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Top down or bottom up? A cross-national study of vertical occupational sex segregation in twelve European Countries

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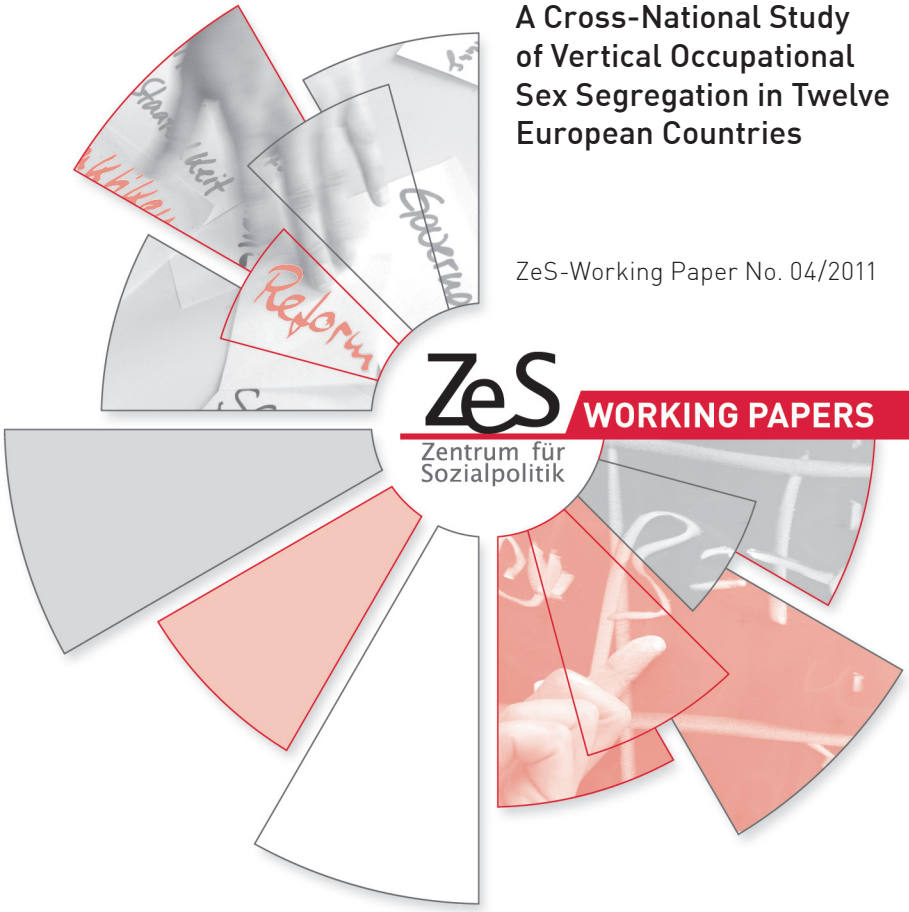

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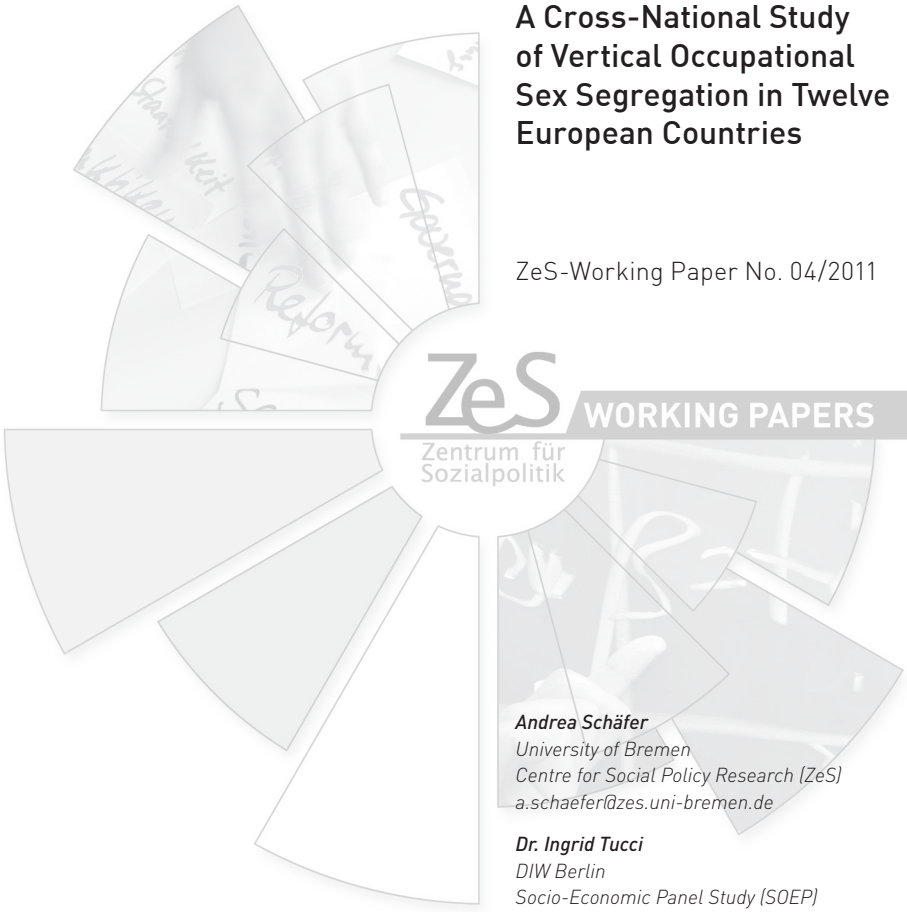

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ABSTRACT

Starting with a comparative assessment of different welfare regimes and political economies from the perspective of gender awareness and "pro-women" policies, this paper identifies the determinants of cross-national variation in women's chances of being in a high-status occupation in twelve West European countries. Special emphasis is given to size and structure of the service sector, including share of women in public employment and structural factors such as trade union density and employment protection. The first level of comparison between men and women concentrates on gender representation in the higher echelons of the job hierarchy, while in the second section we extend the scope of analysis, comparing women in high-status occupations and low-wage employment in order to allow for a more nuanced study of gender and class interaction. The first analysis is based on European Social Survey data for the years 2002, 2004, 2006, and 2008, capturing recent trends in occupational dynamics. Results indicate that in general a large service sector and a high trade union density enhance women's chances of being in a high-status occupations while more specifically a large public sector helps to reduce channeling women in low-wage employment. Thus, equality at the top can well be paired with inequality at the bottom, as postindustrial countries with a highly polarized occupational hierarchy such as the UK show.

Keywords: occupational sex segregation, gender equality, public sector employment, cross-national comparison

JEL classification: P5 comparative economic systems; D6 - Welfare Economics; J2 - Demand and Supply of Labor

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CONTENT

1. Introduction

Over the last several decades, women in Western countries have taken on ever increasing roles in the workforce. Triggered by the growth of the service economy and the expansion of the welfare state, women's participation in higher education and the labor market has increased. Evidence of women's growing labor market integration include rising maternal employment rates and more continuous work biographies, women's inroads into professions such as law and medicine, and into the upper echelons of corporate management (European Commission 2009). Nevertheless, Western welfare capitalism is characterized by a persistent and highly gendered division of labor that places women at a distinct disadvantage. Women still shoulder most of the burden of household and care work, and they also face more inequality and risks to their integration into the workforce and to their position in the occupational structure. Despite the educational gains that have been made in recent decades and the trend towards more stable employment biographies, women are still underrepresented in high-status occupations and subject to a substantial gender pay gap across industries and occupations (European Commission 2009a). Obviously, the persistent gender (and social) gap in earnings (Rubery et al. 2005) and in access to higher positions is at odds with widely accepted gender equality norms and meritocratic beliefs (see Esping-Andersen 2009: 55). Persisting gender inequality is an ongoing subject of public debate on the national and international level, not least because the lack of gender equality in the labor markets of leading industrial countries poses a threat to productivity growth and competitiveness in ever more globalized and knowledge-intense economies (Serrano and Mósesdóttir 2003; Walby et al. 2007).

Both strands of debate raise questions about how to explain gender inequality and how to address it politically. Answers are not easily found, in large part because gender inequalities in the labor market vary substantially across Western European countries. So far, these cross-national differences have been attributed to welfare state variation, with social-democratic welfare states being more successful in improving women's economic position. Eminent scholars in comparative and feminist welfare state research have argued that only universal and highly redistributive welfare regimes are capable of creating "women-friendly states" (Hernes 1988: 188) or "women-friendly policies" (Esping-Andersen et al. 2002: 70pp; 2009: 91), reducing gender inequalities on the labor market and within the family. However, some assumptions concerning this "women-friendly" approach have recently been called into question, particularly the idea that countries with highly developed welfare states and generous social policy packages—such as those in Scandinavia which seek to reconcile work and care—are more favorable to women's social equality than the liberal welfare states (Es-

tévez-Abé et al. 2001; Estévez-Abé 2001, 2005, 2006, 2009). This research argues in favor of liberal market economies that seek to minimize government support and state regulation while maximizing individual choice, risk, and responsibility, emphasizing equal rights in the market which in turn might lead to better representation of women in upper-level positions. But as pointed out by Plantenga et al. (2009) gender equality should be assessed as multidimensional[1] : some countries such as the UK might perform badly on equal pay but better with respect to the distribution of socio-economic power between men and women, for example.

While a rich body of research, including the aforementioned studies, offers insightful and persuasive analyses of variations in occupational sex segregation, there are still some shortcomings. First, many studies analyzing women's access to high-status positions focus on the private sector. Thus, they do not capture the complex expansion process of the service sector under welfare capitalism and in particular the role of the state as an employer, affecting the extent and standards of female employment as well as the patterns of gender segregation (Bettio and Verashchagina 2009). Furthermore, most studies are based on cross-sectional data from the late 1990s and early 2000. However, continuous and rapid changes in labor markets and family structures may also have affected female participation in the labor market. Third, while it makes sense to focus on women's chances of reaching the top of the occupational ladder, especially in light of recent female educational gains, in times of labor market deregulation it seems necessary to take a broader perspective on the occupational hierarchy to fully evaluate gender equality. Equality at the top might, after all, be paired with inequality at the bottom, and more generally, the composition of the job hierarchy might have different effects on gender equality. Indeed, during the last decade, a twofold dynamic of upward and downward evaluation of labor has emerged in some countries, affecting women more than men. In Germany, for example, women have made inroads into some high-status professions, but their share and numbers have also increased substantially in the expanding low-wage service sectors (Kalina and Weinkopf 2006; Bosch and Lehndorff 2005).

Against the backdrop of these recent developments, the next chapter examines current levels of sex segregation in the labor market, comparing the positioning of men and women within the job hierarchy in both the public and private sectors of different European countries.[2] We start

1 The European Union Gender Equality Index developed by Plantenga et al. (2009) considers four dimensions of gender equality: equal sharing of decision-making power, time, money, and paid work.

2 This contribution concentrates on gender segregation in the labor market only, although we recognize that the gendered division of labor between paid and unpaid work and the uneven participation of women and men in paid work are two interrelated aspects of gender inequality. Two basic dimensions of gender segregation in the labour market have been established in the literature: The first one deals with the measurement of inequality between men and women in terms of their positioning in the job hierarchy

by focusing on gender representation in top positions and women's chances of being in a high-status occupations. The second level of comparison concentrates on women only, but extending the scope of analysis to the distribution of women between high-status and low-status occupations in different welfare economies. Here, the following questions are addressed: To what extent are women represented in high-status occupations? How are women distributed in the hierarchy of jobs? We believe that focusing on the development of the service sector - in particular the role of the state as an employer and the extent of the low-wage sector in different regimes - can improve our understanding of what accounts for national differences in the underrepresentation of women in high-status occupations. By extending the view to the intra-gender occupational distribution, i.e., the relation of the share of women in low-status occupations to the share of women in high-status occupations, the investigation also allows for a more comprehensive and nuanced analysis of gender and class effects across countries.

In the next section, we lay out our argument in greater detail and review the literature on the cross-national analysis of women's access to high-status occupations, proposing testable hypotheses. After explaining research design and methods a further section presents our empirical results based on multilevel analyses of women's access to high-status occupations using pooled data from the European Social Surveys (2002, 2004, 2006 and 2008). We first test whether women are better represented in high-status occupations in liberal market economies (LMEs) than in coordinated economies (CMEs). Second, we investigate how the public/private mix in the service sector as well as social protection and collective coordination affect women's chances of entering high-status occupations. A further section refers to the comparison of women's distribution in low- and high-status occupations. Here we analyze the correlation between the percentage of full-time female workers in low-wage jobs and both the percentage of women in the public sector and trade union density in the selected countries. Finally, we discuss the role of public sector size for differences between the countries and address the impact of occupational polarization on gender equality, taking into account factors that affect women's representation in the lower and upper end of the occupational hierarchy.

(vertical segregation), while the second dimension refers to the distribution of men and women across industries or branches (horizontal segregation) (Blackburn et al. 2001; Blackburn 2009; Charles and Grusky 2004).

2. State of Research and Hypotheses

The growing research interest in women's access to high-status occupations has been spurred by the increasing female labor market participation in most European countries, which have seen rising employment rates and a rise in full-time employment during the last two decades.[3] However, although more women are pursuing careers, their underrepresentation in some occupations and concentration in others remains very widespread. European cross-country statistics show that the percentage of employed women who would need to change occupations in order to bring about an even distribution of men and women among occupations is quite high: 59 percent in Finland, 54 percent in France, Germany, Sweden, and Norway, and 51 percent in the UK (European Commission 2009b: 93). Furthermore, findings showing a continuously rising percentage of women in management (Eurostat, Database on Women and Men in Decision Making (WMID)) do not give the full picture, since rising percentages of women in middle management in both the public and private sectors have not been accompanied by rising percentages of women in top management in the private sector: a phenomenon well known as the glass ceiling effect. While countries such as Portugal and Norway with a below-EU average (33 percent) share of women in top positions have made more progress in recent years than countries such as France, the UK, and Spain with above-average percentages, none of the national percentages match the overall representation of women in the respective industries (data for 2009; Eurostat, Database on Women and Men in Decision Making (WMID)).[4]

Thus, gender segregation both along the job hierarchy and along industries and/or manual and non-manual work remains a persistent feature of all Western industrialized countries (Anker 1998; Charles and Grusky 2004). Research on the factors perpetuating the widespread sex segregation in labor markets has identified employer and institutional discrimination, self-evaluation, expected

3 Labour force participation has risen on average by about 4 percent for European countries from 1992 to 2009 (Eurostat 2010), with the highest increase in Spain. The overall female full-time employment rate in Europe is on average 36 percent, with the Netherlands showing the lowest (21 percent) and Finland (45 percent) showing the highest rates in 2008 (UNECE Statistical Division Database 2010).

4 The slow improvement of women's access to leadership positions is seen even more clearly when looking at the share of women on the executive boards of the largest publicly quoted companies. In 2009, only 11 percent of executive board members in the EU-27 were women (as compared to 9 percent in 2003). Scandinavian countries (Norway, Sweden, Finland and Denmark) as well as the UK, Netherlands, and Germany were at the top of the list with a share of women above the EU-27 average. Moreover, the Scandinavian countries and also the Netherlands, France, and Spain showed the highest increase between 2003 and 2009, although starting from different baseline values (UNECE Statistical Division Database 2010).

sanctions, labor force commitment, statistical discrimination, and networks as potentially salient (Charles and Grusky 2004: 16, Table 1.1). From these results, some scholars conclude that universal norms of "gender essentialism" related to male dominance and authority play an important role in accounting for both the universal gender segregation between manual (male) and non-manual (female) occupations and the gender segregation within manual and non-manual occupational hierarchies common to all countries (Charles 2003).

More specifically, research on differential work rewards indicates that the class ceiling effect, namely disadvantages in promotion to highest positions that cannot be explained by job-relevant characteristics of the employee, is gender specific while racial inequalities (among male workers) seem to follow a different pattern (Cotter et al. 2001). On the micro level, this gender bias is reflected in different male and female employment biographies, while, at the same time, individual-level factors such as educational attainment, age, and family obligations seem to account for differences in labor market integration and careers in both women and men (Häusermann and Schwander 2009; on professions see Leuze and Rusconi 2009; Charles et al 2001; Brewster and Rindfuss 2000).[5] These findings indicate that to understand sex segregation, both macro (institutional) and micro (individual) factors have to be taken into account.

Notwithstanding the aforementioned similarities in sex segregation across countries, there are persistent differences among industrialized countries in the degree and nature of occupational sex segregation resulting from varying structural features of the labor market, political and social policies, religious and value systems, educational systems and organizational structures. A convincing argument based on a comprehensive OECD-wide study on sex segregation in terms of the gender divide between manual and non-manual jobs (defined as horizontal segregation) holds that the main reason for this type of segregation is the level of post-industrial restructuring of the labor market, in particular the expansion of the service sector and the level of economic rationalization.[6] In this view, progressive tertiarization opens up new employment opportunities for women as tasks designated as "female" multiply (Charles 1992; Charles and Grusky 2004). Indeed, countries with highly developed post-industrial economies—i.e, the Anglo-Saxon and continental European countries —are characterized by large service sectors including high shares of personal and social services, often dominated by a female workforce and characterized by part-time work, low wages and poor career opportunities. This "pink-collar ghetto" contributes to more pronounced sex segregation than in countries with a smaller service sector (Charles 2005). These findings

5 On recent employment trends for men and women (see ILO 2010).

6 The term service sector applies here to non-manufacturing occupations and jobs including for-profit and public (state and non-profit) employment.

are corroborated by a study by Mandel and Semyonov (2006), who demonstrate, again based on a comparison among OECD countries, that a large public sector and a massive influx of women into occupations coined as "female" perpetuate the traditional gender division of labor and lead to increased horizontal occupational sex segregation.

So far, this argument helped to understand the overall high level of gender segregation along manual and non-manual jobs in post-industrialized countries and welfare economies (as compared to less industrialized countries), but it leaves open the question of vertical segregation, defined as the distribution of women and men along the job hierarchy. According to Charles (2003), the level of post-industrial restructuring also affects vertical occupational sex segregation since tertiarization not only creates a pink-collar ghetto but also increases the number of top positions in service industries, which are more open to women than higher ranks in manufacturing.[7] Charles's findings indicate that vertical sex segregation is more pronounced in the manual sector than in the non-manual sector, and that women have made more inroads into professional occupations than into skilled manual occupations. Thus, desegregation seems to be greater in professional and managerial occupations (England 2005). Against this backdrop, we hypothesize that women in countries with a large service sector have higher chances of being in high-status occupations (Hypothesis 1a).

However, not only the size but also the structure of the service sector has to be taken into account, as the composition of the service sector and careers in the service industry vary across countries and impact on the overall gender structure of occupations (Fligstein 2001; Webb 2009). In contrast to the production sector, service sectors in Western welfare states tend to be very heterogeneous, consisting of both commercial services/industries and public services, the size of which usually varies by welfare regime. By offering extensive educational, health, and care services, the state acts as an important provider of social services and as a major employer of women, thereby promoting their integration into the labor market.[8] As comparative and country-specific research shows, public employment tends to enhance female careers. In a recent study, Mandel and Shalev claim that the public sector offers women more (semi-) professional jobs than private firms in the service sector (2009). This is in line with Kolberg's earlier analysis of Scandinavian countries (1991), which demonstrates that women in Denmark have a higher chance of being in management in the public sector than in the private sector. Looking at

7 Charles argues that economic rationalisation "also generates new opportunities for smaller numbers of elite, career-committed women in the managerial sector, which grows in response to the problems with coordinating and supervising the additional low-level workers" (Charles 2005: 304).

8 The impact of state employment on women, however, does not only depend on the level of state employment as such, but also on its sectoral structure. While public employment in social services tends to be feminized, employment in infrastructure services such as railways, water, and energy and in state-owned enterprises tends to be male-dominated.

the earnings differentials between men and women in the public and private sectors based on Luxemburg Income Study data, Gornick and Jacobs (1998) find that the share of workers in managerial positions is higher for both men and women in the public sector than in the private sector; and that women employed in the public sector have a better chance of holding such positions compared to women in the private sector. However, women's inroads into the whole range of public sector positions could also be explained or accompanied by a "downgrading of both the status of public sector employment and its associated job security" (Rubery, Smith and Fagan 1999: 218). Indeed, there is evidence that, for instance, higher positions in the public sector are associated with less prestige and income than comparable positions in the private sector (Tepe 2009; Tepe and Kroos 2010). Nevertheless, findings suggesting that the percentage of women in upper-level positions is higher in the public sector than in the private sector (whether services or production) seem plausible as the state has long served as a model employer, not only with respect to working conditions and job security but also with respect to the institutionalization of training, career tracks, and gender equality (Tepe et al. 2010). Additionally, comparative welfare state analysis shows that public or publicly funded service provision varies across welfare regimes and this in turn impacts on the level of public employment. An analysis of women's chances of assuming high-status occupations should therefore not be limited to the private sector but should extend to the public sector. Differentiating the service sector argument presented above, we expect that women in countries with a large share of women in the public sector have better chances of being in high-status occupations (Hypothesis 1b).

The service sector argument presented above is broad stroke in the sense that it refers to more general secular macroeconomic dynamics such as tertiarization and welfare state expansion. At the same time, research more sensitive to national differences and focusing more specifically on the determinants of women's access to managerial occupations[9] is still scarce, not least due to the difficulties of finding indicators that are comparable across many countries. Nevertheless, existing research indicates that the national context matters: More specifically, several cross-national studies have confirmed that women's opportunities to access managerial positions differ depending on the national institutional context (Charles 1992; Davidson and Burke 2004; Mandel and Semyonov 2006). An institutional feature of special interest is social protection regulation, as countries obviously differ in the degree of employment protection provided and enforced by the government. A prominent political economy argument following the Varieties of Capitalism (VOC) approach put forward by Estévez-Abé (2001; 2005; 2006) is that countries with strong em-

9 In several studies, individual, organizational and cultural-ideological barriers are identified as reasons for a severe underrepresentation of women in managerial occupations at the national level (Holst et al 2009; Holst and Busch 2010; Powell and Graves 2003; Blum, Fields and Goodman 1994).

ployment protection do not actually facilitate women's access to management, at least in the private sector.[10] Drawing on a rational choice perspective, Estévez-Abé argues that strong employment protection regulations promote firm-specific skills demanding high investments on the side of the employer. According to this argument, hiring women means risking that their work will be interrupted due to reproductive or care-related responsibilities. As a result, employers are more likely to choose male workers, who in turn tend to be promoted to higher positions since firing men would mean that firms would lose the skills investments they had made in these workers. The empirics testing this relationship between employment protection and women's access to high-status positions indicate that the share of women in management positions is higher in liberal market economies characterized by low employment protection than in coordinated market economies where employment protection is high (Estévez-Abé 2001; 2005).[11]

However, the notion that liberal market economies are more favorable to women's careers might be biased, since the analysis is restricted to the private sector, thus not taking into account the concentration and work conditions of women in the public sector, which is especially important in countries with a strong welfare state. Public sector employment might offer better work conditions due to better representation and influence of unions. Drawing on findings that report better chances for advancement of women in the public sector as compared to the private sector (Kohlberg 1991; Mandel and Shalev 2009), we might assume that women have higher chances of being in a high-status occupation in countries with a high trade union density (Hypothesis 2a) and in countries with strong employment protection (Hypothesis 2b). In this case, a large public sector absorbing a high share of the female workforce and serving as a model employer should outweigh the disadvantages women face in recruitment and ca-

10 The VOC approach developed by Hall and Soskice (2001) and refined from a gender perspective by Estévez-Abé and colleagues (1999, 2001, 2005) identifies gendered consequences of key institutions, such as the production system, modes of skill formation, and social protection that sustain distinctive models of capitalism. Though not initially developed to explain cross-national differences in gender relations (Soskice 2005) the work of Estévez- Abé, Iverson, and Soskice (2001) can be credited with broadening the explanatory scope of VOC by differentiating the all-encompassing category of coordinated market economies to include mixed cases, uncovering differences between continental and Scandinavian coordinated market economies (Shire and Gottschall 2007).

11 Additionally, Estévez-Abé (2005) argues that generous maternity and parental leave schemes are unable to counteract this gender bias, since they tend to induce an exit from employment. In line with this, Mandel and Semyonov (2006) find in a comparative study that high scores on the Welfare State Intervention Index are correlated with lower odds of women attaining managerial positions. Their results indicate that women are less likely to have managerial positions in Denmark, the Slovak Republic, and the Netherlands, but more likely in Canada, the United States, and Switzerland. However, Kelley (2007), in a more comprehensive analysis drawing on a comparison of 39 nations and taking into account hours worked, comes to the conclusion that welfare state policies on maternity neither hinder nor help women in holding such positions.

reer promotion in the private sector.

Representation of women in senior positions and top management can be seen as an important indicator of progress in gender equality. Nevertheless, to fully evaluate gender equality in the labor market, we need to take a broader perspective encompassing the entire occupational hierarchy. Equality at the top might well be paired with inequality at the bottom, and more generally the composition of the job hierarchy might have different effects on gender equality. The issue of equality raises the question of the occupational distribution of women, that is, what effect labor market structure might have on women's risks of ending up in low-status occupations. As Mason and Salverda (2010) - referring to Denmark, France, Germany, the Netherlands, the UK and the US - indicate, the probability of a worker being in low-wage employment is greater for women than for men. There are, however, remarkable between-countries variations in the quantitative importance of these effects. Further, Applebaum (2010) showed how strong the share of low-wage work across countries varies with the same industry and activity. If high-skilled women have a greater chance of being in a high-status occupation in liberal economies than in coordinated economies, low-skilled women might benefit from institutional patterns such as generous maternity and parental leave schemes, and the strong employment protection prevalent in coordinated market economies. Indeed, there is evidence that welfare state regulations affect women differently depending on their social class (Mandel and Shalev 2009, Christofi des et al 2010). In this vein, Charles and Grusky (2004) emphasize the interrelation of class and gender. They argue that the expansion of the service sector is associated with a "polarization" of women's occupational distribution, since many women are trapped in jobs requiring few to no qualifications and offering dismal career prospects, while a smaller group of highly qualified women are able to climb the ladder in the expanding service industries. Therefore, we assume that in countries with a large service sector, the percentage of women in high-status occupations is higher, but that their percentage in low-status occupations is also higher. At the same time, if the public sector is large and absorbs considerable numbers of women, they will be concentrated in the middle of the occupational hierarchy. Gornick and Jacobs (1998) show, for example, that the earnings advantage of working in the public sector is higher for those situated at the lower end of the earnings distribution. Thus, we expect that in countries with a large percentage of women in the public sector, the percentage of women in low-wage employment will be lower (Hypothesis 3a). Since strong unions contribute to favorable earnings and working conditions we assume that welfare states with a high trade union density will be characterized by a low percentage of women in low-wage employment (Hypothesis 3b).

3. Data, Countries, Variables, and Method

As shown above, the multifaceted relationship between gender and national labor market institutions is impossible to understand by means of one or two broad, macro-level concepts; it requires the consideration of a complex set of individual-level and macro-level factors. To that end, data from different sources are combined to test the first four hypotheses (1a-2b). The individual-level data are available through the European Social Survey (ESS). The data were gathered through face-to-face interviews with one individual aged 15 and over per private household providing information at the individual level about his or her occupation. The first round of this biannual survey was conducted in 2002 and the data from the fourth round were released recently. To test the stated hypotheses we use all four waves of the European Social Surveys (2002, 2004, 2006 and 2008) (Jowell and Team 2004; Jowell and Team 2007; Team, Fitzgerald et al. 2008; Team 2010). These surveys contain a core module of individual-level questions on occupational position and level of responsibility, respondent's sociodemographic background, and firm information for people living in Europe in each round. The items that are investigated in this paper are part of the core module and therefore it is possible to combine data from different rounds.

It was possible to construct a combined dataset for 12 European countries (of the 31 European countries in 2008) for all four years (N=48 cases), of which 10 were members of the EU before 2004[12] : Belgium (BE), Denmark (DK), Finland (FI), France (FR), Germany (DE), the Netherlands (NL), Portugal (PT), Spain (ES), Sweden (SE) and the United Kingdom (UK). Additionally, Switzerland (CH) and Norway (NO) are included[13]. Since the data for Ireland, Greece, Austria and Luxembourg were incomplete, these countries were excluded from the analysis.

These individual level data are merged with data measuring national labor market institutions and other country characteristics. National level data are taken from two different sources for all four years (Eurostat and OECD).

The source for the aggregated data on low-wage to prove the last two hypotheses (3a and 3b) is Eurostat's Structure of Earnings Survey (SES) for the year 2006.[14]

12 New EU member states are not included as their labor market structures are still influenced by the former state socialist regime and EU regulations on anti-discrimination and gender equality in the workplace (e.g., 84/635/EWG, 2002/73/EG) have only been adopted recently. Further, only countries who participated in all four waves of the European Social Surveys are taken into account.

13 See Table A1a in Appendix for share of respondents in each country.

14 The SES 2006 covers enterprises with at least 10 employees and in all economic activities except agriculture, fishing, public administration, private households and extra-territorial organisations (NACE Rev. 1.1 classification: sections C to O) and all persons employed—with an employment contract—, except, for example, self-employment; Board of Directors members; directors/managers paid by way of profit share or by fee. Earnings

Further, we used data on women in management from the European Commission database on Women and Men in Decision Making (see Table A2a an A2b for details).

The individual and national data employed here are not without limitations: ESS survey sample size varies over time and country. Thus, in some countries the same respondents are observed over all rounds and in others the sampling varies from round to round. This might have an effect on sample size of high-status occupations. Further, national data introduces problems such as common interpretation, use of crosswalks from national classifications and culture of job titles, status and work organization. However, we have detailed information on occupational status and labor market structure, which allows us to investigate the effects of national factors on labor market status. Given the representative sample, we are in a position to conduct a more detailed empirical analysis also from a gender perspective.

Rationale for Selection of Countries

The choice of countries represents all types of market economies (Estévez-Abé 2005): Belgium, Germany, the Netherlands and Switzerland represent the continental coordinated market economies (CMEs); Norway, Denmark, Finland and Sweden represent the Scandinavian CMEs; France, Portugal, and Spain are mixed cases; and the UK represents the liberal market economies (LMEs). Further, Belgium, France, Sweden, Germany, the UK, and Switzerland are included to represent advanced post-industrial countries; and Portugal as a less advanced post-industrial economy, as suggested by Charles and Grusky (2004). However, countries are also chosen in order to ensure a between-countries variation of female labor market integration, i.e., including countries such as the Scandinavian coordinated market economies with a high share of women in the labor market and countries as well as liberal market economies with a relatively low share of women in labor market (see footnote 30).

Measuring High-Status Occupations

Occupations of full-time and part-time respondents are defined on the basis of the International Standard Classification of Occupations (ISCO88).[15] High-status occupations are therefore defined as managers, senior officials, legislators, directors or chief executives (ISCO88 11, 12, 13)[16] irrespective of the sector the individual is working in, since we consider both the public and the private sector

cover full-time workers.

15 Corresponding question: What is/was the name or title of your main job? In your main job, what kind of work do/did you do most of the time? What training or qualifications are/were needed for the job?

16 The indicator for high occupational status is adequate, since the share of those with a leadership position (about 80 percent) and the number of employees (42 on average) is high (see Appendix/Table A1b). It is important to note that occupational classification schemes such as the ISCO 88 suffer from a gender bias in over-reporting male-dominated occupations while failing to differentiate female-dominated occupations to an equal degree (see Tijdens 1996; Hakim 1996).

here. At the individual level within each country, the indicator variable is 1 for those whose self-assessed occupational status corresponds with the aforementioned ISCO88 categories and 0 for all other employed respondents.

Measuring Low-Wage Employment

In order to show the degree of polarization of women's position the labor market (ratio of female in high-status to female in low-status employment) in the second section of the study, the share of female low-wage full-time workers is measured as follows: A woman in full-time employment is defined as a low-wage earner when her annual gross earnings are less than two-thirds of annual full-time median gross earnings (Eurostat, SES 2006). This approach avoids the difficulties of defining an absolute level of low-wage that is difficult to compare across countries and is in line with the definition used at the OECD and EU level as well as in many other national studies. For all countries in our sample, it holds true that employment in high-status occupation relates to high mean gross annual earnings and employment with low-wages corresponds to occupations such as service and craft workers or elementary occupations (Casali and Gonzalez 2010: 3). Thus, we use low-wage employment as an equivalent to low-status employment.

For the first analysis we use pooled data because there are few women in high-status occupations, as the low numbers of female respondents over the four years indicate (Table 1). The pooling of the four rounds creates a dataset including information about 56,980 individuals living in 12 EU countries, of which 29,169 are women. The number of respondents by country and survey year combinations is summarized in Table 1. Only respondents aged 25–75 who are employed full-time or part-time are included since people younger or older would yield selectivity problems in terms of completion of education and labor force participation. Since we only lost about 9 percent of the observations each year due to missing information on the dependent variable,

Table 1: Number of Observations and Respondents across 12 European Countries for 2002-2008 (ESS)

	Number of respondents N (total)	Number of observations N (total)	Managers: ISCO Category 1					
			N observations (total)	percent	CI (95percent)		N obs. (total)	Share of women percent
UK	6,023	6,769	980	14,86	13,65	15,49	370	36,19
Spain	4,186	5,365	449	8,82	7,85	9,47	147	32,97
Portugal	2,929	5,677	279	5,18	4,38	5,56	98	31,61
France	5,971	5,971	502	8,98	8,06	9,62	153	30,24
Belgium	4,686	5,217	616	11,87	10,94	12,84	207	33,59
Netherlands	6,402	6,402	956	14,85	14,05	15,97	285	27,65
Switzerland	4,226	6,326	535	8,78	7,85	9,33	157	25,7
Germany	7,362	8,882	574	6,37	6,04	7,12	127	21,97
Finland	3,07	6,288	688	10,98	10,17	11,83	218	31,69
Norway	2,827	5,709	448	8,18	7,43	8,96	142	31,65
Denmark	4,227	4,929	582	12,12	11,1	13,14	175	30,07
Sweden	5,071	5,916	372	6,3	5,67	6,97	106	28,49
Total (N)	56,980	73,451	6,981				2,185	

Note: only employed respondents aged 25 to 75

Source: European Social Surveys (2002, 2004, 2006, 2008), percentages are weighted with design weights; authors' calculations.

we decided not to impute or substitute missing values.[17] Furthermore, about 15 percent of responses on the dependent variable are lost due to selection criteria (age, employment, missing independent variables). Overall, the pooled data set contains 6,981 observations from 5,588 respondents in high-status occupations, of which 2,185 observations correspond to 1,743 women in high-status occupations.

The share of employees in high-status occupations in our sample varies widely between countries, from about 15 percent in the Netherlands to about 5 percent in Portugal. Interestingly, those figures correspond to the share of women as members of boards in the largest publicly quoted companies published by the European Commission (see Database on Women and Men in Decision Making (WMID), 2010), even if the concepts used are different. However, the share of women in high-status occupations ranges on average from 22 percent in Germany to 36 percent in the UK. Germany, Portugal, Spain, France, Norway, and Sweden have rather low shares of people in high-status occupations, whereas the UK, Belgium, the Netherlands, Finland, and Denmark have higher shares.

Individual and Macro-Level Measures of National Variations in Women's Underrepresentation in High-Status Occupations

The explanatory variables included in the estimations represent individual and firm-specific (Xi) as well as country-specific (Zj) characteristics. Based on the theoretical arguments and findings from the literature, the following variables are used as indicators at the individual level.[18]

Age (measured in years) as an indicator for the point in time of the life cycle is calculated for each wave of the survey. To examine the possibility of a curvilinear relationship, we also include a quadratic variable for age in our models. Several studies have shown an association between age and level of occupational status (see Holst et al. 2010 for Germany). Increasing age suggests increasing experience at company level; employees with a long company history are more often promoted. Therefore, we assume that older workers are more likely to be in high-status occupations than younger workers and that this holds true for both men and women.

Moreover, we include an indicator for immigrants, those born outside the country of interest.[19] Despite affirmative action policies and laws to stop discrimination against minorities, migrants are more dis-

17 Women were responsible for about two-thirds of the missing information on the dependent variable. Most of the respondents with missing information on the dependent variable (about 86 percent) state that they are not employed.

18 The Appendix (Table A1b) lists means and standard deviations for all (micro) individual-level independent variables for respondents in higher-status occupations.

19 Corresponding question: Were you born in [country]?

advantaged in the labor market (Zegers de Beijl 2002). Consequently, immigrants are less likely to be in high-status occupations than other workers. This holds especially true for female migrants who face a double burden.

To capture the extent of additional resources and possible pooling within the household, we include an indicator of whether the respondent is currently living in a legal partnership or not.[20] However, we do recognize that feminist research indicates that resources are not simply split equally in many households. But this indicator also suggests possible caretaking or further responsibilities within the household. As the literature suggests, men in high status-occupations are more likely to be legally married, but this is not the case for women in high-status occupations.

Previous education and current responsibilities are important for an individual's human capital and labor market continuity. This would especially be the case for women who have increased their human capital by taking part in higher education or on-the-job training and withdraw from own children. Two indicators relating to this are available, even if the extent and form of the influence of these factors on women being in employment varies markedly between countries and are also based on demand-side indicators[21]: they show whether women are highly-educated[22] and whether they currently have a child at home. Thus, in general employees with a higher education are more likely to hold a high-status occupation, but women with children are less likely to hold such a high-status occupation.

Due to data limitations, we are not able to include indicators on employment or training experience[23] but only on the volume of working hours, such as part-time employment (below 30 hours per week). Working hours impact substantially on the promotion of employees and their chances of being in a high-status occupation, but their quality and extent varies markedly between countries (see O'Reilly and Fagan 1998). In general, we hypothesize that part-time workers have a lower chance of being in a high-status occupation than those working full-time and this might well be true for both men and women.

Several studies also suggest substantial variation in the chance of employees being promoted with the size of the company, with employees having better

20 Corresponding question: Could I ask about your current legal marital status? Which of the descriptions on this card applies to you? We generated three categories: married, now without a partner (separated, divorced or widowed), and never married. The last two are single but with different legal statuses.

21 The model of employed women and securing employment is also based on national variations in labour demand.

22 Corresponding question: How many years of full-time education have you completed? And for 2004-2008: About how many years of education have you completed, whether full-time or part-time? Please report these in full-time equivalents and include compulsory years of schooling.

23 An indicator on training experience may show how the individual is valued as an important resource within the company, as well as that the individual possesses company specific skills, which increases one's human capital values.

opportunities in large than in small companies (Holst et al. 2009). Women can however expect to have a better chance of climbing the career ladder in smaller companies than in larger ones. Thus, we include the establishment size measured by the number of employees.[24]

Since employment conditions vary substantially between the private and the public sector, we also differentiate between inividual public and private-sector employment.[25] Leuze and Rusconi (2009), for example, suggest substantial differences in integration, promotion and training of professionals in private and public companies in Germany.

In order to comprehensively assess a variety of theoretically relevant macro-level gender influences, we collected data from a range of international sources discussed below. Descriptive statistics for all macro-level independent variables are listed in the Appendix (Table A2a and A2b). Data limitations nevertheless remain: harmonized macro-level gender measures available over time, which also represent theoretical concerns of interest, are exceedingly difficult to obtain. Thus, the data we included in our sample are aimed at comprehensively addressing the theoretical concern, given limitations in data availability. A structural characteristic of the national labor market that may influence women's improved access to higher occupations is considered using the percentage of women in the public sector[26] and the service sector size (Eurostat). The level of regulatory protection and collective coordination of working conditions is captured by an OECD synthetic indicator of the strictness of regulation on dismissals and the use of temporary contracts, ranging from 0 as least stringent to 6 as most restrictive. Collective coordination is measured by trade union density, which corresponds to the ratio of wage and salary earners who are trade union members divided by the total number of wage and salary earners (OECD 2009). Correlations of national macro-level characteristics are listed in the Appendix (Table A3). The highest correlation is found for the share of women in the service sector and trade union density (0.674***).

Estimation Method

The dataset contains information at the individual level (level 1) for men and women and at the national level (level 2) for each country. The dependent variable "high-status occupation" is measured at

24 Corresponding question: Including yourself, about how many people are/were employed at the place where you usually work/worked? We differentiate small firms (1-24 employees) from large firms (25 and more employees).

25 Private sector is defined by the type of organization in which the respondent works (Which of the types of organisation on this card do/did you work for?) and the sector in which the respondent works (What does/did the firm/organization you work/worked for mainly make or do?). Information on the type of organization is only available for 2008.

26 To our knowledge, no data on the share of women in the whole public sector are available for all the countries included in the analysis. We could only include data on the percentage of women in public administration, security, and social insurance (Eurostat 2009). The share of employees in 'public administration, security, and social insurance' (NACE=L) in total service sector varies between eight percent in Switzerland and Finland to 14 percent in France in 2008.

the individual level and takes the value 1 for respondents who hold a high-status occupation and 0 otherwise. The independent variables reside at the individual and national level. Thus, we ran multilevel analyses to test our hypotheses.[27] This technique accounts for the fact that individuals are clustered hierarchically within countries, which may cause underestimation of standard errors (Snijders and Bosker, 1999).[28] We use two levels of analysis: individuals are level-one units and country-year combinations are level-two units. Using ordinary regression would violate the assumption of independent error terms. People within one country share unobserved characteristics. Thus, we introduce a country-specific constant ui in the error term. For our models, the constant is modeled explicitly. Following the assumption that there is no covariation between ui and any independent variables, the estimation is unbiased and efficient. Using this kind of model, we are able to differentiate between individual and country-specific variance.

We estimate logit models referring to our binary dependent variable, whether respondents are working in high-status occupations. If i indicates the level-one unit (individual) and j the level-two unit (country-year), the random intercept model for our binary data is written as:

$$\text{Logit}\,(Y_{ij}) = a + bX_{ij} + c0Z_j + c1X_{ij}Z_j + U0_j + U1_jX_{ij} + E_{ij}$$

where Y_{ij} indicates a binary variable with 0=no high-status occupation and 1= high-status occupation, Xij are the variables at individual level (age, married) and Z_j the variables at country level (service sector, women in public sector). The term $c1X_{ij}Z_j$ in the fixed part is the interaction effect between the level-one variable X and the level-two variable Z. The regression coefficient c1 expresses how much the national context variable (Z) modifies the effect of the individual achievement (X) on occupational position (Y). This expresses how national context affects relations between individual-level variables (see DiPrete and Forristal, 1994).

27 The second analysis is based on bivariat descriptives.

28 Given the hierarchical structure of the data, it is not possible to use Ordinary Least Square (OLS) regression analysis. Moreover, such a dataset violates the assumption of independent explanatory variables because the national level variables are the same for all people within the same country. The use of multilevel regression analysis allows investigation of effects at different levels of analysis and at the same time. Multilevel models explain micro-level outcomes by showing that the parameters at the micro level are a function of the macro level and that this relationship can be expressed in terms of the macro-level variables.

4. Underrepresentation of Women in High-Status Occupations and National Variation

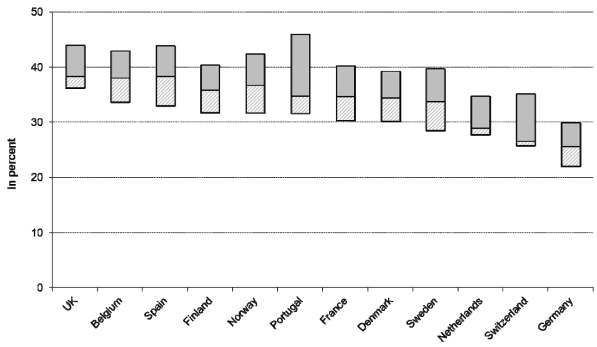
Looking at the representation of women at the top of the job hierarchy, our results confirm a continuous trend of high underrepresentation of women in top positions in the private and public sector for all twelve countries. Figure 1 shows the mean share and confidence interval (grey) of women in high-status occupations over all four years with values ranging from the UK with the highest shares of women in high-status occupations to Germany with the lowest shares of women in top positions.[29]

In the Netherlands and the Scandinavian countries of Norway, Finland, Denmark, and Sweden, a good share of women hold a high-status occupation. Bearing in mind that not only the labor market participation rate of women but also the share of employees in high-status occupation varies markedly between countries, the results might point to a quite diverse picture of the hierarchical occupational structure between countries. The Scandinavian countries of Norway, Sweden, Denmark and Finland as well as Switzerland and the Netherlands have a labor force participation rate of women of over 73 percent, whereas the participation rate of women in other countries was lower in 2008.[30] Further, in some countries, such as the Scandinavian ones, the share of

29 Those differences proved to be significantly different.

30 See OECD (2009a: 254) and OECD statistics (http://stats.oecd.org/Index.aspx?DataSetCode=GID accessed August 2011).

Figure 1: Average Share of Women in High-Status Occupations and Confidence Interval across 12 European Countries for 2002-2008



Note: only employed respondents aged 25 to 75
Source: European Social Surveys (2002, 2004, 2006, 2008), weighted with design weights; authors'

employees at the margins (high-status and low-status) might be small and in others it might be larger. The ratio of high-status and low-status employment varies extensively between countries as the section on polarization shows.

What is of interest here are the national differences. We examine the extent to which the variance of the share of women in high-status occupations can be attributed to the country level. Therefore, we will first show whether there is substantial variation between countries for all respondents in high-status occupations (Table 2, model A). Second, the influence of individual characteristics is regressed on all respondents in high-status occupations, including interaction terms for women (Table 2, models B and C). Finally, national institutional characteristics and cross-level interaction terms will be added to the model (Table 3, models D to G). For each of our models, we report odds ratios (OR), statistical significance (p-value), absolute value of z, intraclass correlation (ICC), levels 1 variance, and the log-likelihood as an indicator of model fit.

After selection of missing values on the independent variables, the total sample for estimation contains 66,024 observations, of which 6,432 are respondents in high-status occupations, among which 2,004 observations are for women.[31]

First, the empty model (Table 2, model A) shows to what extent there is significant between-country variation in the chance of being in a high-status occupation for men and women, which confirms our results from Figure 1. According to model A, the intraclass correlation[32] at country level is 0.054 (median odds ratio is 1.511). This means that there is not only variation in high-status occupations between individuals, but also between countries, although at a low level; this justifies our comparative approach.

Since we are interested in gender differences in high-status occupations, we further estimated the effects of country clusters[33] as well as their interaction with gender (not shown in the table) without individual-level characteristics. In continental coordinated market economies, such as Germany, Belgium, the Netherlands, and Switzerland, women seem to have lower chances of having a high-status occupation than in liberal market economies. Testing continental CMEs against all other countries confirms this result; women have significantly higher

31 We lost about 12 percent of our observations for men and 14 percent of our observations for women on the dependent variable for the whole time period.

32 The parameter estimated using the different variance component that can describe the relative importance of the two levels is the intraclass correlation coefficient (ICC). Normally, it is calculated as follows: rho = sigma_u / (sigma_u + sigma_e) and can be understood as the proportion of the total variance contributed by the country-level variance component and is (analogously) equivalent to the intracluster correlation (ICC). It shows the between-country variance as a percentage of the total variance. However, the parameter is calculated using the ado 'xtmrho' which follows the procedure by Snijders and Bosker (1999) ICC = are level variance / (sum of are level variances + (c(pi)^2)/3) (published by Lars E. Kroll).

33 Scandinavian CMEs: Norway, Finland, Denmark, Sweden; LMEs: UK; mixed cases: Portugal, Spain, France; continental CMEs: Germany, Belgium, Netherlands, Switzerland (Chow-test for women - chi2 (4): 1061,53, p-value: 0.000).

Table 2: Individual-Level Determinants of Being in a High-Status Occupation across 12 European Countries for 2002-2008 (Multi-Level Random Intercept Model, Odds Ratios)

	Model A	Model B	Model C
Individual Characteristics			
Women		0.584	0.413
		(-17.61)***	(-2.09)**
Age (in years)		1.063	1.053
		(7.53)***	(5.16)***
Age squared		0.999	0.999
		(-5.25)***	(-3.26)***
Children in household (yes)		1.052	1.052
		(1.57)	(1.26)
Marital status (married)		1.326	1.490
		(8.88)***	(9.61)***
Education (in years)		1.121	1.120
		(32.02)***	(26.27)***
Part-time employment (yes)		0.348	0.449
		(-20.06)***	(-9.86)***
Immigrant (yes)		0.813	0.833
		(-4.05)***	(-2.93)**
Establishment size (small)		1.442	1.401
		(13.06)***	(9.84)***
Work organization (public sector)		0.443	0.543
		(-23.31)***	(-13.48)***
Individual-level interaction terms			
Age * women			1.037
			(2.13)**
Age squared * women			0.999
			(-2.47)**
Children in household * women			0.950
			(-0.73)
Marital status * women			0.723
			(-4.99)***
Education * women			0.997
			(-0.44)
Part-time employment * women			0.676
			(-3.69)***
Immigrant * women			0.923
			(-0.74)
Establishment size * women			1.116
			(1.85)*
Work organization * women			0.633
			(-6.54)***
N level 1 (observation)	66,024	66,024	66,024
N level 2 (countries/year-countries)	12/48	12/48	12/48
Log-likelihood	- 20,707	-19,006	-18,949
Intraclass correlation (ICC) for level 2	0.054	0.053	0.053
Level 1 variance	0.433	0.428	0.429

*Note: Absolute value of z in parentheses; Indicators for year of survey included in estimation but not shown in table. Only employed respondents aged 25-75 without missing individual characteristics. * p < 0.10, ** p < 0.05, *** p < 0.01*
Source: European Social Surveys (2002, 2004, 2006, 2008), authors' calculations.

chances of being in a high-status occupation in LMEs such as the UK, in Scandinavian CMEs such as Norway, Finland, Denmark, and Sweden, and in mixed cases such as Portugal, Spain, and France.

In model B, the chance of being in a high-status occupation for men and women was regressed on all individual-level characteristics. Comparison of models A and B shows that the ICC and both the country-level and individual-level variances decrease slightly after the inclusion of individual characteristics. Apparently, the individual-level characteristics in our model account for variation in higher occupations between countries.[34] In other words, a share of the variance between countries can be explained by composition effects, due to the fact that each country is composed of different types of individuals. Some of whom are more likely to experience promotion. In ac-

34 The highest correlation of independent individual variables is -0.347*** for children in household and age.

cordance with the literature, we find that the respondents' age, years of education, marital status, and working in small establishments is positively associated with respondents' higher occupational status. However, immigrants, part-timers and those working in the public sector have lower chances of being in a high-status occupation. As we expected, women have lower chances than men of being in a high-status occupation, regardless of the respondent's other individual characteristics.[35]

In model C, we applied gender interaction terms for all individual variables to know what the effects are estimated to be for men[36] and for women in a high-status occupation.[37] However, the significance of the difference between effects for men versus women, variable by variable, is given by the significance of the interactions with sex. Thus, the effect of children at home, years in education and immigrant status are not different for men and women. But the results show that especially number of working hours, establishment size and work organization, as well as family status make a difference for women. For men, being married has a significant positive effect on being in a high-status occupation. However, this effect is negative for women. Male employees in the public sector have lower chances of being in a high-status occupation. It almost halves men's odds ratio of being in a high-status occupation. But interestingly, the significant interaction term of 0.633 shows that the effect of public sector on being in a high-status occupation is even more negative for women than for men. Thus, from a micro-level perspective women's chances of being promoted in the public sector are much smaller than those for men.[38] The same is true for employees working less than 30 hours a week (part-timers). Male employees working fewer hours have lower chances of being in a high-status occupation, but women's chances are even smaller if they limit their working hours.[39] The situation changes if the establishment size is considered: Men working in small companies have with an odd ratio of 1.401 significantly higher chances of being in a high-status occupation. The positive significant interaction term of 1.116 shows that women have even better chances of being promoted in small companies than men.[40]

In the following section, the variance left across countries is explained, after controlling for various compositional effects, in the share of high-status occupations of individuals in twelve coun-

35 A random intercept and coefficient model using sex as random coefficient showed similar results in terms of level of odds ratio and statistical significance.

36 The effect for men is given by the odds ratio on the additive effect of the variable interacted with sex.

37 Chow test Model C: chi2(10)= 188,67, 0.000.

38 This does however not offset the macro-level effect that in general expansion of service sector including public employment enhances women's chances of holding higher positions.

39 Changing the reference category showed that for both factors the effect is significantly negative for women. Results are not shown.

40 Further results showed that the effect of small establishments is significantly positive for women.

tries. Firstly, we examine the impact of the national-level variables separately.[41] Table A4 in the Appendix shows the results of the multi-level random intercept model where country level variables are included one by one separately. Each row represents one model and the models all control for all individual-level variables as well as for individual interaction effects (as shown in Table 2, model C but not shown in Table A4). Results show that the service sector size has a statistically significant effect on being in high-status occupations. The level of employment in the service sector has a positive effect on the promotion of employees in the occupational hierarchy as shown in the first row of Table A4. Further, countries with a large percentage of women in the public sector are countries where employees have significantly lower chances of being in a high-status occupation. The strictness of regulation on dismissals and the use of temporary contracts as well as trade union density have a negative significant impact on being in high-status occupations across countries. However, we have to go a step further to assess the impact of the national characteristic separately for men and women.

In the next step, country variables that were of significant statistical and theoretical relevance are simultaneously included in the model with gender interaction effects. Further, cross-level interactions are included in the models. In models D, E, F and G (Table 3), we test the impact of these sets of characteristics at the national level including individual as well as cross-level interaction terms between individual- and national-level characteristics. Table 3 shows the results of the multi-level random intercept model where country level variables are included simultaneously, and all models control for all individual level variables (not shown in the table). We expected that the larger the service sector, the higher the percentage of women in high-status occupations. In this respect, hypothesis 1a is verified as shown in model D (Table 3). The positive significant interaction term of 1.037 shows that women have even better chances than men to reach high-status occupations in countries with a larger service sector, as is the case in Sweden, Norway, Netherlands, France and Britain. After differentiating the service sector argument and including employment of women in the public sector in the model, it appears that the effect of the size of service sector remains stable (model E, Table 3). As to the effect of a high percentage of women in the public sector, as is the case in Norway, Denmark, Finland and France, men have lower chances of being in a high-status occupation in such countries. The interaction effect is positive but statistically not significant; this means that women have probably higher chances of being in high-status occupations in countries with a high percentage of women in the public sector. Thus, hypothesis 1b is only partly verified. We expand our analyses and include the indicators on employment protection regulation and trade union density, as we hypothesize that in countries with a high trade union density (Hypothesis 2a) and strong employment protection (Hypoth-

41 This estimation strategy is suggested and used by Chung and van Oorschot (2010).

Table 3: Individual, Country and Cross-Level Determinants of Being in a High-Status Occupation across 12 European Countries for 2002-2008 (Multi-Level Random Intercept Model, Odds Ratios)

	Model D	Model E	Model F	Model G
National Characteristics				
Size of service sector	1.014	1.062		
	(1.11)	(3.98)***		
Percentage of women in public sector		0.959	1.000	0.989
		(-3.55)***	(0.02)	(-1.20)
Trade union density			0.993	
			(-1.59)	
Index of employment protection				0.757
				(-4.53)***
Cross-level interactions				
Size of service sector * women	1.037			
	(5.00)***			
Women in public sector * women		1.003		
		(0.50)		
Trade union density * women			1.015	
			(1.87)*	
Employment protection * women				0.870
				(-3.49)***
N level 1 (observations)	66,024	66,024	66,024	66,024
N level 2 (countries/year-countries)	12/48	12/48	12/48	12/48
Log-likelihood	-18,935	-18,940	-18,945	18,928
Intraclass correlation (ICC) for level 2	0.047	0.044	0.060	0.042
Level 1 variance	0.402	0.391	0.460	0.378

Note: Individual indicators and interaction terms included in estimation but not shown in the table. Absolute value of z in parentheses. Indicators for survey year included in estimation but not shown in table. Only employed respondents aged 25-75 without missing individual characteristics.
** p < 0.10, ** p < 0.05, *** p < 0.01*
Source: European Social Surveys (2002, 2004, 2006, 2008), authors' calculations

esis 2b), women have higher chances of being in a high-status occupations (model F and G, Table 3). We test whether the extent to which the respondent's sex affects occupational status is influenced by employment in the public sector, union density, and employment protection. The results indicate that strong collective coordination as is the case in Scandinavian countries such as Sweden, Denmark and Finland, has positive repercussions on women's occupational advancement and that union participation by workers (male and female) can contribute to setting gender equality at the top of the occupational hierarchy on the political agenda. High union density is positively associated with a higher chance of women being in a high-status occupations. Results for the degree of employment protection, however do not point in the same direction. In countries characterized by a high employment protection, such as Germany and France, a negative effect on men's as well as on women's chances of having a high-status occupation can be found; this effect is less pronounced in Scandinavian countries (with the exception of Norway) which show medium levels of employment protection while the low employment protection levels in liberal market economy and welfare state regime countries such as UK and Ireland are more favorable for being in a high- status occupation. Thus, the first part of hypothesis 2 is verified and the second part is not.

To sum up, findings so far show that chances for female representation in high-status occupations are significantly enhanced by a large service sector (com-

prising private and public employment) and high trade union density. There is also evidence for a specific positive effect of high female presentation in the public sector although this effect is not statistically significant. Thus, not only liberal market economies such as the UK but also some countries belonging to the CME group such as Sweden (and France as a mixed case) show good chances for gender equality in higher positions, whereas countries like Germany characterized by a smaller service sector, not least due to a less service intense welfare regime and a strong manufacturing economy, fare less well in this respect.

5. Effects of National Characteristics on the Degree of Polarization of Women in Low-Status and High-Status Occupations

In the following section, we focus on the situation of women only, looking at their position within the occupational hierarchy by comparing the share of women in high-status occupations with that of women in low-wage employment. Taken together, both the results for the top tail of the gender occupational distribution and for the bottom tail should allow for a more comprehensive analysis of the interaction between gender and class inequality in different countries.

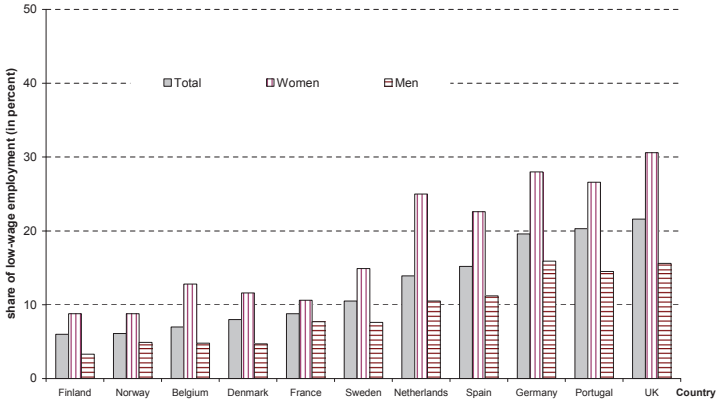
Obviously, the extension of the service sector has had a different impact on women and men at the bottom tail of the occupational hierarchy and on the income distribution. As Figure 2 indicates, the share of women in low-wage employment is higher than the share of men for all countries considered (see also Mason and Salverda 2010).

Apart from this general finding indicating substantial disadvantages of women in the labor market, important between-countries variations can be observed. While the UK, a state with a liberal economy stands out with the highest share of women in low-wage employment and an overall high share of low-wage employment, the Scandinavian countries like Finland, Norway Denmark, but also Belgium and France show the lowest shares not only for women but also for men.

In order to evaluate how equality at the top might be paired with inequality at the bottom, we consider in the following the influence of selected national characteristics[42] on the percentage of women in low-wage employment. As Figure A1 in the Appendix shows, there are two different patterns of distribution of women across the wage hierarchy: In LMEs like the UK, we find a high share of women in

42 Switzerland is excluded due to data restrictions.

Figure 2: Share of Low-Wage Employment by Gender across 11 European Countries in 2006



Note: A fulltime employee is defined as a low wage earner when his/her annual gross earnings are less than two thirds of the annual full-time median gross-earnings (Low wage : ≤ 2/3 of median), Source: Eurostat SES 2006, authors' calculations

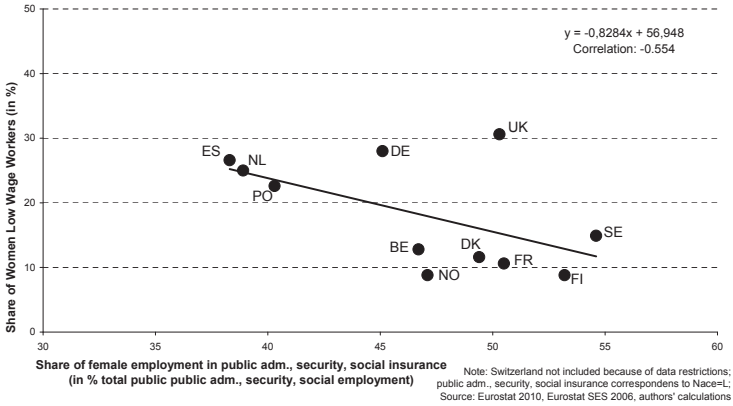
low-wage employment as well as a high percentage of women in management. In Scandinavian CMEs, the share of women in high-status occupations is low and only a few women are in low-wage employment. Thus, the question arises whether the same factors that exclude women from top positions actually channel women into low-wage employment?

As our findings show, service sector and especially public sector size make a difference here: With an increasing public sector, the share of women in low-wage work decreases (not shown in the figures). More specifically, if the share of women in public sector employment increases, the share of women in low-wage employment decreases (Figure 3).

Confirming hypotheses 3a, we find a cluster of Scandinavian CMEs as well as France and Belgium, all representing countries which are characterized by a large public sector and a low share of the female full-time workforce in low-wage jobs. Conversely, countries such as Germany and the UK, which are characterized by a relatively small public sector, show a relatively large percentage of women as low-wage workers. Certainly, the preceding analyses include only full-time employed women due to data restrictions. Excluding part-timers has important implications given that the share, quality and integration of part-time employment vary markedly across the chosen countries[43]. If a large proportion of

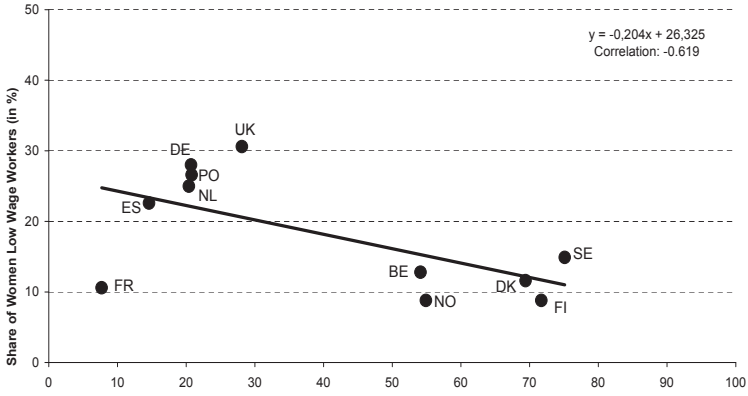
43 Part-time participation rate of women in percent of total employment in 2006: Portugal (15.8 percent), Finland (19.2 percent), Spain (23.2 percent), France (30.3 percent), Denmark (35.4 percent), Sweden (40.2 percent), Belgium (41.1 percent), UK (42.5 percent), Norway (45.2 percent), Germany (45.6 percent) and the Netherlands (74.7 percent) (Eurostat, 2011, http://epp.eurostat.ec.europa.eu/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tps00159&language=de (accessed August 2011)).

Figure 3: Women in Public Employment and Low-Wage Women Workers across 11 European Countries in 2006



Note: Switzerland not included because of data restrictions; public adm., security, social insurance correspondens to Nace=L;
Source: Eurostat 2010, Eurostat SES 2006, authors' calculations

Figure 4: Trade Union Density and Low-Wage Women Workers across 11 European Countries in 2006



Note: Switzerland not included because of data restrictions;
Density is calculated as ratio of wage/salary earners that are trade union members, divided by the total number of wage and salary earners
Source: OECD statistics 2010, Eurostat SES 2006, authors' calculations

the female workforce in the public sector is part-time, it may impact on the level of trade union density. Further, in countries such as the UK, part-time work is primarily used as a secondary worker model for low-wage jobs (predominant in low-paid service employment) while in others such as the Netherlands and the Scandinavian

countries as a retention model of work/family reconciliation.

Finally, confirming hypothesis 3b, Figure 4 shows that high trade union density goes hand in hand with lower shares of women as low-wage workers. Obviously, collective coordination and worker participation works in favor of a more even distribution of women in the occupational hierarchy, and at the same time contributes to a less polarized occupational structure. Furthermore, in countries where a large public sector employs large numbers of women, they tend to be concentrated in the middle of the occupational hierarchy. This pattern of female employment, which is prominent in Scandinavian CMEs, might also have positive effects on the distribution of power between men and women in labor relations and enhance the bargaining power of women on the shop floor level.

Overall, in liberal market economies such as the UK, women have higher chances of being in a high-status occupation, but the percentage of women in low-wage employment is also higher, resulting in a higher polarization of women's employment than in Scandinavian CMEs. Germany as continental CME shows a polarized pattern too, although less so than the UK. Finally, France resembles the Scandinavian pattern of a smaller percentage of women in the low-wage sector, but it deviates in that women are better represented at the top than in the Scandinavian CMEs. While the low level of low-wage employment (both for men and women) might be attributed to the impact of the country's relatively high minimum wage, the good performance of France on female representation in higher positions occurs irrespective of a low trade union membership. This however, might be compensated for by relatively high street-level activism and strong union influence on wages and career and social issues (Kroos and Gottschall 2011).

6. Discussion

Despite the persistent underrepresentation of women in top leadership positions, Western European countries nevertheless show significant diversity in women's chances of climbing the occupational hierarchy and/or being caught at the bottom. In our analysis of sex occupational segregation in post-industrial countries, we have addressed arguments about the impact of political economies and welfare regimes on gender equality in the labor market, broadening the scope to include private and public-sector employment as well as individual and institutional factors. Bearing in mind that market economies generate social stratification by class and gender, we also take into account the degree of social polarization by analyzing the relationship between women in high-status and low-status occupations. All in all, this enlarged perspective produces interesting results that contribute more nuanced explanations to the debate on gender equality in the la-

bor market. Several findings seem worth highlighting here.

First, our findings indicate that a large service sector enhances women's chances to hold high-status occupation; this lends support to former research attributing a favorable role to postindustrial restructuring (Charles 2003). A large service sector however, can be found in both liberal market economies like the UK and countries with a generous welfare state such as the Scandinavian countries and France. While we did not find strong support for a significant positive effect of public sector employment as compared to private sector employment, other institutional factors prevalent in the Scandinavian countries and France, as i.e. high union influence seem to have a positive impact on women's chances at the top. Hence, referring to the controversy whether Scandinavian welfare states or liberal market economies are more 'women friendly' our results call for more differentiation: Rather than opposing LMEs' and CMEs' potential to enhance gender equality at the top of the occupational ladder, a relevant line can be drawn between the above named countries on the one hand and less service intense welfare states and economies such as Germany on the other.

To this background our findings again underscore the importance of differentiating the broad-stroke category of coordinated market economies with respect to gender, since differences between continental and Scandinavian market economies are quite pronounced. Obviously, continental coordinated market economies such as Germany stand out as providing women poor chances of reaching top positions, whether in the public or the private sector—indeed much poorer chances than in LMEs such as the UK, the Scandinavian CMEs, and mixed cases such as France.

Second, regarding the assessment of gender equality, a perspective focusing on top positions only obviously is not able to capture the complexity of women's labor market integration. Although many researchers and politicians see comparisons of women's chances of reaching the top of the occupational ladder to their male counterparts' chances as a good yardstick of gender equality, we hold that gender equality in the labor market has to be analyzed in the broader context of social stratification. To this end, our analysis has been extended to the concentration of women in low-wage employment. The results point to negative effects of a polarized occupational and wage structure as can be found in the UK and underline the more general insight that in reality, gender and class are interrelated (Acker 1988). Factors mitigating class effects such as the more condensed wage and occupational structure in the Scandinavian welfare states and in France obviously work in favor of the majority of working women, who bear lower risks of ending up in a low-wage bracket. This broader perspective also allows a more nuanced assessment of the role of public sector employment for gender equality: the positive effect of a large public sector obviously is more pronounced at the lower and medium than at the top occupational levels.

Irrespective of the insights reported here, some shortcomings of this type of

broad comparative analysis should be mentioned. The institutional indicators applied here such as employment protection and union density represent a very rough measure and often do not fully capture national specificities relevant to the research question. For example, the union density measure does not adequately capture the political influence of unions and the strictness of employment protection might produce different social effects depending on the labor market policy profile. Here, qualitative comparative analysis and explorative case studies will provide more nuanced insights. Also, it might be useful in further research to consider the private and the public sector separately and to include reliable data on part-time employment in order to see whether the explaining factors for women's access to high-status occupations have the same effect in each sector. Last but not least, coming back to the representation of women in higher positions, further research allowing for the inclusion of aggregated data on the company level is needed in order to better assess the effect of differences between countries in terms of economic structure.

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Appendix

Table A1a: Descriptive Statistics for Individual-Level Characteristics across 12 European Countries for 2002-2008 (Managers only)

Micro- Level Variable	Description	Minimum	Maximum	Mean	SD
Sex	Female respondent	0	1	0.312	0.463
Age	Age of respondents (in years)	25	75	49.831	13.116
Children at home	Children still living at home	0	1	0.425	0.494
Marital status	Respondent is legally married	0	1	0.687	0.464
Years in education	Years of full-time education	0	48	13.850	4.175
Part-time employment	Working hours below 30 hours a week	0	1	0.072	0.258
Immigrant	Born outside the country	0	1	0.079	0.269
Establishment size	Establishment has 1-24 employees	0	1	0.533	0.498
Type of work organization	Public sector employment	0	1	0.208	0.406
Supervisor	Respondent is responsible for supervising employees	0	1	0.798	0.400
Responsibility for employees	Number of employees responsible for	0	10,000	42.251	257.562

Source: European Social Surveys (2002, 2004, 2006, 2008), unweighted results, N=6,981 observations for managers, authors' calculations

Table A1b: Descriptive Statistics for 12 European Countries for 2002-2008 (All Respondents)

Micro- Level Variable	Description	Minimum	Maximum	Mean	SD
Country (all respondents)	BE - Belgium	0	1	0.071	0.256
	CH - Switzerland	0	1	0.086	0.280
	DE - Germany	0	1	0.120	0.326
	DK - Denmark	0	1	0.067	0.250
	ES - Spain	0	1	0.073	0.260
	FI - Finland	0	1	0.085	0.279
	FR - France	0	1	0.081	0.273
	UK - United Kingdom	0	1	0.092	0.289
	NL - Netherlands	0	1	0.087	0.282
	NO - Norway	0	1	0.077	0.267
	PT - Portugal	0	1	0.077	0.267
	SE - Sweden	0	1	0.080	0.272

Source: European Social Surveys (2002, 2004, 2006, 2008), unweighted results, N=73,451, observations for all respondents, authors' calculations

Table A2a: Description of Macro-Level Characteristics across 12 European Countries for 2002-2008

Variable	Measures and Data Source	Minimum	Maximum	Mean	SD
Size of service sector	Share of service sector employment in total employment *(EUROSTAT)*	56.20	76.90	70.87	4.98
Women in public sector	Share of women in public administration, security and social insurance employment *(EUROSTAT)*	35.50	55.80	46.22	5.94
Index of employment protection	Synthetic employment protection indicator of the strictness of regulation on dismissals and the use of temporary contracts *(OECD Stat Extracts)*	0.75	3.67	2.16	0.76
Trade union density	Ratio of wage and salary earners who are trade union members, divided by the total number of wage and salary earners *(OECD Labour Force Statistics)*	7.70	78.10	38.10	24.05

Source: OECD; EUROSTAT; unweighted results, N=48 observations for 12 countries, authors' calculations

Table A2b: Description of Macro-Level Characteristics across 11 European Countries for 2006

Variable	Measures and Data Source	Minimum	Maximum	Mean	SD
Women in low-wage employment	Female low-wage workers as a percent of all female full-time workers *(EUROSTAT, SES 2006)*	8.80	30.60	18.21	8.39
Women in public sector	Share of women in public administration, security and social insurance employment *(EUROSTAT)*	38.30	54.60	46.76	5.61
Trade union density	Ratio of wage and salary earners that are trade union members, divided by the total number of wage and salary earners *(OECD Labour Force Statistics)*	7.70	75.10	39.77	25.44
Women in management	Share of women as corporate managers (directors) and managers of small enterprises (EC, Database on Women and Men in Decision Making (WMID))	21.00	40.00	29.63	6.18

Note: Switzerland excluded because of data restrictions.
Source: EUROSTAT; EC; OECD, unweighted results, N=11 observations for 11 countries, authors' calculations

Table A3: Correlations for Macro-Level Characteristics across 12 European Countries for 2002-2008

National Characteristics	Size of Service Sector	Women in Public Sector	Index of Employment Protection	Union Density
Size of service sector	1			
Women in public sector	0.589	1		
Index of employment protection	-0.617	-0.319	1	
Trade union density	-0.319	0.674	-0.238	1

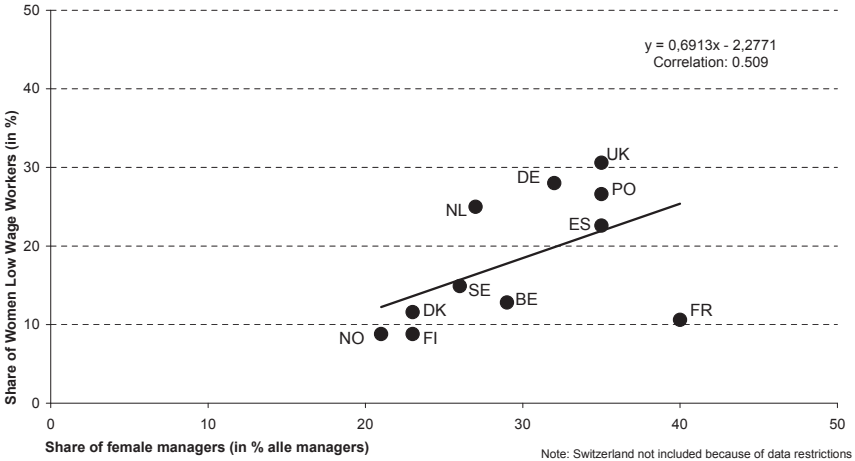
Source: OECD; EUROSTAT; unweighted results, N=48 observations for 12 countries, authors' calculations

Table A4: Contextual-Level Determinants of Being in a High-Status Occupation across 12 European Countries for 2002-2008 (Multi-Level Random Intercept Models)

National characteristics	Odds ratio	Std. err.	z (p)	Intraclass correlation (ICC) for level 2
Size of service sector	1.027	0.013	2.10**	0.046
Women in public sector	0.982	0.010	-1.71*	0.060
Trade union density	0.994	0.002	-2.22**	0.060
Index of employment protection	0.720	0.043	-5.44***	0.043

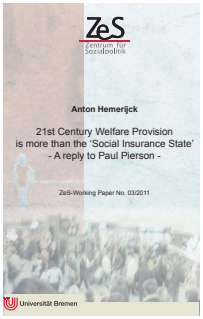
Note: Individual indicators included in estimation but not shown in the table. Only employed respondents aged 25-75 without missing individual characteristics.
** p < 0.10, ** p < 0.05, *** p < 0.01*
Source: European Social Surveys (2002, 2004, 2006, 2008), authors' calculations.

Figure A1: Women in Management and Women in Low-Wage Employment across 11 European countries in 2006



Note: Switzerland not included because of data restrictions

Source: European Commission, Database on Women and Men in Decisionmaking (WMID), 2010, Eurostat SES 2006, authors' calculations



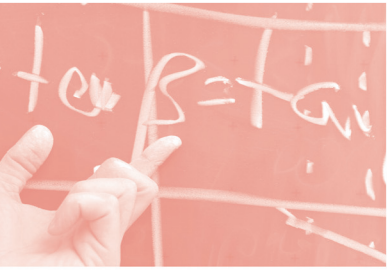
Anton Hemerijck

21st Century Welfare Provision is more than the 'Social Insurance State' - A reply to Paul Pierson -

Hemerijck, Anton, 2011: *21st Century Welfare Provision ist more than the 'Social Insurance State'.* ZeS-Arbeitspapier Nr. 03/2011. Bremen: Zentrum für Sozialpolitik, Universität Bremen.

Dieser Artikel beschäftigt sich mit dem bedeutenden Vortrag „The Welfare State Over the Very Long Run", den Paul Pierson anlässlich der Herausgabe des Oxford Handbook of the Welfare State am 8. November 2010 an der London School of Economics gehalten hat (vgl. Pierson 2011). Piersons Erklärung für die seiner Meinung nach bemerkenswerte Stabilität des Wohlfahrtsstaates in den von "permanenter Austerität" geprägten vergangenen drei bis vier Jahrzehnten basiert im Wesentlichen auf der Angst der politischen Eliten vor der Abstrafung an der Wahlurne und dem Widerstand organisierter Interessen gegen Sozialreformen.

Vorliegender Aufsatz beleuchtet sowohl die empirischen als auch die theoretischen Grenzen dieser These eines wandlungsresistenten Wohlfahrtsstaates. In empirischer Hinsicht weist er auf eine nicht unerhebliche Anzahl von qualitativen Veränderungen hin, etwa auf der Ebene der Sozialversicherung, makroökonomischer Politikprioritäten, der Arbeitsmarktpolitik und -regulierung, der Beziehungen von Arbeitgebern und Arbeitnehmern, Renten, sozialen Dienstleistungen und der Sozialverwaltung. Die Beobachtung grundlegender Sozialreformen werfen wichtige theoretische Fragen für das vergleichende Studium wohlfahrtstaatlicher Entwicklung auf: Was unterscheidet politische Entscheidungsträger und die institutionellen Bedingungen, unter denen sie agieren, von dem anscheinend weitaus üblicheren Fall von Reformträgheit, wenn diese Akteure - entgegen der landläufigen Meinung - trotz einer Vielzahl institutioneller Hindernisse und negativer politischer Anreize umfassende Reformen anstoßen? Als Schlussfolgerung argumentiert dieser Aufsatz, dass die Lehren vergangener Performanz, neue Ideen und Expertisen sowie anregende Reformerfolge in vielen Ländern als wichtige Mechanismen gelten müssen, mit denen sich wohlfahrtstaatliche Veränderungen erklären lassen.



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