who has access to schedule control. Men working in mostly male-dominated job posts and sectors had limited access to schedule control compared to men working in jobs and sectors where an equal number of men and women are represented. For women, working in male-dominated jobs and sectors were no worse than working in gender-neutral posts/sectors. However, working in job posts and sectors where women were overrepresented decreased the likelihood of having access to schedule control for both men and women. The 'women's work penalty' for workers working in female-dominated job posts was stable across countries. Although 'women's work penalty' found for female-dominated sectors varied across countries, in none of the countries examined was the access better than in sectors where both genders were equally represented.

The results of this paper confirms the conclusions found by previous scholars using American data (Jaffee, 1989; Glass, 1990; Adler, 1993) where typically female jobs (occupations) were less likely to gain investment from employers in terms of improved working conditions and workers working in these jobs were less likely to be given control or autonomy over their work. This paper extends these findings to the case for schedule control in Europe, and for the sectoral contexts. Accordingly, there is little evidence to show that female-dominated workplaces are better in the provision of schedule control due to the normalization of

flexibility practices or due to the lack of flexibility stigmas (e.g., Minnotte et al., 2010; Cech and Blair-Loy, 2014).

Interestingly, some evidence of the femininity stigma (Williams et al., 2013; Cech and Blair-Loy, 2014) was found in Europe – i.e., where male dominated job posts and sectors can negatively impact workers’ access to schedule control for men yet not for women. This may be related to the different types of jobs being done by women and men in male-dominated sectors – e.g. women working in construction, industry, and transport sectors may be white collar clerical workers rather than manual craftsmen whose schedule control access policies may be different. However, this result still holds when the model controls for occupations (see Table 2), meaning that the difference in the type of job done by the two gender cannot be the sole reason. It could be that when women work in male-dominated sectors and occupations/job posts they are more likely to have access to schedule control gifted by their employers, but not provided to their male colleagues, as an exception to the rule. Employers may allow such use since it might not entail much cost if it is provided to a small group of workers. On the other hand, in female-dominated jobs and sectors, when employers provide family-friendly schedule control to their workers it may involve a much higher cost and problems for managing the workforce since it is likely to be provided for a larger group of workers.

There are several reasons why gender-neutral workplaces are best in providing schedule control. Firstly, as noted by previous scholars (Glauber, 2011), many higher ranking occupations – i.e. (associate) professionals – have neutral gender compositions, which may impact the results. Similarly, gender-neutral sectors – such as financial sectors/real estate and for some countries, public administration sectors – are also those where schedule control may be implemented more easily due to the nature of the job, and it may be easier to implement high performance strategies. However, it is also likely to be the case that these sectors/job

posts are those where both employers' willingness to invest in their workers, trust that these arrangements can lead to better performance outcomes, and demand for such policies coexists. This may be the best environment for family-friendly policies to foster.

In sum, the results of the study shows that female dominated workplaces are generally worse off in providing workers access to flexible working arrangements, more specifically schedule control. Based on the results of this study the application of 'women's work penalty' can be extended from gender wage gaps to other good working conditions. Through this, this study provided empirical evidence to reject the commonly accepted assumption that women have better access to flexible working arrangements and that female dominated workplaces are better in providing them. Accordingly, it also puts into question the theory of compensating differentials - that the low wages found in female dominated workplaces can be justified through the better provision of family-friendly arrangements in these workplaces.

The main policy implication to draw from this study is that the group of population that may be in most need of flexible work arrangements may not be able to gain access to it (see also, Swanberg et al., 2005; Chung, forthcoming). Policy makers should thus examine exactly why these female-dominated job posts and sectors are not able to provide the much needed schedule control access. An introduction of the legal right to request flexible working can help, but only when provided where workers have a genuine right and true protection from possible negative consequences (see also, TUC, 2017). Enabling companies and managers to understand the true value of flexible working through campaigns and training could also be of help. Flexible working has been shown to help women maintain their labour market positions after childbirth and can help tackle the persisting gender wage gap (Chung and Van der Horst, 2017). The expected gains from staff maintenance and recruitment alone could possible offset the costs involved when introducing these policies. More investigation is needed to explain why female-dominated workplaces do worse in providing workers access

to schedule control. Based on previous literature we can expect this phenomenon to be explained somewhat by the lack of trust employers have towards workers in these workplaces and their expectation that the flexibility will be used to shirk away from work, rather than to improve performance. Future studies should explore this issue further. Future studies should also examine whether there are women's work penalties found for other family-friendly arrangements. There is evidence that such penalties could be found for other family-friendly working-time arrangements (Chung, forthcoming), but more evidence will be helpful to tackle the persistent and harmful assumption behind compensating differentials, that somehow lower wages in female dominated workplaces can be justified due to better working conditions.

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## Appendix

### A-1. Variable definitions and data sources

1. Individual level variables
  - Gender: dichotomous variable of female (male = reference group)
  - 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.
  - Gender dominance of the occupation: ISCO-08 1 digit - linked to EUROSTAT national data on gender composition of the occupation. Thus two dummies are used to indicate a male-dominated occupation (with 60% or more men) and female dominated occupation (with 60% or more women) with the reference category being equally represented occupation/sector (40-60% men and women).
  - Gender dominance of the sector: NACE R.2 - linked to EUROSTAT national data on gender composition of the sector. Thus two dummies are used to indicate a male-dominated sector (with 60% or more men) and female dominated sector (with 60% or more women) with the reference category being equally represented occupation/sector (40-60% men and women).
  - Age – as a continuous variable ranging from 15 to 65
  - Education – divided into three categories of 1) primary and lower-secondary, 2) upper-secondary and post-secondary(reference), 3) tertiary or above
  - 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.
  - Skill-level – Simplified categorisation based on the ISCO-08 2 digit recoded into 4 majors groups based on skill levels based on ILO definition. Highest skill, Medium skill, Lower-medium (reference group), Elementary skill.
  - 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).
  - 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.
  - Size of the company: Company size is included as a scale variable: less than 10, 10 to 49, 50 to 99, 100 to 249, 250-499, 500 + 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.

- The existence of an employee representative: “At your workplace is there an employee acting as an employee representative?”
- Female 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).
- 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
- Family structures
  - Lives with a child under the age of 18
  - Lives with a pre-school child (< 6)
  - Lives with a school age child (<12)
  - Lives with a partner is also included in the model.

#### Occupational grouping – ISCO08 1 digit

Occupational group	ISCO code/group	Gender dominance	% of women EU27 ave.
Managers	1. Legislators, senior officials and managers	Male	36.1%
Professionals	2. Professionals	Equal	51.6%
Technicians and associate professionals	3. Technicians and associate professionals	Equal	56.2%
Clerical support workers	4. Clerks	Female	68.8%
Service and sales workers	5. Service workers and shop and market sales workers	Female	68.9%
Craft and related trades workers	7. Craft and related trades workers	Male	10.9%
Plant and machine operators	8. Plant and machine operators, and assemblers	Male	17.7%
Elementary occupations	9. Elementary occupations	Equal	53.5%

## Sectoral grouping

Based on NACE R.2 condensed into 10 categories (based on Eurofound, 2012)

Sector	Corresponding NACE Rev.2 sectors	Gender orientation	% women EU27 ave.
Agriculture	A Agriculture, forestry and fishing 01–03	Male	28.3%
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	Male	29.0%
Construction	F Construction 41–43	Male	10.5%
Wholesale, retail, food and accommodation	G Wholesale and retail trade; repair of motor vehicles and motorcycles 45–47 I Accommodation and food service activities 55–56	Equal	53.8%
Transport	H Transportation and storage 49–53	Male	24.2%
Financial services	K Financial and insurance activities 64–66 L Real estate activities 68	Equal	54.1%
Public admin. and defence	O Public administration and defence; compulsory social security 84	Equal	46.1%
Education	P Education 85	Female	72.5%
Health	Q Human health and social work activities 86–88	Female	79.9%
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%)	Mixed within the sector But generally equal	

## Independent variable summary

Variable	N	Mean	Std.Dev.
Female	29,296	0.53	0.50
Job title – mostly men	29,112	0.36	0.48
Job title – mostly women	29,112	0.35	0.48
Male dominated occupations (60% or more male)	29,296	0.28	0.45
Female dominated occupations (60% or more female)	29,296	0.39	0.49
Male dominated sector (60% or more male)	29,296	0.30	0.46
Female dominated sector (60% or more female)	29,296	0.26	0.44
Education – lower secondary or below	29,208	0.24	0.43
Education – tertiary or above	29,208	0.31	0.46
Supervisory role	28,975	0.14	0.35
Skill levels			
High	29,006	0.15	0.35
Medium	29,006	0.22	0.41
Elementary	29,006	0.21	0.41
Working hours			
Part-time contract	28,793	0.23	0.42
Long hours work	28,793	0.11	0.31
Open ended contract	29,156	0.79	0.40
Public company	29,068	0.35	0.48
Employee representative	27,911	0.46	0.50
Female boss	28,758	0.32	0.47
Management support	28,070	0.63	0.48
Has a child <18	29,296	0.32	0.47
Has a preschool child <6	29,296	0.14	0.35
Has a school age child <12	29,296	0.12	0.33
Has a partner	29,296	0.66	0.47
ISCO-1 digit occupational levels			
Managers	29,164	0.05	0.23
Professionals	29,164	0.15	0.36
Technicians and associate professionals	29,164	0.16	0.36
Clerical support workers	29,164	0.12	0.33
Service and Sales workers	29,164	0.18	0.39
Craft and related trades workers	29,164	0.12	0.32
Plant and machine operators	29,164	0.09	0.28
Elementary occupations	29,164	0.11	0.32

Variable	N	Mean	Std.Dev.	Min	max
Establishment size	28283	2.48	1.54	1.00	5.00
Age	29163	41.55	11.71	15.00	81.00

## Additional Tables

**Table A-1.** Explaining access to schedule control across Europe (odds ratios)

Model	1-3	1-4	1-5
	ALL	Men	Women
Female	1.002		
Gender dominance of job/occupation and sector (ref: equal)			
Mostly men with the same job	<b>0.855**</b>	<b>0.868*</b>	0.952
Mostly women with the same job	<b>0.690***</b>	<b>0.671***</b>	<b>0.715***</b>
Male dominated occupations	<b>0.816***</b>	0.951	<b>0.772***</b>
Female dominated occupations	1.020	1.085	0.940
Male dominated sectors	<b>0.784***</b>	<b>0.697***</b>	0.977
Female dominated sectors	<b>0.545***</b>	<b>0.598***</b>	<b>0.564***</b>
<b>Controls</b>			
Age	1.013***	1.010***	1.017***
Education (ref: upper secondary)			
Lower secondary and below	0.753***	0.683***	0.812**
Tertiary and above	1.621***	1.606***	1.687***
Supervisory role	1.522***	1.449**	1.578***
Skill level (ref=lower medium)			
Highest skill	1.892***	2.547***	1.373**
Medium skill	2.394***	3.076***	1.910***
Elementary skill	0.807***	0.772**	0.887
Working hours (ref: Full time worker)			
Part-time	1.373***	1.263**	1.326***
Long hours (48+)	1.952***	2.190***	1.558***
Indefinite contract	0.900*	0.958	0.855*
Establishment size	1.069***	1.066***	1.062***
Public company	0.738***	0.717***	0.787***
Employee representative	0.912*	0.842**	1.004
Female boss	1.002	1.052	0.977
Management support	1.138***	1.146*	1.128*
Has a child <18	1.066	1.149	1.011
Has a preschool child <6	1.140	1.029	1.267*
Has young child <12	1.000	0.877	1.104
Has a partner	0.981	0.948	1.005
constant	0.085***	0.086***	0.078***
Log Likelihood	-9985.1839	-4572.926	-5398.1783
Variance country level	<b>0.893***</b>	<b>0.864***</b>	<b>0.942***</b>

\*\*\* = p < 0.001, \*\* = p < 0.010, \* = p < 0.050, + = p < 0.100, N1=23685(total), 11055(Men), 12630 (Women) N2=27

**Table A-2.** Reverse coded results comparing male vs female dominated workplaces

Model	Schedule control		
	1-1	1-2	1-3
	ALL	Men	Women
Female	1.002		
Gender dominance of job/occupation and sector (ref: male dominated)			
Equally represented job	<b>1.169**</b>	<b>1.152*</b>	1.051
Mostly women with the same job	<b>0.807***</b>	<b>0.773*</b>	<b>0.751***</b>
Equally represented occupation	<b>1.225***</b>	1.052	<b>1.296**</b>
Female dominated occupations	<b>1.250***</b>	1.141 <sup>+</sup>	<b>1.218*</b>
Equally presented sector	<b>1.275***</b>	<b>1.436***</b>	1.024
Female dominated sectors	<b>0.695***</b>	0.859	<b>0.578***</b>
Log Likelihood	-9985.184	-4572.926	-5398.178
Variance country level	<b>0.893***</b>	<b>0.864***</b>	<b>0.942***</b>

\*\*\* = p < 0.001, \*\* = p < 0.010, \* = p < 0.050, <sup>+</sup> = p < 0.100, N1=23685(total), 11055(Men), 12630 (Women) N2=27

**Table A-3.** Explaining access to flexitime across Europe (odds ratios)

Model	Flexitime		
	1-1	1-2	1-3
	ALL	Men	Women
Female	1.050		
Gender dominance of job/occupation and sector (ref: equal)			
Mostly men with the same job	<b>0.892*</b>	0.880 <sup>+</sup>	1.035
Mostly women with the same job	<b>0.750***</b>	<b>0.771**</b>	<b>0.791***</b>
Male dominated occupations	<b>0.778***</b>	0.939	<b>0.709***</b>
Female dominated occupations	1.007	1.083	0.928
Male dominated sectors	<b>0.814***</b>	<b>0.724***</b>	1.015
Female dominated sectors	<b>0.538***</b>	<b>0.630***</b>	<b>0.544***</b>
Log Likelihood	-8708.276	-3914.6913	-4777.4342
Variance country level	<b>1.009***</b>	<b>0.882***</b>	<b>1.178***</b>

\*\*\* = p < 0.001, \*\* = p < 0.010, \* = p < 0.050, <sup>+</sup> = p < 0.100, N1=22662(total), 10478(Men), 12184 (Women)

**Table A-4.** Explaining access to schedule control across Europe (odds ratios) – model without public sector as a control variable

Model	Schedule control without public		
	1-4	1-2	1-3
		Men	Women
Female	1.009		
Gender dominance of job/occupation and sector (ref: equal)			
Mostly men with the same job	<b>0.866**</b>	0.883 <sup>+</sup>	0.959
Mostly women with the same job	<b>0.683***</b>	<b>0.651**</b>	<b>0.711***</b>
Male dominated occupations	<b>0.834***</b>	0.978	<b>0.791**</b>
Female dominated occupations	1.020	1.091	0.935
Male dominated sectors	<b>0.798***</b>	<b>0.711***</b>	0.990
Female dominated sectors	<b>0.504***</b>	<b>0.548***</b>	<b>0.534***</b>
Log Likelihood	-10010.081	-4585.9584	-5406.6502
Variance country level	<b>0.890***</b>	<b>0.864***</b>	<b>0.937***</b>

\*\*\* = p < 0.001, \*\* = p < 0.010, \* = p < 0.050, <sup>+</sup> = p < 0.100, N1=23685(total), 11055(Men), 12630 (Women) N2=27

**Table A-5.** Explaining access to schedule control across Europe (odds ratios) – model replacing gender dominance of occupations with isco occupational levels

Model	1-1	1-2	1-3
	ALL	Men	Women
Female	0.965		
Gender dominance of job (ref: equal)			
Mostly men with the same job	0.915 <sup>+</sup>	0.908	0.988
Mostly women with the same job	<b>0.711<sup>***</sup></b>	<b>0.670<sup>***</sup></b>	<b>0.742<sup>***</sup></b>
Occupational level (ref: Service and sales)			
Managers	3.468 <sup>***</sup>	3.755 <sup>***</sup>	3.427 <sup>***</sup>
Professionals	2.307 <sup>***</sup>	2.921 <sup>***</sup>	1.871 <sup>***</sup>
Technicians and associate professionals	2.575 <sup>***</sup>	3.023 <sup>***</sup>	2.229 <sup>***</sup>
Clerical support workers	1.702 <sup>***</sup>	1.688 <sup>***</sup>	1.627 <sup>***</sup>
Craft and related trades workers	0.744 <sup>**</sup>	0.856	0.609 <sup>*</sup>
Plant and machine operators	0.620 <sup>***</sup>	0.785 <sup>†</sup>	0.356 <sup>***</sup>
Elementary occupations	1.069	0.773 <sup>†</sup>	1.368 <sup>**</sup>
Male dominated sectors	<b>0.800<sup>***</sup></b>	<b>0.696<sup>***</sup></b>	1.036
Female dominated sectors	<b>0.567<sup>***</sup></b>	<b>0.609<sup>***</sup></b>	<b>0.576<sup>***</sup></b>
constant	0.078 <sup>***</sup>	0.087 <sup>***</sup>	0.065 <sup>***</sup>
Log Likelihood	-9924.5886	-4557.3959	-5350.2936
Variance country level	0.888 <sup>***</sup>	0.857 <sup>***</sup>	0.944 <sup>***</sup>

\*\*\* = p < 0.001, \*\* = p < 0.010, \* = p < 0.050, † = p < 0.100, N1=23685(total), 11055(Men), 12630 (Women) N2=27