Gender Differences in Earnings and Occupational Attainment in Europe

Yekaterina Chzhen

PhD

University of York

Department of Social Policy and Social Work

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Abstract

Despite significant increases in female labour market participation and educational achievement in the EU in recent decades, women still trail men in terms of employment rates, earnings and occupational attainment. This thesis is about the interplay between the characteristics of individuals associated with productivity, labour market returns to these characteristics, and country-level work/family reconciliation policies in influencing female employment and gender inequalities in the labour market in the enlarged EU. It explores variations in the ways EU member states support individuals in combining work and family life and the extent to which these policies promote gender equality in the labour market in terms of pay and occupational attainment. The approach of the thesis is quantitative and comparative, based on the secondary analysis of micro social datasets and comparable policy indicators, using advanced statistical techniques. It is also multi-disciplinary, drawing on the literature and methods from the fields of labour economics and comparative social policy.

Results from the study suggest that the existing work-family reconciliation policies in the EU have not caught up sufficiently with the dramatic advances in women's labour market position. To various extents, they retain elements of the traditional male breadwinner model. Even in the Nordic countries, which rank highest on most measures of gender equity in work/family reconciliation policies, women tend to earn less than men, on average, and to work in a narrower range of occupations than their male counterparts. At the other extreme, Eastern-European and Mediterranean countries tend to have more traditional gender-role attitudes and a policy environment less compatible with the dual-earner/dual-carer model of the family. However, women who work, particularly those who work full-time, typically enjoy more equality with men in terms of their wages and occupational attainment.

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Declaration

An earlier version of the analysis of gender wage gaps across the distribution in Britain, presented in Chapter 5, appears in IZA Discussion Paper No. 4331 (2009) in co-authorship with my supervisor Prof. Karen Mumford. I analysed and composed all the work in this thesis myself.

Chapter 1 Introduction

Gender equality is one of the fundamental rights and common values of the European Union. According to Article 23 of the EU Charter of Fundamental Rights: “equality between men and women must be ensured in all areas, including employment, work and pay” (2000, p.13). Despite significant increases in female labour market participation and educational achievement in the EU in recent decades, women still trail men in terms of employment rates, earnings and occupational attainment (European Commission, 2010). Gendered division of labour in households, with men as primary earners and women as carers and secondary earners, may partly account for perpetuating these gender inequalities.

This thesis is about the interplay between the characteristics of individuals associated with productivity, labour market returns to these characteristics, and country-level work/family reconciliation policies in influencing female employment and gender inequalities in the labour market in the enlarged EU. It seeks to explore variations in the ways EU member states support individuals in combining work and family life and the extent to which these policies promote gender equality in the labour market in terms of pay and occupational attainment. It investigates the hypothesis that by helping parents combine paid work with caring for children, work-family reconciliation policies may have the potential to reduce the negative consequences of motherhood for women’s careers.

The approach of the thesis is quantitative and comparative, based on the secondary analysis of micro social datasets and comparable policy indicators, using advanced statistical techniques. It is also multi-disciplinary, drawing on the literature and methods from the fields of labour economics and comparative social policy. The thesis makes an original contribution to the comparative welfare state research area by examining the cross-country variation in work/family reconciliation policies and gender-role attitudes, and by analysing individual level determinants of gender wage gaps and occupational gender segregation in the enlarged EU.

This introductory chapter states the research questions of the thesis; overviews the structure of the study; and briefly discusses the data sources, sample restrictions and country choice.

Objectives of the thesis

To achieve its overall aim, the study has four broad research questions:

- What kind of relationship is there between work/family reconciliation policies and gender inequality in the labour market?
- To what extent is recent motherhood related with activity transitions from full-time work and, indirectly, with occupational downgrading?
- In what measure are gender wage gaps across the distribution due to gender differences in the distribution of individual characteristics and the returns to these characteristics? What would the gender wage gaps be if all women worked full-time?
- How does occupational gender segregation vary across the EU?

In addressing the first research question, the thesis focuses on the relationship between work/family reconciliation policies and prevailing gender-role attitudes on the one hand and female labour supply and gender inequality in the labour market on the other. The study investigates variation in the generosity, duration and gender neutrality of parenthood leave schemes; availability and affordability of childcare for pre-school children; gender neutrality of tax/benefit systems in relation to secondary earners in couples; and prevailing gender-role attitudes across 25 European countries, including the new EU accession states. The purpose of the analysis is to create a composite indicator of work/family reconciliation policies which is relevant not only to female participation but also to gender inequality in the labour market in terms of gender wage gaps and occupational segregation. Furthermore, the study explores associations between the constructed summary index and female employment rates, average gender wage gaps, and occupational segregation.

To address the second research question, the thesis analyses the association between recent childbirth and the relative risks of switching to part-time, inactivity or unemployment for full-time working women in a comparative perspective, using

micro-level longitudinal data. At the same time, it investigates the relationship between major transitions in working hours and the risk of occupational downgrading, separately for men and women. This helps clarify if the risk of switching from longer to shorter hours after childbirth could lead to concurrent occupational downgrading for women. Furthermore, gender differences in the risk of occupational downgrading upon switching from full-time to part-time work are investigated.

With respect to the third research question, the study examines the differences in the hourly earnings distributions of men and women working full-time, as well as the determinants of full-time work for women. The investigation focuses on Britain and five other EU countries that have diverse work/family reconciliation policies and different levels of earnings inequality (Italy, Spain, France, Poland, and the Czech Republic). Since female employment rates and the shares of full-time employment vary considerably across the EU, in order to make the cross-country results comparable this study examines gender wage gaps in the earnings distributions both before and after accounting for women's unequal probability of working full-time. The study seeks to reveal to what extent the separate contributions of differences in productive characteristics and differences in returns to these characteristics to the overall gender gap in the distribution of earnings differ across countries with diverse work/family reconciliation policies.

To tackle the fourth research question, the study investigates gender differences in occupational attainment in 25 European countries and the extent to which the cross-national variation in occupational gender segregation is related to differences in other macro-level factors. As the female labour force participation rate (particularly that of mothers) has been the recent focus of comparative research on work-family reconciliation policies, there has been less comparative research into the types of paid jobs that men and women do. This thesis seeks to identify an index measure of occupational gender segregation that is most suitable for cross-country comparative research and explore the patterns of variation in the index across the 25 studied countries.

Structure of the thesis

This thesis consists of a literature review chapter, four empirical chapters addressing the research questions outlined above, and the conclusion chapter which draws the main findings together. Each of the research chapters presents findings from original complex statistical analyses.

Chapter 2 reviews comparative literature on the welfare state and work-family reconciliation policies in Europe, thus placing the thesis in a theoretical context and demonstrating how it seeks to address the research gaps in the literature. It begins by highlighting the milestones reached in comparative welfare state research from gender-blind analysis of welfare regimes, to its feminist critiques, and the new gender regime typologies. It then reviews the relatively scarce welfare state literature focusing on new EU accession states and emphasizes the need to include these countries in the mainstream European comparative research.

Chapter 3 then reviews the work-family reconciliation policies and attitudes to gendered division of labour in 25 European countries. In doing so, it sets the policy context for multivariate research presented in the following chapters. It then goes on to construct a combined indicator of work-family reconciliation policies and gender-role attitudes and analyse its bivariate relationships with female participation rates, gender wage gaps and occupational segregation.

Chapter 4 examines labour market and occupational transitions of men and women in 13 European countries. It starts by reviewing the available literature on the timing of women's return to work after childbirth and the research on part-time work and occupational downgrading. By considering both the activity changes associated with the birth of a new child and occupational downgrading (by skill and/or occupational wage) concurrent with transitions from full-time to part-time work for both men and women in the same study, this chapter aims to fill the gap in the comparative literature.

Chapter 5 examines the differences in the log hourly wage distributions of men and women working full-time in Britain, Italy, Spain, France, Poland and the Czech

Republic. It first studies the determinants of women's participation in full-time work and discusses the differences in earnings potential between full-time women and all women. The gender wage gaps that would be observed if all women worked full-time are then simulated. After that the chapter goes on to analyse the gender differences in the distribution of personal characteristics and the returns to these characteristics among full-time workers in the studied countries. Simulating the counterfactual distribution of full-time gender wage gaps, it shows the gender wage gaps that would be observed if women had their own distribution of characteristics, but were rewarded for them like men.

Chapter 6 focuses on the differences in occupational distributions of men and women in 25 European countries and studies the cross-national variation in occupational gender segregation levels using index measures and log-linear methods. After discussing recent research on occupational gender segregation, it proceeds to review the relevant economic and sociological theories of segregation as well as measurement issues in segregation studies. The chapter ranks the studied countries based on the chosen indices of segregation and discusses the pattern of cross-country variation with respect to the work/family reconciliation policies analyses in Chapter 3. Substantial levels of occupational gender segregation are found in all 25 countries. It then explores the extent to which differences in part-time work rates and the education levels of the labour force account for the cross-national variation in the association between occupation and sex, using log-linear modelling.

Finally, the concluding chapter summarises the main findings across all the chapters, reiterates the theoretical and empirical contributions of the thesis to existing research, states the overall limitations of the study, considers the policy implications of the thesis and suggests possible directions for further research.

Overall, this thesis concludes that the existing work-family reconciliation policies in the EU have not caught up with the dramatic advances in women's labour market position, as they retain elements of the traditional male breadwinner model to varying extents. In order to achieve gender equality in the labour market with respect to not only employment levels, but also pay and job status, employment and family

policies need to explicitly promote a dual-earner/dual-carer model of the family in which both men and women do unpaid caring and paid labour market work. Otherwise, women have to face a trade-off between having children and pursuing a career, which results either in the situation of low employment and low fertility (e.g. Southern-European countries) or in the scenario of relatively high employment and fertility combined with relatively high levels of occupational segregation and gender wage gaps (e.g. Scandinavian countries).

Data sources and subjects of study

This thesis relies on a variety of micro-level secondary data sources that provide comparable data for the studied countries. The 2007 round of the EU Statistics on Income and Living Conditions (EU-SILC) is used to study gender differences in earnings and occupational attainment. The in-depth study of gender differences in earnings distributions in Chapter 5 uses data for Britain from the British Household Panel Survey. Data on gender-role attitudes are taken from the 1999 wave of the European Values Study (EVS). Data on labour market activity changes and occupational transitions (see Chapter 4) are taken from the European Community Household Panel (ECHP) 1994-2001.

The thesis also draws on a range of sources of macro-level statistics. Data on family policy indicators, such as duration and generosity of maternity, paternity and parental leave, government spending on childcare and early education services, and childcare costs for model families are taken from the Organisation for Economic Cooperation and Development (OECD) Family Database. The statistics on childcare enrolment rates are derived from the EU-SILC individual database. This provides a more harmonised set of statistics than can be obtained from the OECD. The indicators of gender neutrality of tax/benefit systems are computed using the OECD Tax/Benefit Calculator.

Combining detailed micro-level analysis of individual labour market transitions, earnings and occupational attainment with aggregate analysis of the cross-national variation, the subjects of this study are both individuals and countries. The micro-level analysis focuses on prime-age individuals 25 to 55 years old. From the cross-

country comparative perspective, the focus is on the EU-25. Other industrialised countries are excluded for data reasons (e.g. they are not covered by the EU-SILC and the EVS) and because they are not covered by the common EU legal frameworks.

Chapter 2 Literature review

The dramatic increases in female achievements in education and employment in industrialised countries over the course of the 20th century have been largely unaccompanied by reforms in family policy. In countries with under-developed work-family reconciliation institutions, there is an apparent trade-off between having children and pursuing a career, resulting in low fertility and low female employment (Esping-Andersen, 2009). However, although work-family reconciliation policies have the potential to increase the female labour supply, they may not necessarily improve the quality of women's employment or promote gender equality in terms of pay and occupational attainment.

This chapter reviews comparative literature on the welfare state and work-family reconciliation policies in Europe, in order to place the thesis in a theoretical context and demonstrate how it contributes to progress in the field. In the next two sections, the chapter highlights milestones in comparative welfare state research: from gender-blind analysis of welfare regimes to the new typologies that place family, and policies supporting female employment, at the heart of the analysis. The chapter then reviews the welfare state literature focusing on new EU accession states and emphasizes the need to include these countries in mainstream European comparative research. The last section summarises the literature review. The chapter concludes that the existing welfare state typologies are not ideally suited to the study of gender inequality in the labour market as they focus on female employment at the expense of other types of gender inequality such as wage gaps and occupational segregation.

Comparative welfare state research: mainstream[1] and feminist typologies

It is well documented that advanced economies differ in the way they organise the distribution of welfare between the state, the market and the family (Esping-Andersen, 1990; Esping-Andersen, 1996; Lewis, 1992; Ferrera, 1996; Korpi, 2000). Yet, until the late 1980s, comparative welfare state research mostly focused on differences in social spending. In *The Three Worlds of Welfare Capitalism*, Esping-

[1] Similarly to Orloff (2009), the term 'mainstream' is used here to refer to welfare state scholarship that is not gender-nuanced and assumes that all actors have a typical male life course.

Andersen (1990) shifted the focus of comparative welfare state research to social citizenship rights[2] and the extent to which they allowed individuals to be independent from the labour market.

Esping-Andersen (1990) clustered 18 OECD countries on three dimensions with respect to social provision: state-market relations, stratification, and social citizenship rights, including de-commodification of labour. De-commodification is "the degree to which individuals, or families, can uphold a socially acceptable standard of living independently of market participation" (1990, p.37). The liberal regime is characterised by a low level of de-commodification, with targeted means-tested benefits, modest social insurance or modest universal transfers. The corporatist welfare state, in contrast, serves to preserve the existing status and class differentials with little income redistribution and, therefore, minimal de-commodification. The family is assumed to be the main provider of care and "the state will only interfere when the family's capacity to service its members is exhausted" (Esping-Andersen, 1990, p.27). At the same time, the social-democratic welfare state emphasises de-commodification and universalism, with extensive social services provision by the state. Thus, the role of the family is only explained in the corporatist regime, but not in the other two (Gerhard et al., 2005, p.4) Ferrera (1996) later proposed distinguishing the 'Latin rim' Mediterranean European countries as a distinct southern cluster with polarised social protection, exceptions to institutional corporatism in healthcare, a mix between public and private provision, and the persistence of clientelism in the distribution of cash subsidies.

Feminist scholars have critiqued mainstream comparative research on the welfare state, including Esping-Andersen's (1990) welfare regimes theory, on the grounds that it lacks a gender dimension (Lewis, 1992; O'Connor, 1993; Orloff, 1993; Sainsbury, 1994). While maintaining gender neutrality in its discourse, mainstream comparative welfare state research implicitly treats the male worker as the universal worker and citizen. Thus, 'women disappear from the analysis when they disappear from the labour markets' (Lewis, 1992, p.161). Moreover, mainstream research focuses on the relationship between welfare and paid work to the exclusion of unpaid

[2] Based on Marshall's (1950) definition of social citizenship closely related to participation in paid work.

domestic work, done predominantly by women, and disregards the role of women's unpaid work in the home in facilitating men's labour market participation (Orloff, 1993). Finally, even in Esping-Andersen's (1990) discussion of social rights, references to the effects of the welfare state on gender relations and gender inequalities are missing (Orloff, 1993, p.309).

There are two main lines of analysis by which feminist literature attempts *to gender* the welfare state. The first approach incorporates gender into the mainstream paradigm by analysing the differing implications of the welfare state for men and women (Orloff, 1993; O'Connor, 1993). The second approach develops alternative models to the mainstream ones (Lewis, 1992; Lewis et al., 2008).

To incorporate the previously absent gender aspect into the conceptual frameworks of mainstream welfare regime theories based on the power resources[3] approach, such as Esping-Andersen's (1990), Orloff (1993) proposed two additional dimensions to capture the effect of state social provision on gender relations: *access to paid work;* and *the capacity to form and maintain autonomous households*. Access to paid work complements the mainstream de-commodification dimension, as it concerns the extent to which states encourage or inhibit female paid employment—'the right to be commodified' (Orloff, 1993, p.318). While male rights to paid work have historically been promoted through family wage policies, women's right to economic independence from the family have never been fully endorsed. Instead, the post-World War II workers' movements promoted women's right to combine paid work with domestic labour.

With regard to the second dimension, there are two main ways for states to promote women's ability to form and maintain an autonomous household, without relying on a male breadwinner's income, according to Orloff (1993). One is to ensure income protection for lone mothers not participating in the labour market, while the other is to increase work opportunities for women and reduce their domestic responsibilities.

[3] "The power resources approach expects class to be one of the major determinants of conflicts of interest in Western societies, holds that inequality in the distribution of power resources is of central interest but assumes that the degree of inequality can vary over time and between countries, and accords democracy an important role in the processing of conflicts of interest" (Korpi, 1989, p.310).

However, both strategies face obstacles in their implementation. The former strategy, pursued by welfare states to varying extents, rarely secures incomes for stay-at-home mothers on a par with those of non-working mothers in couple families or of wage earners, thus resulting in inferior levels of economic well-being for lone mother households. At the same time, the success of the latter strategy is curtailed by the existing gender inequalities in pay, as few lone mothers are able to earn sufficient wages in the labour market (Orloff, 1993, p.321).

Similarly, O'Connor (1993) argues that the de-commodification dimension has to be augmented with the concept of personal autonomy. The level of personal autonomy depends on the services that protect individuals from unwanted dependence on either the family or the state. This can be tested by the extent to which public services are available as citizenship rights rather than as income- or means-tested benefits. In line with other feminist research, O'Connor argues that the de-commodification concept ignores the fact that not all groups are equally commodified. Since labour market participation is gendered due to an unequal division of unpaid domestic labour and caring responsibilities, policies that promote women's participation in paid employment are crucial for their independence from the family and for access to the work-related benefits that help de-commodify their labour. Policies on childcare provision, maternity and parental leaves, flexibility of the working day and adult-care services can facilitate or hinder women's labour market participation and, consequently, their achievement of personal autonomy (O'Connor, 1996). Therefore, a gender-sensitive analysis of labour market inequality, which is central to welfare state analysis, needs to account for the effects of these policies on individuals involved in caring work (O'Connor, 1996, p.98).

A second line of feminist analysis offers a wholly different welfare state typology with a strong emphasis on gender, as opposed to enhancing the mainstream paradigms with the gender element. Lewis (1992) proposes a male-breadwinner typology of North-Western European welfare states in which countries are classified as strong, modified and weak male-breadwinner (or dual breadwinner) states. Lewis uses a theoretical construct of a pure male-breadwinner model as a starting point. In a pure breadwinner state all married women would be excluded from the labour market

and would depend on their husbands for taxation and social security purposes, while remaining fully responsible for care work in the home (1992, p.162). Britain and Ireland are described as strong male-breadwinner states, with low levels of female labour market participation and publicly funded childcare as well as minimal rights for working mothers, such as maternity leave, maternity pay and the right to job re-instatement. In modified male-breadwinner countries such as France, the state recognises women's roles as mothers and paid workers through high levels of public childcare provision and generous family benefits to compensate households for the cost of children. However, joint taxation and means-testing of family benefits create disincentives for second earners to work long hours, particularly for less educated women. In dual breadwinner states, such as Sweden, women are treated as 'citizen-workers' with their entitlements as mothers recognized. Individual taxation, high levels of public childcare provision and generous job-protected parental leave make it easier for mothers to take up paid work and develop unbroken careers. However, a major weakness of this typology is that even the dual breadwinner model does not challenge the gendered division of unpaid domestic labour. Furthermore, although the typology helps predict female labour market participation rates in different male-breadwinner economy types, it does not directly extend to other forms of gender inequalities in the labour market, such as occupational segregation and gender pay gaps.

In her later work, Lewis shows that the traditional male-breadwinner model has declined, to be replaced by a 'one-and-a-half' or a 'one-and-three-quarters' model, with men working full-time and women working a variety of part-time hours while remaining responsible for unpaid care work (Lewis et al., 2008). In Southern Europe, with few part-time jobs available, women tend to choose between working full-time and not participating in the labour market at all, while the Scandinavian countries have developed a dual-earner family model. Even in Scandinavia, however, women are found to be working shorter hours than men, on average (2008, p.21).

Although regarded as highly influential, Lewis's typology has been critiqued by other feminist scholars. The male-breadwinner typology focuses on married women and appears to ignore the situation of unmarried women, particularly lone mothers

(Orloff, 1996, p.72). Poverty rates for lone mothers in the countries that Lewis classifies as strong male-breadwinner states, for example, vary substantially. Furthermore, the male-breadwinner paradigm is one-dimensional and the weak male-breadwinner type in particular is characterised by what it is not rather than what it is (Sainsbury, 1994, p.154).

Building upon Lewis's model, Sainsbury (1994) proposes a two-pronged framework for analysing welfare states: a breadwinner model and an individual model. The breadwinner model is characterised by the traditional gender division of labour in the family (male earner and female carer) and the resulting implications for social welfare and taxation systems. In the individual model, on the contrary, men and women are all workers and carers, benefit entitlements are individual and much of the care work is done publicly. Each country can be situated on a continuum between these two opposite models. While Lewis (1992) focuses on women's entitlements as wives or workers, Sainsbury also analyses their social rights as citizens and mothers. Examining gender differences in social rights, Sainsbury shows that the 'breadwinner-individual' typology results in a different clustering of countries than the mainstream welfare regimes analysis would predict. For example, Sweden and the Netherlands (both in Esping-Andersen's (1990) social-democratic cluster) occupy different points on the breadwinner-individual spectrum. Although Sainsbury criticises Lewis for the one-dimensionality of her typology, it appears that Sainsbury's 'individual model' is the mirror image of the 'breadwinner' model, so the whole paradigm is similar to Lewis's and generates similar predictions with respect to female participation rates.

While critiquing the mainstream comparative welfare state research, feminist scholars have traditionally been divided according to their preferred role of the welfare state in promoting gender equity. The division has been along the sameness versus difference lines. The 'sameness' (employment) approach posits that women's equality to men in the labour market leads to the achievement of full citizenship status, while the 'difference' (care) perspective focuses on women's value as carers. The former calls for policies that make it easier for women to fully participate in the labour market, while the latter emphasises recognition and reward for women's care

work (Fraser, 1994). However, Kilkey (2000) argues that instead of considering paid work versus care giving, it is crucial to examine the policies that allow women to move between successive spells of paid work and care over their life time without being at risk of poverty.

The main weakness of the feminist comparative welfare state research is that it tends to place women alone at the heart of the analysis. Just as the mainstream research criticised by feminist scholars prioritises the standard male lifecourse, feminist research focuses entirely on women in their roles as workers, carers, mothers and welfare recipients. Although some models account for the state's role in care provision, none of the models discussed so far assumes that men (as husbands and fathers) could share the unpaid domestic and caring work in equal measure with women. Thus, Esping-Andersen argues that to date the changes in social behaviour have been limited to the masculinisation of the female life course; however, to achieve gender equality the male life course needs to become more feminine (2002, p.70).

The dual-earner/dual-carer model addresses this weakness. Crompton (1999) suggests a classification of models ranging from the traditional male breadwinner-female carer model to the dual-earner/dual-carer model, with the dual-earner/female part-time carer and dual-earner/state-market carer models in between. According to Gornick and Meyers (2003), the second model applies in the UK and the Netherlands, where men tend to work full-time and most women combine part-time employment with unpaid care work in the home. The third model (dual earner/substitute carer) is prevalent in Nordic countries where most women work full-time, using extensive public childcare for their children and in the United States, where women work full-time relying on market based childcare. Gornick and Meyers (2003, p.85) argue that the 'dual-earner/dual-carer' model promotes both gender equality and care-giving through equal involvement of men and women both in the labour market and in the home. The authors envision that young children would be cared for in the home, while older children would be cared for in public childcare and at school. The model allows for reduced working time for both parents to take care of their young children.

In response to feminist critiques, mainstream comparative welfare state research gradually incorporated the gender dimension (Esping-Andersen, 1999; Korpi, 2000). Esping-Andersen acknowledges the gender blindness of his original analysis in his later work (Esping-Andersen, 1999). In addition to de-commodification that reduces dependence on the market, he uses the term *de-familialisation* 'to capture policies that lessen individuals' reliance on the family; that maximise individuals' command of economic resources independently of familial or conjugal reciprocities" (Esping-Andersen, 1999, p.45). Since a large proportion of women depend on the family for their welfare, women's family obligations have to be reduced in order for them to command economic independence via the market. Thus, de-familialisation is a concept that is more relevant to women than to men.

Having added a new dimension to his empirical analysis of welfare state variation, Esping-Andersen confirms his initial three welfare regimes typology. Gornick and Meyers (2003, p.23) also note that "the welfare-state principles underlying these clusters are highly correlated with those that shape family policy". Thus, the social-democratic Nordic welfare states offer the highest levels of both de-commodification and de-familialisation, the conservative states institutionalise the traditional male breadwinner model and, therefore, are highly familialist, while the liberal Anglo-Saxon welfare states are classified as residual and non-familialist. In contrast, Lewis (1992) defines Britain, a liberal non-familialist welfare state according to Esping-Andersen (1999), as a strong male-breadwinner country.

Korpi (2000) includes both gender and class in his study of inequality in rich industrialised democracies. He develops a welfare state typology based on the country-level variation on two dimensions: institutional support for dual earner families and general (nuclear) family support. On the one hand, the dual earner family support component reflects the aim of the welfare state to encourage female labour force participation, as well as a more equal division of social care within the family and society at large. The general family support, on the other hand, presupposes a traditional gendered division of labour in the family and in society. Korpi uses macro-level indicators that capture these two dimensions and groups 18 OECD countries into three ideal type models: *general family support*, *dual earner*

support and *market oriented policies.* Countries with weak institutional support for dual earner families and for families in general that allow market forces to influence gender relations are classed as the third (market-oriented) type. Korpi finds the lowest gender differences in labour force participation rates in dual earner support welfare states (Scandinavian countries) and the largest differences in general family support states (continental European countries), with market-oriented states (Anglo-Saxon countries) ranking in the middle. However, Korpi does not address cross-country variation in other aspects of labour market inequality, such as gender wage gaps and occupational segregation.

In summary, mainstream comparative welfare state research has evolved to incorporate a gender dimension, but like feminist analysis, it focuses on female participation rates and largely ignores important gender inequalities in the labour market such as pay gaps and occupational gender segregation.

Work/family reconciliation policies

According to Orloff (2009), one of the positive outcomes of the ongoing debate between mainstream and feminist social policy scholars has been the emphasis on the themes originally developed by feminist scholars, such as the role of the state in helping parents reconcile their work and family commitments, although the focus has mainly been on mothers rather than fathers. This section reviews the comparative literature on work-family reconciliation policies, starting with the family policies typology.

Gauthier (1996) distinguished between four models of family policy in Europe in the early 1990s. Countries in the 'pro-family/pro-natalist' group, such as France, encourage families to have children by helping mothers combine child rearing and work through extended maternity leave and child-care provision. Countries in the 'pro-traditional' group aim to preserve the traditional male-breadwinner family, where mothers stay at home to look after children. The model is characterised by cash support for families, low provision of childcare and extended maternity leave. Gauthier (1996) uses Germany as an example of this model. 'Pro-egalitarian' countries have gender equality as their main objective and, therefore, support

working parents through extended parental leave (as opposed to maternity leave) and leave to take care of sick children as well as extensive provision of childcare (e.g. Nordic countries). Finally, 'non-interventionist' countries, such as Britain, are based on the assumptions of self-sufficiency of families and unregulated labour markets. The state supports families in need with targeted benefits, but does not provide generous parental leave or childcare facilities. However, most countries have a mixture of these types.

In her more recent work, Gauthier (2002) shows that family policies in industrialised countries have diverged between 1970 and 1999, and the clusters of countries identified in the 1990s have not been stable. All of the studied countries increased their support to working parents over this period by lengthening the duration of childcare leave, although there is considerable variation in the level of payment across countries (i.e. longer leave is paid in the Social-Democratic countries but not in Southern-European countries). Liberal countries lag behind the rest in their degree of support for working parents. Using the indicator of generosity of maternity leave (duration multiplied by percentage paid), Gauthier finds a growing dispersion across countries between 1972 and 1999. The liberal and social-democratic countries are even further apart in 1999 than in 1972, while conservative and Southern-European countries are clearly in the middle. However, this analysis uses only a limited range of family policy indicators (cash benefits and maternity leave), which may not adequately capture the cross-country variation in family policy.

Lambert (2008) constructs an index of family policies that help women combine work and family life for twenty OECD countries for three periods: 1984-86, 1994-96 and 2001-2003. The index is based on: the length and generosity of maternity and parental leave during the first 52 weeks after childbirth; percentage of children under three in publicly provided or subsidised childcare; and percentage of children between the age of three and school age in childcare and early education services. In the period 2001-2003, the index scores range from the low of 13 in the US to the high of 100 in Denmark, with Anglo-Saxon countries at the bottom of the league and Nordic countries at the top. However, this index has several weaknesses. It does not include a wider range of policies that may affect maternal labour supply, such as the

tax/benefit treatment of secondary earners in couples. Furthermore, the study neglects the implications of the studied maternal employment policies for gender equality in the home or in the labour market. Policies that help mothers reconcile the dual burdens of work and family do not necessarily challenge the existing gendered divisions of labour.

Mahon (2006) argues that industrialised countries are shifting their policy focus from women's roles as unpaid care-givers (the male breadwinner model) to work/family reconciliation policies to support mothers' employment. The author distinguishes between four emerging ('post-maternalist') models of supporting mothers in paid work: the neo-liberal, the neo-familialist, third way, and egalitarian. The neo-liberal model, prevalent in the US, relies on low-wage care workers to provide non-parental care that enables mothers to participate in the labour market, while employment legislation ensures employment equity rights and freedom from sexual harassment in the workplace. The neo-familialist model, found in continental Europe, underscores women's choice between staying at home as a mother and a housewife and participating in the labour market. It is exemplified by long childcare leave and low provision of public childcare facilities for pre-schoolers, inducing mothers to take career breaks to care for children and later return to work part-time. In contrast, the third way model, found in Britain and Canada, promotes mothers' participation in employment through short and generous parental leaves and demand-side subsidies for childcare. Finally, the egalitarian model is more of an ideal or a blueprint, present to some extent only in Sweden and Denmark. It is exemplified by parental leave arrangements taken equally by mothers and fathers and accessible and affordable childcare facilities available to children regardless of the working status of their parents. Although this typology provides a useful theoretical analysis, it does not provide any empirical examples or explain how the post-socialist new accession states fit in.

Gornick and Meyers (2003) produce an index of work and family reconciliation policies in 12 developed countries. The study focuses on two types of families: those with children up to the age of five and those with school-age children. Twelve countries are included in the comparative study: US, Canada, Denmark, Sweden,

Norway, Finland, Belgium, France, Luxembourg, the Netherlands, Germany and the UK. The index for policies relevant to families with younger children comprises the indicators of childcare and early education provision, family leave policy, and working time regulation. Scandinavian countries rank highest on this index, followed by Continental countries and, finally, the three English-speaking countries. A similar ranking is observed for the index relevant to families with school-age children (including indicators of school schedules, sick-child leave, and working time regulation). A limitation of both of these indices is that they omit other policies that are likely to have an important effect on the labour supply of mothers, such as the tax and benefit treatment of secondary earners or the prevailing gender-role attitudes. The earlier study by Gornick et al. (1997) that constructs an index of policies supporting mothers' employment suffers from the same weakness as it focuses on job protection, family leave and childcare policies only.

Stier and Lewin-Epstein (2001) study the relationship between Esping-Andersen's regime type, Gornick-Meyers-Ross (1997) index of policies supporting mothers' employment along with labour market outcomes for women with children. They use data for 12 European countries from the International Social Survey Programme 1994 'gender-role' module. The study finds evidence of greater employment continuity for mothers in the countries that have higher levels of support for working mothers, regardless of the welfare regime. Similarly, earnings losses from part-time or discontinuous employment are found to be lower in the countries that have more supportive policies.

The OECD (2001, p.152) constructs a similar index of work-family reconciliation policies. It includes childcare coverage, family leave, flexible work and voluntary part-time work indicators. The study finds a positive correlation (around 0.7) between the composite index and female employment rate (aged 30-34). This correlation is higher than with any of the individual indicators, which suggests that the combination of these policies is more important than any policy in isolation. The highest value of the composite index is found in Scandinavian and North American countries, while the scores are lowest in Southern European countries, Japan and Ireland. The composite index may have a methodological flaw, however, as it

includes two measures that are likely to be highly correlated with the studied outcome of female labour supply: flexible work and female part-time rates. Moreover, the female part-time rate could be considered a dependent variable on its own, rather than a predictor of the female participation rate. Plantenga et al. (2009) stress the importance of not mixing dependent and independent variables when constructing international indices of gender equality.

Esping-Andersen (2002) suggests that 'women-friendly' policies that alter the opportunity costs of having children have the greatest potential effect on the labour supply of women who seek to combine their roles as mothers and workers. Thus, he argues that women have different preference sets (Hakim, 1991; Hakim, 1995). The vast majority of women prefer the *dual-role* of workers and mothers, unwilling to sacrifice motherhood for careers. Thus, they tend to concentrate in female-dominated jobs, such as public services, and in part-time jobs. At the same time, the diminishing minority of *family-centred* women prioritise marriage and motherhood and tend to work largely out of necessity, if at all. By contrast, *career-centred* women, also a minority, focus on their education and employment and become mothers only if it does not interfere with their careers. The problem with the 'power of preference' reasoning is that it does not challenge the gendered division of labour, assuming that mothers retain the primary responsibility for child care, and it does not enquire about the social and political origins of the expressed preferences (Orloff, 2009).

However, even the most generous work/family reconciliation policy package does not necessarily prevent other negative trade-offs. For instance, the high birth rates and employment rates of women in Nordic countries are also associated with high levels of occupational gender segregation, whereby women concentrate in the public sector jobs, "a virtual female employment ghetto" (Esping-Andersen, 2002, p.75). Alternatively, in countries with less generous 'women-friendly' packages and more deregulated labour markets, such as the US, lower levels of occupational segregation go together with uneven quality of childcare and early education services, resulting in higher levels of child poverty and inequality. Yet, Esping-Andersen argues that it is important to promote 'women-friendly' policies, such as affordable day care and paid parental leave, because female employment produces increasing social returns.

As women in many countries represent a reserve of labour and, with increasing female education, also a pool of productive human capital, high female employment will decrease future old-age dependency ratios and reduce poverty and social exclusion.

Few studies of work/family reconciliation policies look at gender equality outcomes in the labour market. Gornick and Meyers (2008) consider mothers' earnings as a share of total parental earnings and fathers' share of unpaid household work in seven countries (US, France, Belgium, Finland, Sweden, Norway and Denmark), but they do not examine any other labour market indicators of gender equality, such as occupational segregation or the overall gender wage gap. They find that even in countries with relatively generous and gender-egalitarian work-life reconciliation policies, mothers' share of parental earnings is well below 50%: the share ranges between 32% in France and 38% in Denmark (J. C. Gornick & Meyers, 2008, p.340).

However, work/family reconciliation policies rarely, if ever, have gender equality in the labour market as their primary goal. Instead, they often aim at increasing women's labour supply, fertility and child well-being. According to Esping-Andersen, higher maternal employment is associated with lower levels of child poverty and higher levels of financial sustainability of ageing populations (Esping-Andersen, 2009, p.83). Furthermore, in countries where women are more able to successfully combine motherhood and careers, fertility rates tend to be higher (McDonald, 2000).

To sum up, all of these studies indicate the importance of work-family reconciliation policies for the cross-country variation in female labour supply. However, they still overlook other forms of gender inequality in the labour market. They are also limited in geographical scope, excluding the new EU accession countries.

New accession countries in comparative welfare state research

There is still a relative shortage of comparative welfare state research that includes both old and new EU accession countries. Esping-Andersen (1996) rejected the idea that Central and Eastern European (CEE) countries formed a separate welfare state

cluster, since at the time of his writing they were still in a transitional stage. However, more recent welfare state studies focusing on the CEE region tend to argue that post-socialist new accession states are sufficiently similar to be treated as a separate welfare state regime. See Cerami (2006) for a comprehensive overview of the post-transition development of welfare states in CEE new accession countries.

Some welfare state studies incorporate CEE countries in the mainstream comparative analysis. Fenger (2007) re-produces Esping-Andersen's typology (albeit with the Latin rim countries as a distinct cluster) for the traditional welfare states, with post-socialist countries forming a distinct group, using hierarchical cluster analysis with macro-level data on 30 European countries. The post-socialist countries are divided into three sub-types: 1) 'former USSR type' that includes the three Baltic countries (EU accession states) along with Belarus, Russia and Ukraine; 2) 'post-communist European type' that includes the 2004 EU accession states, such as Hungary, Poland, the Czech and Slovak Republics plus Bulgaria and Croatia; and 3) 'developing welfare state type' that includes Georgia, Romania and Moldova. Although the analysis uses many variables on government expenditure, social situation (e.g. inequality, female participation, unemployment), and political participation and trust, it suffers from the same gender-blindness as Esping-Andersen's original analysis. It is, therefore, not ideally suited to the study of gender inequality in the labour market across the EU-25.

Aspalter et al. (2009) seek to explain why some of the CEE countries are more similar than others. They focus on pension and healthcare systems in the Czech Republic, Poland, Hungary and Slovenia, using an ideal type analysis, to show that these countries are returning to their common pre-socialist Bismarckian roots. Although these countries have elements of universality and neo-liberalism in addition to their basic social insurance models, they now fit in with the Continental European (corporatist-conservative) countries. However, this analysis is limited, only looking at pension and health-care systems and disregarding family and employment policies, amongst others.

In contrast, several studies focus exclusively on the variation between family polices in CEE countries. For instance, Rostgaard (2004) finds a divergence in family support policies, such as family and parental leave benefits, across the CEE countries at the beginning of the 21st century. Scharle (2007) examines the effect of family policies, such as family benefits and day care provision, on female labour supply in eight new and 13 old member states for the period 1995-2004. The study finds that although labour market conditions, such as unemployment levels, had a stronger effect on female labour supply in Central and Eastern Europe than work-family reconciliation policies during the transition period, by 2004 family policies had more of an impact on female participation rates across the CEE countries.

Similarly, Saxonberg and Sirovatka (2006) investigate the variation in work-family reconciliation policies in the Czech and Slovak Republics, Poland and Hungary from a gender-equality perspective. Examining paid family leave policies, day care provision and the availability of part-time work, they argue that these countries have been following a re-familialisation path towards the male-breadwinner model, either explicitly or implicitly, since their transition to a market economy. For example, the Czech and Slovak republics have long parental leave with low benefit rates, which assumes that women will leave the labour market for several years to look after their children, while Poland has a heavily means-tested parental leave benefit. Interestingly, Lück and Hofäcker (2003) find high levels of support for both female employment and traditional gender roles in post-socialist countries, using comparable cross-country data on gender-role attitudes.

Pascall and Kwak (2005) also document a shift away from the dual-earner model that existed during the socialist period in the CEE region, but they argue that the emerging gender regime is more egalitarian than the traditional male breadwinner model. Thus, they find that gender gaps in employment, unemployment, working time and risk of poverty are smaller in CEE countries than in the EU-15. The only exception is the gender gap in political representation, which is still higher in CEE countries than in the EU-15. However, the authors do not provide any quantitative evidence on sharing of caring responsibilities within households, which makes their picture of emerging gender regimes somewhat incomplete. Yet, in a survey of working conditions in EU accession and candidate countries in 2001, Paoli and

Parent-Thirion (2003, p.78) find that the distribution of caring and domestic tasks between men and women in households is indeed more egalitarian in 12 accession and candidate countries than in the EU-15.

Summary and conclusion

To sum up, mainstream comparative welfare state research lacks an explicit gender dimension and, even in response to feminist critiques, fails to fully address the profound gender inequalities in the labour market. Feminist analysis highlights gender inequalities in receipt of social security benefits and stresses the importance of considering women's multiple roles as workers, consumers, mothers, and welfare state clients. It brings to light the interaction between the family, the state, and the market as a determinant of public welfare provision. It also shifts the focus away from social insurance schemes, which depend on employment status, to social care and services. Finally, feminist research emphasises the role of familial ideologies and the division of unpaid domestic labour in developing social policies (Sainsbury, 1994, pp.151-152).

However, in so far as feminist research looks at the labour market position of women, it focuses on female participation rates and largely neglects working hours, gender pay gaps and occupational segregation. Although there has been an increased interest in work-family reconciliation policies in comparative welfare state research, the indices constructed to capture the policy framework tend to focus on childcare and parental leave policies to the exclusion of other relevant predictors of female employment. This chapter concludes that the existing welfare state and work/family reconciliation policy typologies are not ideally suited to the study of gender inequality in the labour market as they focus on female employment at the expense of other sources of gender inequality such as wage gaps and occupational segregation.

Crucially, there is still a lack of comparative welfare state research that includes new EU accession states. Therefore, there remains a need to devise a welfare state typology or ranking relevant to gender inequalities in the labour market, including differences in pay and occupational attainment, which covers the enlarged EU. This thesis seeks to address this gap in the literature.

The next chapter compares the work/family reconciliation policies and prevailing gender-role attitudes in 25 European countries. It focuses on: parenthood leave provisions; childcare availability and affordability across the studied countries; tax/benefit rules that are likely to affect second earners in couples (who tend to be women); and social norms and attitudes towards the gendered division of market and non-market work. It then ranks the studied countries on a summary index of work/family reconciliation policies relevant to gender equality in the labour market and studies the relationship between the combined index and gender equality outcomes in the labour market.

Chapter 3 Work/family reconciliation policies and gender equality outcomes

Women face different constraints to their employment across Europe. By reviewing the work-family reconciliation policies and attitudes to gendered division of labour in 25 European countries, this chapter sets the policy context for empirical research presented in the following chapters. The chapter is organised as follows. First parenthood leave policies are compared; then childcare availability and affordability are reviewed across the studied countries, followed by a discussion of fiscal rules that affect second earners in couples and an analysis of social norms and attitudes towards gender equality in the home and in the labour market. The last section analyses the relationship between each of these indicators, as well as a combined indicator of work-family reconciliation policies, and female participation rates, gender wage gaps and occupational segregation indices.

Job-protected parenthood leave policy designs

This section reviews statutory maternity, paternity and parental leave policy designs in the EU-25, focusing on job-protected leave available to families with children. It analyses parental leave designs with respect to their duration, generosity and the extent to which they are gender egalitarian. Acting on the nexus of labour market (e.g. worker entitlements to leave) and family policies (childcare benefits), parenthood leave designs shed light on the different priorities and rationales in these two policy fields. The analysis in this section is based on comparable data from the *OECD Family Database.*

Parenthood leave policies[4] can have a profound impact on gender equality both in the labour market and in the home with respect to child-rearing, as they allow parents to return to their workplace after the period of job-protected leave and they allow both parents, not just mothers, to stay at home to care for their young children. The potential of parenthood leave policies to both increase maternal employment and involve fathers in care-giving explains the growing interest in maternity, paternity

[4]Parenthood leave encompass maternity, paternity and parental leaves, extended child care leave and leave to look after a sick child (Escobedo, 1999).

and parental leave in the literature on the women-friendly welfare state (Ray et al., 2010). However, in practice, the effect of parenthood leave policy designs on gender equality is not at all straightforward. Moss and Deven (1999, p.14) argue that simply having statutory provisions for parental leave available to both mothers and fathers does not promote gender equality; in fact, fathers' increased take-up of parental leave may be an indicator of gender equality rather than its cause.

The EU sets binding minimum standards for both maternity leave and parental leave in the member states. The maternity leave directive (Council Directive 92/85/CEE) sets common standards for occupational health and safety of pregnant workers and those who have recently given birth or are breastfeeding, establishing the minimum of 14 weeks of statutory maternity leave for all female workers, two of which have to be taken before delivery. The member states have to guarantee income protection for at least the minimum 14-week period, which has to be at least equivalent to what the employee would be entitled to if taking sick leave. All of the EU-25 countries studied in this chapter have statutory provisions guaranteeing parental leave of at least three months per parent, in compliance with the 1996 Parental Leave directive (Council Directive 96/34/EC of 3 June 1996)[5]. However, it is up to the member states to define by law or collective agreement whether and how much of the parental leave is to be paid. Thus, parental leave provisions vary substantially across the EU in terms of their duration, benefit structures, coverage, flexibility in use, type of entitlement (family or individual) and source of financing. The complexity and multidimensionality of parental leave policy designs severely complicate the study of their impact on gender equality in the labour market.

The consequences of parenthood leave policies for maternal labour supply are ambiguous (De Henau et al., 2007; Ray et al., 2010). While paid leave schemes of short duration allow mothers to return to work instead of quitting the labour market, thus helping ensure job continuity for new mothers (Baum, 2003) and reduce the

[5] The Directive implemented the Framework Agreement on parental leave concluded by the Union of Industrial and Employers' Confederations of Europe (UNICE), the European Centre of Employers and Enterprises providing Public Services (CEEP) and the European Trade Union Confederation (ETUC) on 14 December 1995. The framework agreement has been revised on 18 June 2009 to increase the minimum length of parental leave from three to four months, amongst other provisions, but this period is out of scope of the current study.

earnings gap between women with and without children (Waldfogel, 1998), compulsory paid leaves of longer duration can erode women's human capital, reduce opportunities for promotion and make women more costly to hire than men (De Henau et al., 2007). Furthermore, in the absence of childcare facilities available after the end of parental leave, new mothers may still not be able to return to the labour market (Rubery et al., 1999). According to Gornick and Meyers (2003), generous family leave provisions taken up predominantly by mothers can weaken women's labour market attachment and increase gender inequalities in paid and unpaid work. The authors argue that "government policies are needed that both enable and encourage fathers to share in family leave benefits" (2003, p.133).

Furthermore, there is little evidence that parenthood leave policies successfully engage fathers in care-giving. If parental leave is an individual, non-transferable entitlement, both mothers and fathers can claim it, losing the entitlement if they do not. In contrast, parents can decide who will take the parental leave if it is a family entitlement (Bruning and Plantenga, 1999). Research evidence shows that fathers are more likely to take up paternity leave (which tends to be better paid) than parental leave, even if the latter is an individual, 'use it or lose it', entitlement; they are the least likely to take up parental leave if it is a family entitlement which the mother can take instead (Moss, 2008). Since fathers' take-up of parental leave lags behind that of mothers, the net effect of parental leave schemes on gender equality is unclear (Ray et al., 2010). In countries with paid paternity leave, fathers tend to take it, but paternity leaves are usually too short (from a few days to a few weeks) to make a real difference to the gender division of care in the home.

There is a growing interest in parenthood leave designs in comparative social policy literature. Some studies describe leave schemes in individual countries without explicitly comparing them using a common framework (see Moss & Deven, 1999; Kamerman & Moss, 2009). Others review statutory leave provisions in a cross-country comparative perspective. For instance, there is a growing body of comparative research on the generosity of parental leave schemes in the EU (Bruning & Plantenga, 1999; Lohkamp-Himmighofen & Dienel, 2000; De Henau et al., 2007). Most of these studies measure generosity as a combination of benefit levels and

duration. Several studies focus on the gendered impacts of parental leave policies (Meulders & O'Dorchai, 2007; Moss & Korintus, 2008; De Henau et al., 2007). However, there is a gap in the empirical literature for a systematic enquiry into the extent to which parental leave schemes are egalitarian (Ray et al., 2010).

Haas (2008) proposes a new typology of parental leave policies in Europe. She distinguishes between four models: a privatised (noninterventionist) care model, a family-centred care model, a market-oriented care model and a valued care model. The privatised care model characterises the Southern European states, where the care of young children is primarily a family responsibility that falls on the shoulders of mothers. Job protected parental leaves were introduced only as a response to the EU directives, with minimum possible provisions. Fathers' take up of leave is not encouraged and is correspondingly low in practice. The family-centred model is found in continental European countries where long parental leaves encourage mothers to care for their young children at home and then go back to the labour force. Incentives for fathers to share parental leave exist, but actual take-up is very low. The market-oriented model, found in Ireland, the Netherlands and the UK, involves little state support for working parents, which is seen as employers' responsibility. Finally, the value care model, prevalent in Scandinavian countries, is characterised by generous state support for working parents, generous parental leaves that encourage fathers' take-up and accessible childcare facilities for young children. However, this typology does not include any of the new accession states and does not include any recent policy developments (since 2001).

Gornick and Meyers (2003) examine the gendered structure of parental leave schemes in 12 countries, using a six-point "gender equality" index to compare parental leave policy designs using 2000-2003 data. One point is assigned to a country if *any paid paternity* leave is available, two points if fathers have non-transferable *parental leave* rights, three points if benefits are wage-related at 80 per cent or higher, two points if benefits are wage related but at less than 80 per cent, and one point for flat rate paid benefits. Sweden and Norway score the maximum of 6 points, Denmark scores 5 points, Finland, Belgium and Luxembourg score 4 points each, Canada scores 3 points, the Netherlands, the UK and the US score 2 points

each, while France and Germany only score one point each. A limitation of this index is that it focuses on fathers' rights to family leave rather than on the gender equality in leave entitlements per se.

Ray et al. (2008; 2010) revise the Gornick and Meyers gender equality index and include a larger set of countries. They evaluate parental leave policies in 21 high-income countries using a 15-point scale with respect to gender equality both in the workplace and in care-giving. They rank Sweden, Finland, Norway and Greece highest on both gender equality and generosity, as they have generous paid leave, non-transferable quotas for each parent, universal coverage, 'financing structures that pool risk among many employers,' and scheduling flexibility. However, the authors use 'parental leave' as an umbrella term for all family leave related to the care of young children.

This section examines the duration of job-protected leave and the proportion of it that is paid. It uses internationally comparable data from the *OECD Family Database* Table PF7.1 (last updated in June 2009) for the period 2006/2007. It is supplemented with detailed information from Moss and Korintus (2008), who review maternity, paternity and parental leave policies in 25 industrialised countries as of 2007, including 21 of the countries studied in this chapter. They do not include Latvia, Lithuania, Luxembourg or Slovakia in their study. Information on statutory entitlements to parenthood leave is not sufficient to study the take-up of leave in practice, but accurate comparative information on take-up of parental leave by mothers and fathers in Europe is not available, due to the lack of consistent data gathering through national surveys and administrative data, different definitions of parental leave in various countries and the availability of extra provision through collective agreements (Bruning and Plantenga, 1999). Furthermore, identifying the eligible population to determine take-up rates is even more difficult than gathering data on the numbers of leave-takers (OECD, 2009). However, a systematic analysis of statutory parenthood leave policy designs can still provide important insights into the variation in different states' involvement in the family sphere, the way in which labour market and family policies interact, and the extent to which maternal employment and fathers' involvement in care-giving are prioritised.

Since parenthood leave schemes in Europe are complex and diverse, a common standard has to be used in order to compare them. This section uses full-time equivalent (FTE) paid leave as a measure of both duration and generosity of leave. It is calculated as the wage replacement rate multiplied by the duration of leave in weeks[6]. This approach is used in Ray et al. (2010) and the *OECD Family Database*, along with several simplifying rules in order to deal with the complexity and diversity of parenthood leave policies in various countries. For instance, if more than one option of leave is available, the least generous option is used. If one option offers a longer leave at a lower rate of pay and another option offers a shorter leave at a higher rate, the latter option is used. If the benefit is flat rate, the FTE amount is calculated as a proportion of the national average wage using the OECD Tax-Benefit calculator. These rules are also used here to calculate FTE leave measures using detailed information on parenthood leave from Moss and Korintus (2008) whenever the summary statistics in the *OECD Family Database* do not match the description of leave schemes in other sources. Any discrepancy between these two sources is reported in the notes beneath the tables. The rules for maternity and paternity leaves are typically straightforward, but the calculation of FTE paid parental leave is usually more complex. For instance, in some countries parental leave benefit is separate from the job-protected parental leave and parents can receive it even if both of them are working (e.g. in the Czech Republic). Detailed notes on statutory maternity, paternity and parental leave entitlements, including the level of payment, eligibility, flexibility in use and source of financing, summarised from Moss and Korintus (2008) and the *OECD Family Database,* are reported in Annex 3.

Table 3.1 shows the amount of total and FTE paid job-protected leave available to couples in 25 European countries. Total parental leave (columns 5 and 6) is the total amount of leave available per couple: if it is an individual entitlement available to both mothers and fathers and it cannot be transferred from one parent to another, the sum of the two is reported. Thus, even if one parent forgoes his/her entitlement, the

[6] For example, total maternity leave in Ireland is 42 weeks as of 2007/2008, but only 26 weeks of it are paid (at 70% of past earnings averaged over the tax year subject to a minimum of €151.60 per week and a ceiling of €232.40 per week). FTE paid leave is calculated as 0.70*26=18.2. Thus, the minimum and the ceiling are ignored for simplicity.

total amount per family shows the maximum that could be taken in theory. Total leave and total FTE paid leave (columns 7 and 8 of Table 1; Figure 3.1) are the sum of total and FTE paid maternity, paternity and parental leaves available to couples, respectively.

There is considerable variation in total duration and generosity of parenthood leave schemes available to couples across the studied countries. Paid maternity leave ranges from 9 FTE weeks in Norway to 28 weeks in Estonia. The vast majority of these countries have fully paid maternity leaves; the UK is the major exception with only 12 weeks out of 52 being FTE paid (as of 2006/2007).

Paternity leave tends to be of shorter duration (between 2 days and 13 weeks), but most of it is usually paid. Iceland has the longest and most generous paternity leave provision of 13 weeks, 10 of which are FTE paid, followed by Sweden with 12 weeks of paternity leave (9 weeks FTE). For Sweden and Norway, paternity leave includes the share of parental leave reserved for fathers (*fathers' quota*). Notably, seven of the studied countries have no statutory paternity leave provisions at all: Austria, Czech Republic, Germany, Ireland, Italy, Poland and Slovakia. In practice, however, a couple of leave days may be given to fathers around the time of birth due to collective agreements or the employer's discretion (Moss & Korintus, 2008). Among the countries that have statutory paternity leave provisions, two weeks of fully paid leave are the most common (Denmark, Estonia, Spain, France and Latvia).

In contrast, parental leave provisions vary considerably in duration. Some countries provide job-protected parental leave until the child is three years old, although only a small proportion of it is paid (Czech Republic, Germany, Estonia, Spain, Finland, France, Poland and Slovakia). Others only guarantee 26 weeks, largely unpaid (Belgium and the UK). FTE paid parental leave ranges from none in Spain, Greece, Ireland, the Netherlands, Portugal, and the UK to at least 52 weeks in Sweden, Hungary, Estonia and Lithuania.

The maximum amount of total parenthood leave available to couples varies substantially. FTE paid leave ranges from the low of 12 weeks in the UK to the high

of 113 weeks in Lithuania (Figure 3.1). Total (paid and unpaid) parenthood leave ranges from 42 weeks in the Netherlands and Belgium to 156 weeks[7] in the Czech Republic, Germany, Estonia, Spain, Finland, France, Poland and Slovakia, assuming that both parents take their individual non-transferable leave entitlements.

[7] In these countries parental leave, taken after maternity and paternity leave, can be taken until the child is three years old, so the maximum amount of parenthood leave cannot exceed 156 weeks.

Table 3.1 Child-related employment protected leave periods available to couples: duration of unpaid leave and duration of the full-time equivalent of the leave period if paid at 100% of last earnings, 2006/2007 (in weeks)

	Total maternity leave 1)	FTE paid maternity leave 2)	Paternity leave 3)	FT paid paternity leave 4)	Total parental leave 5)	FTE paid parental leave 6)	Total leave 7)	Total FTE leave 8)
AT	16.0	16.0	0.0	0.0	104.0	16.7	120.0	32.7
BE	15.0	11.3	2.0	1.2	26.0	5.6	43.0	18.1
CZ	28.0	13.7	0.0	0.0	156.0	50.3	156.0	64.0
DE	14.0	14.0	0.0	0.0	156.0	34.8	156.0	48.8
DK	18.0	18.0	2.0	2.0	32.0	32.0	52.0	52.0
EE	28.0	28.0	2.0	2.0	156.0	62.0	156.0	92.0
ES	16.0	16.0	2.0	2.0	156.0	0.0	156.0	18.0
FI	17.5	16.9	8.0	5.7	156.0	35.8	156.0	58.4
FR	16.0	16.0	2.0	2.0	156.0	31.1	156.0	49.1
GR	17.0	17.0	0.4	0.4	30.0	0.0	47.4	17.4
HU	24.0	16.8	1.0	1.0	80.0	56.0	105.0	73.8
IE	42.0	18.2	0.0	0.0	28.0	0.0	70.0	18.2
IS	13.0	10.4	13.0	10.4	39.0	10.4	65.0	31.2
IT	20.0	16.0	0.0	0.0	43.0	13.0	63.0	29.0
LT	21.0	21.0	4.0	4.0	104.0	88.3	129.0	113.3
LU	16.0	16.0	0.4	0.4	52.0	26.0	68.4	42.4
LV	19.0	19.0	2.0	1.6	52.0	36.4	73.0	57.0
NL	16.0	16.0	0.4	0.4	26.0	0.0	42.4	16.4
NO	9.0	9.0	8.0	6.0	39.0	39.0	56.0	54.0
PL	18.0	18.0	0.0	0.0	156.0	16.1	156.0	34.1
PT	17.0	17.0	3.0	1.0	26.0	0.0	46.0	18.0
SE	12.0	9.6	11.7	9.3	72.0	52.8	95.7	71.7
SI	15.0	15.0	13.0	2.8	37.0	37.0	65.0	54.8
SK	28.0	15.4	0.0	0.0	156.0	30.7	156.0	46.1
UK	52.0	11.5	2.0	0.3	26.0	0.0	80.0	11.8

Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008).

† There is no statutory paternity leave in **Austria**, but a few days of fully paid paternity leave may be provided through collective agreement, immediately after the birth of the child (Moss & Korintus, 2008).

Notes: in the **UK**, paid maternity leave was extended from 26 weeks to 39 weeks in April 2007.

In **Germany**, parental leave is available until the child's third birthday, but the 'childrearing benefit' paid at 67% of average earnings over the past 12 months' is only available for 12 months (14 months if the father takes at least 2 months of parental leave). The FTE parental leave figure in the table excludes the additional 2 months of leave that depend on fathers' take-up.

In **Norway**, 8 weeks of paternity leave include 2 weeks of unpaid 'daddy days' and 6 weeks of fully paid 'fathers' quota' of parental leave. Thus, parental leave in column 5 only includes the 9 weeks reserved for mothers and 39 weeks of family entitlement. Optional cash-for-care scheme for parents of children aged 12-36 months not in full-time public childcare is not included here.

In **Portugal**, paternity leave is 5 working days at 100% of earnings with no ceiling.

In **Sweden**, paternity leave includes 10 days of paternity leave and 60 days of 'fathers' quota' of parental leave, paid at 80% of earnings up to a ceiling.

In **Finland**, paternity leave includes two weeks of parental leave and 12 'bonus' days for fathers who take at least two weeks of parental leave. Parental leave includes 'childcare leave' with homecare allowance.

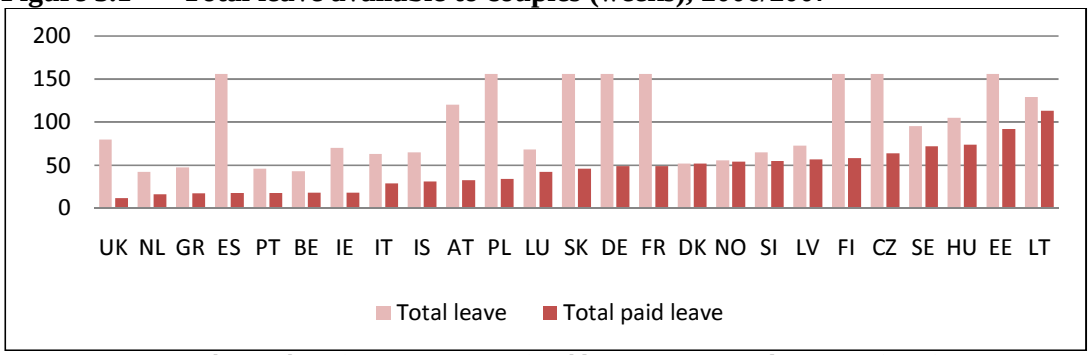
In **Hungary**, parental leave for insured parents (GYED) is from the end of maternity leave until the child's 2nd birthday, thus approximately 80 weeks, rather than 104.

In **Iceland**, total parental leave of 39 weeks includes 3 months of parental leave (13 weeks, 10.4 weeks FTE) and unpaid childcare leave of 13 weeks per parent.

In **Italy**, although each parent is entitled to 6 months parental leave paid at 30% of earnings, the maximum per family is 10 months (43 weeks, 13 weeks FTE).

In **Portugal**, 'paternity leave' includes 15 'daddy days' of paid parental leave at 100% of earnings straight after maternity or paternity leave.

Figure 3.1 Total leave available to couples (weeks), 2006/2007



Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008).

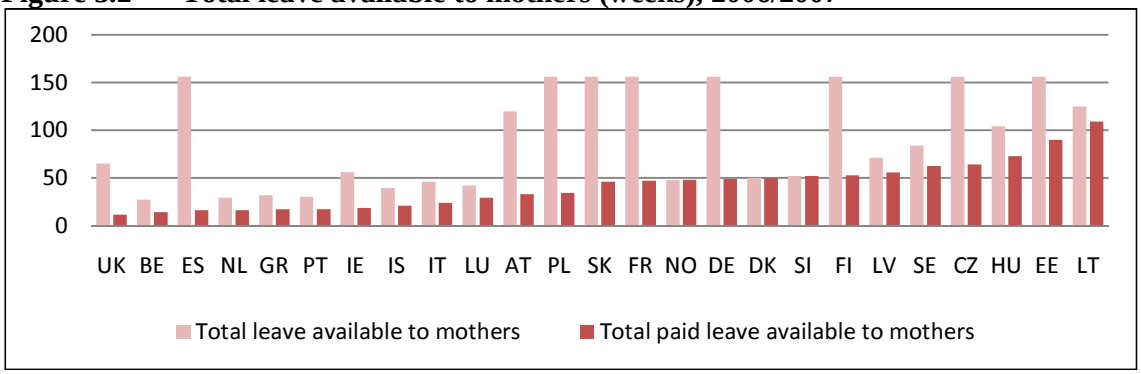
Table 3.2 reports the maximum amount of leave available to mothers through maternity leave and parental leave assuming that they take all of the parental leave not reserved specifically for fathers. The pattern is very similar to the one focusing on total leave available for couples: in most of the studied countries paternity leave is negligible if available at all. Moreover, where parental leave is a family entitlement or individual entitlements can be easily transferred between parents, mothers can (and often do) take all of the parental leave. The UK still provides the shortest FTE paid leave and Lithuania the longest (Figure 3.2).

Table 3.2 Child-related employment protected leave periods available to mothers by duration of unpaid leave and the duration of the full-time equivalent of the leave period if paid at 100% of last earnings, 2006/2007 (in weeks)

	Total maternity leave	FTE paid maternity leave	Total parental leave	FTE paid parental leave	Total leave available to mothers	Total FTE leave available to mothers
AT	16.0	16.0	104.0	16.7	120.0	32.7
BE	15.0	11.3	12.0	2.6	27.0	13.9
CZ	28.0	13.7	156.0	50.3	156.0	64.0
DE	14.0	14.0	156.0	34.8	156.0	48.8
DK	18.0	18.0	32.0	32.0	50.0	50.0
EE	28.0	28.0	156.0	62.0	156.0	90.0
ES	16.0	16.0	156.0	0.0	156.0	16.0
FI	17.5	16.9	156.0	35.8	156.0	52.7
FR	16.0	16.0	156.0	31.1	156.0	47.1
GR	17.0	17.0	15.0	0.0	32.0	17.0
HU	24.0	16.8	80.0	56.0	104.0	72.8
IE	42.0	18.2	14.0	0.0	56.0	18.2
IS	13.0	10.4	26.0	10.4	39.0	20.8
IT	20.0	16.0	26.0	7.8	46.0	23.8
LT	21.0	21.0	104.0	88.3	125.0	109.3
LU	16.0	16.0	26.0	13.0	42.0	29.0
LV	19.0	19.0	52.0	36.4	71.0	55.4
NL	16.0	16.0	13.0	0.0	29.0	16.0
NO	9.0	9.0	39.0	39.0	48.0	48.0
PL	18.0	18.0	156.0	16.1	156.0	34.1
PT	17.0	17.0	13.0	0.0	30.0	17.0
SE	12.0	9.6	72.0	52.8	84.0	62.4
SI	15.0	15.0	37.0	37.0	52.0	52.0
SK	28.0	15.4	156.0	30.7	156.0	46.1
UK	52.0	11.5	13.0	0.0	65.0	11.5

Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008).
Note: this assumes that mothers take all of the joint/family entitlement.

Figure 3.2 Total leave available to mothers (weeks), 2006/2007



Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008)

Table 3.3 shows the amount of leave available to fathers through paternity leave and any parental leave reserved for fathers that cannot be transferred to mothers. Sweden, Iceland and Luxembourg provide the most generous leaves available to fathers. However, in Sweden and Iceland this is due to paid paternity leave, while in Luxembourg it is largely due to the individual entitlement to paid parental leave. The

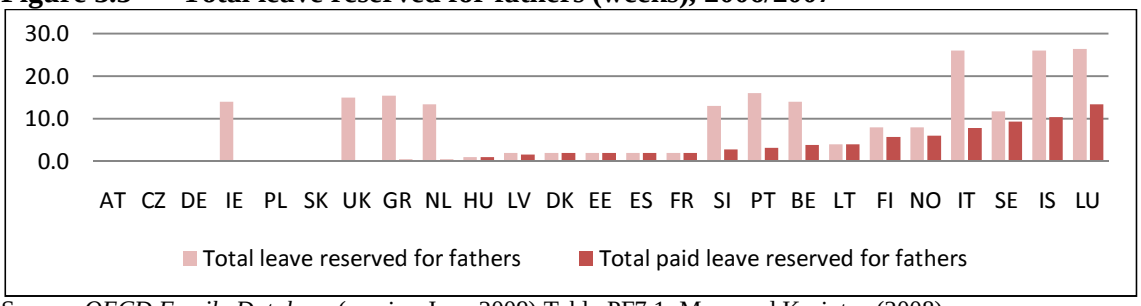
distinction is important because fathers are more likely to take up paternity leave than parental leave (Moss, 2008). Although several countries give fathers individual rights to parental leave, typically unpaid, in reality it is not likely to be used.

Table 3.3 Child-related employment protected leave periods available to fathers by duration of unpaid leave and the duration of the full-time equivalent of the leave period if paid at 100% of last earnings, 2006/2007 (in weeks)

	Total paternity leave	FTE paid paternity leave	Total parental leave reserved for fathers	FTE paid parental leave reserved for fathers	Total leave reserved for fathers	Total FTE leave reserved for fathers
AT	0.0	0.0	0.0	0.0	0.0	0.0
BE	2.0	1.2	12.0	2.6	14.0	3.8
CZ	0.0	0.0	0.0	0.0	0.0	0.0
DE	0.0	0.0	0.0	0.0	0.0	0.0
DK	2.0	2.0	0.0	0.0	2.0	2.0
EE	2.0	2.0	0.0	0.0	2.0	2.0
ES	2.0	2.0	0.0	0.0	2.0	2.0
FI	8.0	5.7	0.0	0.0	8.0	5.7
FR	2.0	2.0	0.0	0.0	2.0	2.0
GR	0.4	0.4	15.0	0.0	15.4	0.4
HU	1.0	1.0	0.0	0.0	1.0	1.0
IE	0.0	0.0	14.0	0.0	14.0	0.0
IS	13.0	10.4	13.0	0.0	26.0	10.4
IT	0.0	0.0	26.0	7.8	26.0	7.8
LT	4.0	4.0	0.0	0.0	4.0	4.0
LU	0.4	0.4	26.0	13.0	26.4	13.4
LV	2.0	1.6	0.0	0.0	2.0	1.6
NL	0.4	0.4	13.0	0.0	13.4	0.4
NO	8.0	6.0	0.0	0.0	8.0	6.0
PL	0.0	0.0	0.0	0.0	0.0	0.0
PT	3.0	1.0	13.0	2.1	16.0	3.1
SE	11.7	9.3	0.0	0.0	11.7	9.3
SI	13.0	2.8	0.0	0.0	13.0	2.8
SK	0.0	0.0	0.0	0.0	0.0	0.0
UK	2.0	0.3	13.0	0.0	15.0	0.3

Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008).
Fathers' individual non-transferable entitlements only.

Figure 3.3 Total leave reserved for fathers (weeks), 2006/2007



Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008)

Generous family leave arrangements do not necessarily entail a gender egalitarian distribution of entitlements between mothers and fathers, however. Information from Tables 3.2 and 3.3 on total FTE leave available to mothers and reserved for fathers is

used to assess the extent to which mothers' paid entitlements exceed fathers' entitlements. The six countries with no statutory paid paternity leave or non-transferable parental leave reserved for fathers (Austria, the Czech Republic, Germany, Ireland, Poland and Slovakia) can be considered the least egalitarian. Nine countries with mothers' FTE entitlements exceeding fathers' by a factor of 10 or less can be categorised as the most egalitarian. All the Scandinavian countries except Denmark, along with Luxembourg, Belgium, Italy, Portugal and Spain are in this group. Paid provisions in Iceland are the most egalitarian, with mothers' leave exceeding fathers' by only a factor of two. The rest of the countries fall in the middle with mothers' FTE leave exceeding fathers' by a factor of between 19 (Slovenia) and 73 (Hungary). Most of the countries in the 'egalitarian' group rank highly on the generosity and duration of fathers' entitlements (Figure 3.3), but there are countries, e.g. Lithuania, where relatively generous provisions for fathers are so outstripped by mothers' entitlements that they do not appear egalitarian in the provision of family leave.

Childcare services for pre-school children

The previous section reviewed statutory maternity, paternity and parental leave policy designs in the EU-25 with respect to their duration, generosity and the extent to which the arrangements are gender-egalitarian. This section examines the availability and affordability of childcare services for pre-school children, separately for 0-2-year-olds and those between the age of three and compulsory school age. It focuses on enrolment rates in formal childcare services, public spending on childcare and early education services and, to the extent that comparable statistics are available, on the costs of childcare.

The availability of affordable, accessible and high-quality childcare facilities can promote gender equality by making it easier for women with younger children to participate in employment. Gornick and Meyers (2003, p.197) argue that access to childcare services promotes gender equality both in the labour market and in the home because in their absence it is mothers, and not fathers, who become detached from the labour market. Unlike parenthood leave policies, affordable and accessible childcare services tend to have an unambiguously positive impact on mothers'

attachment to the labour force. Classical labour supply theory predicts that the price of out-of-home childcare will affect the mother's decision to work (D. M. Blau & Robins, 1988; Connelly, 1992) and to work longer hours (Powell, 1997). Blau and Robins (1988) find a significant negative effect of childcare cost both on family labour supply and demand for market child-care in the US[8], while Powell (1997) finds a significant negative effect of childcare cost on the labour force participation of married mothers and their hours of work in Canada[9]. At the same time, access to publicly funded childcare is found to have a positive effect on maternal labour supply (Baker et al., 2008; Uunk et al., 2005).

The EU recognises the importance of childcare services provision as an instrument of work and family life reconciliation policies. In 1992 the European Council recommended initiatives "to enable women and men to reconcile their occupational, family and upbringing responsibilities arising from the care of children" (Recommendation 92/241/EEC of 31 March 1992 on 'Childcare'). The proposed initiatives included childcare facilities for working parents, leave for working parents, family friendly workplace practices, and policies to promote the equal sharing of care responsibilities between women and men. Furthermore, the Barcelona Council in 2002 set explicit targets for the provision of childcare places to reach 90% of children between age 3 and mandatory school age and 33% of children under the age of 3 by 2010 in order to remove barriers to women's participation and achieve full employment. These targets were later restated in the 2008-2010 employment policy guidelines (Council Decision 2008/618/EC).

Lewis (2006, p.430) criticises the Barcelona childcare targets for their narrow focus on formal childcare and the explicit link to female employment levels, rather than equal participation of men and women in employment and care provision. However, the targets provide a clear benchmark for monitoring the provision of childcare services in each member state. It used to be difficult to monitor progress towards achieving the Barcelona targets due to the lack of harmonised and comparable

[8] Estimated price elasticity of childcare for married mothers' employment and purchasing market care are -0.38 and -0.34, respectively, using 1980 data.
[9] Estimated child care price elasticities for the labour force participation and hours of work of married mothers in Canada are -0.38 and -0.32, respectively, using 1988 data.

national statistics (Plantenga et al., 2008). However, the EU-SILC provides detailed harmonised data on children's enrolment in formal and informal childcare facilities. Statistics from the EU-SILC have been used to calculate childcare enrolment rates in the EU since 2006 (Plantenga & Remery, 2009; European Commission, 2009). This section uses data from the 2007 round of the EU-SILC to compare formal childcare enrolment rates across 25 European countries.

Gornick and Meyers (2003) evaluate childcare programmes in 12 countries according to five criteria: access and inclusiveness, affordability, quality, compensation of child care workforce and the compatibility of school schedules with standard working hours. In terms of access, they find the most extensive publicly supported care in Denmark, Sweden and Finland. Although in France and Belgium early child care is well integrated with pre-school care, provision for very young children, under the age of two and a half, is limited (2003, pp.198-199).

There is considerable variation in the way childcare provision is financed: direct provision of public child care; cost sharing with parents through co-payments; and alternative arrangements such as subsidies and tax credits. In Nordic countries, childcare is primarily provided directly, funded by taxation and moderate co-payments (J. Gornick & Meyers, 2003, p.206). In France and Belgium, direct provision is also the primary financing mechanism for children between the ages of two and a half/three and the start of school age, free of charge to parents. However, parents have to pay for childcare provision for younger children and for out-of-school-hours care, although some of these costs can be deducted from income taxes.

Table 3.4 reports the use of formal childcare facilities by children aged 2 or younger (column 1) and those between the age of 3 and the national mandatory school age (column 2), using harmonised and comparable data from the EU-SILC 2007. Formal childcare includes early education at pre-school and compulsory school as well as childcare at centre-based services and at day-care centres.

It appears that in 2007 only six[10] of the EU member states (as well as Norway and Iceland) had at least 33% of 0-2-year-olds in formal childcare services, thus hitting the Barcelona target: Spain, UK, Belgium, the Netherlands, Sweden and Denmark (see Figure 3.4). The share of the 0-2-year-olds using formal childcare varies considerably across the studied countries from the low of 2% in the Czech Republic and Poland to the high of 70% in Denmark. The new accession countries have consistently lower formal childcare enrolment rates for the youngest children (0-2), with only Slovenia coming close to achieving the Barcelona target for this age group. This could be the result of relatively generous parental or childcare leave in most of the new accession countries[11]. In contrast, Scandinavian countries have noticeably higher enrolment rates for the youngest children. However, considerably fewer of the youngest children are enrolled in formal care in Finland and Norway than in Denmark, Sweden or Iceland. This is possibly due to the fact that Finland and Norway have childcare leave benefits for parents who look after their young children at home[12].

However, coverage of formal childcare does not necessarily correlate with the intensity of use. Both the Netherlands and the UK achieve the Barcelona target, but amongst 0-2-year-olds who use at least one hour a week of formal care, the average number of hours in formal care is 16 and 13 hours a week, respectively (Table 3.4, column 3). This is not surprising given the high rates of part-time employment amongst women in these countries. In contrast, only 2% of children aged 0-2 use formal childcare in Poland, but those who do spend 37 hours a week in formal childcare facilities, on average.

[10] Interestingly, the proportion of children aged 0-2 using formal care in Portugal appears to have decreased from around 30% in the 2006 EU-SILC data to 22% in the 2007 data. Plantenga and Remery (2006) report the enrolment rate for this age group of 33% for Portugal using the EU-SILC 2006 and note that this estimate appears too high (p.31).

[11] Parents can take paid parental leave until the child's third birthday in the Czech Republic (childcare benefit is available until the child's fourth birthday), Estonia, Hungary, and Poland (paid for 24 months but available until the child's fourth birthday) (Moss & Korintus, 2008).

[12] In Norway, parents with a child aged 12-36 months are entitled to a cash benefit conditional on not using formal childcare on a full-time basis. In Finland, a childcare leave with a 'home-care' cash allowance can be taken after the end of parental leave until the child's third birthday. An unpaid childcare leave of 13 weeks per parent until the child's eighth birthday is available in Iceland, while there is no entitlement for additional childcare leave in Denmark or Sweden (Moss & Korintus, 2008).

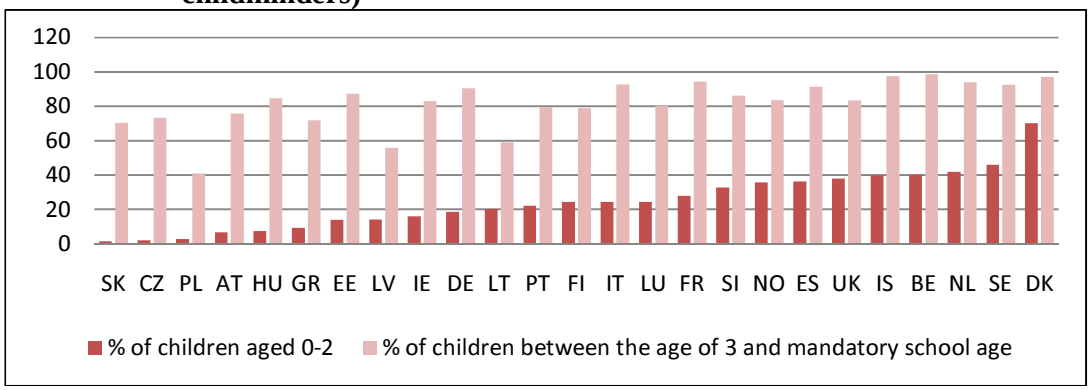
As regards the Barcelona target for children between the age of 3 and mandatory school age, Italy, France, Spain, Germany, Iceland, Belgium, the Netherlands, Sweden and Denmark have at least 90% of children in this age group using formal childcare services. However, only five of the EU member states (plus Iceland) achieved both of the Barcelona targets: Belgium, Denmark, Spain, the Netherlands and Sweden. Among children between the age of 3 and mandatory school age, the intensity of formal childcare use is lowest in the Netherlands, the UK and Ireland, where children in this age group use formal childcare for only 20-22 hours a week. This is in line with the high female part-time rates in these countries.

Table 3.4 Use of formal childcare arrangements (excluding registered childminders)

	% of children aged 0-2 (1)	% of children between the age of 3 and mandatory school age (2)	Average weekly hours in formal care (children aged 0-2) (3)	Average weekly hours in formal care (children aged 3-school age) (4)	Admission age to mandatory education (5)
AT	6.8	75.7	[22]	24	6
BE	40.1	98.5	30	32	6
CZ	2.1	73.4	[-]	29	6
DE	18.7	90.4	26	24	6
DK	70.2	97.2	35	34	7
EE	13.9	87.2	[38]	39	7
ES	36.3	91.4	26	29	6
FI	24.4	78.8	34	32	7
FR	28.0	94.4	28	29	6
GR	9.4	71.9	[31]	27	6
HU	7.5	84.6	[30]	33	5
IE	16.0	83.1	30	22	6
IS	39.9	97.6	36	36	6
IT	24.5	92.7	29	32	6
LT	20.2	59.1	[4]	4	6
LU	24.5	80.4	30	24	4
LV	14.1	55.9	[39]	39	5
NL	41.9	94.0	16	21	5
NO	35.8	83.5	33	33	6
PL	2.7	40.8	[37]	32	6
PT	22.2	79.6	[42]	37	6
SE	45.9	92.5	29	34	7
SI	32.9	86.1	36	33	6
SK	1.5	70.5	[-]	36	6
UK	37.9	83.3	13	22	5

Source: EU-SILC 2007 (individual weights used).
Means based on the number of cases below 50 are reported in square brackets (below 20 as [-]).
Formal childcare: pre-school; compulsory school; centre-based child-care; day-care.
Average weekly hours for those who use formal care for at least one hour a week.

Figure 3.4 Use of formal childcare arrangements (excluding professional childminders)



Source: EU-SILC 2007 (individual weights used).

The definition of formal childcare used in evaluating progress towards the Barcelona targets does not include care by professional childminders. Instead, this is included as 'other care' along with care by grandparents, other relatives, friends and neighbours (Plantenga and Remery, 2009, p.29). However, in some countries (e.g. France) care by registered childminders is the main form of childcare for the youngest children and is counted as formal childcare in the national statistics (Plantenga and Remery 2009, p.31). Therefore, the remainder of this section analyses the use of formal childcare arrangements that include care by "professional childminders"[13], even though the EU-SILC does not specify if the childminders are formally registered. Table 3.5 reports the coverage of formal childcare using this broader definition.

In addition to the seven countries that attained the Barcelona target for the youngest age group (0-2) using the Eurostat definition of formal care, three more countries (France, Luxembourg and Slovenia) have at least 33% of children aged 0-2 in formal childcare, using the definition that includes professional childminders (Table 2, Figure 3.5). Indeed, in each of the studied countries except Denmark, the proportion of children aged 0-2 using formal care increases when professional childminders are classed as formal rather than 'other' care. Interestingly, using the broader definition makes a visible difference for Poland, where the proportion of children aged 0-2 in formal care increases from under 3% to 9%, but not for the Czech Republic, where

[13] EU-SILC variable RL 050 "child care by a professional child minder at child's home or at childminder's home".

the share remains stable at around 2%. This indicates that formal care for very young children is more widespread in Poland than the official Eurostat estimates suggest, although it is still very low.

To allow mothers to work full-time, pre-school children may need to use formal childcare for at least 30 hours a week. Table 3.5 shows the proportion of children aged 0-2 (column 3) and those between the ages of 3 and mandatory school age (column 6) who use formal childcare services for 30 hours a week or more. Denmark (63%), Iceland (52%) and Slovenia (31%) are now the only countries that achieve the Barcelona target for the youngest age group. The lowest share of children aged 0-2 using formal childcare for at least 30 hours a week is found in Austria (2%), Slovakia (2%), Czech Republic (0.4%) and Lithuania (0%). In Lithuania, children aged 0-2 use formal childcare facilities for only 4 hours a week, on average. Overall, countries with the higher average proportion of 0-2-year-olds in formal care tend to have a higher proportion of 0-2-year-olds in "longer hours" (30 hours a week or more) formal care, as Figure 3.6 indicates. The only exceptions are the UK, the Netherlands and Lithuania, where the share of children in "longer hours" formal care is lower than would be predicted based on their share of children in formal care generally.

Low enrolment rates in formal childcare do not automatically imply low availability of childcare facilities, but there is a lack of comparable and reliable data on both demand and supply of formal childcare services[14]. However, the high proportions of young children using informal non-parental care in the studied countries, especially where enrolment rates in formal childcare are low, suggest that there is a demand for non-parental childcare. Informal care by relatives and friends appears to be an important source of non-parental care for very young children in most of the studied countries (Table 3.5, column 5). In nine of these countries the share of 0-2-year-olds who use any amount of informal care exceeds the proportion of 0-2-year-olds in formal care: Austria, Czech Republic, Estonia, Greece, Hungary, Italy, Poland, Slovenia and Slovakia. The difference is the most striking in the Czech Republic: 30% of 0-2-year-olds use informal care, compared with just under 3% who use formal

[14] See Immervoll and Barber (2006, p.14).

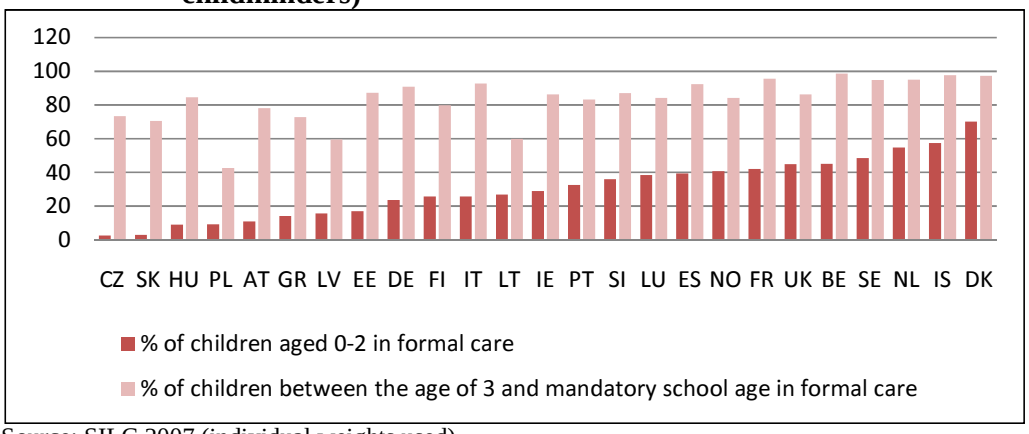
care. Overall, informal care is the least widespread in Scandinavian countries, where large proportions of young children are enrolled in formal childcare facilities.

Table 3.5 Use of formal childcare arrangements (including registered childminders)

	% of children aged 0-2 in formal care (1)	% of children between the age of 3 and mandatory school age in formal care (2)	% of children aged 0-2 in formal care of at least 30 hours a week (3)	Average weekly hours in formal care (children aged 0-2) (4)	% of children aged 0-2 in informal childcare (5)	% of children between the age of 3 and mandatory school age in formal care of at least 30 hours a week (6)
AT	10.9	78.1	2.0	19	23.4	20.1
BE	45.0	98.5	23.6	30	19.4	66.1
CZ	2.6	73.4	0.4	[-]	30.1	38.8
DE	23.6	90.9	13.1	26	15.3	32.6
DK	70.2	97.2	63.1	35	1.1	81.1
EE	17.0	87.3	14.5	[36]	28.9	79.3
ES	39.3	92.3	16.9	27	21.5	43.5
FI	25.8	79.8	20.4	34	3.9	51.9
FR	42.0	95.5	25.0	31	17.7	48.2
GR	14.2	72.8	9.9	[33]	40.5	31.1
HU	9.0	84.6	6.0	[29]	37.4	63.3
IE	29.0	86.2	15.8	30	15.8	22.6
IS	57.4	97.6	51.9		4.1	88.5
IT	25.8	92.7	15.0	30	30.0	70.7
LT	26.9	59.8	0.0	[4]	11.3	0.0
LU	38.4	84.0	19.3	27	28.7	26.4
LV	15.6	59.5	15.1	[41]	12.2	49.3
NL	54.9	94.9	6.4	17	51.1	17.9
NO	40.8	84.0	29.9	32	6.3	62.1
PL	9.1	42.6	7.1	35	27.8	27.2
PT	32.5	83.1	29.4	43	24.3	69.9
SE	48.4	94.8	28.2	29	1.1	69.5
SI	35.9	86.9	31.2	36	47.6	67.7
SK	3.0	70.5	1.9	[-]	17.2	61.2
UK	44.8	86.3	8.2	16	35.4	38.7

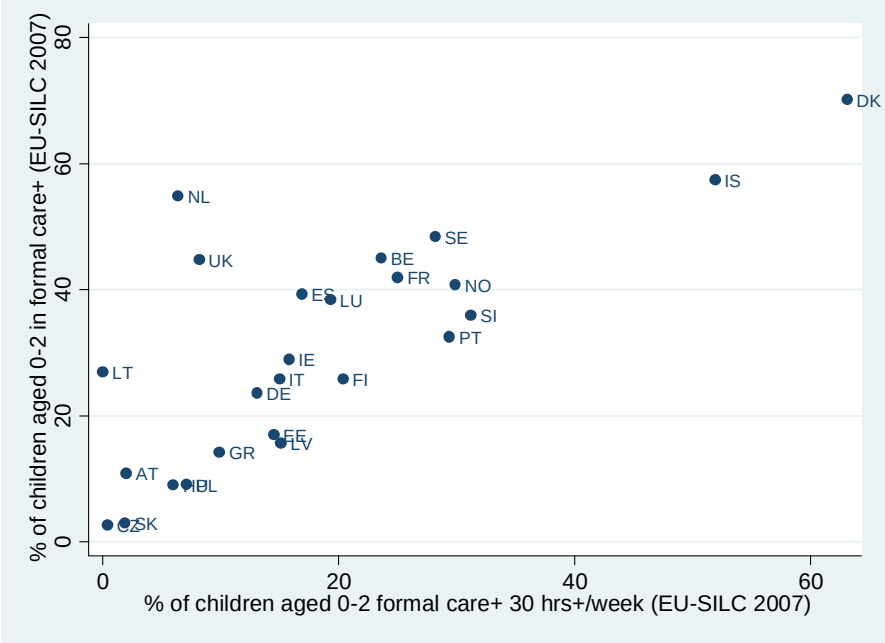
Source: SILC 2007 (individual weights used).
Means based on the number of cases below 50 are reported in square brackets (below 20 as [-]).
Formal childcare: pre-school; compulsory school; centre-based child-care; day-care; professional child minder.
Average weekly hours for those who use formal care for at least one hour a week.
Informal childcare: grandparents; other household members (not parents).

Figure 3.5 Use of formal childcare arrangements (including professional childminders)



Source: SILC 2007 (individual weights used).

Figure 3.6 Use of formal childcare arrangements by children aged 0-2

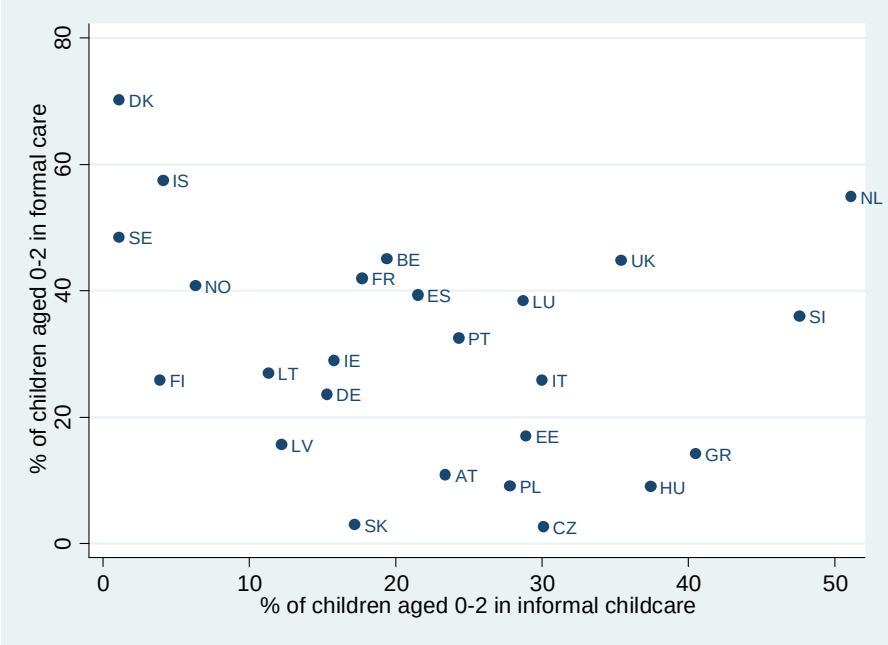


Source: SILC 2007 (individual weights used).
R=0.75 (p<0.001).

However, there is no straightforward negative association between the proportions of 0-2-year-olds using formal and informal care (Figure 3.7), because in some countries informal care appears to be complementary to formal childcare, rather than being a substitute. Thus, Figure 3.7 shows that the UK, the Netherlands and Slovenia have relatively high usage rates of both formal and informal childcare. This suggests that formal childcare in these countries is either not accessible or affordable enough for mothers of young children to work full-time without having to resort to help from

family and friends. Indeed, Table 3.6 shows that amongst 0-2-year-olds who use any amount of formal childcare, 42% also use some informal care in the UK (13 hours on average), 56% in the Netherlands (8 hours on average) and 53% in Slovenia (13 hours on average). In Italy and Spain formal childcare also tends to be supplemented with informal care by relatives and friends: 19% of 0-2-year-olds in Spain and 37% in Italy who use any amount of formal care also use informal care (16 hours on average in both countries).

Figure 3.7 Use of formal and informal childcare by children aged 0-2



Source: SILC 2007 (individual weights used).
R=-0.26.

Table 3.6 Use of formal and informal childcare arrangements

	% of children aged 0-2 who use formal care who also use informal care	Average weekly hours in informal care (children aged 0-2 who use both formal and informal care)	Average weekly hours in formal care (children aged 0-2 who use both formal and informal care)
AT	[23.3]	[-]	[-]
BE	20.4	[16]	[23]
CZ	[-]	[-]	[-]
DE	11.8	[-]	[-]
DK	0.0	[-]	[-]
EE	[21.2]	[-]	[-]
ES	18.8	16	22
FI	4.8	[-]	[-]
FR	23.8	10	24
GR	[38.2]	[-]	[-]
HU	[56.7]	[10]	[32]
IE	17.4	[-]	[-]
IS	2.6	[-]	[-]
IT	37.4	16	28
LT	[1.2]	[-]	[-]
LU	29.0	[9]	[26]
LV	[1.9]	[-]	[-]
NL	55.5	8	15
NO	0.0	[-]	[-]
PL	[24.1]	10	37
PT	[20.4]	[-]	[-]
SE	1.0	[-]	[-]
SI	52.5	13	36
SK	[-]	[-]	[-]
UK	41.6	13	12

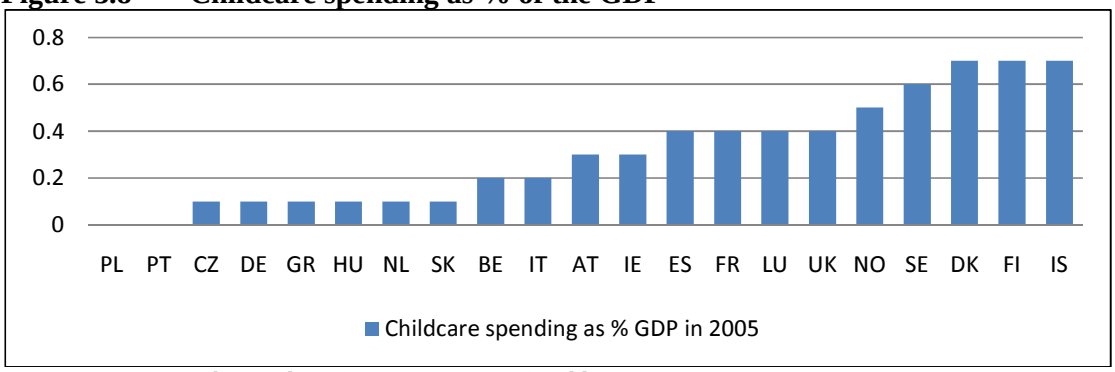
Source: SILC 2007 (individual weights used).
Means based on the number of cases below 50 are reported in square brackets (below 20 as [-]).
Formal childcare: pre-school; compulsory school; centre-based child-care; day-care; professional child minder.
Average weekly hours for those who use formal care for at least one hour a week.
Informal childcare: grandparents; other household members (not parents).

Including care by professional childminders in the definition of formal care does not make much difference to the proportion of children between the age of 3 and mandatory school age (see Table 3.4 and Table 3.5). The same nine countries that attain the Barcelona target of 90% under the Eurostat definition of formal care also reach this target when the broader definition is used. This suggests that professional childminders are a more important form of non-parental childcare for the youngest children than for those aged three and above.

Unsurprisingly, countries that spend more on childcare and early education have higher enrolment rates in formal childcare. Scandinavian countries spend the largest share of their GDP on childcare services (excluding pre-primary education): from 0.5% in Norway to 0.7% in Denmark, Iceland and Finland (Table 3.7, column 1). In contrast, Poland and Portugal spend less than 0.1% on childcare services (Figure 3.8). Overall, there is a positive association ($R=0.64$, $p<0.01$) between government

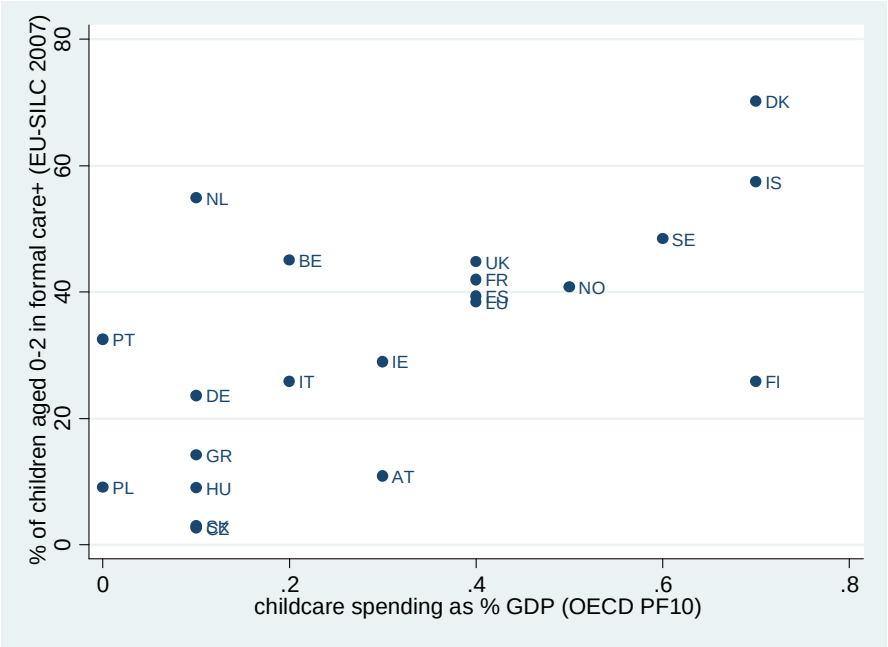
spending on childcare services and the share of 0-2-year-olds using formal childcare (Figure 3.9).

Figure 3.8 Childcare spending as % of the GDP



Source: *OECD Family Database* (version June 2008) Table PF10.
Note: no information available for Estonia, Latvia, Lithuania or Slovenia.

Figure 3.9 Childcare spending as % of the GDP and formal childcare enrolment rates for 0-2-year-olds



Source: *OECD Family Database (Table PF10)*; EU-SILC 2007.
R=0.64 (p<0.01).

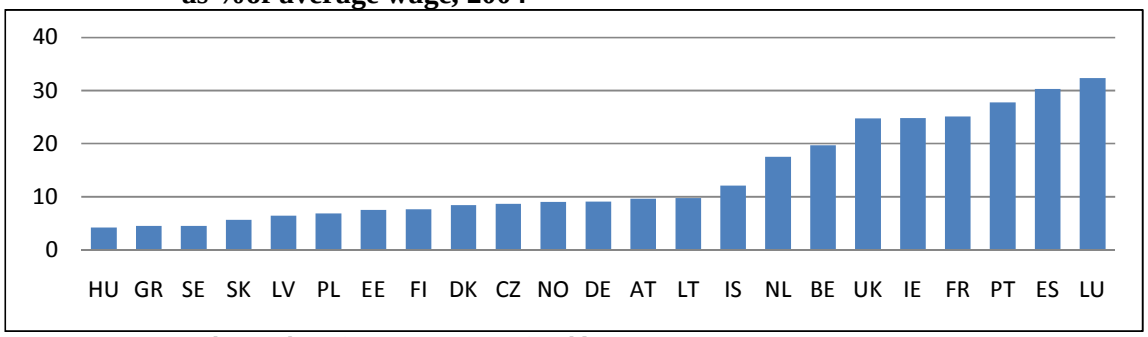
There is also considerable variation in the costs of childcare between the studied countries. Although the EU-SILC does not collect information about childcare prices, the OECD Family Database provides harmonised and comparable information on these costs for parents in most of the countries studied in this chapter. Childcare

fees[15] for a 2-year-old range from 4% of the average wage in Hungary and Greece to 30% in Spain and Luxembourg, reflecting the differences in the structure of the childcare market and the amount of government subsidies to childcare providers (Table 3.7, column 2; Figure 3.10). However, parents do not pay the full cost of childcare fees if they receive government help through cash transfers, rebates or tax concessions. Net childcare costs, including fees minus the value of any cash transfers, rebates or tax concessions (for a dual earner family with one earning 100% of the average wage and the other 67% of the average wage, both working full-time) expressed as a percentage of the average wage vary from just 1% in Estonia to around 44% in the UK and Ireland (Table 3.7, column 4). Belgium and Estonia appear to do the most to mitigate the cost of childcare fees: parents pay only 12% and 15% of the childcare fees, respectively, once childcare and other benefits are taken into account (Table 3.7, columns 3 and 4). Unfortunately, there is no comparable and harmonised European statistics on the quality of childcare services (Plantenga & Remery, 2009, p.43).

There does not appear to be any evident association between childcare fees or net costs and enrolment rates for pre-school children, however. Immervoll and Barber (2006) suggest that in the countries where very few children use formal care, low availability of childcare facilities is a greater problem than affordability. Indeed, in the four countries with fewer than 10% of children under the age of three using formal childcare (Figure 3.5), i.e. Czech Republic, Slovakia, Hungary and Poland, fees for a 2-year-old in accredited childcare as a share of national average wage are also below 10% of the national average wage, some of the lowest levels across the studied countries (Table 3.7, column 2).

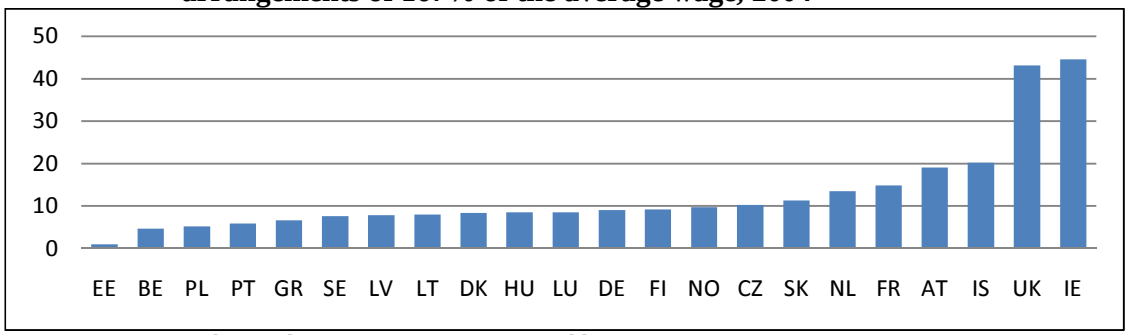
[15] Childcare fees are paid by parents to the childcare institution, after any government subsidies to the institution but before any childcare related cash benefits or tax transfers (Immervoll & Barber, 2006, p.11).

Figure 3.10 Childcare fees for a 2-year-old in accredited childcare services as %of average wage, 2004



Source: *OECD Family Database* (version June 2008) Table PF12.1.
Note: no information available for Italy or Slovenia.

Figure 3.11 Net childcare costs for a dual earner family with full-time arrangements of 167% of the average wage, 2004



Source: *OECD Family Database* (version June 2008) Table PF12.2.
Note: no information available for Spain, Italy or Slovenia.

Table 3.7 Public spending on childcare and private costs of childcare

	Childcare spending as % GDP in 2005 (1)	Childcare fees per two-year old attending accredited early-years care and education services, 2004, % of average wage (2)	Childcare fees for 2 children (aged 2 and 3) in full-time accredited childcare for a dual earner family (with full-time arrangements of 167% of AW) as % of AW (3)	Net childcare costs for 2 children (aged 2 and 3) in full-time accredited childcare for a dual earner family (with full-time arrangements of 167% of AW) as % of AW (4)
AT	0.3	9.6	19.1	19.1
BE	0.2	19.7	31.6	4.7
CZ	0.1	8.6	10.3	10.3
DE	0.1	9.1	16.0	9.1
DK	0.7	8.4	11.4	8.4
EE	-	7.5	8.5	1.0
ES	0.4	30.3	-	-
FI	0.7	7.6	9.2	9.2
FR	0.4	25.1	16.8	14.8
GR	0.1	4.5	8.9	6.6
HU	0.1	4.2	8.5	8.5
IE	0.3	24.8	49.6	44.6
IS	0.7	12.1	24.2	20.2
IT	0.2	-	-	-
LT	-	9.7	19.4	8.0
LU	0.4	32.4	19.1	8.5
LV	-	6.4	13.2	7.8
NL	0.1	17.5	22.7	13.5
NO	0.5	9.0	18.0	9.7
PL	0.0	6.8	9.3	5.2
PT	0.0	27.8	27.8	5.9
SE	0.6	4.5	7.6	7.6
SI	-	-	-	-
SK	0.1	5.6	11.3	11.3
UK	0.4	24.7	47.8	43.1

Source: *OECD Family Database* (version June 2008). Tables PF 10.1, PF 12.1, PF 12.2.

Tax and benefit treatment of secondary earners in couple families

The previous section considered the availability and affordability of childcare services for pre-school children in 25 countries. Although access to childcare facilities for young children makes it easier for parents to reconcile work and family life, the net gain from employment, as opposed to household work, also depends on the governing tax and benefit rules. This section reviews the main features of the tax and benefit systems in 25 countries that are likely to influence women's decisions to take up paid work. In particular, it considers the nature of the personal income tax unit (family or individual); the average effective tax rate on secondary earners entering employment at three-quarters of average earnings or at average earnings; and the difference between the tax rates on secondary earners in couples, on single individuals and on primary earners with non-working spouses, if all of them have the

same level of gross earnings. Scenarios with and without dependent children are analysed.

In spite of social attitudes changing in favour of women's participation in paid work, tax and benefit systems retain past social norms about the roles of men and women, thus sustaining implicit gender biases. While explicitly different treatment of men and women in legal provisions in industrialised countries is increasingly a thing of the past (e.g. family tax return to be filed in husband's name), implicit gender bias is still found in tax and benefit regulations that have different consequences for men and women, because of the prevailing social and economic behaviour (Stotsky, 1997). Secondary earner bias, present when lower earners within couples face higher taxes, is found in most European countries (Stotsky, 1997; Bettio & Verashchagina, 2009a).

In so far as women in couples contribute less to household income than their partners, they are likely to be secondary earners. Although two-thirds of all couple households in the EU-SILC 2007 database have two earners, in 59% of couples (ranging from 43% in Slovenia to 74% in the Netherlands), on average, women do not earn at all or contribute to less than 45% of combined household earnings (Bettio & Verashchagina, 2009a, p.6). This suggests that when married women work they tend to earn less than their husbands. Using comparable data for Mediterranean countries, Nicodemo (2009a) finds considerable gender wage gaps among married adults (Nicodemo, 2009a).

An implicit secondary earner bias is most likely to be found in joint (i.e. family-based rather than individual) taxation systems, where both the primary and the secondary earner face the same marginal tax rate. In progressive tax systems this means that secondary earners pay a higher level of tax than they would pay as single earners at the same earnings level, simply as a result of joint income tax filing (McCaffery, 2008). This can be a disincentive for secondary earners to increase their working hours or to work at all (OECD, 2005). Therefore, since women in couples are more likely to be secondary earners than men, the type of tax unit (joint or individual) has implications for gender equality both in the labour market and in the

home[16]. Making the tax and benefit systems neutral with respect to secondary earners in couples and single individuals on the same earnings could increase married women's participation rates and lead to a more equal sharing of market work between spouses (Jaumotte, 2003). Indeed, it is often found that the labour supply of married women is more sensitive to changes in taxes and benefits than that of men (Meghir & Phillips, 2008). Furthermore, some groups of married women are more responsive to fiscal incentives in their decisions to work, such as lower educated women and those with young children, who are usually the least attached to the labour market (Bettio & Verashchagina, 2009a).

In fact, since the labour supply of secondary earners is more responsive to fiscal incentives, economic literature on taxation argues in favour of separate and lower taxation of secondary earners (Apps & Rees, 2007). Since women in couples are more likely to be secondary earners, Alesina and Ichino (2007) show theoretically that it would be optimal to have lower tax schedules for women than for men. Although implementing gender-specific taxation would be unrealistic in most countries, tax rates could be different for primary and secondary earners, defined in terms of their respective contributions to the total household income (Immervoll et al., 2008).

Concern with married women facing prohibitively high marginal tax rates rose up on the European Community agenda in the early 1980s. In a 1984 memorandum on income taxation and equal treatment for men and women, the European Commission found that tax and benefit systems in several of the 10 member states appeared to have 'an indirect adverse effect on women's employment' due to joint taxation[17] with progressive tax rates, allowances or tax deductions granted a priori to the husband, lack of tax deductions for childcare costs, loss of tax allowances when opting for separate taxation, women not being taxpayers in their own right, 'the responsibility for the non-payment of tax by the other spouse', and 'limitations on the amount of income that can be paid to an assisting wife by a husband' (European

[16] Furthermore, joint tax systems are not neutral to marriage decisions, as they distort the marriage market (efficiency argument) and treat cohabiting and married couples unequally (equity argument); however, if the main equity concern is that families with the same total income pay equal taxes, only joint taxation systems can produce this outcome (Immervoll et al., 2008).
[17] With income aggregation or income splitting.

Commission, 1984). The European Commission recommended the adoption of individual income tax systems or at least an option for separate taxation. Seven out of ten countries had a joint taxation system at the time: Belgium, Germany, France, Ireland, Luxembourg, the Netherlands and the UK, of which two have since switched to fully individual taxation (the Netherlands and the UK). Out of 25 countries studied in this chapter, France, Germany, Luxembourg, Portugal and the Czech Republic had joint income taxation in 2007, although several other countries had some elements of joint taxation in their systems or retained an option for joint filing (See Table 1, column 1).

However, the interaction between tax and benefit systems can produce the opposite effect on the second earner than would be expected if only the nature of the tax unit were considered, because eligibility to income-tested benefits is typically assessed on joint family income. According to Bettio and Verashchagina (2009a), the vast majority of the EU member states with individual taxation systems test eligibility for social assistance benefits and housing benefits using family income. Moreover, eligibility for cash benefits for families with children usually depends on family income (Bradshaw & Finch, 2002). In a comprehensive evaluation of tax and benefit systems in 15 EU countries using EUROMOD microsimulation data for 1998, Immervoll et al. (2008) find that in the countries with individual income taxation, the effective tax rate (the proportion of gross earnings taxed away or lost to benefit withdrawal) faced by the second earner depends negatively on the earnings level of the working spouse. For example, a secondary earner married to a low-income spouse will face a high effective tax rate due to taxes and insurance contributions on gross earnings and the withdrawal of family-based means-tested benefits. At the same time, a secondary earner married to a high earner will be subject to a low effective tax rate, since each spouse's earnings are taxed separately. In contrast, in a fully joint and progressive taxation system, the effective tax rate for the secondary earner depends positively on the earnings level of the spouse, so the higher the principal earner's income, the higher the effective tax rate faced by the secondary earner. Thus, rather than focusing exclusively on the nature of the income tax unit, the entire tax and benefit system needs to be considered in the analysis of work incentives for potential second earners in families.

Table 3.8 reports average tax transfers, including social insurance contributions and net of benefits, as a percentage of gross earnings for two types of households with equal total household income: 'single breadwinner' households where one spouse earns 133% of the Average Production Wage (APW) and the other does not work (column 2) and 'dual-earner' households where each spouse earns 67% of APW (column 3). The calculations are based on data from the OECD Tax/Benefit models (OECD, 2010). These models are based on a couple with two children aged four and six (OECD, 2007, p.197). Given household income of 133% of APW, tax/benefit systems appear to treat single-breadwinner and dual-earner households equally in Iceland, France, Slovakia, Estonia and Slovenia (Figure 3.12). At the same time, single-breadwinner households in Germany and the Czech Republic pay somewhat lower taxes overall than dual-earner families on the same income. The rest of the studied countries have positive incentives towards equal sharing of paid work, privileging dual-earner households in their tax/benefit systems. The most favourable systems for dual-earner households are found in Sweden, Finland, Greece, Hungary and Ireland. The tax/benefit system in Hungary produces the largest percentage point difference between the tax transfers of single-breadwinner and dual-earner households (15ppt), while in Ireland single-breadwinner households are expected to pay more than three times more taxes net of benefits than dual-earner households on the same combined level of income (133% of APW). However, the results could be different if families with younger children were considered.

Although there is no clear-cut correlation between the neutrality of the tax/benefit system with respect to single and dual-earner households and the type of income tax unit, countries with individual taxation appear to be more favourable to dual-earner households, on balance. Thus, both Germany and the Czech Republic, the two countries that privilege single-breadwinner households, have joint income taxation. Sweden, Finland, Greece, Hungary and Ireland, the countries that are most favourable to dual-earner households, have individual income taxation, although in Ireland individual taxation is optional. Most of the countries that are largely neutral in their treatment of single-breadwinner and dual-earner households—Iceland, France, Slovakia, Estonia and Slovenia—are individual taxation countries, with France being the only exception. Since cash benefits are typically assessed on total

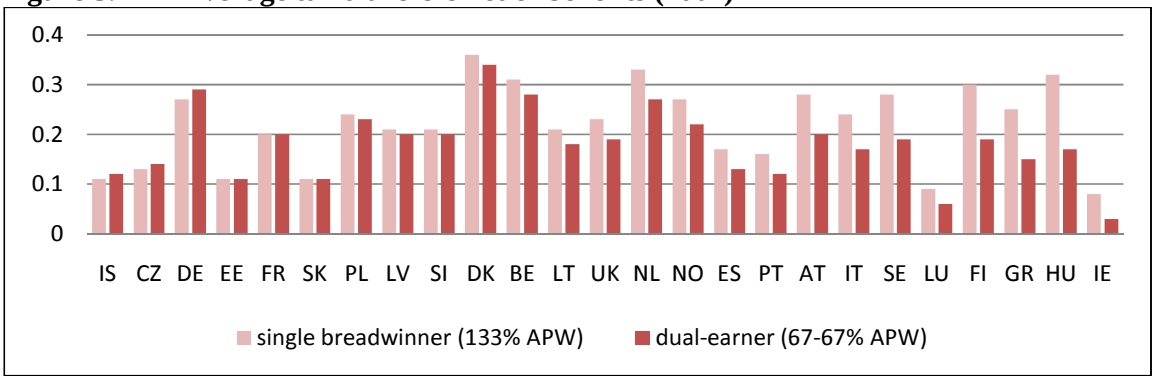
family income, it is not surprising that not all individual income taxation countries clearly privilege dual-earners.

Table 3.8 Tax treatment of couples (2007)

	Tax unit (1)	Average tax transfers net of benefits for 'single breadwinner' (133-0% APW) households with 2 children, as % of gross earnings (2)	Average tax transfers net of benefits for 'dual earner' (67-67% APW) households with 2 children, as % of gross earnings (3)
AT	**Individual**	0.28	0.20
BE	Individual (option for joint)	0.31	0.28
CZ	Joint	0.13	0.14
DE	Joint	0.27	0.29
DK	**Individual**	0.36	0.34
EE	Individual (option for joint)	0.11	0.11
ES	Individual (option for joint)	0.17	0.13
FI	**Individual**	0.30	0.19
FR	Joint	0.20	0.20
GR	Individual (joint for family firms)	0.25	0.15
HU	**Individual**	0.32	0.17
IE	Joint (option for individual)	0.08	0.03
IS	Individual (non-wage income taxed jointly)	0.11	0.12
IT	**Individual**	0.24	0.17
LT	**Individual**	0.21	0.18
LU	Joint	0.09	0.06
LV	**Individual**	0.21	0.20
NL	**Individual**	0.33	0.27
NO	Individual (option for joint)	0.27	0.22
PL	Individual (option for joint)	0.24	0.23
PT	Joint	0.16	0.12
SE	**Individual**	0.28	0.19
SI	**Individual**	0.21	0.20
SK	**Individual**	0.11	0.11
UK	**Individual**	0.23	0.19

Source: Column 1— OECD Family Database , "Neutrality of Tax/Benefit Systems", last update 10/02/2010; Bettio and Verashchagina (2009) summarising OECD 2007 country chapters and reports. Eurostat 'Taxes in Europe' Database for information on Latvia.
Columns 2 and 3 — OECD Tax/Benefit Calculator (accessed on 29/04/2010).

Figure 3.12 Average tax transfers net of benefits (2007)



Source: OECD Tax/Benefit Calculator (accessed on 29/04/2010).
Data sorted by the ratio of tax for single breadwinner households to the tax for dual-earner households.

Table 3.9 compares average tax rates on secondary and primary earners in families without children, and on single individuals with the same level of earnings. Two earnings levels are used: 67% of APW (columns 1-4) and 100% of APW (columns 5-8). Columns 1 and 2 show the Average Effective Tax Rates[18] (AETR) for secondary earners entering employment at 67% of APW, whose spouses earn 67% of APW and 100% of APW, respectively. Similarly, columns 5 and 6 show the AETR values for secondary earners entering employment at 100% of APW. The AETR is calculated as the proportion of their earnings that goes into paying increased household taxes and social contributions, net of cash benefits, when they enter employment, given the level of earnings of the spouse (here, 67% of APW and 100% of APW). Columns 3 and 7 show average tax rates net of transfers for single individuals earning 67% and 100% of APW, respectively. Finally, columns 4 and 8 show average tax rates net of transfers for households with one earner and a non-working spouse, where the main earner is on 67% and 100% of APW. Cash benefits include unemployment insurance, unemployment assistance, housing benefits, and 'in-work' benefits conditional on employment, excluding any benefits in kind (OECD, 2007, p.189). As before, all calculations are based on the OECD Tax/Benefit Calculator 2010; see OECD (2007, pp.183-198) for the full description of the tax/benefit modelling methodology and assumptions. The originality of this analysis lies in the simultaneous comparison of tax rates on secondary earners (with spouses on different earnings), primary earners and single individuals, rather than the narrow focus on either secondary earners and single individuals, or primary and secondary earners in couples.

It is important to note that while the OECD tax/benefit models express earnings levels in terms of the national average wage, it is likely that average earnings for women, particularly the group of married women with young children, are lower than the national average wage used in the OECD modelling. Thus, Bettio and Verashchagina (2009a) model fiscal outcomes for female secondary earners using actual average earnings (estimated from the EU-SILC 2007) in the OECD tax/benefit models. They define secondary earners as married women with two young children

[18] The AETR shows the proportion of the increase of gross earnings which is lost due to taxes, social security contributions and benefit income withdrawal upon entering work at a specified level of earnings. For a secondary earner, AETR = $1-(\Delta Y_{net})/(\Delta Y_{gross})=1-(Y_{netB}-Y_{netA})/(Y_{grossB}-Y_{grossA})$, where A is the situation when only one spouse works; B is the situation when both spouses work (OECD, 2007, p.194).

in households where they earn less than 45% of total market income. The study finds that it largely pays for secondary earners to enter paid work and that the tax rates they face do not correlate with the unit of income taxation, but rather with the overall level of taxation (Bettio, 2002, p.57). The analysis in this section is entirely based on the OECD tax/benefit models. Thus, it is worth bearing in mind that secondary earners assumed to enter work at the national average wage are likely to have a higher than average earnings potential for their respective group (e.g. female secondary earners with young children).

In the majority of the studied countries, secondary earners face the highest tax rates when they decide to move into work at two-thirds of average earnings or at average earnings, when their spouse earns 67% or 100% of APW, compared with single individuals on the same earnings or primary earners with a non-working spouse. Primary earners tend to face the lowest effective tax rates because of joint income taxation and/or joint assessment of income for cash benefits, taking into account the fact that their spouse has no earned income. One of the most striking examples is the situation in Iceland for earners on 67% of APW: secondary earners (with spouses earning average wage) have 39% of their gross earnings taxed away due to higher household taxes and/or reduced cash benefits (i.e. housing benefit) when they enter employment, which is almost double the effective tax rate on single individuals (18%) and almost 20 times greater than the effective tax rate on primary earners with non-working spouses (2%).

Only in six countries do all three types of earners in the analysed model families face the same tax rates at similar earnings levels. In Finland, Greece, Hungary, Lithuania, Sweden and the UK there is effectively no distinction made in the tax and benefit system between secondary earners (regardless of spouse's earnings), single individuals and primary earners with non-working spouses, all of whom are at 67% of APW or 100% of APW. Although this is an otherwise diverse mix of countries, all of them have separate income taxation (Table 3.8). At the same time, Iceland and Denmark exhibit some of the highest relative burdens on secondary earners, in spite of separate income taxation. This appears to be largely due to eligibility to housing benefit being assessed on joint family income.

Table 3.9 also shows that in most countries the difference between taxes on secondary earners with spouses earning average wage and primary earners with non-working spouses is larger than the tax burden difference between secondary earners and single individuals at the same gross earnings level. This is likely to be due to eligibility to cash benefits being assessed on joint family income and, in some countries, due to a dependent spouse allowance, which makes primary earners with non-working spouses face the lowest effective tax rates net of transfers. Furthermore, relative tax burdens on secondary earners in comparison with either single individuals or primary earners tend to be higher at lower earnings (67% of APW compared with 100% of APW). This shows that fiscal constraints are highest for secondary earners with the lowest earnings potential.

Finally, in the vast majority of the studied countries the AETR for secondary earners does not depend on the earnings level of the spouse for the two situations considered here (spouse earns 67% or 100% of APW; columns 1 and 2; 5 and 6, respectively). However, in the Czech Republic and Slovenia, the AETR is somewhat higher for secondary earners whose husbands earn lower wages. For instance, for a secondary earner entering work at 67% of APW in the Czech Republic, the AETR is 25% if the spouse earns 67% of APW, but only 22% if the spouse earns average wage. In both the Czech Republic and Slovenia, the difference appears to be due to lower income couples with a single earner being eligible for housing benefit, which is withdrawn when the other spouse enters employment (at 67% APW or higher). In contrast, the AETR values are somewhat lower for secondary earners whose spouses earn lower wages in Belgium, Germany, France, Luxembourg, Portugal and Slovakia. In all of these countries, couples with a single earner on 67% APW are not entitled to housing or social assistance benefits[19]. This shows once again that tax burdens on secondary earners are influenced by a complex interplay of taxes and means-tested benefits even when there are no dependent children present.

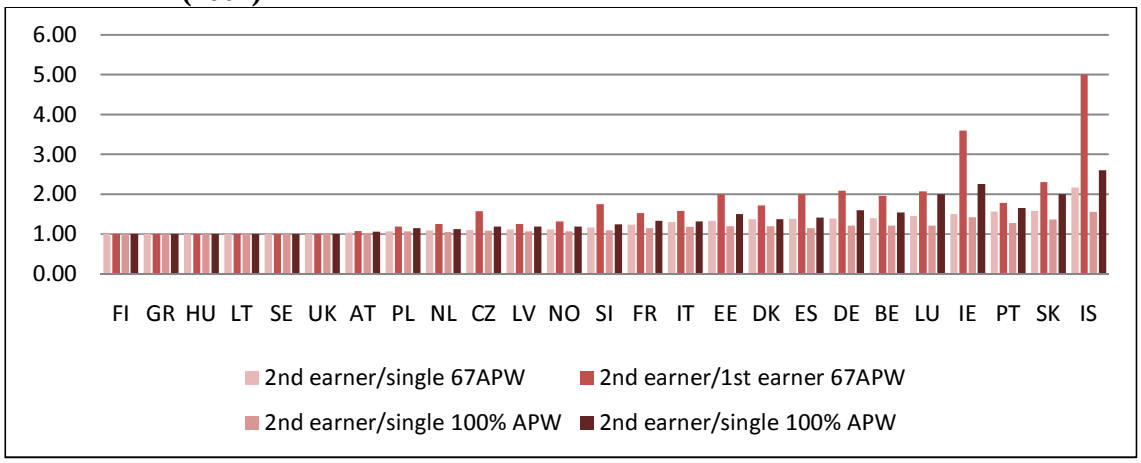
[19] However, in France, a couple without children with a single earner on 67% would still be entitled for a small amount of in-work benefits (82 Euros per year).

Table 3.9 Average tax rates for secondary earners, single individuals and primary earners, at 67% and 100% of APW, families without children (2007)

	67% APW				100% APW			
	2nd earner, (spouse earns 67% of APW) (1)	2nd earner, (spouse earns 100% of APW) (2)	single (3)	1st earner (non-working spouse) (4)	2nd earner, (spouse earns 67% of APW) (5)	2nd earner, (spouse earns 100% of APW) (6)	single (7)	1st earner (non-working spouse) (8)
AT	0.29	0.29	0.28	0.27	0.35	0.35	0.34	0.33
BE	0.47	0.49	0.35	0.25	0.49	0.51	0.42	0.33
CZ	0.25	0.22	0.20	0.14	0.27	0.25	0.23	0.21
DE	0.48	0.50	0.36	0.24	0.49	0.51	0.42	0.32
DK	0.50	0.48	0.35	0.28	0.48	0.48	0.40	0.35
EE	0.24	0.24	0.18	0.12	0.24	0.24	0.20	0.16
ES	0.22	0.22	0.16	0.11	0.24	0.24	0.21	0.17
FI	0.24	0.24	0.24	0.24	0.30	0.30	0.30	0.30
FR	0.31	0.32	0.26	0.21	0.31	0.32	0.28	0.24
GR	0.18	0.18	0.18	0.18	0.25	0.25	0.25	0.25
HU	0.27	0.27	0.27	0.27	0.39	0.39	0.39	0.39
IE	0.18	0.18	0.12	0.05	0.21	0.27	0.19	0.12
IS	0.39	0.39	0.18	0.02	0.39	0.39	0.25	0.15
IT	0.30	0.30	0.23	0.19	0.33	0.33	0.28	0.25
LT	0.23	0.23	0.23	0.23	0.25	0.25	0.25	0.25
LU	0.23	0.29	0.20	0.14	0.28	0.34	0.28	0.17
LV	0.30	0.30	0.27	0.24	0.31	0.31	0.29	0.26
NL	0.35	0.35	0.32	0.28	0.38	0.38	0.36	0.34
NO	0.29	0.29	0.26	0.22	0.32	0.32	0.30	0.27
PL	0.31	0.31	0.29	0.26	0.32	0.32	0.30	0.28
PT	0.19	0.25	0.16	0.14	0.24	0.28	0.22	0.17
SE	0.25	0.25	0.25	0.25	0.28	0.28	0.28	0.28
SI	0.40	0.35	0.30	0.20	0.40	0.36	0.33	0.29
SK	0.24	0.30	0.19	0.13	0.26	0.30	0.22	0.15
UK	0.24	0.24	0.24	0.24	0.27	0.27	0.27	0.27

Source: *OECD Tax-Benefit calculator (accessed on 24/04/2010).*

Figure 3.13 Relative tax burdens on secondary earners with spouses earning 100% APW, compared with single individuals and primary earners with non-working spouses, families without children (2007)



Source: *OECD Tax-Benefit calculator (accessed on 24/04/2010)*
Note: the value of 2nd earner/1st earner for Iceland (19.8) is truncated to 5.

Table 3.10 compares average tax rates for primary and secondary earners as well as for single individuals on the same level of earnings, in families with two children aged four and six. The presence of dependent children complicates the picture considerably. In addition to the cash benefits included in the modelling of taxes and benefits affecting households without children, cash benefits now also include family benefits and lone parent benefits, and childcare benefits for parents who look after their children in the home. Because these child-related benefits are typically assessed on joint family income and because single individuals with children are often in receipt of lone parent benefits, average tax rates on lone parents and on primary earners with non-working spouses and children are generally very low and can be negative (Figure 3.14).

Secondary earners face high marginal tax rates when they make a decision to enter employment. For secondary earners (with spouses earning average wage) moving into work at 67% of APW (column 2), at least half of their earnings are taxed away due to increased household taxes and reduced cash benefits in Denmark (53%) and Germany (50%), with an average tax rate across the studied countries of 31%. Secondary earners moving into work at low earnings (67% of APW) typically face lower tax rates than those entering work on average earnings, but in the vast majority of the studied countries the tax rates for those on 67% of APW are no more than 10 percentage points lower than the tax rates for those on average earnings. This suggests that non-working parents with the lowest earnings potential face relatively high marginal tax rates. This is consistent with the finding in Immervoll et al. (2008) of substantial marriage penalties at the bottom of the earnings distribution resulting from family-based means-tested transfers.

Focusing on AETR values for secondary earners, it appears that in the vast majority of the studied countries it pays for non-working parents to enter employment (AETR below 50%). For secondary earners entering work at two-thirds of average wage, whose spouses earn average wage (column 2), AETR values reach 50% of gross earnings only in Germany (50%) and Denmark (53%). However, since these figures do not take into account any childcare benefits for formal childcare or childcare costs, they can only be interpreted as conservative estimates. Therefore, work incentives for

potential second earners with dependent children are likely to be considerably weaker in reality. Had childcare costs been included in the simulation by the OECD as an implicit tax on earnings, Denmark would probably not have ranked highest on AETR values for second earners because childcare services for pre-school children are widely available and affordable (see Section 2). According to Immervoll and Barber (2006), without taking into account any work-related costs, even a low wage full-time job taken up by a married second earner increases household net incomes in most of the OECD countries, but including the full-time costs of childcare for families with children makes net gains from employment of second earners considerably lower, in some cases even resulting in a net loss when the secondary earner takes up low-wage employment (Immervoll & Barber, 2006).

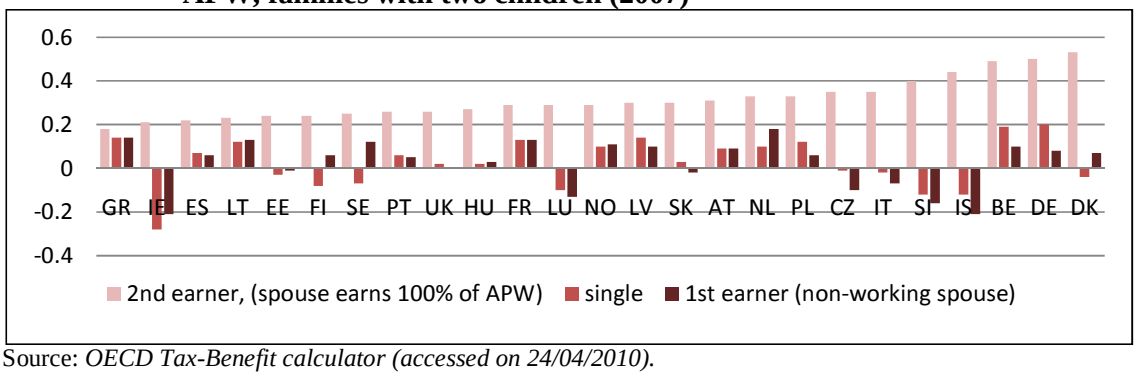
Table 3.10 also shows that the values of AETR do not vary according to the type of income tax unit but appear to depend on the overall level of taxation. Thus, Denmark, a high taxation country with individuals as tax units, has some of the highest AETR values for second earners entering work at 67% of APW or at average earnings, with spouses earning 67% or 100% of APW. At the same time, Portugal has one of the lowest AETR values, although families are taxed jointly. It is not surprising that there is no clear correlation between the type of tax unit and the effective tax rates faced by non-working parents, since even in individual taxation countries eligibility to social transfers is likely to be assessed on family income.

Table 3.10 Average tax rates for secondary earners, single individuals and primary earners at 67% and 100% of APW, families with two children aged 4 and 6 (2007)

	67% APW				100% APW			
	2nd earner, (spouse earns 67% of APW) (1)	2nd earner, (spouse earns 100% of APW) (2)	single (3)	1st earner (non-working spouse) (4)	2nd earner, (spouse earns 67% of APW) (5)	2nd earner, (spouse earns 100% of APW) (6)	single (7)	1st earner (non-working spouse) (8)
AT	0.31	0.31	0.09	0.09	0.35	0.35	0.21	0.21
BE	0.47	0.49	0.19	0.10	0.49	0.51	0.31	0.23
CZ	0.38	0.35	-0.01	-0.10	0.35	0.33	0.15	0.06
DE	0.49	0.50	0.20	0.08	0.50	0.51	0.31	0.22
DK	0.61	0.53	-0.04	0.07	0.55	0.52	0.18	0.24
EE	0.24	0.24	-0.03	-0.01	0.24	0.24	0.06	0.07
ES	0.20	0.22	0.07	0.06	0.23	0.24	0.14	0.13
FI	0.32	0.24	-0.08	0.06	0.36	0.30	0.12	0.23
FR	0.27	0.29	0.13	0.13	0.28	0.30	0.18	0.17
GR	0.17	0.18	0.14	0.14	0.24	0.25	0.22	0.22
HU	0.31	0.27	0.02	0.03	0.41	0.39	0.23	0.25
IE	0.26	0.21	-0.28	-0.21	0.26	0.29	0.00	-0.02
IS	0.44	0.44	-0.12	-0.21	0.44	0.44	0.07	0.00
IT	0.41	0.35	-0.02	-0.07	0.41	0.37	0.16	0.13
LT	0.23	0.23	0.12	0.13	0.25	0.25	0.18	0.19
LU	0.25	0.29	-0.10	-0.13	0.29	0.34	0.07	0.01
LV	0.30	0.30	0.14	0.10	0.31	0.31	0.20	0.17
NL	0.36	0.33	0.10	0.18	0.39	0.37	0.23	0.29
NO	0.33	0.29	0.10	0.11	0.34	0.32	0.19	0.22
PL	0.41	0.33	0.12	0.06	0.38	0.33	0.23	0.20
PT	0.19	0.26	0.06	0.05	0.25	0.29	0.15	0.10
SE	0.27	0.25	-0.07	0.12	0.29	0.28	0.11	0.20
SI	0.57	0.40	-0.12	-0.16	0.51	0.42	0.17	0.13
SK	0.24	0.30	0.03	-0.02	0.26	0.30	0.12	0.05
UK	0.38	0.26	0.02	0.003	0.37	0.29	0.21	0.21

Source: *OECD Tax-Benefit calculator (accessed on 24/04/2010).*

Figure 3.14 Average tax rates for secondary earners (with spouses earning average wage), single individuals and primary earners on 67% APW, families with two children (2007)



Source: *OECD Tax-Benefit calculator (accessed on 24/04/2010).*

Gender-role attitudes

The previous section reviewed the fiscal rules that are likely to influence the labour supply of secondary earners in couples, who are likely to be women. This section looks at cultural, rather than institutional, factors that play a role in the gender division of labour in the labour market and in the home. It uses cross-nationally comparable micro data on gender-role attitudes from the European Values Study 1999-2001 (EVS) to examine cross-country variation in prevalent social norms relevant to gender equality.

The role of country-level gender-role attitudes in determining women's labour market outcomes, in addition to the role of institutional factors such as parental leave, availability of formal childcare for young children and the treatment of secondary earners in tax/benefit systems, is increasingly acknowledged in the literature. In comparative studies of labour market outcomes for women, attitudes to gender equality can be captured as country 'fixed effects' (Jaumotte, 2003), but this is an imperfect approximation because the effects of attitudes and values may be confounded by the effects of policies and institutions. International values surveys, such as the European Values Study (EVS) and the World Values Survey (WVS), provide a wealth of comparable information on gender-role attitudes in large numbers of countries, allowing for a more precise estimation of the effects of attitudes on labour market outcomes.

Fortin (2005) analyses the impact of gender-role attitudes on female employment rates and gender wage gaps in 25 OECD countries, using data from the WVS (1990, 1995 and 1991). Traditional (non-egalitarian) attitudes are found to have a strong negative association with female employment rates and a positive association with gender earnings gaps. In particular, countries with higher average agreement with the statement that 'scarce jobs should go to men' have lower female employment rates and larger gender wage gaps, on average. Similarly, countries where a higher proportion of respondents agree that 'being a housewife is fulfilling' have lower female employment rates.

In a study of the effect of childbirth on maternal labour supply in 13 EU countries, using work and family history data from the ECHP for the period 1994-1999 and data on gender-role values from the EVS 1990/1999, Uunk et al. (2005) find that more egalitarian societal gender-role attitudes have a large positive effect on mothers' labour supply, when the availability of public childcare is not accounted for. However, when public childcare provision for children aged 0-3 is controlled for, egalitarian gender-role values no longer have a significant effect on maternal labour supply. At the same time, the inclusion of gender-role attitudes does not substantially change the effect of public childcare provision. Thus, institutions that support female employment appear to mediate the effect of gender-role values.

Gender-role attitudes are also used to explain the variation in labour market institutions in industrialised countries. Algan and Cahuc (2006) argue that 'the male breadwinner cultural values' can be used to explain the variation in the strength of employment protection across the OECD. Since job protection benefits insiders, who are predominantly men, while unemployment insurance benefits outsiders, who are more likely to be women, job protection policies, as opposed to unemployment insurance policies, are stronger in more traditional Mediterranean countries. Using micro data from international values surveys and macro data from the OECD, they establish that Protestants and non-religious people are more likely to reject traditional gender-role values and that labour-market institutions are influenced by the dominant religious and cultural values in the country. For instance, the study finds that respondents in Catholic countries, Buddhist countries (Japan) and Muslim countries (Turkey) are more likely to agree with a statement that 'when jobs are scarce, men have more rights to a job than women' than those in Protestant ones (Anglo-Saxon and Scandinavian countries), based on data from three waves of the WVS (1981, 1990, 1995) in an ordered probit model with country fixed effects. As regards individual-level predictors, the study reports that male respondents are more likely to support job priority for men, especially if they are Catholic, Buddhist or Muslim, while women tend to reject job priority for men regardless of their religious affiliation. However, these findings need to be interpreted with caution given the age of the data source (WVS 1981-1995).

This section uses more recent data from the third round of the EVS (1999-2001). It is a large-scale cross-national and longitudinal survey on basic human values, including gender-role attitudes, that uses nationally representative data on adult citizens aged 18 and older. The same questionnaire is used in all participating countries. See Halman (2001) for a detailed description of the EVS 1999-2001 methodology and questionnaire design. The survey was carried out in 1999 in 23 out of 24 countries studied in this section and in 2000 in Finland. Unfortunately, Norway was not included in this round of the EVS[20].

This section uses ten survey questions on gender-role attitudes that appear to be most relevant to the equal sharing of market and non-market work between men and women:

1. When jobs are scarce, men have more right to a job than women (v99);
2. Sharing household chores is important for a successful marriage (v143);
3. Woman has to have children in order to be fulfilled (v149);
4. A working mother can establish just as warm and secure a relationship with her children as a mother who does not work (v154);
5. A pre-school child is likely to suffer if his or her mother works (v155);
6. A job is alright but what most women really want is a home and children (v156);
7. Being a housewife is just as fulfilling as working for pay (v157);
8. Having a job is the best way for a women to be an independent person (v158);
9. Both the husband and wife should contribute to household income (v159);
10. In general, fathers are as suited to look after their children as mothers (v160);

Kalmijn (2003) uses questions 4 through 9 from the EVS 1999 and finds that they do not form a single dimension, but three separate ones. Thus, questions 4 and 5 are beliefs, rather than attitudes, about the consequences of women's work on children. The average of the scores on these two items is used in Uunk et al. (2005) as a gender-role values indicator. Questions 6 and 7 are attitudes about women's

[20] Data from the fourth (2008) round of the EVS became available in mid-July 2010, but Britain, Iceland, Italy, Sweden, and Norway did not participate in the latest round. See "EVS1981-2008 – Participating Countries" at http://zacat.gesis.org/nesstar/docs/ZACAT_EVS%201981_2008.pdf (accessed on 14/08/2010).

traditional role as housekeepers, while questions 8 and 9 are attitudes about women's economic role.

Fortin (2005) finds the question 'When jobs are scarce, men should have more right to a job than women' from the World Value Surveys (WWS), identical to question 1 above, to be the most important one in explaining cross-country differences in female employment rates and the gender earnings gap. Attitudes to women as housekeepers (question 7 here) and the perception of consequences of maternal work for children (question 4 here) are also found to be strong predictors of female labour supply. However, not only average gender-role attitudes are important, but the gender differences in these attitudes. Fortin finds that where more men than women think that 'scarce jobs should go to men', the gender wage gap is larger. Where fewer women than men respond that 'being a housewife is fulfilling', the gender wage gap is smaller.

This section uses all ten items above because they all appear to be relevant to gender equality in the labour market, in the home or in both spheres. The items are re-coded into dummy variables so that 1 refers to agreement with egalitarian attitudes (questions 2, 4, 8, 9, 10) or disagreement with traditional attitudes (questions 1, 3, 5, 6, 7) and 0 otherwise. Items 4-10 are originally coded on a four-point scale so that respondents can choose from the following options: 'strongly agree', 'agree', 'disagree' and 'strongly disagree'. However, in Austria, Northern Ireland and the Republic of Ireland, these questions have a five-point scale that includes a middle category 'neither agree nor disagree'. The middle category is re-coded as zero in the dummy variable. Northern Ireland is excluded from the analysis because there are substantial differences between average attitudes in Britain and Northern Ireland[21]. Kalmijn (2003) excludes the countries that offered a middle category from the analysis because they are not strictly comparable with the rest. Although they are not

[21] Out of 10 items, significant differences at conventional levels between average responses in Northern Ireland and Britain are found for four items (1, 4, 5 and 9). On item 1, respondents in Northern Ireland (76%) have more egalitarian attitudes, on average, than in Britain (64%). On item 4, average attitudes in Britain (56%) are more egalitarian than in Northern Ireland (45%). On item 5, attitudes are more egalitarian in Britain (39%), on average, than in Northern Ireland (30%). On item 9, attitudes in Britain (71%) are more egalitarian than in Northern Ireland (66%).

excluded from the analysis in this section, the results for Austria and Ireland need to be interpreted with caution.

Items 1-3 originally have different scales than items 4-10. Item 1 ('when jobs are scarce, men have more right to a job than women') has three categories: 'agree', 'disagree', and 'neither agree not disagree'. It is re-coded into a dummy variable where 1 indicates disagreement with the statement. Options for item 2 ('sharing household chores is important for a successful marriage') are 'very important', 'rather important' and 'not important'. It is re-coded into a dummy variable with 1 indicating 'very important' and 0 'rather/not important'. Item 3 ('woman has to have children to be fulfilled') has only two categories 'needs children' and 'not necessary'. The latter is re-coded as 1 and the former as 0.

Table 3.11 displays the means of the gender role attitudes in 24 European countries as well as the average and the standard deviation across all countries for each question. The most egalitarian gender role attitudes are reported for the item 'both the husband and wife should contribute to household income' (column 10 of Table 3.11), with 78% of respondents across all of the studied countries agreeing or strongly agreeing with this statement. This proportion ranges from the low of 38% in the Netherlands[22] to the high of 93% in the Czech Republic (see Figure A 3-10). Notably, the wording of the question does not specify that both spouses should contribute to the household income equally. The most traditional gender role attitudes are reported for the item 'sharing household chores is important for a successful marriage' (column 7), with only 36% of respondents agreeing with this statement, on average. The proportion supporting this statement ranges from the mere 18% in Estonia to 55% in Poland (Figure A 3-7). The item 'women need children in order to be fulfilled' appears to be the most divisive across the studied countries, with the cross-country standard deviation of 25 percentage points (column 2 of Table 3.11). The proportion of respondents disagreeing with this statement ranges from 6% in Hungary to 93% in the Netherlands (Figure A 3-2). At the same time, the proportion of respondents agreeing with the item 'fathers are as suited to

[22] The figure for the Netherlands is unrealistically low. Kalmijn (2003) suggests that the wording in the Dutch questionnaire implied *equal* contribution to household income, which resulted in relatively low agreement with the statement.

look after their children as mothers' is the least dispersed across the studied countries (column 9 of Table 3.11 below), with the standard deviation of only 8 percentage points. It also has one of the highest averages (76%), indicating that attitudes about fathers' suitability to engage in childcare are rather positive in Europe. Nevertheless, respondents in Nordic countries are more positive about fathers' role in looking after children than in the Mediterranean or Eastern European countries (Figure A 3-9).

Table 3.11 Average gender-role attitudes (EVS 1999/2000)

	Disagree (%)					Agree (%)				
	scarce jobs to men (1)	women need children to be fulfilled (2)	preschool child suffers with working mother (3)	women really want home and children (4)	housewife as fulfilling as paid job (5)	working mothers warm with children (6)	very important to share chores (7)	job best way to independence for women (8)	fathers as suited to look after children (9)	husband +wife contribute to HH income (10)
AT	54.4	66.1	14.9	37.2	36.6	54.6	29.5	75.0	69.5	69.0
BE	69.6	66.7	48.7	46.0	36.2	78.6	42.3	76.9	76.8	70.4
CZ	65.9	55.9	52.8	27.9	23.6	80.8	23.9	75.8	67.0	92.7
DE	56.5	46.0	33.7	56.0	57.5	67.2	20.4	81.4	73.7	73.7
DK	89.4	20.4	82.0	81.6	45.8	86.4	40.6	84.5	84.3	68.0
EE	75.5	25.1	34.9	32.5	41.0	70.7	17.7	78.7	69.0	82.4
ES	62.5	51.8	54.2	53.3	46.3	76.8	36.1	81.0	74.1	83.3
FI	83.1	87.9	59.1	50.4	19.1	94.7	28.6	63.2	86.2	71.4
FR	68.3	32.9	43.7	34.9	37.6	77.3	39.9	83.6	79.8	81.3
GR	72.6	24.9	21.9	35.3	58.3	75.6	43.7	82.5	63.8	87.6
HU	66.7	5.9	37.0	29.8	38.9	77.8	41.1	72.2	70.9	89.4
IE	77.0	84.3	51.2	45.3	27.1	70.7	53.3	55.2	68.3	63.2
IS	94.3	64.8	66.9	38.1	35.5	85.9	44.5	45.8	84.5	63.7
IT	56.8	43.6	18.6	32.5	45.1	64.1	28.9	77.0	68.6	80.8
LT	63.3	31.6	28.7	6.2	21.4	76.5	25.8	76.7	82.7	89.6
LU	64.0	62.2	32.2	44.5	35.5	75.9	36.5	83.9	78.0	54.4
LV	69.5	9.4	24.7	33.0	60.0	75.6	26.2	85.2	72.4	88.6
NL	83.7	93.2	54.3	65.6	48.5	81.1	32.6	60.7	77.3	37.9
PL	47.8	30.4	23.4	25.7	39.5	54.2	54.6	76.0	85.8	87.2
PT	59.0	32.0	27.8	47.5	49.3	67.2	23.3	78.9	68.3	88.1
SE	93.4	75.2	62.2	59.6	49.4	84.0	52.1	83.5	91.9	89.2
SI	67.8	62.0	53.5	35.3	45.9	82.5	35.8	79.4	84.8	91.0
SK	54.4	54.5	36.9	38.9	29.2	81.1	30.7	74.6	66.7	88.6
GB	63.7	79.2	53.8	55.7	38.9	73.0	50.2	64.8	71.2	70.4
Mean	69.1	50.3	42.4	42.2	40.3	75.5	35.8	74.9	75.6	77.6
St dev	12.5	24.8	17.1	15.4	11.1	9.4	10.7	10.0	7.8	13.7

Source: European Values Survey 1999 (individual weights used).

However, male and female respondents do not necessarily hold similar views on gender roles. Using data on gender-role attitudes in the United States, Canada, Australia, Norway and Sweden for the period of early to mid-1980s, Baxter and Kane (1995) find that men hold less egalitarian views on gender roles than women in all five countries. The smallest gender differences in attitudes are found in the countries with the least egalitarian views overall, suggesting that women in more traditional societies depend on men more and, therefore, adjust their attitudes to be

consistent with their dependent position. However, their sample is limited to men and women in paid work, so the gender-role attitudes may not be typical of each country's population.

Table 3.12 shows the percentage points difference between average male and female responses in each of the studied countries. Women tend to hold more egalitarian gender-role attitudes than men. The biggest gender differences are observed for the question about the relationship of working mothers with their children (column 6): women are more likely to agree that 'a working mother can establish just as warm and secure a relationship with her children as a mother who does not work' in each of the studied countries. The gender difference is statistically significant at conventional levels in 17 out of 24 countries, with the largest gender differences in Estonia (14 ppt) and Iceland (12 ppt). At the same time, men are significantly more likely to agree that fathers are as suited to look after their children as mothers (column 9) than women in Lithuania (11 ppt), Latvia (8 ppt), Portugal (12 ppt), and Slovakia (10 ppt), which possibly suggests that women in these countries discourage fathers from taking an equal role in childcare. In contrast, women in Iceland (14 ppt) and in Denmark (13 ppt) are significantly more likely to agree with this statement than men. This is surprising, given the relatively high take-up of paternity leave in these countries and perhaps indicates fathers' ambivalence with regards to their childcare roles.

Table 3.12 Gender differences in attitudes to gender equality (EVS 1999)

	Disagree (percentage point difference between women and men)					Agree (percentage point difference between women and men)				
	scarce jobs to men (1)	women need children to be fulfilled (2)	preschool child suffers with working mother (3)	women really want home and children (4)	housewife as fulfilling as paid job (5)	working mothers warm with children (6)	very important to share chores (7)	job best way to independence for women (8)	fathers as suited to look after children (9)	husband +wife contribute to HH income (10)
AT	5.2	3.0	1.7	7.5*	8.5**	10.5***	-0.3	5.0	4.6	8.9**
BE	-5.2*	5.3*	8.4**	1.1	7.2**	6.7**	-5.0*	6.0**	4.4*	12.1***
CZ	3.3	-3.9	10.8***	2.5	11.8***	6.2**	5.7**	7.5**	0.9	3.7**
DE	9.4**	3.4	12.5***	5.6	4.3	8.4**	3.6	4.4	-0.6	0.0
DK	2.5	7.5**	10.9***	1.0	2.8	3.0	2.2	1.8	13.3***	2.8
EE	12.8***	-6.2*	1.3	3.1	14.6***	13.8***	2.7	7.8**	-4.7	4.0
ES	9.0**	-6.8*	0.3	-1.5	0.9	0.2	6.8*	-1.7	-6.1*	0.9
FI	9.8***	0.5	10.9**	8.1*	-0.4	4.0**	2.7	6.4*	3.0	0.6
FR	3.8	2.8	7.8**	2.0	6.6*	7.2**	6.9**	5.1**	5.6**	1.2
GR	16.1***	-4.8	5.3*	12.1***	19.9***	9.9***	16.8***	13.2***	-5.5	5.9**
HU	5.2	-4.0*	-4.3	-4.0	4.3	2.2	-0.7	2.8	-4.5	4.5*
IE	2.1	7.4**	5.4	7.2*	-3.3	6.1	-1.3	6.4	7.6*	5.0
IS	1.1	8.4**	15.6***	6.7*	1.3	12.2***	1.7	6.3	14.3***	8.2*
IT	6.6**	-2.9	2.1	2.5	7.2**	8.6***	1.9	7.7***	2.9	6.2**
LT	23.4***	-5.9	-4.9	-0.6	1.4	3.3	9.3**	6.8	-10.7**	-0.8
LU	7.4*	5.6	10.2**	8.3*	11.2***	6.2*	6.8*	3.2	0.5	1.2
LV	7.0*	-0.4	1.7	8.5**	6.1	8.6**	4.7	5.9*	-7.9**	-0.5
NL	-1.2	-0.6	19.2***	2.2	7.2*	8.8**	-3.0	0.5	11.1***	8.2*
PL	8.9*	6.9*	5.1	8.5**	10.0**	10.5**	6.9*	4.8	0.4	1.0
PT	7.3	-6.8	6.1	6.0	6.0	2.3	6.6	11.4**	-11.8**	5.2
SE	5.4**	7.5**	16.2***	7.5*	3.3	11.6***	7.3*	-0.4	6.1***	2.5
SI	8.7**	-1.3	8.0*	7.3*	11.1**	1.4	10.5***	4.3	-1.7	4.3*
SK	18.7***	-3.0	2.1	2.7	7.6**	7.6**	10.5***	3.1	-9.7***	3.9*
GB	6.0	2.7	14.9***	14.1***	-4.0	7.9*	-1.8	1.7	-0.1	-1.5

Source: European Values Survey 1999 (individual weights used).
*** p<0.001, ** p<0.01, * p<0.05 (two-sample t-test with equal variances).

Although all of these items refer to gender role attitudes, they do not necessarily form a single dimension. The studies that use gender-role attitudes as explanatory variables tend to follow two distinct approaches in how they deal with a large number of related attitude items. Some studies create summary measures of several related items (Baxter & Kane, 1995; Uunk et al., 2005; Stickney & Konrad, 2007), while others cherry-pick individual items that have the highest correlation with the dependent variables or otherwise appear the most relevant and drop the rest of the items (Algan & Cahuc, 2006; Fortin, 2005). This section follows the former approach in order not to discard information on any of the ten items and to produce meaningful indicators based on the relationships amongst them. While the 10-item scale in the present analysis has high internal consistency (Cronbach's alpha=0.80), an iterated principal factor analysis[23] produces a two-factor solution using all ten

[23] Principal component analysis and principal factor analysis produce very similar results.

items. Seven items are more related to one dimension and three items to another (Table 3.13).

Table 3.13 Iterated principal factor analysis – factor loadings (EVS 1999)

Item	Factor 1	Factor 2
scarce jobs to men	**0.80**	0.29
women need children to be fulfilled	**0.62**	-0.49
preschool child suffers with working mother	**0.92**	0.29
women really want home and children	**0.55**	0.21
housewife as fulfilling as paid job	-0.20	**0.38**
working mothers warm with children	**0.65**	0.30
very important to share chores	**0.34**	-0.04
job best way to independence for women	-0.54	**0.63**
fathers as suited to look after children	**0.47**	0.22
husband+wife contribute to HH income	-0.52	**0.32**
% variance explained	**0.74**	0.26
Reliability	**0.77**	0.57

Source: European Values Survey 1999.

The first dimension (Factor 1) can be summarised as attitudes towards gender equality in the home, as it refers to views about giving preference to men when jobs are scarce, beliefs about women's role in childrearing and housekeeping and the effect of mothers' employment on children, as well as attitudes to equal sharing of household chores and childcare between spouses. This factor has a high internal consistency of 0.77. The other dimension appears to be related to attitudes towards gender equality in the economic sphere. It refers to beliefs about the value of having a job for women and women's role in contributing to household income (though not necessarily equally). Table 3.14 reports linear factor scores[24] for each country for the 'attitudes to gender equality in the home' and 'attitudes to gender equality in the economic sphere' dimensions. Iceland scores highest on equality in the home and Denmark scores highest on equality in the economic sphere. However, while Iceland has a negative factor score on the equality in the economic sphere dimension, Denmark scores highly on both dimensions. So does Sweden.

[24] The factor score on the first dimension is highly correlated (r=0.92) with the scale produced by averaging the country-level means for the respective 7 items, while the factor score on the second dimension has a lower correlation (r=0.64) with the scale produced by averaging the country-level means for the respective 3 items (Figure A 3-12).

Table 3.14 Attitudes to gender equality in the home and in the labour market (factor scores)

Country	Gender equality in the home	Gender equality in the labour market
AT	-1.06	-1.31
BE	0.47	0.13
CZ	0.51	0.42
DE	-0.57	-0.03
DK	1.31	2.43
EE	-0.23	0.74
ES	0.33	0.65
FI	0.79	-1.03
FR	-0.11	0.92
GR	-1.08	0.52
HU	-0.85	0.18
IE	1.05	-1.32
IS	2.02	-0.83
IT	-1.15	-0.65
LT	-0.74	-0.10
LU	-0.29	-0.01
LV	-1.07	0.92
NL	1.58	-0.88
PL	-1.27	-0.69
PT	-1.21	-0.24
SE	1.10	1.24
SI	0.68	0.61
SK	-0.87	-0.79
GB	0.68	-0.89

Source: European Values Survey 1999 (individual weights used).

With a few exceptions, attitudes to gender equality in the home and in the labour market tend to go hand in hand. Countries that exhibit more egalitarian attitudes to gender equality in the economic sphere tend to score higher on the equality in the home dimension (Figure 3.15). However, five countries do not fit this general pattern: Iceland, the Netherlands, Ireland, Finland and Britain have considerably higher scores on the equality in the home dimension than would be expected given their low scores on the equality in the economic sphere dimension. If these countries were excluded, there would be a high positive correlation of 0.72 ($p<0.001$) between the two dimensions across the rest of the studied countries. A closer look at the three items that are highly related to the equality in the economic sphere dimension reveals that relatively few respondents in Ireland, Iceland and Finland disagree that being a housewife is as fulfilling as having a paid job (Figure A 3-5) and relatively few respondents agree that having a job is the best way to independence for women[25] (Figure A 3-8). Respondents in Ireland and Iceland also show low average levels of agreement with the statement that both husbands and wives should contribute to

[25] However, female respondents in Finland are significantly more likely to agree with this statement than men (see Table 2).

household income[26] (Figure A 3-10). Although respondents in the Netherlands show relatively high levels of disagreement with the statement that being a housewife is as fulfilling as having a paid job, relatively few agree that having a job is the best way to independence for women and they are the least likely to agree that both the husband and wife should contribute to household income across the studied countries. At the same time, Britain has relatively low scores on 'having a job is the best way for women to be an independent person' item (Figure A 3-8), but middling scores on the other two items.

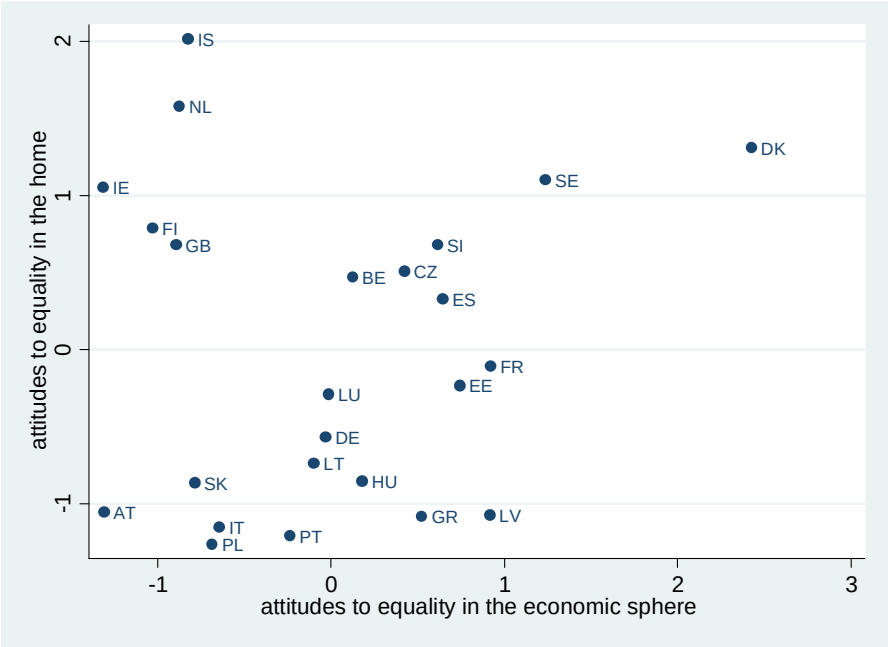
Only Sweden and Denmark score high on both counts. Sweden consistently scores high on each of the studied items, but Denmark shows a more mixed picture. While only 20% of Danish respondents disagree that women need children to be fulfilled and only 68% agree that both husband and wife should contribute to household income (the fifth lowest proportion amongst the studied countries), they are some of the most likely to disagree that scarce jobs should go to men (Figure A 3-1), that pre-school children suffer when their mothers work (Figure A 3-3), that women really want home and children (Figure A 3-4), and some of the most likely to agree that a working mother can establish a warm relationship with her children (Figure A 3-6) and that having a job is the best way to independence for women (Figure A 3-8).

Other countries do somewhat better on the equality in the economic sphere dimension than on the equality in the home dimension. This is not surprising given that most prime-age women participate in the labour market, but they still do a disproportionate amount of household and caring work. For instance, although respondents in France have some of the highest levels of agreement that having a job is the best way to independence for women (Figure A 3-8), they show middling levels of support for each of the 'equality in the home' related items. At the same time, respondents in Austria, Slovakia, Italy and Poland have some of the most traditional gender-role attitudes of all, scoring low on both dimensions.

Overall, the results support the finding in Algan and Cahuc (2006) that traditional gender-role attitudes are more prevalent in Catholic countries and least prevalent in Protestant or predominantly secular countries.

[26] Although women in Iceland are more likely to agree with this statement than men, on average.

Figure 3.15 Attitudes to gender equality in the home and in the labour market



Source: European Values Survey 1999.
Factor scores.
R=0.08 (R=0.72, p<0.001, if Iceland, the Netherlands, Ireland, Finland and Britain are excluded).

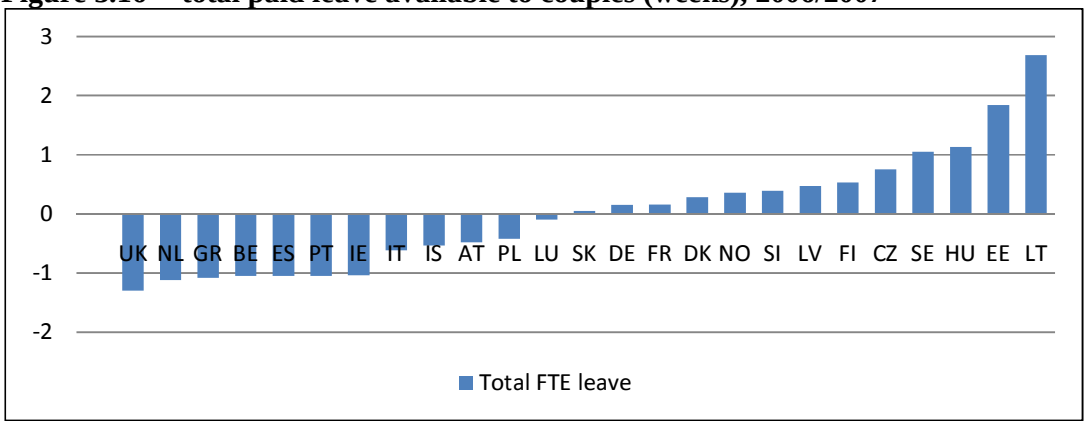
Work/Family reconciliation policies and gender equality outcomes

The four previous sections analysed the cross-country variation in the duration and generosity of parenthood leave, the availability and cost of childcare, the gender neutrality of the tax and benefit systems, and the extent to which prevailing gender role attitudes are consistent with gender equality in the home and in the economic sphere. This section draws the separate evidence together to analyse the relationship between the studied indicators and measures of gender equality in the labour market. Finally, it draws up a combined indicator of work-family reconciliation policies studied in this chapter.

Table 3.15 shows the z-scores for the number of weeks of total and FTE paid parenthood leave available to couples. The use of z-scores provides a simple way of summarising comparative data while taking account of both rank order and the degree of dispersion (Bradshaw et al., 2007). Figure 3.16 shows that Lithuania and Estonia have by far the most generous paid leave entitlements for couples, exceeding one and a half standard deviations above the mean. At the same time, Figure 3.17

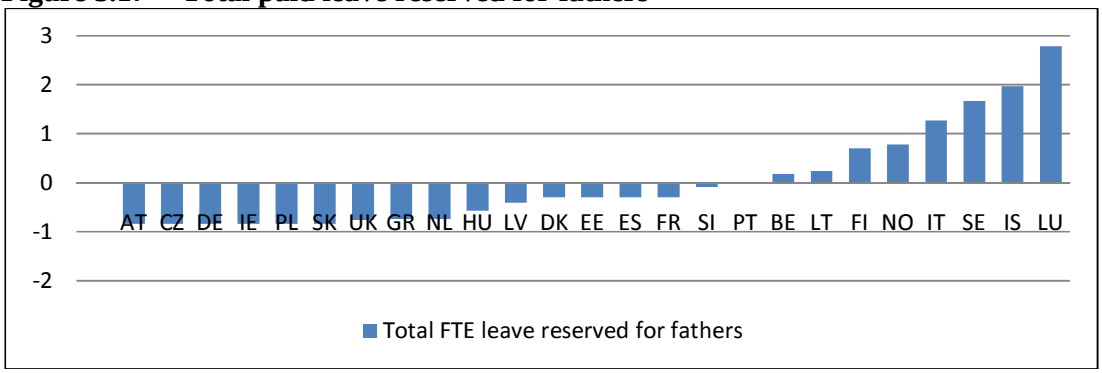
shows the distribution of the z-scores for the duration of paid leave reserved for fathers, with Luxembourg standing out with the most generous provisions (nearly three standard deviations above the mean).

Figure 3.16 total paid leave available to couples (weeks), 2006/2007



Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008).

Figure 3.17 Total paid leave reserved for fathers



Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008)

Table 3.15 Child-related employment protected leave periods available to couples: duration of total leave and duration of the full-time equivalent of the leave period if paid at 100% of last earnings, 2006/2007 (weeks), z-scores

Country	Total leave	Total FTE leave	Total leave available to mothers	Total FTE leave available to mothers	Total leave reserved for fathers	Total FTE leave reserved for fathers
AT	0.47	-0.48	0.56	-0.37	-1.01	-0.84
BE	-1.23	-1.05	-1.22	-1.11	0.59	0.18
CZ	1.26	0.75	1.25	0.87	-1.01	-0.84
DE	1.26	0.15	1.25	0.27	-1.01	-0.84
DK	-1.03	0.28	-0.78	0.32	-0.79	-0.30
EE	1.26	1.84	1.25	1.91	-0.79	-0.30
ES	1.26	-1.05	1.25	-1.03	-0.79	-0.30
FI	1.26	0.53	1.25	0.43	-0.10	0.70
FR	1.26	0.16	1.25	0.20	-0.79	-0.30
GR	-1.13	-1.08	-1.12	-0.99	0.75	-0.74
HU	0.14	1.13	0.25	1.22	-0.90	-0.57
IE	-0.63	-1.04	-0.66	-0.94	0.59	-0.84
IS	-0.74	-0.54	-0.99	-0.84	1.96	1.97
IT	-0.79	-0.62	-0.86	-0.72	1.96	1.27
LT	0.66	2.68	0.66	2.67	-0.56	0.24
LU	-0.67	-0.10	-0.93	-0.51	2.00	2.78
LV	-0.57	0.47	-0.38	0.53	-0.79	-0.41
NL	-1.24	-1.12	-1.18	-1.03	0.52	-0.74
NO	-0.94	0.36	-0.82	0.24	-0.10	0.78
PL	1.26	-0.42	1.25	-0.31	-1.01	-0.84
PT	-1.16	-1.05	-1.16	-0.99	0.81	0.00
SE	-0.07	1.05	-0.13	0.81	0.32	1.67
SI	-0.74	0.39	-0.74	0.40	0.47	-0.09
SK	1.26	0.05	1.25	0.16	-1.01	-0.84
UK	-0.41	-1.30	-0.49	-1.21	0.70	-0.76

Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008)
Note: total parental leave is the leave for the entire couple, some of which may be reserved for either parent.
If the parental leave entitlement is per parent per child, the maximum entitlement per family is reported.

Figure 3.18 shows a moderately high positive correlation between the z-score for female labour force participation rate and the z-score for weeks of total FTE paid parenthood leave available to couples ($R=0.52$, $p<0.05$). However, no significant association is observed between the participation rate and total leave ($R=0.14$). This suggests that it is paid leave, rather than other leave, that makes it easier for women to take up employment. Similarly, Figure 3.19 shows a significant positive correlation between total FTE paid leave available to mothers and female participation rate ($R=0.50$, $p<0.05$), but no significant association is observed between participation rate and total leave available to mothers ($R=0.16$).

Figure 3.20 reports a much weaker positive association between the female participation rate and weeks of FTE paid leave reserved for fathers ($R=0.17$). If

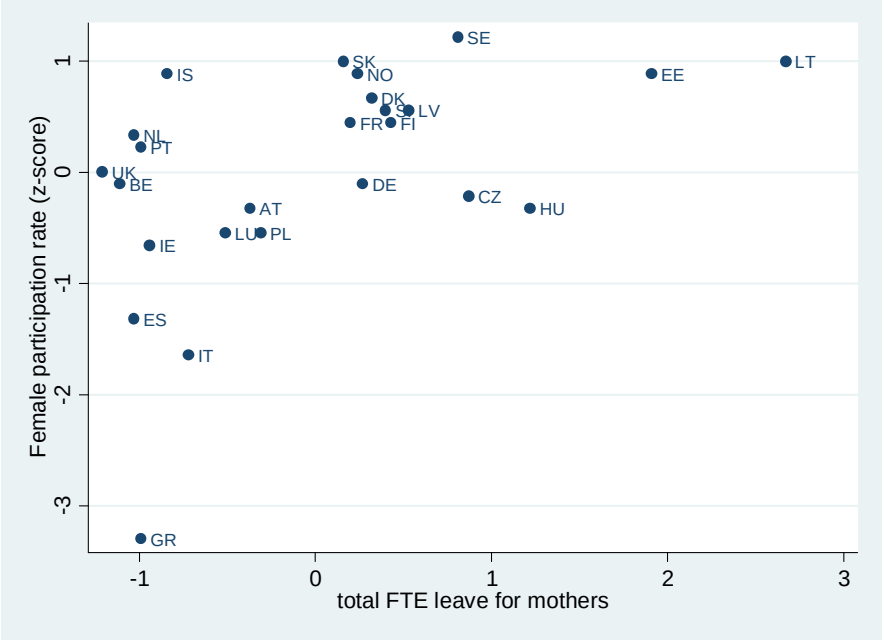
Luxembourg is excluded, the correlation rises (R=0.29), but it is still insignificant and lower than the association between mothers' FTE leave and the female participation rate. This suggests that although fathers' leave may be important, it is still too short and the take-up is too low to make much of a difference to female participation rates in practice. For example, Luxembourg has the most generous statutory leave entitlement for fathers (through individual paid parental leave rather than long paternity leave), but the female participation rate is below average in Luxembourg. Yet, Sweden and Iceland have some of the highest female participation rates and the most generous fathers' entitlements to paid leave after Luxembourg. Unlike in Luxembourg, fathers' leave in Sweden and Iceland largely consists of generous paternity leave. This suggests that paternity leave and fathers' quotas play a more important role in influencing female participation rates than individual non-transferable entitlements to parental leave, even if relatively well paid.

Figure 3.18 Total paid leave available to couples and female participation rate

Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008); EU-SILC 2007, women aged 25-55.

R=0.52 ($p<0.05$).

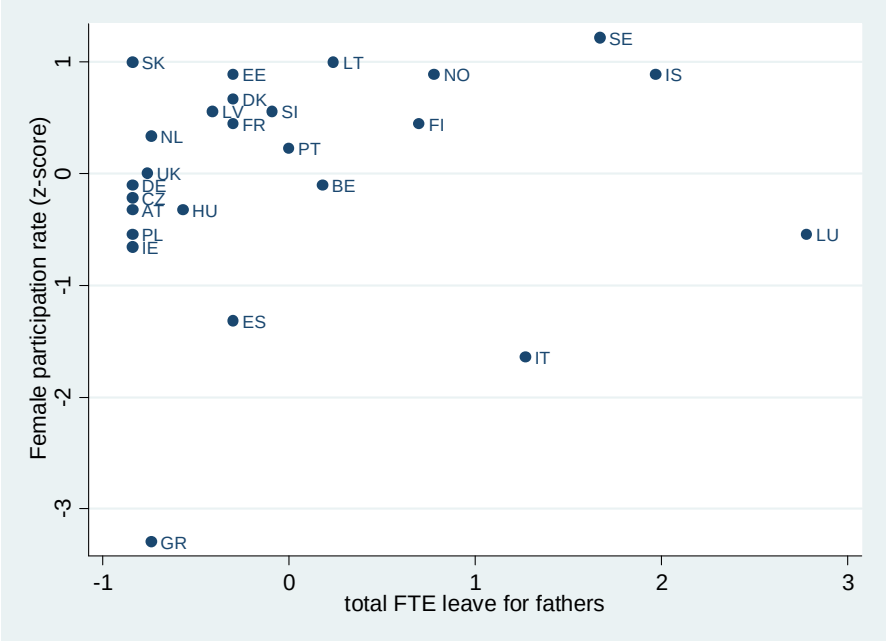
Figure 3.19 Total paid leave available to mothers and female participation rate



Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008); EU-SILC 2007 women aged 25-55.

R=0.50 (p<0.05).

Figure 3.20 Total paid leave reserved for fathers and female participation rate



Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008); EU-SILC 2007 employees and self-employed individuals aged 25-55.

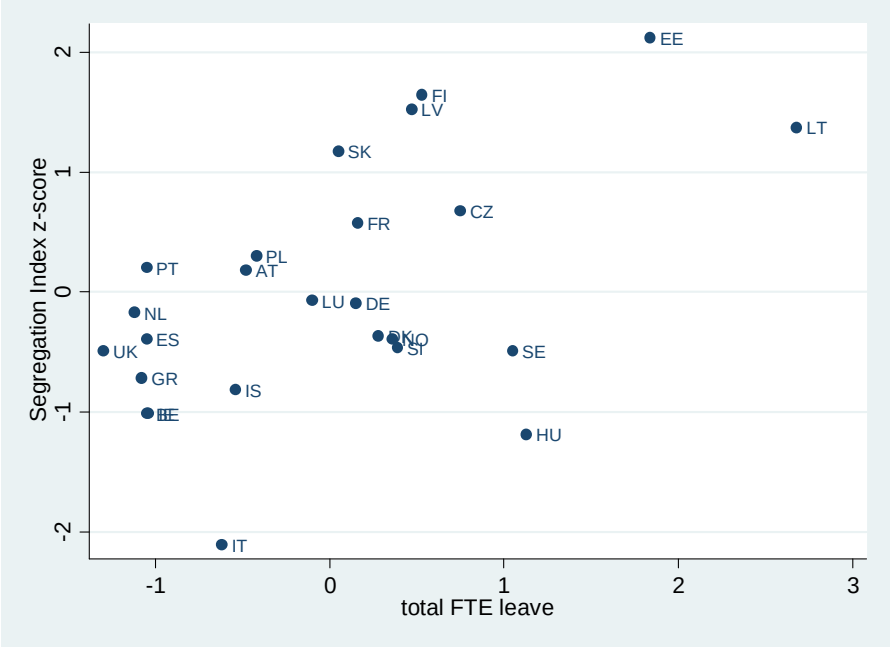
R=0.1

Although female participation rates tend to be higher in countries with longer FTE paid parenthood leave, female part-time rates are lower. The correlation between total paid parenthood leave available to couples and female part-time rate (R=-0.48) and between total paid leave reserved for mothers and female part-time rate (R=-0.50) is moderately negative. At the same time, the linear association between total paid leave reserved for fathers and female part-time rate is virtually nil (R=0.05).

While countries with more generous paid parenthood leave available to couples tend to have higher female participation rates, they also have higher levels of occupational segregation[27]. Figure 3.21 shows a significant positive relationship between the z-score for the index occupational segregation and the z-score for total paid leave (R=0.54, $p<0.01$), while Figure 3.22, similarly, reports a significant positive association between occupational segregation and paid leave available to mothers (R=0.57, $p<0.01$). At the same time, the association between segregation and paid leave reserved for fathers is insignificant and negative (R=-0.20). These results suggest that although paid leave may make it easier for mothers to remain attached to the labour market, it does not guarantee a similar distribution of men and women across the occupational structure. Indeed, a positive association between female participation rates and levels of occupational segregation in Europe is documented in the literature (e.g. Bettio, 2002) and is also observed in this study.

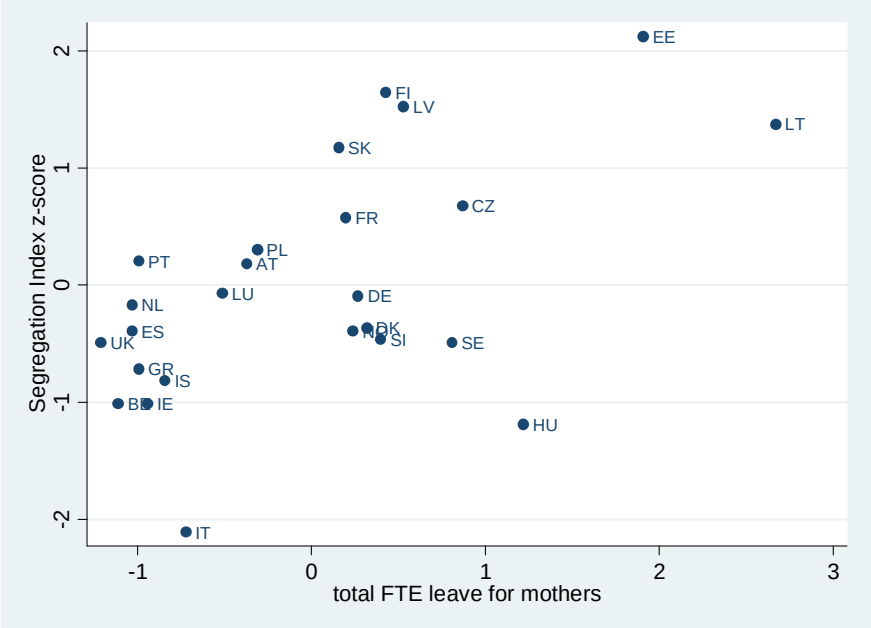
[27] Duncan's (1955) index of occupational segregation is calculated using 27 occupational categories from the EU-SILC 2007, including both full-time and part-time employees, but excluding armed forces. See Chapter 6 for a more detailed discussion of cross-country variation in occupational gender segregation.

Figure 3.21 Total paid leave available to couples and occupational segregation



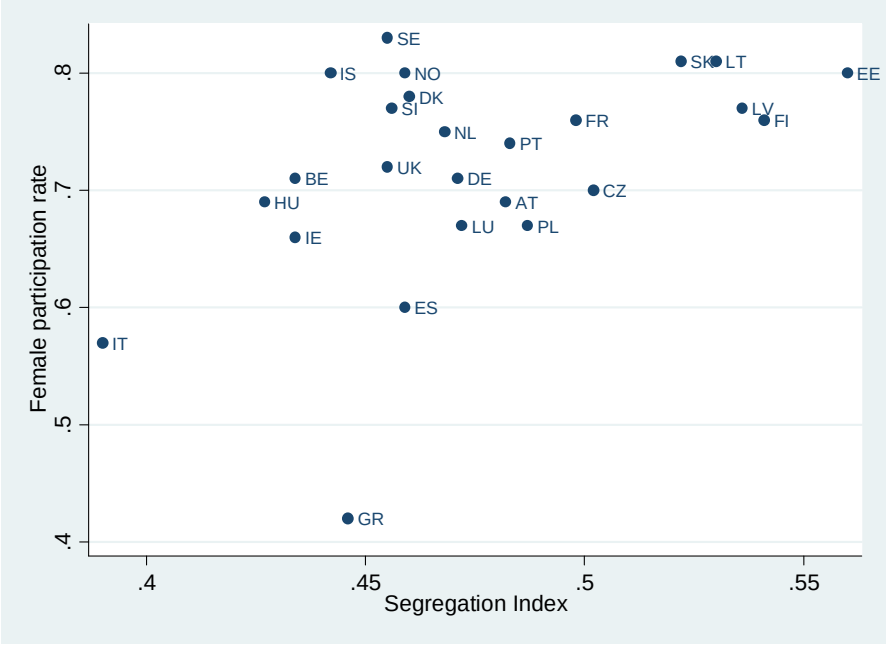
Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008); EU-SILC 2007, employees aged 25-55.
R=0.54 (p<0.01).

Figure 3.22 Total paid leave available to mothers and occupational segregation



Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008); EU-SILC 2007, employees aged 25-55.
R=0.57 (p<0.01).

Figure 3.23 Occupational segregation and female labour force participation

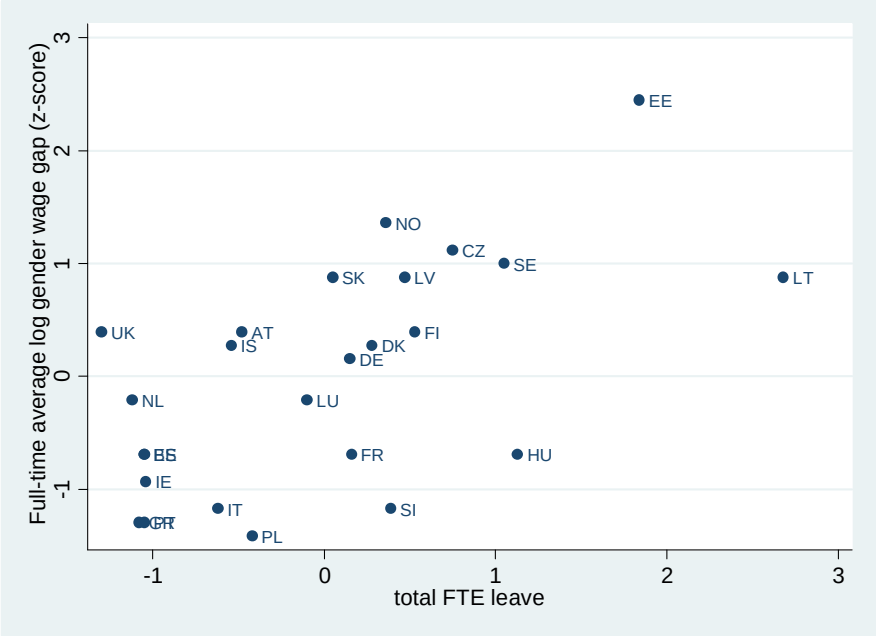


Source: EU-SILC 2007, individuals aged 25-55.
R=0.47 (p<0.05).

Similarly, gender wage gaps tend to be larger in the countries with more generous parenthood leave entitlements for mothers. There is a significant positive association between the duration of FTE paid leave available to couples and the average wage gap[28] among full-time employees (R=0.61, p<0.01, Figure 3.24) and between the duration of FTE leave available to mothers and the average full-time wage gap (R=0.59, p<0.01, Figure 3.25). If Estonia is excluded, the correlation becomes somewhat lower (R=0.52 and R=0.40, respectively), but it is still significant at p<0.10. These findings are not surprising given that gender earnings gaps tend to be larger in countries with higher female participation rates because women with lower earnings potential are present in the labour market (Olivetti & Petrongolo, 2008). A significant positive relationship between female participation rates and average gender wage gaps amongst all employees (R=0.54, p<0.01) and full-time employees only (R=0.61, p<0.01) is also observed here using data from the EU-SILC 2007.

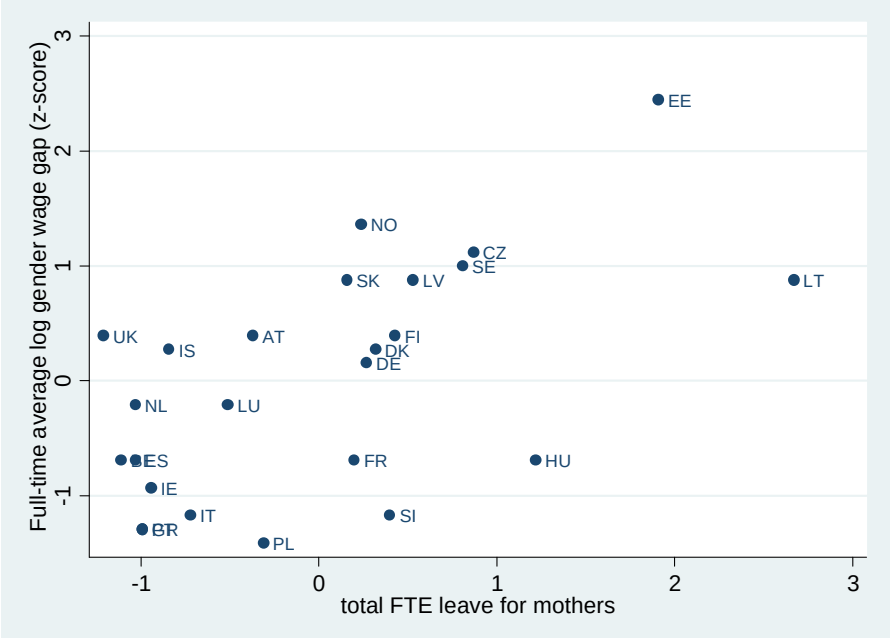
[28] The correlation between total paid leave available to couples and median wage gap among full-time employees is of a similar order (R=0.59), while the correlation between FTE leave and average and median wage gaps amongst all employees are somewhat lower at R=0.48.

Figure 3.24 Total paid leave available to couples and average wage gap amongst full-time employees



Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008); EU-SILC 2007, employees aged 35-55.
R=0.61 (p<0.01).

Figure 3.25 Total leave available to mothers and average wage gap amongst full-time employees



Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008); EU-SILC 2007, employees aged 25-55.
R=0.59 (p<0.01).

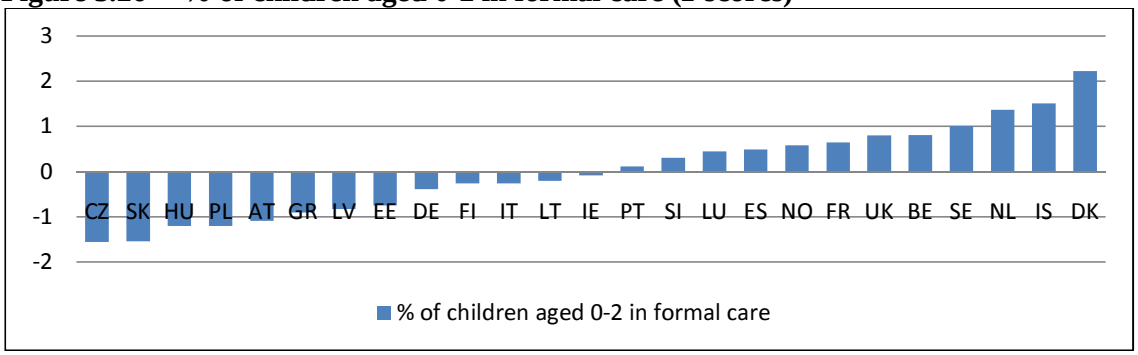
Table 3.16 shows the z-scores for the proportions of pre-school children using formal and informal childcare services. The Netherlands, Iceland and Denmark have the highest proportion of children in formal childcare facilities, in excess of one standard deviation above the cross-country mean (Figure 3.26). In contrast, the Czech Republic, Slovakia, Hungary, Poland and Austria have the lowest usage rates, under one standard deviation below the mean.

Table 3.16 Childcare arrangements for children aged 0-2 and 3-5, z-scores

	% of children aged 0-2 in formal care	% of children between the age of 3 and mandatory school age in formal care	% of children aged 0-2 in formal care of at least 30 hours a week	% of children between the age of 3 and mandatory school age in formal care of at least 30 hours a week	% of children aged 0-2 in informal childcare	% children between the age of 3 and mandatory school age in informal care
AT	-1.09	-0.35	-1.06	-1.26	0.10	0.67
BE	0.81	1.14	0.35	0.74	-0.19	0.39
CZ	-1.56	-0.70	-1.16	-0.45	0.57	0.44
DE	-0.39	0.58	-0.33	-0.72	-0.49	-0.44
DK	2.22	1.04	2.94	1.39	-1.51	-1.60
EE	-0.75	0.32	-0.24	1.31	0.49	0.27
ES	0.49	0.68	-0.08	-0.24	-0.04	-0.57
FI	-0.26	-0.23	0.15	0.12	-1.31	-1.23
FR	0.64	0.92	0.45	-0.04	-0.32	-0.25
GR	-0.91	-0.74	-0.54	-0.78	1.32	0.43
HU	-1.20	0.12	-0.80	0.62	1.10	1.26
IE	-0.08	0.24	-0.15	-1.15	-0.45	-0.58
IS	1.51	1.07	2.21	1.71	-1.30	-1.50
IT	-0.26	0.71	-0.21	0.94	0.57	0.88
LT	-0.20	-1.69	-1.19	-2.13	-0.77	-0.55
LU	0.44	0.08	0.07	-0.99	0.48	0.76
LV	-0.83	-1.71	-0.20	0.01	-0.71	-0.85
NL	1.37	0.87	-0.77	-1.36	2.09	1.58
NO	0.58	0.08	0.77	0.56	-1.13	-1.37
PL	-1.20	-2.95	-0.72	-0.95	0.41	0.54
PT	0.11	0.01	0.74	0.90	0.16	0.30
SE	1.00	0.87	0.66	0.88	-1.51	-1.55
SI	0.30	0.29	0.85	0.81	1.84	1.91
SK	-1.54	-0.91	-1.07	0.52	-0.35	0.11
UK	0.80	0.25	-0.66	-0.45	0.96	0.94

Source: *SILC 2007 (individual weights used).*
Formal childcare: pre-school; compulsory school; centre-based child-care; day-care; child minder
Informal childcare: grandparents; other household members (not parents)

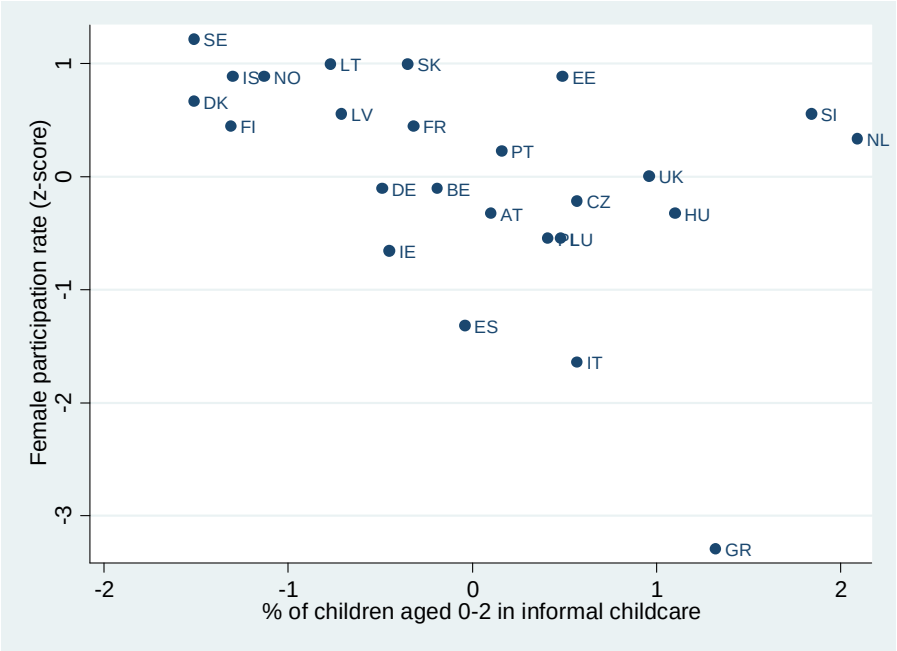
Figure 3.26 % of children aged 0-2 in formal care (z-scores)



Source: EU-SILC 2007.

Higher enrolment rates of children aged 0-2 in formal care tend to be associated with higher female participation rates, although the correlation is not statistically significant (R=0.28). Although the proportion of children aged 0-2 using formal care for at least 30 hours a week could be expected to have a higher correlation with female participation rates, it too is fairly weak (R=0.29). Interestingly, Figure 3.27 shows a significant negative association between female participation rates and the proportion of younger children in informal care (R=-0.45, $p<0.05$). There is also a negative association between female participation rates and the proportion of children between the age of three and mandatory school age in informal care (R=-0.35, $p<0.10$). Figure 3.27 shows a clear clustering of Scandinavian countries in the top left hand corner, with the lowest informal care usage rates and the highest female participation rates, while Southern countries like Greece, Italy and Spain have some of the lowest participation rates and some of the highest informal care usage rates. This suggests that in countries with more accessible formal childcare facilities for very young children, mothers are less likely to require informal childcare arrangements and more likely to work. By contrast, in countries where formal childcare facilities are less accessible, mothers have to rely on informal help from family and friends, which may not be readily available to all mothers, thus resulting in lower observed female participation rates.

Figure 3.27 Proportion of children aged 0-2 in informal care



Source: EU-SILC 2007, women aged 25-55 (participation rate) and children aged 0-2.
R=-0.45 ($p<0.05$).

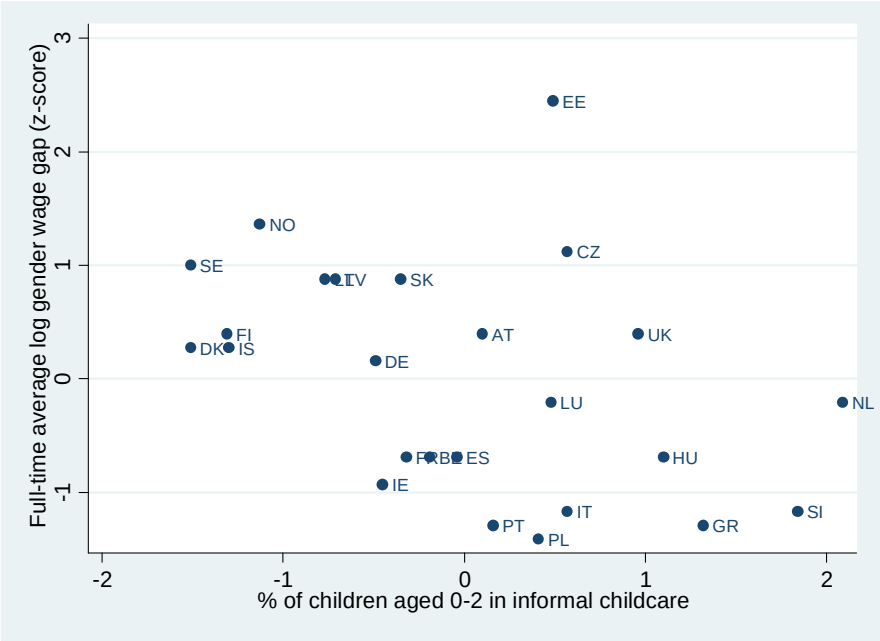
There appears to be a moderate negative association between the level of occupational segregation and enrolment rates in non-parental childcare by pre-school children. In countries with higher proportions of pre-school children using any form of non-parental childcare, formal or informal, observed levels of occupational segregation tend to be lower. The strongest correlations are observed for the proportion of children aged 0-2 (R=-0.35, $p<0.10$) and those between the ages of 3 and mandatory school age (R=-0.48, $p<0.05$) in formal care. The associations between occupational gender segregation and children's usage of informal care are negative, but not statistically significant[29].

Although there appears to be no evident relationship between enrolment rates of pre-school children in formal childcare facilities and gender wage gaps, there is a significant negative relationship between informal care usage rates of pre-school children (both under 3's and those between the age of 3 and mandatory school age) and gender earnings gaps amongst full-time employees (R=-0.40, $p<0.05$). It appears

[29] The correlations between the Index of Dissimilarity and the proportion of children aged 0-2 and those between the age of 3 and mandatory school age in informal care are -0.21 and -0.19, respectively (all in z-scores).

that, once again, the relationship between non-parental childcare usage and gender inequality in the labour market is mediated by the female participation rate. Figure 3.28 shows that average gender earnings gaps amongst full-time employees are higher in the countries where fewer children aged 0-2 use informal childcare. Thus, it is again the Scandinavian countries with higher female participation rates, more accessible formal childcare facilities and lower rates of informal childcare usage, that have the highest gender wage gaps among full-time employees.

Figure 3.28 Proportion of children age 0-2 using informal care and average gender hourly wage gap among full-time employees



Source: EU-SILC 2007, employees aged 25-55 (wage gap) and children aged 0-2.
R=-0.40 ($p<0.05$).

Table 3.17 shows the indicators of tax/benefit systems' neutrality towards second earners in couples. The z-score of the ratio of average tax transfers (net of benefits) for single breadwinner families to average tax transfers for otherwise similar dual breadwinner families is reported in column 1. The raw figures were reported in Table 3.8 in Section 3.3. The higher the ratio and, therefore, the z-score, the more tax a single breadwinner household would pay relative to a dual earner household on the same total income[30]. By contrast, the indicators are lowest in the tax/benefit systems biased in favour of single breadwinner families. Columns 2 and 3 show the z-scores

[30] Total income of 133% APW, two children aged 4 and 6.

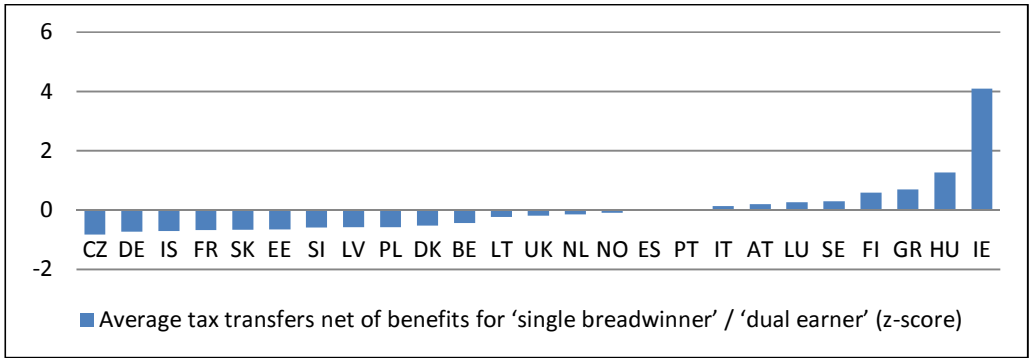
of the ratio of average tax rate for a secondary earner (whose spouse earns average wage, without any dependent children) on 67% and 100% of APW, respectively, to average tax rate for a single individual on the same wages. The raw figures were reported in Table 3.9 in Section 3.3. The higher the ratio (and the z-score), the more the tax/benefit system is biased against second earners in couples and, therefore, against dual-earner families. The association between female participation rates, occupational segregation, and gender wage gaps with each of these three indicators is explored below.

Table 3.17 Tax treatment of couples (z-scores)

	Average tax transfers net of benefits for 'single breadwinner' / 'dual earner' (z-score) (1)	Average tax rate for secondary earner at 67% APW (with husband at 100% APW) / average tax rate for single earner at 67% APW, no children (z-score) (2)	Average tax rate for secondary earner at 100% APW (with husband at 100% APW) / average tax rate for single earner at 100% APW, no children (z-score) (3)
AT	0.20	-0.80	-0.79
BE	-0.43	0.54	0.49
CZ	-0.83	-0.57	-0.39
DE	-0.73	0.50	0.49
DK	-0.52	0.43	0.39
EE	-0.65	0.29	0.39
ES	-0.01	0.44	-0.01
FI	0.59	-0.93	-0.99
FR	-0.67	-0.09	-0.01
GR	0.69	-0.93	-0.99
HU	1.27	-0.93	-0.99
IE	4.09	0.90	1.91
IS	-0.70	3.35	2.87
IT	0.14	0.18	0.24
LT	-0.23	-0.93	-0.99
LU	0.27	0.72	0.49
LV	-0.57	-0.53	-0.51
NL	-0.15	-0.59	-0.61
NO	-0.09	-0.51	-0.53
PL	-0.57	-0.68	-0.53
PT	0.03	1.13	0.89
SE	0.30	-0.93	-0.99
SI	-0.58	-0.32	-0.36
SK	-0.66	1.19	1.52
UK	-0.19	-0.93	-0.99

Source: OECD Tax/Benefit Calculator (accessed on 29/04/2010).

Figure 3.29 Ratio of average tax transfers net of benefits for 'single breadwinner' families to average tax transfers for 'dual earner' families



Source: OECD Tax/Benefit Calculator (accessed on 29/04/2010).

Out of three indicators reported in Table 3.17, only the ratio of the net tax transfers for single breadwinner families to net tax transfers for dual earner families (column 1) has any kind of linear association with the studied gender equality in the labour market outcomes. It has a modest negative association with the female participation rate ($R=-0.34$, $p<0.10$): in countries where single breadwinner families with children pay relatively higher taxes net of benefits than dual earner families with the same gross earnings, female participation rates tend to be lower. If the outlier (Ireland) were removed, the correlation would be even stronger ($R=-0.42$, $p<0.05$). The finding is perhaps counter-intuitive, given that women are more likely to be secondary earners in couples and, therefore, they could be expected to be more likely to work in the tax/benefit systems less biased in favour of single breadwinner households.

However, considering the participation rate of the type of women who would be the most likely to be responsive to tax and benefit measures, i.e. married, lower educated and with younger children, a somewhat different picture emerges. There is still a negative (but insignificant) correlation between the ratio of the net tax transfers for single breadwinner families to net tax transfers for dual earner families and the participation rate of married women without university education, with the youngest child aged 0-4 ($R=-0.25$), but it appears to be influenced by a group of outliers with some of the lowest participation rates (see Figure 3.30). If Austria, the Czech Republic, Hungary, Greece, and Ireland were removed, a positive (but insignificant) correlation of $R=0.22$ would be observed. The correlation amongst the five excluded

countries is R=0.58. Thus, there is some evidence of an expected relationship between the tax/benefit regime and the participation rate of women who, in theory, are the least attached to the labour market, but the strength of the correlation is too weak to be reliable.

Figure 3.30 Ratio of average net tax transfers for single breadwinner families to that for dual earner families and female participation rate (married, no university degree, youngest child aged 0-4)

Source: OECD Tax/Benefit Calculator (accessed on 29/04/2010); EU-SILC 2007, women aged 25-55.
R=-0.25

The tax/benefit neutrality indicator (i.e. the ratio of the net tax transfers for single breadwinner families to net tax transfers for dual earner families) has a modest negative association with the level of occupational segregation (R=-0.35, p<0.10). At the same time, the tax/benefit indicator has a modest negative correlation with the average (R=-0.31, p<0.15) and the median (R=-0.31) gender wage gap among full-time employees. Thus, gender wage gaps for full-time employees tend to be somewhat higher in the countries where the tax/benefit systems are more biased in favour of single breadwinner families (with two children aged 4 and 6). However, these correlations are too weak for this conclusion to be reliable. Furthermore, given that the tax/benefit regime is not likely to affect the labour market behaviour of all

women, it is not expected that it would influence the gender wage gaps (or occupational segregation level) in any straightforward way.

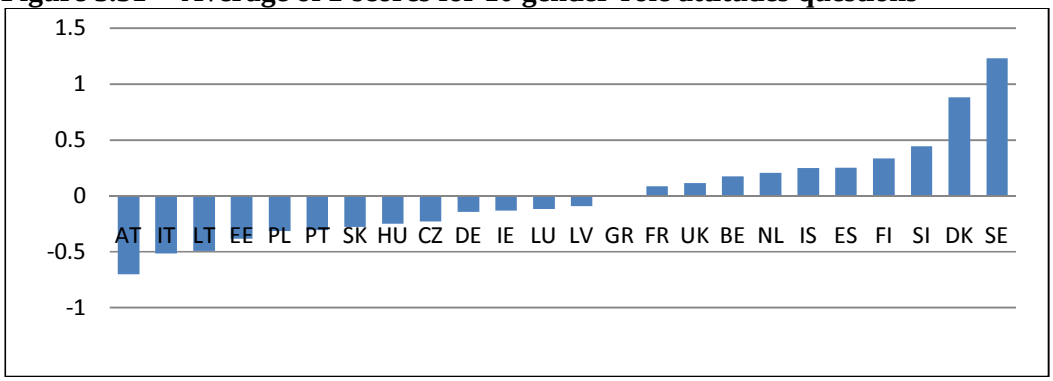
Finally, Table 3.18 reports the z-scores for each of the gender-role attitudes statements discussed in Section 3.4, while Figure 3.31 reports the average of these z-scores for each country. The most egalitarian attitudes, on average, are observed in Denmark and Sweden, followed by Slovenia, Finland, Spain and Iceland. The most traditional attitudes are observed in Austria, Italy and Lithuania.

Table 3.18 Average gender-role attitudes – z-scores (EVS 1999)

	Disagree (%)					Agree (%)				
Country	scarce jobs to men	women need children to be fulfilled	preschool child suffers with working mother	women really want home and children	housewife as fulfilling as paid job	working mothers warm with children	very important to share chores	job best way to independence for women	fathers as suited to look after children	husband +wife contribute to HH income
AT	-1.2	0.6	-1.6	-0.3	-0.3	-2.2	-0.6	0.0	-0.8	-0.6
BE	0.0	0.7	0.4	0.3	-0.4	0.3	0.6	0.2	0.1	-0.5
CZ	-0.3	0.2	0.6	-0.9	-1.5	0.6	-1.1	0.1	-1.1	1.1
DE	-1.0	-0.2	-0.5	0.9	1.6	-0.9	-1.4	0.7	-0.3	-0.3
DK	1.6	-1.2	2.3	2.6	0.5	1.2	0.5	1.0	1.1	-0.7
EE	0.5	-1.0	-0.4	-0.6	0.1	-0.5	-1.7	0.4	-0.9	0.4
ES	-0.5	0.1	0.7	0.7	0.5	0.1	0.0	0.6	-0.2	0.4
FI	1.1	1.5	1.0	0.5	-1.9	2.0	-0.7	-1.2	1.4	-0.5
FR	-0.1	-0.7	0.1	-0.5	-0.2	0.2	0.4	0.9	0.5	0.3
GR	0.3	-1.0	-1.2	-0.5	1.6	0.0	0.7	0.8	-1.5	0.7
HU	-0.2	-1.8	-0.3	-0.8	-0.1	0.2	0.5	-0.3	-0.6	0.9
IE	0.6	1.4	0.5	0.2	-1.2	-0.5	1.6	-2.0	-1.0	-1.1
IS	2.0	0.6	1.4	-0.3	-0.4	1.1	0.8	-2.9	1.1	-1.0
IT	-1.0	-0.3	-1.4	-0.6	0.4	-1.2	-0.6	0.2	-0.9	0.2
LT	-0.5	-0.8	-0.8	-2.3	-1.7	0.1	-0.9	0.2	0.9	0.9
LU	-0.4	0.5	-0.6	0.1	-0.4	0.0	0.1	0.9	0.3	-1.7
LV	0.0	-1.6	-1.0	-0.6	1.8	0.0	-0.9	1.0	-0.4	0.8
NL	1.2	1.7	0.7	1.5	0.7	0.6	-0.3	-1.4	0.2	-2.9
PL	-1.7	-0.8	-1.1	-1.1	-0.1	-2.3	1.8	0.1	1.3	0.7
PT	-0.8	-0.7	-0.9	0.3	0.8	-0.9	-1.2	0.4	-0.9	0.8
SE	1.9	1.0	1.2	1.1	0.8	0.9	1.5	0.9	2.1	0.9
SI	-0.1	0.5	0.6	-0.5	0.5	0.7	0.0	0.5	1.2	1.0
SK	-1.2	0.2	-0.3	-0.2	-1.0	0.6	-0.5	0.0	-1.2	0.8
GB	-0.4	1.2	0.7	0.9	-0.1	-0.3	1.4	-1.0	-0.6	-0.5

Source: *European Values Survey 1999 (individual weights used)*
Norway did not participate in the EVS 1999

Figure 3.31 Average of z-scores for 10 gender-role attitudes questions

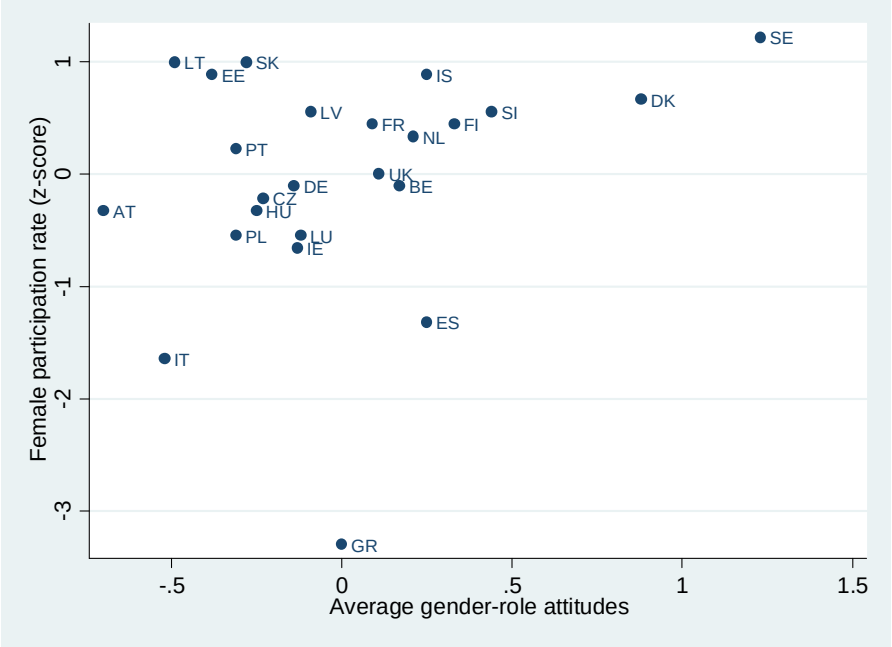


Source: *European Values Survey 1999.*

Figure 3.32 shows a positive (but not statistically significant) relationship between the gender-role attitudes and female participation rate[31] (R=0.28). However, the analysis in Section 3.4 showed that the 10 studied attitude questions form two separate sub-dimensions: attitudes to gender equality in the home and in the economic sphere (see Table 3.14). The z-score of female participation rate has a higher correlation with the factor scores on the attitudes to gender equality in the home dimension (R=0.36, p<0.10) than with the factor scores on the gender equality in the economic sphere dimension (R=0.12). Although the two sub-dimensions are positively related (see Figure 3.15), it appears that egalitarian attitudes towards the sharing of caring responsibilities and household chores (Figure 3.34) are related to higher female labour market participation to a greater extent than egalitarian attitudes to equality in the economic sphere (Figure 3.34). It is not clear, however, whether more egalitarian attitudes lead to higher female labour market participation or the other way around. There is no evident association between the gender-role attitudes and any of the other gender equality outcomes, although the correlation coefficients are of expected signs[32].

[31] The correlation between average gender role attitudes and the participation rate of married women without a university degree, with the youngest child aged 0-4, is R=0.51, p<0.05).
[32] R=-0.19 for gender-role attitudes and the index of segregation; R=-0.18 for the median gender wage gap amongst full-time employees (R=-0.25 for the median gender wage gap amongst all employees).

Figure 3.32 Average gender-role attitudes (z-score) and female participation rate



Source: European Values Survey 1999; EU-SILC 2007, women aged 25-55.
R=0.28

Figure 3.33 Attitudes to gender equality in the home and female participation rate

Source: European Values Survey 1999; EU-SILC 2007, women aged 25-55.
R=0.36, p<0.10.

Figure 3.34 Attitudes to gender equality in the economic sphere and female participation rate

Source: European Values Survey 1999; EU-SILC 2007, women aged 25-55.
R=0.12 (R=0.29 if Greece is excluded).

The work/family reconciliation index is constructed from the indicators that are found to be most relevant to gender equality in the labour market outcomes, such as female participation rate, occupational segregation and average gender wage gap for full-time employees. Table 3.19 (column 5) shows the average of the z-scores for six indicators: total paid leave reserved for fathers[33]; proportions of children aged 0-2 in formal childcare facilities; the ratio of average tax transfers net of benefits for single breadwinner families to that for dual earner families; and the average gender-role attitudes (mean of z-scores for each of 10 separate attitudes). The scale reliability of these four items is 0.51, which is not very high. The scale would have a higher reliability of 0.66 if the tax/benefit component were dropped[34]. This is consistent

[33] Although total paid leave available to mothers has a higher degree of correlation with the female participation rate, the availability of statutory leave reserved for fathers may tell more about the country's commitment to gender equality in the sharing of childcare responsibilities. Gornick and Meyers (2003) also used fathers' leave in their "gender equality" index. However, if total paid leave available to couples were also included in the summary measure, the ranking of some of the lower ranking countries would be higher (e.g. Hungary). The work-family reconciliation policies index compiled by the OECD (2001) includes FTE maternity leave as well as total childcare leave, but it is more relevant to mothers' ability to work rather than to gender equality in the labour market.

[34] However, the correlation between the average of z-scores on all four indicators and the average of z-scores on just three indicators (excluding the tax/benefit component) is very high (R=0.88). The only outlier is Ireland which scores much higher if the tax/benefit component is included.

with the finding of relatively low correlation between the tax/benefit indicator and the measures of gender equality in the labour market. However, the indicator is retained here because the tax/benefit environment affecting secondary earners in couples is expected to affect the labour market behaviour of married women, especially those with lower earnings potential (Jaumotte, 2003).

The composite index is modestly negatively correlated with the median hourly gender earnings gap amongst all employees (R=-0.28) and full-time employees only (R=-0.25). Figure 3.35 shows that it is also negatively correlated with the index of occupational segregation (R=-0.46, p<0.05). The correlation between the composite index and female participation rates is positive, as would be expected, but very low[35] (R=0.11). However, there is a stronger positive correlation between the composite index and the participation rate of married women without a university degree, with the youngest child aged 0-4 (R=0.48, p<0.05).

Figure 3.35 Segregation index and 'work/family reconciliation index'

Source: OECD Family Database (version June 2009) Table PF7.1; Moss and Korintus (2008); OECD Tax/Benefit Calculator (accessed on 29/04/2010); EVS 1999.; EU-SILC 2007, employees aged 25-55. R=-0.46, p<0.05.

[35] The alternative index that omits the tax/benefit indicator has a weaker correlation with the measures of gender wage gap and with the index of segregation (R=-0.32), but a higher correlation with the female participation rate (R=0.30).

Figure 3.36 ranks the studied countries by the value of the average z-score ('work/family reconciliation index'). It appears that there are three clusters of countries based on the composite index. The first group comprises the Czech Republic, Slovakia, Poland, Austria, Germany, Estonia and Latvia with the lowest z-scores (between -0.9 and -0.5). The second and largest group includes the countries with middling z-scores of between -0.5 and +0.3: Greece, Hungary, Lithuania, France, Portugal, UK, Slovenia, Spain, Italy, the Netherlands and Belgium. The third and smallest group consists of countries with the highest z-scores of between +0.6 and +1: Finland, Norway, Denmark, Iceland, Ireland, Luxembourg and Sweden.

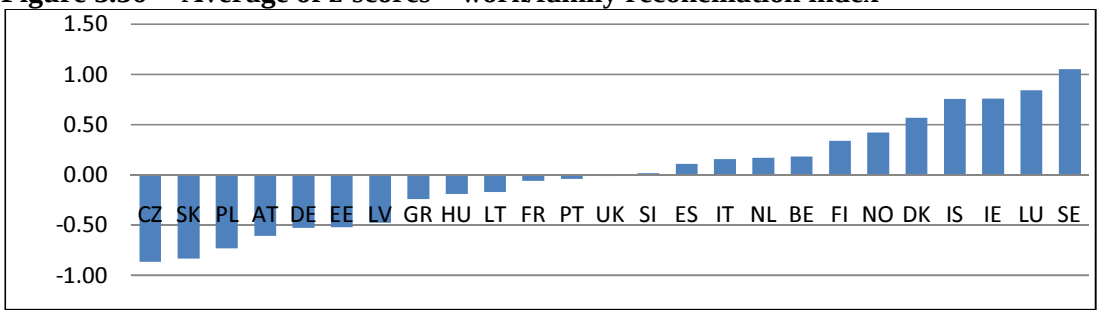
The resulting ranking, however, offers a simplified picture of the cross-country variation in work-family reconciliation policies and gender role attitudes relevant to gender equality in the labour market. Hence, it needs to be interpreted with caution. Some of the countries ranking high on the summary index rank low on some of the constituent measures. For instance, Luxembourg has the second highest ranking overall, but it ranks below average on the egalitarian gender role attitudes component. Ireland is the third highest ranking country, but it ranks below average on three out of four indicators (while topping the ranking on the tax neutrality measure). If the tax/benefit indicator were excluded, Ireland would have a below average z-score. Only one country, Sweden, scores above average on all four indicators.

Table 3.19 Work/family reconciliation index

	FTE leave reserved for fathers (z-score) (1)	% children aged 0-2 in formal care (z-score) (2)	Average tax transfers net of benefits for 'single breadwinner' / 'dual earner' (z-score) (3)	Average gender-role attitudes (z-score) (4)	Average of the z-scores (5)
AT	-0.84	-1.09	0.20	-0.70	-0.61
BE	0.18	0.81	-0.43	0.17	0.18
CZ	-0.84	-1.56	-0.83	-0.23	-0.87
DE	-0.84	-0.39	-0.73	-0.14	-0.53
DK	-0.30	2.22	-0.52	0.88	0.57
EE	-0.30	-0.75	-0.65	-0.38	-0.52
ES	-0.30	0.49	-0.01	0.25	0.11
FI	0.70	-0.26	0.59	0.33	0.34
FR	-0.30	0.64	-0.67	0.09	-0.06
GR	-0.74	-0.91	0.69	0.00	-0.24
HU	-0.57	-1.20	1.27	-0.25	-0.19
IE	-0.84	-0.08	4.09	-0.13	0.76
IS	1.97	1.51	-0.70	0.25	0.76
IT	1.27	-0.26	0.14	-0.52	0.16
LT	0.24	-0.20	-0.23	-0.49	-0.17
LU	2.78	0.44	0.27	-0.12	0.84
LV	-0.41	-0.83	-0.57	-0.09	-0.48
NL	-0.74	1.37	-0.15	0.21	0.17
NO	0.78	0.58	-0.09	N/A	0.42
PL	-0.84	-1.20	-0.57	-0.31	-0.73
PT	0.00	0.11	0.03	-0.31	-0.04
SE	1.67	1.00	0.30	1.23	1.05
SI	-0.09	0.30	-0.58	0.44	0.02
SK	-0.84	-1.54	-0.66	-0.28	-0.83
UK	-0.76	0.80	-0.19	0.11	-0.01

Sources: Column 1 – OECD Family Database (version June 2009) Table PF7.1; Moss and Korintus (2008). Column 2 – EU-SILC 2007. Column 3 - OECD Tax/Benefit Calculator (accessed on 29/04/2010). Column 4 – EVS 1999.

Figure 3.36 Average of z-scores – work/family reconciliation index



Source: Table 3.19, colum

Summary and conclusion

This chapter reviewed important work-family reconciliation policies and attitudes to gendered division of labour in 25 European countries. It analysed and compared parenthood leave policies, childcare availability and affordability, fiscal rules that

affect secondary earners in couples, and prevailing social norms and attitudes to gender equality in the home and in the economic sphere, using comparable macro data compiled by the OECD as well as micro data from international surveys. Bivariate relationships between the studied indicators and female participation rates, gender wage gaps and an index of occupational gender segregation were analysed. Finally, a summary measure of work-family reconciliation policies and gender role attitudes was produced in order to rank the studied countries and set the scene for multivariate analyses in the following chapters.

Comparing parenthood leave policy designs proved to be a challenge, due to the complexity and multidimensionality of family leave provisions. The countries were ranked according to the combined measure of length and generosity (full-time equivalent) of the parenthood leave entitlements available to couples and mothers as well as reserved for fathers. Eastern European and Nordic countries tend to have the longest FTE paid leave available to couples and mothers. However, while Eastern European countries tend to provide longer paid maternity leave provisions, Nordic countries are more likely to have shorter maternity leave combined with longer and more generous parental leave. With the exception of longer paternity leave in Iceland and Sweden, paternity leave tends to be very short in duration, although fully paid in most cases. As of 2006/2007, six countries had no statutory paternity leave provision at all (Austria, the Czech Republic, Germany, Ireland, Poland, and Slovakia).

Overall, there is greater variation in the designs of parental leave than maternity or paternity leave. While some countries guarantee job-protected leave until the child is three years old at relatively low rates of benefit, others offer leave of shorter duration (one year or less) at higher rates of pay. However, longer and more generous parental leave designs do not assure a gender egalitarian distribution of entitlements between mothers and fathers. For example, Iceland offers the most gender egalitarian parenthood leave provisions, without ranking high on the generosity or length of leave, while Lithuania offers one of the longest and most generous entitlements to couples, with relatively little leave reserved for fathers.

Although childcare enrolment rates are not a perfect proxy for the availability of childcare services, evidence from the EU-SILC 2007 suggests that there is still considerable unmet demand for accessible non-parental childcare for pre-school children in Europe. Formal childcare services for children under the age of three appear to be particularly scarce. Only eight out of 25 countries studied in this chapter have at least 33% of 0-2-year-olds in formal childcare services, attaining the Barcelona target for this age group. However, in two of these countries (the UK and the Netherlands), average weekly hours in formal childcare do not reach 20 hours. Including registered childminders in the definition of formal childcare noticeably increases childcare enrolment rates, highlighting the importance of this type of non-parental childcare for children under three (though not for those between the age of three and mandatory school age) in most countries. Enrolment rates for children between the age of three and compulsory school age are considerably higher than enrolment rates for 0-2-year-olds, but the Barcelona target of 90% for this age group is met in only nine countries.

Unsurprisingly, more children under the age of three attend formal childcare in countries that spend a higher proportion of their GDP on childcare and early education, on average. Contrary to what might be expected, however, no association between childcare fees (or net costs to parents) and enrolment rates for 0-2-year-olds is found, indicating that availability and affordability of childcare do not necessarily go hand in hand. Given high rates of informal childcare usage in countries with lower formal childcare enrolment rates, availability of childcare services for very young children may be a more serious problem than affordability.

Tax and benefit rules affecting married couples, particularly those with dependent children, further complicate the analysis of work incentives for women. Countries with individual taxation systems appear to be more favourable to dual-earner households, on balance. However, in individual taxation countries with benefits dependent on joint household income, spouses with lower earnings potential still face high marginal tax rates when entering employment due to the withdrawal of benefit income. In the majority of the studied countries in families without children, secondary earners face somewhat higher tax rates (when entering work on two-thirds

of average wage or average wage) than single individuals or primary earners (with non-working spouses) on the same income. Only in Finland, Greece, Hungary, Lithuania, Sweden and the UK is there no difference in tax rates for primary, secondary and single earners entering work on two-thirds of average wage or average wage. However, when dependent children are present, secondary earners face considerably higher tax rates than comparable primary earners or lone parents, due to family benefits (and other benefits) being assessed on total household income. Although it still pays for secondary earners with children to work when in-work costs are disregarded (e.g. childcare fees), the gains from employment would be lower if in-work costs were fully accounted for[36].

Gender-role attitudes vary considerably across the countries studied in this chapter. Women have more gender egalitarian attitudes than men, on average. As expected, traditional gender-role attitudes tend to be more prevalent in Catholic countries (including the new accession states) than in Protestant countries (Britain and Scandinavia). Although, overall, countries that have more egalitarian attitudes to gender equality in the home also have more egalitarian attitudes to gender equality in the economic sphere, there are five notable exceptions to this pattern. Iceland, Finland, the Netherlands, Ireland and Britain all score higher on the equality in the home dimension than their low scores on the equality in the market dimension would predict.

Finally, the studied institutional and cultural factors that were found to be most relevant to gender equality in the division of market and non-market work produced a summary measure of work-family reconciliation policies and gender role attitudes. Similarly to the findings in OECD (2001), Gornick and Meyers (2003) and Ray et al. (2010), Scandinavian countries top the ranking on this composite index. Benelux countries (Belgium, the Netherlands, Luxembourg) also rank highly, followed by the UK, France and, finally, Germany. At the same time, the new accession states tend to rank very low on the studied measure. Slovenia is the only exception, with the highest ranking of all the new accession countries, due to its above average scores on the proportion of children aged 0-2 in formal childcare and on egalitarian gender-role

[36] The OECD Tax/Benefit Calculator does not include childcare costs in its modelling.

attitudes. Mediterranean countries tend to rank higher than the new accession states, but they lag behind Scandinavian and Benelux countries. Austria and Germany rank particularly low (along with the Czech Republic, Slovakia and Poland), due to their lack of statutory paternity leave, low availability of formal childcare for very young children, the tax regime favouring single earner families over dual earner families[37] and more traditional gender-role attitudes.

As expected, the composite index is negatively associated with the measures of gender inequality in the labour market. A moderately negative correlation between the work/family reconciliation index and the measure of occupational gender segregation is observed. This suggests that men and women are more likely to work in different occupational categories in the countries with more traditional gender-role attitudes and less egalitarian work/family reconciliation policies. However, the negative correlation with the median gender wage gap (amongst full-time employees and amongst all employees) is somewhat weaker. This suggests that factors other than work/family reconciliation policies and gender-role attitude, such as labour market institutions, may influence gender wage gaps. Furthermore, work/family reconciliation policies tend to have wider goals than gender equality in the labour market, such as fertility and child well-being. Although the composite index is positively related to the female participation rate, the strength of the correlation is quite low. This is largely because the tax/benefit component of the index has a weak correlation with the average female participation rate. Moreover, it is not surprising to find a relatively weak correlation between the composite index and the overall female participation rate, given that work/family reconciliation policies do not influence all women equally.

Although this chapter used a variety of comparable macro level indicators, the analysis highlighted the need for more types of harmonised data sources. There appears to be a notable lack of comparable data on take-up rates of paternity and parental leave by fathers in the EU[38]. This is partly due to difficulties in identifying

[37] With regard to the studied scenario: household income of 133% APW, couple family, two children aged four and six (see Table 3.8).

[38] The OECD Family Database reports information on paternity leave usage rates, rather than take-up, for fathers with children under the age of one based on the European Labour Force Survey. No distinction is made, however, between maternity, paternity or parental leave.

the eligible group. Furthermore, there is a lack of comprehensive statistics on childcare quality, although the OECD Family Database provides average child-to-carer ratios in formal childcare facilities for 0-3-year-olds in selected countries (OECD, 2010). Finally, no comparable information on the availability and affordability of childcare places, for those who want them, appears to be publicly available. Although there are statistics on childcare enrolment rates for all children in a certain age group as well as on average childcare fees (or net costs to parents) for selected family scenarios, it is still difficult to infer precisely to what extent there is an unmet demand for formal childcare places.

Another limitation of the analysis in this chapter is that it does not allow the identification of causal relationships between the studied macro-level factors. Thus, it cannot be ascertained whether and to what extent the studied work-family reconciliation policies affect the labour force participation of women, gender wage gaps and occupational gender segregation. Furthermore, not all possible policies that might reasonably affect gender equality outcomes in the workplace are included in this study. A more comprehensive analysis, which is beyond scope of the present study, might include data on labour market institutions, such as collective bargaining coverage, employment market regulation and product market regulation. Nevertheless, this chapter analysed harmonised data covering 25 European countries to study the variations in work/family reconciliation policies and gender-role attitudes relevant to the gender division of labour in the home and in the labour market, and to rank the countries on a summary measure. In doing so, the analysis made two contributions to the comparative literature on work-family reconciliation policies in Europe. Firstly, it included a wider range of indicators than previous studies that focused primarily on parenthood leave and childcare policies. Secondly, new accession states were included in the analysis.

The next chapter uses comparable longitudinal data for the period 1994 to 2001 to examine the relationship between recent childbirth and the relative risks of switching to part-time, inactivity or unemployment for full-time women in 13 European countries. It also analyses the relationship between switching from full-time to part-

time work and the risk of occupational downgrading for both male and female employees.

Chapter 4 Activity changes and occupational transitions

Although female participation in the labour force in industrialised countries has increased considerably in recent decades, women's position in the labour market remains worse than men's (OECD, 2008, p.140). Some of this gender inequality can be explained by women's greater role in caring for children (Brewer & Paull, 2006). New mothers often take time out of employment following childbirth, but the human capital theory predicts that spells out of the labour force have a negative effect on lifetime earnings (Mincer & S. Polachek, 1974). Although part-time employment can be a way to alleviate the work-family conflict, as an alternative to non-participation, it too may have negative consequences for women's careers (Crompton & Lyonette, 2008). This chapter examines the association between recent childbirth and the likelihood of switching to part-time employment, inactivity or unemployment for full-time working women. Then it explores the relationship between switching from full-time to part-time work and occupational downgrading, using comparable longitudinal data from 13 European countries for the period 1994-2001[39].

Literature review

Several studies investigate the timing of women's return to work after childbirth in a comparative perspective. Gutiérrez-Domènech (2005a) examines transitions from employment to non-employment for mothers in Belgium, West Germany, Italy, Spain and Sweden, using retrospective data from the United Nations Family and Fertility Survey (1992-1993). The study finds the highest decline in female post-birth employment in Spain and West Germany. Women with the highest level of education are more likely to return to work sooner in all countries except Sweden, where no significant differences by education level are found.

Similarly, Gustafsson et al. (1996) find that education is not an important predictor of when women will return to work after childbirth in Sweden, while in Germany and Britain mothers with more years of work experience tend to return to work quicker. Their study uses data from national panel surveys for the period from the early 1980s to the early 1990s. A subsequent study of timing of return to work after first birth in

[39] The research presented in this chapter was funded by the European Commission under the 6th Framework Programme's Research Infrastructures Action (Trans-national Access Contract RITA 026040) hosted by IRISS C/I at CEPS/INSTEAD, Differdange (Luxembourg).

Britain, Germany, the Netherlands and Sweden over two decades (1980s-1990s) also shows that more educated mothers leave full-time housewife status significantly quicker in all the studied countries except Sweden (Gustafsson et al., 2002).

Dex et al. (1998) study female employment transitions after childbirth in the UK, using the National Child Development Study (NCDS) for the cohort of women born in 1958. They find that highly educated women are the most likely to stay in continuous employment around childbirth, suggesting a growing polarization between outcomes for highly educated and high earning mothers and those with lower education and wages. At the same time, the age of the youngest child is still the most important predictor of labour force participation for women with pre-school children. In a later study, Dex et al. (2008) find that although most of the highly educated women from the NCDS cohort delayed childbirth until their thirties and returned to work within a year after giving birth, almost a quarter (24%) of them returned to an occupation with a lower status, mostly due to working part-time.

At the same time, Saurel-Cubizolles et al. (1999) investigate the female rates of return to work in the first year after childbirth in France, Italy and Spain. They find that 80% of mothers in France, 78% in Italy and 53% in Spain return to work by the time of their child's first birthday. However, the samples used are not nationally representative, as only selected maternity units in a number of regions were included in the surveys. Public sector workers are the most likely to return to work within a year after childbirth in all three countries. French and Spanish women are also more likely to return to work if they have a higher level, professional or intermediate occupation. Women who worked part-time before the birth are the least likely to return within a year in all three countries.

However, in a comparative study of nine European countries, using the ECHP 1994-2001, Pronzato (2009) finds that institutional characteristics play a bigger role than human capital characteristics in determining the timing of return to work after childbirth for women. In countries with longer periods of job protection women are more likely to start working again by the time the child is one year old, but they return to work at a slower rate if parental leave is paid. When the child is two, the

positive effect of job protected leave is largest for medium and highly educated women, but when the child is three, the effect is largest for lower educated women. However, these differences by education are found to be smaller in countries with more generous parental leave arrangements, such as Finland.

Del Boca et al. (2008) find that social policies, such as the availability of part-time work and childcare facilities, parental leave and child allowances, can have significant impacts on women's labour market participation, particularly that of less educated women. They analyse the joint decision to work and to have children by women aged 21-45 with partners in seven European countries using the sixth (1999) wave of the ECHP. The study shows that the availability of 'good quality' part-time work significantly increases the chances of participation; the proportion of children aged 0-2 using childcare facilities significantly increases the probability of working; the length of optional parental leave first positively affects labour market participation, but then starts to decline; while family allowances tend to reduce participation. Similarly, Uunk et al. (2005) find a less negative effect of childbirth on female labour supply both in countries with more generous public childcare provision and in less affluent countries, using panel data from the ECHP.

Ondrich et al. (1996) study the effects of the changes in West German maternity leave and benefit policy using data for the period from 1984 to 1991. They find that since maternity leave and benefits provision have become more generous, German mothers with more years of labour market experience and years of full-time work before childbirth are more likely to return to work after using up their maternity leave than mothers with weaker attachment to the labour force. In addition, a subsequent study finds that first-time mothers are less likely to return to work than mothers with previous children, possibly because the latter already have experience of arranging out-of-home infant care (Ondrich et al., 2003).

At the same time, discontinuous employment may have adverse consequences for mothers' careers, such as lower lifetime earnings through the loss of human capital and direct earnings foregone while out of the labour force (Gustafsson, 2001, p.236). An analysis of 1998 West German data, for example, shows that career breaks take a

toll on women's wages, particularly if the break occurs later in the career (Beblo & Wolf, 2000). Based on the US National Longitudinal Surveys of Labour Market Experience, Shapiro and Mott (1994) find that the earnings premium to uninterrupted work around the first birth for women in 1987 (14-19 years after their first birth) is around 19% for white women and 7% for black women.

Part-time employment can be an alternative to economic inactivity or full-time work for women with children, accommodating both the desires to spend time with the family and to stay in the labour market. However, negative economic outcomes of part-time work are well documented in the literature. These may include wage penalties (Manning & Petrongolo, 2008; Bardasi & Janet Gornick, 2008), concentration in low pay and low status jobs (Connolly & Gregory, 2008), reduced access to training and occupational benefits (OECD, 2002), as well as less job security and fewer career advancement opportunities (Rosenfeld & Birkelund, 1995). Although, on balance, part-time working women in Europe[40] typically report higher levels of satisfaction with their working hours, part-time workers in low status occupations tend to report lower levels of subjective economic well-being, such as satisfaction with their financial situation, (Warren, 2008). As part-time workers are considerably more likely to be women than men (Buddelmeyer et al., 2005), it is women who disproportionately bear the short- and long-term-costs of part-time employment.

The nature and levels of part-time work by women differ considerably across Europe. The Netherlands consistently led with the highest female part-time work rates (over 65%), followed by the UK with over 40% of employed women aged 25-59 working part-time in 1994-2001, according to the official Eurostat statistics (Table A 4-1 in Annex 4). At the same time, fewer than 15% of women worked part-time in the Southern Mediterranean countries (Greece, Portugal, Spain and Italy) and in Finland. However, in these countries the share of involuntary[41] part-time employment among women working part-time was highest (over 20%), while women typically chose to

[40] Based on data from the Seventh (2000) wave of the ECHP.
[41] 'Persons working on an involuntary part-time basis are those who declare that they work part-time because they are unable to find full-time work' (Labour Force Survey metadata, Eurostat, http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN /lfsq_esms.htm).

work part-time in the Netherlands and in the UK (Table A 4-2). Remarkably, in 2001 the share of involuntary female part-time employment was 51% in Greece and only 2% in the Netherlands. Countries with higher rates of female part-time employment tend to have lower shares of involuntary part-time employment: there was a high negative correlation ($R=-0.81$, $p<0.001$) between these rates for the EU-15 in 2001.

Switching from full-time to part-time employment may also be associated with downward occupational mobility (that is, moving to an occupation with a lower status, educational requirements, responsibilities or payment than before). Connolly and Gregory (2008) order occupations by average skill requirements and investigate movements between the resulting 15 job categories amongst prime-age women, using data from the New Earnings Survey Panel and the BHPS 1991-2001[42]. The results from both surveys suggest a high incidence of occupational downgrading amongst women who move from full-time to part-time work. Although the study is not limited to mothers, the risk of downgrading while switching from full-time to part-time hours of work increases modestly with the presence of pre-school children in the household[43]. However, the risk drops again when the youngest child starts school. In contrast, Gutiérrez-Domènech (2005b) orders occupations by average occupational wage into four categories[44] and finds no evidence of downward occupational mobility amongst Spanish women who move from full-time to part-time work after their first birth, using retrospective data from the 1995 Spanish Family and Fertility Survey. The author suggests that the finding could be explained by the relative paucity of full-time to part-time transitions after motherhood in Spain, as opposed to transitions to non-employment.

Although several papers analyse the timing of women's return to work after child-birth in a sample of European countries[45], fewer studies investigate activity and

[42] A 15-occupation ranking is based on the average level of qualification held by full-time adult men and women working in the occupation, using data from the 2000 Labour Force Survey.
[43] Evaluated at the sample means (BHPS), the probability of downgrading when moving from full-time to part-time work increases by 4ppt for women with pre-school children who stay with their current employer and by 6ppt for those who switch employers.
[44] Coefficients on occupation dummies are estimated in a log-wage equation controlling for age and square age for women aged 16-49 in the 1994-95 wave of the European Community Household Panel (ECHP) and divided into four categories (Gutiérrez-Domènech, 2005b, pp.126-127) .
[45] For exampele, Pronzato (2009) for Italy, Greece, Spain, Portugal, France, Belgium, Austria, UK and Finland ; Gutiérrez-Domènech (2005a) for Belgium, West Germany, Italy, Spain and Sweden;

occupational transitions of employed women after childbirth in a cross-national perspective. No studies to date analyse occupational downgrading for men who switch from full-time to part-time work. This chapter uses data from a harmonized cross-national longitudinal survey to study the relationship between childbirth and women's transitions from full-time employment to part-time employment, unemployment or inactivity in 13 European countries over the period 1994-2001. The relationship between activity transitions and occupational downgrading is explored for both men and women. It is then investigated further for women, particularly in countries where childbirth is found to be related to an increased probability of switching from full-time to part-time work. The study uses two different definitions of occupational downgrading: moving to an occupation that is below the previous one in terms of average qualification and moving to an occupation that ranks lower in terms of average hourly earnings.

The next section describes the data and the econometric model for the analyses of: 1) recent childbirth and women's labour market transitions and 2) the association between full-time to part-time transitions and occupational mobility. The rest of the chapter presents the summary statistics of labour market and occupational transitions for men and women in Europe and discusses the results from multivariate analyses for women only. The final section summarises the main findings and concludes the chapter.

Data, sample and estimation technique

The study uses data from the ECHP. This is a standardised cross-national household-based annual longitudinal survey, designed and coordinated at the EU level. The panel ran between 1994 and 2001, producing eight waves of data on multiple topics, including demographics, labour market activity and income. The survey provides harmonised data on households and individuals from 15 pre-enlargement EU countries (EU-15). Austria joined the survey in the second wave in 1995, Finland in the third wave in 1996, and Sweden in the fourth wave in 1997. See Peracchi (2002) for a review of the ECHP structure and a discussion of methodological and statistical issues relevant to economic research.

Gustafsson et al. (1996) for Sweden, Germany and Britain; Saurel-Cubizolles et al. (1999) for France, Italy and Spain.

The ECHP was replaced with the EU-SILC in 2004 under Regulation (EC) no. 1177/2003 (European Union, 2003). Although the EU-SILC has become the main EU-wide instrument for collecting micro-level information on income and social exclusion, it provides a more limited set of variables than the ECHP and produces a shorter panel, using a four year rotational panel design for most countries[46]. Also, the EU-SILC does not use a standardised questionnaire for all participating states, so information on several important variables, such as years in paid work, is sometimes unavailable for several countries (see Chapter 5). This chapter, therefore, uses the ECHP because it provides labour market activity data on the same individuals for up to eight years, as well as detailed fertility data and information on important personal and workplace characteristics. The following 13 countries are included in the analysis: Germany (sample based on the German Socio-Economic Panel), Denmark, the Netherlands, Belgium, France, the United Kingdom (sample based on the BHPS), Ireland, Italy, Greece, Spain, Portugal, Austria and Finland. Sweden is excluded because it provides cross-sectional data only (and has no information on gross earnings) and Luxembourg because of its relatively small sample size.

The analysis is based on the sample of individuals aged 25-55 in order to disregard the cross national age differences in the timing and pattern of entry into and exit from the labour force. Although this age restriction excludes women who had children before the age of 25 from the sample and, therefore, disregards the potential effects of childbirth on the labour market behaviour of younger women, it ensures that women who may still be in education or training are excluded and facilitates comparison with the results in Chapters 5 and 6. The tiny minority of respondents with missing main activity information were also excluded from the analysis. Employment is defined here as being in paid work for at least 15 hours a week, including both employees and the self-employed[47]. The minority of respondents whose main activity is an apprenticeship or another type of paid training are also defined as employed. Unfortunately, those working or studying under 15 hours a week constitute a separate category in the ECHP ('work/study < 15 hours') and no information is given on the starting year of the current job. Therefore, they are

[46] For a more detailed discussion of the differences between the ECHP and EU-SILC, see Whelan and Maitre (2007).
[47] However, the self-employed have no information on gross earnings.

defined as being out of the labour force in this study. However, this is a temporary activity, since more than half of these individuals make a transition to another state in each wave. To sum up, individuals whose main activity is paid employment, self-employment, or paid training of at least 15 hours a week are defined as being employed. The self-reported unemployed form a separate category, while the rest are defined as being inactive. Table A 4-3 reports frequencies of main activity for men and women in each country.

The chapter uses a self-assessed measure of part-time status because the legal definitions of part-time work and the length of a typical working week may vary across the studied countries. For individuals for whom the self-defined information on part-time or full-time status is missing, data on weekly hours worked are used instead. Following the approach in Manning and Petrongolo (2008), in such cases part-time employees are defined as those working less than 30 hours a week (25 hours for teaching professionals).

Labour market activity transitions are studied at the annual level. Although monthly transitions would be more precise, a large proportion of respondents have missing information on the month of end of their previous job or the start of their current job, particularly in Germany. Yearly, rather than monthly, transitions are studied in Manning and Petrongolo (2008) and in Buddelmeyer et al. (2005), who also used the ECHP. Pronzato (2009) uses monthly employment and fertility information from the ECHP but excludes Germany, Denmark and the Netherlands, which have entirely missing monthly data on employment or fertility, and imputes the month of start of work for 10% of the remaining cases.

Gross hourly wages are constructed from gross monthly earnings and weekly working hours in the main job, including paid overtime. Derived hourly earnings are then deflated using the 2005 Consumer Price Index in order to study transitions between better or worse paid occupations in each country using real wages.

Children are defined as individuals aged 16 or younger living in the household. A dummy for a new birth in wave t is constructed using information on child-parent

pairs from the ECHP 'relationship' file and the year of birth of the child. The month of birth was not used because this information was entirely missing for the German sample and because labour market activity transitions were studied at the annual level. Step, adopted and foster children are also defined as children as long as they are under 17 years old and live in the household. A new birth is observed in wave *t* if the year of birth of the youngest (or sole) child in the household is the same as the year of the parent's personal interview in wave *t* or if the year of birth of the child is one year before the parent's personal interview but was not reported at the previous year's interview (as the child was born between the two interviews). Thus, a birth that occurs in wave *t* after the parent's personal interview is recorded as a new birth in wave *t+1*.

Table A 4-4 reports the means of the workplace characteristics of employed men and women across the eight waves of the ECHP[48]. In all of the studied countries, men are more likely to have supervisory duties than women, with the largest gender differences observed in Finland, Denmark, the Netherlands and the UK and the smallest differences in the Southern European countries. A similar pattern holds for the sub-sample of full-time workers, except that the gender gap in the proportion of those with supervisory duties falls noticeably in the UK (Table A 4-7). Women are also uniformly more likely than men to work in the public sector, particularly in the UK, Finland and Denmark, and to hold temporary contracts. The largest gender differences in the proportions of temporary workers are found in Ireland and the smallest gender differences are observed in Denmark. Men have higher log hourly earnings, on average, in all of the studied countries, with the largest gender gap observed in the UK and the smallest in Italy.

Men are also uniformly more likely to work in managerial occupations (including legislators, senior officials, and managers) than women, particularly in the Netherlands and the UK (Table A 4-5). The smallest gender differences are found in the Mediterranean countries (Italy, Spain, Greece and France). At the same time, women are over-represented in the clerical and sales/services occupations, while men are over-represented in crafts and related trades as well as in ‘plant and machine

[48] Seven waves in Austria and six waves in Finland.

operators and assemblers' occupations. A similar pattern is observed among both full-time (Table A 4-8) and part-time workers (Table A 4-11). Using the Labour Force Survey 2000, Bettio (2002) reports the highest levels of occupational segregation, measured using the Duncan and Duncan (1955) Index of Dissimilarity, in Denmark, Sweden and Finland and the lowest in Greece and Italy.

Occupational moves upwards or downwards are defined using two different approaches. Following Connolly and Gregory (2008), the first method uses average qualification levels within each occupation to derive an occupational ranking separately for each country. Using one-way analysis of variance, average levels of education[49] were compared across nine major International Standard Classification of Occupations (ISCO-88) categories for all employees (male and female workers combined) separately by country. The occupational categories with similar average qualification levels were merged to create a seven-category ranking. The second approach uses average hourly wages (converted to 2005 price levels and transformed onto a logarithmic scale) to order occupations within each country. The resulting number of significantly different categories varies between countries, however (from the lowest of five to the highest of seven categories). Unlike Gutiérrez-Domènech (2005b) who uses women's log-wages and controls for age and age squared to order occupations, this paper uses average wages for the combined sample of male and female employees without controlling for age in order to create a ranking that is more representative of the employed population in each country.

The analysis is done in two steps for women in Europe. First, the effects of childbirth on the probability of moving from full-time work to three alternative labour market states (part-time work, unemployment or inactivity) are investigated, controlling for a number of important household and occupational characteristics. Second, the effects of switching between full-time and part-time states, as well as changing employers, on the transitions between higher or lower ranked occupations are studied for employed women, also controlling for other relevant characteristics. Since there are three mutually exclusive destinations from full-time work, a competing risks framework is used to study the hazards of moving into part-time work,

[49] The three-category education variable ('highest level of general or higher education completed') was recoded so that the lowest level of education (ISCED 0-2) had the score of 1 and the highest (ISCED 5-7) had the score of 3.

unemployment or inactivity. Because the time intervals are discrete (years), a multinomial logit model of the log odds of event of type *j* in period *t* as opposed to no event in this period is estimated (Allison, 1984, pp.17-18):

$$\log(h_{ti}^{(j)}/h_{ti}^{(0)})=\alpha^{(j)}(t) + \beta^{(j)\prime}X_{ti}^{(j)} \quad j=1, \ldots, k, \text{ where} \qquad (1)$$

$h_{ti}^{(j)}$ is the hazard of the event *j* occurring in period *t*, given that no event occurred prior to *t* and $h^{ti\,(0)}$ is the base (censored) outcome of no event in period *t*; $\alpha^{(j)}(t)$ is the vector of the parameters for the duration variables (which can be expressed as a function of duration or as a vector of dummy variables for time intervals); $\beta^{(j)}$ is the vector of parameters and $X_{ti}^{(j)}$ is the vector of the covariates that can be time-varying. It is assumed that any unobserved individual-specific effects that affect different destination hazards are not correlated. In all estimations, standard errors are adjusted for clustering within individuals, since observations are independent across individuals, but not necessarily across time for each individual[50]. The estimated coefficients $\beta^{(j)}$ are exponentiated to obtain the relative risk ratios of making a transition to state *j* versus not making a transition. A discrete time competing risks event history (multinomial logit) model is also used to estimate the relative risks of moving to a higher or lower ranked occupation versus staying in the same occupational category.

All estimations are carried out separately by country and by gender.

Equation (1) does not allow for possible sample selection into (full-time) employment by women. Therefore, the findings should not be generalised to the whole female population. This chapter focuses on the labour market transitions of employed women and the findings are relevant for that group.

Labour market activity transitions: summary statistics

Table 4.1 shows the year-on-year transitions between four labour market states, separately for men and women, for the sample of 13 European countries across eight waves of the ECHP. Finland and Austria are excluded from the pooled sample

[50] Using the 'cluster' sub-option in STATA 10.

because they are not present in all eight waves. There are notable differences between the labour market transition patterns of men and women:

1) Full-time female workers show more mobility than male workers: 89% of women remain full-time in the subsequent year, compared with 95% of men.
2) Full-time women are the most likely to switch to part-time work (4%) or inactivity (4%) each year, while male workers are the most likely to switch to unemployment (2%).
3) Although the transition to part-time work is relatively infrequent even for women, it is a very stable state for those who already work part-time: 65% of women remain part-time the following year.
4) For men part-time work is the most unstable state, while unemployment is the most unstable state for women.

These results are comparable to those in Buddelmeyer et al. (2005) reporting two-year transition matrices for the first five waves of the ECHP for the same set of the ECHP countries.

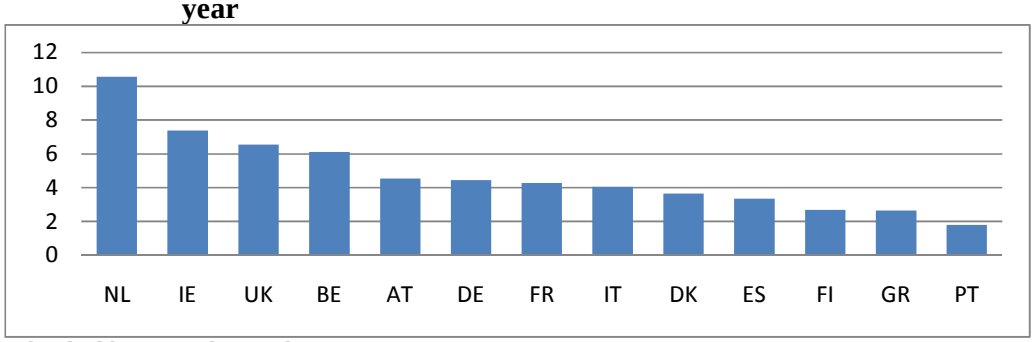
Table 4.1 Labour market transition patterns in each wave: EU-15

		Year t+1			
		Women			
Year t	**Full-time**	**Part-time**	**Unemployed**	**Inactive**	Total %
Full-time					
Row %	88.7	4.4	2.9	4.1	100.0
Column %	86.6	17.8	16.8	4.8	43.8
Part-time					
Row %	21.9	65.0	3.3	9.8	100.0
Column %	5.2	63.3	4.8	2.8	10.6
Unemployed					
Row %	17.9	6.0	49.6	26.6	100.0
Column %	3.3	4.5	54.7	5.9	8.2
Inactive					
Row %	6.0	4.2	4.7	85.2	100.0
Column %	5.0	14.4	23.7	86.5	37.4
Total %	44.9	10.9	7.4	36.9	100.0
		Men			
Full-time					
Row %	95.4	0.9	2.3	1.4	100.0
Column %	94.2	37.4	28.6	16.2	83.1
Part-time					
Row %	49.2	38.7	6.2	5.8	100.0
Column %	1.2	39.3	1.9	1.7	2.0
Unemployed					
Row %	33.7	3.3	54.1	8.9	100.0
Column %	3.0	12.8	60.7	9.6	7.6
Inactive					
Row %	19.0	2.9	8.2	69.9	100.0
Column %	1.7	10.6	8.9	72.5	7.3
Total %	84.2	2.0	6.8	7.1	100.0

Countries: Denmark, the Netherlands, Belgium, France, Ireland, Italy, Greece, Spain, Portugal, Germany, UK.
Individual base weights used.
Source: ECHP 1994-2001.

As expected, women in countries with generally higher rates of part-time work (the Netherlands, the UK, Ireland and Belgium) are the most likely to switch from full-time to part-time employment each year (Figure 4.1). Women in the Mediterranean and Scandinavian countries, who tend to have lower rates of part-time work generally, are the least likely to switch from full-time to part-time employment. Women in France, Austria and Germany, however, have middling transition rates despite their generally high levels of female part-time work (see Table A 4-1).

Figure 4.1 % of women (25-55) switching from full-time to part-time each year



Individual base weights used.
Source: ECHP 1994-2001.

Table 4.2 shows the year-on-year transition probabilities separately for women who gave birth in year *t* and those who did not:

1) Women who reported working full-time in year *t* and who gave birth that year are less likely to remain working full-time in the subsequent year (82%) compared to those who did not give birth that year (89%).
2) Full-time women who gave birth are more likely to switch to part-time work (8%) and inactivity (7%) the following year than those who did not, only 4% of whom move to part-time work and 4% to inactivity each year.
3) Part-time women who gave birth in one year are more likely to remain part-time in the subsequent year (69%) than those who did not give birth that year (65%).

Table 4.2 Labour market transition patterns among women in each wave

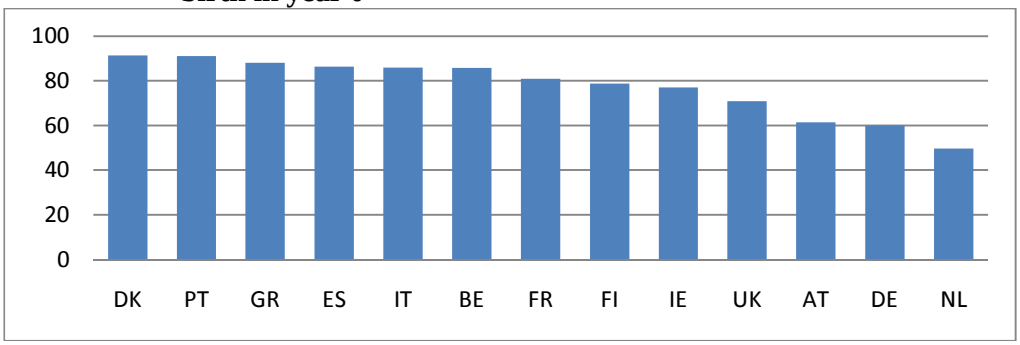
		Year t+1			Total %
Those who gave birth in Year t					
Year t	**Full-time**	**Part-time**	**Unemployed**	**Inactive**	
Full-time					
Row %	81.6	8.4	2.8	7.1	100.0
Column %	84.1	24.2	14.7	6.4	38.0
Part-time					
Row %	17.1	68.5	2.8	11.6	100.0
Column %	5.0	55.7	4.1	2.9	10.8
Unemployed					
Row %	16.7	6.9	45.0	31.4	100.0
Column %	3.6	4.2	49.5	5.9	8.0
Inactive					
Row %	6.3	4.9	5.3	83.5	100.0
Column %	7.3	16.0	31.7	84.8	43.2
Total %	36.9	13.2	7.3	42.6	100.0
Those who did not give birth in Year t					
Full-time					
Row %	89.1	4.2	2.9	3.9	100.0
Column %	86.8	17.3	16.9	4.7	44.2
Part-time					
Row %	22.2	64.8	3.4	9.6	100.0
Column %	5.2	63.9	4.8	2.8	10.6
Unemployed					
Row %	17.9	5.9	49.9	26.3	100.0
Column %	3.2	4.5	55.1	5.9	8.2
Inactive					
Row %	5.9	4.1	4.7	85.3	100.0
Column %	4.8	14.3	23.2	86.6	37.0
Total %	45.4	10.7	7.4	36.5	100.0

Countries: Denmark, the Netherlands, Belgium, France, Ireland, Italy, Greece, Spain, Portugal, Germany, UK.
Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-13 to Table A 4-25 in Annex 4 report the yearly transition matrices separately by country. Figure 4.2 shows that full-time female workers who gave birth in year *t* are the most likely to remain full-time the following year in Denmark and the Mediterranean countries (85%-90%) and the least likely to do so in the Netherlands, Austria and Germany (50%-60%). The finding of the highest rate for Denmark is not surprising, given its high female participation rates and the finding of a relatively high ranking on the work/family reconciliation policy index constructed in Chapter 3, particularly on its childcare component. It is more remarkable to find high rates of remaining in full-time work after childbirth for the Mediterranean

countries. However, Uunk et al. (2005) also observe comparatively small negative effects of childbirth on working hours for women in these countries, using the ECHP 1994-1999. Controlling for public childcare provision and the level of each country's affluence, they find a smaller reduction in post-birth working hours for women in less affluent countries, such as Portugal.

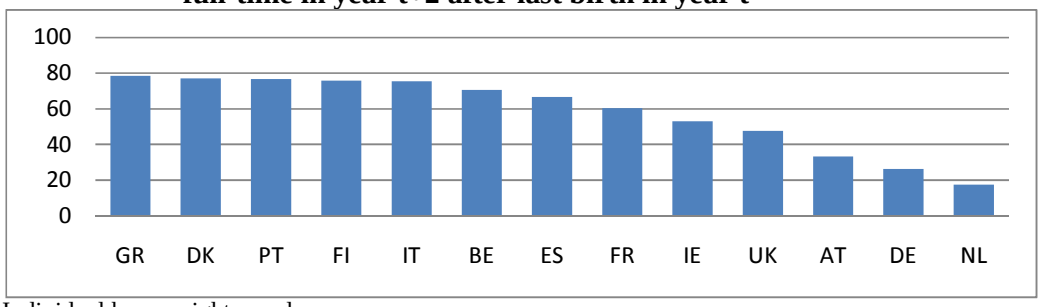
Figure 4.2 % of women (25-55) remaining full-time in year t+1 after last birth in year t



Individual base weights used.
Source: ECHP 1994-2001.

However, the full-time rate in year *t+1* for women who gave birth in year *t* is likely to be over-estimated because some of these women would be on maternity or parental leave. Unfortunately, the ECHP does not use maternity/parental leave as a separate labour market activity category, so women may choose between inactivity and work responses. The two-year transitions (*t-2*, *t+2*, last birth at *t*) may show a more realistic picture of women's activity around childbirth. Figure 4.3 summarises the probabilities of remaining full-time two years after the last birth for women who had worked full-time two years before childbirth. The estimated probabilities are consistently lower than these in the year-on-year analysis in Figure 4.2 but the country variation pattern is similar. The Scandinavian and Mediterranean countries still have the highest rates of staying in full-time work, while the rates are still lowest in Austria, Germany and the Netherlands.

Figure 4.3 % of women (25-55) who worked full-time in year t-2 working full-time in year t+2 after last birth in year t



Individual base weights used.
Source: ECHP 1994-2001.

Occupational transitions: summary statistics

Table 4.3 reports yearly occupational transitions upwards or downwards, by skill (panel 1) and by occupational wage (panel 2), separately for male and female workers. Overall, occupational upgrading and downgrading are infrequent events relative to staying in the occupational category of the same ranking. Changes in the occupational ranking are the most infrequent in France in terms of both skill and occupational wage for both men and women. Occupational transitions by skill are the most frequent in the UK for women and in Belgium for men, while occupational moves by wage are the most frequent in Belgium for both men and women. Overall, upward occupational moves are just as likely as downward moves, particularly for women. This suggests that women are not uniformly losing out on occupational status: while some move down, others move up. Men are also about as likely to upgrade as to downgrade both by skill and occupational wage. For all other countries, the absolute difference between downgrading and upgrading is within 0.5 percentage points for both women and men (with the exception of Finland for men).

Table 4.3 Occupational transitions by skill (row %)

	By skill (1)				By occupational wage (2)			
	Female workers							
	Same	Up	Down	*N*	Same	Up	Down	*N*
Denmark	92.0	4.0	4.1	*7,425*	88.6	5.6	5.8	*5301*
Netherlands	80.8	9.6	9.7	*12,130*	76.2	12.1	11.7	*8,372*
Belgium	82.4	8.7	8.9	*6,094*	74.6	12.5	12.9	*4,246*
France	95.6	2.3	2.2	*15,199*	94.0	3.0	3.0	*11,088*
Ireland	83.7	8.0	8.4	*6,150*	76.5	11.7	11.9	*3,987*
Italy	86.1	7.0	6.9	*14,926*	87.0	6.6	6.5	*10,701*
Greece	90.9	4.5	4.6	*8,001*	87.6	6.0	6.4	*5,361*
Spain	83.9	8.1	8.0	*11,134*	76.1	12.0	11.9	*7,194*
Portugal	84.4	7.7	7.9	*12,312*	84.8	7.6	7.5	*8,887*
Austria	84.3	7.8	7.9	*7,209*	80.7	9.5	9.8	*5,096*
Finland	90.0	4.9	5.2	*8,929*	86.7	6.4	6.9	*6,190*
Germany	87.5	6.4	6.1	*15,661*	82.8	8.6	8.6	*11,134*
UK	79.2	10.6	10.2	*12,235*	77.2	11.5	11.3	*8,970*
	Male workers							
Denmark	89.1	5.5	5.4	*8,064*	84.9	7.5	7.6	*6,124*
Netherlands	77.9	11.3	10.9	*18,117*	78.7	10.9	10.4	*13,970*
Belgium	75.4	12.4	12.3	*7,661*	64.6	17.6	17.7	*5,609*
France	93.9	3.0	3.1	*18,117*	92.2	3.9	3.8	*13,839*
Ireland	85.1	7.6	7.3	*10,614*	78.13	11.15	10.72	*7,706*
Italy	83.1	8.3	8.6	*25,451*	85.7	7.0	7.2	*19,383*
Greece	88.9	5.5	5.7	*16,582*	89.3	5.2	5.5	*12,644*
Spain	81.5	9.4	9.1	*21,411*	72.4	13.9	13.7	*15,560*
Portugal	84.5	7.8	7.8	*16,556*	86.4	6.7	6.9	*12,933*
Austria	81.4	9.5	9.1	*9,985*	76.7	11.7	11.6	*7,588*
Finland	88.5	5.4	6.1	*9,605*	84.8	7.1	8.0	*6,861*
Germany	85.2	7.4	7.5	*21,070*	81.7	9.1	9.2	*16,152*
UK	77.6	11.3	11.1	*13,456*	76.9	11.6	11.5	*10,572*

Individual base weights used.
Source: ECHP 1994-2001.

Table 4.4 shows the transitions upwards or downwards for the workers who switch from full-time to part-time work at the same time. Occupational moves are more likely for those who switch from full-time to part-time work than for the working population overall. Female workers are the most likely to move downwards by skill in Finland (20%) and the least likely to do so in France (4%); by occupational wage, female workers are the most likely to move downwards in the UK (20%) and the least likely to do so in France (5%). Male workers who switch from full-time to part-time work are the most likely to move downwards by skill in the Netherlands (23%) and by occupational wage in Germany (23%), while downward moves are the least frequent in France (6%) by skill and in Greece (5%) by occupational wage. Contrary to the results for the working population at large, downward moves are generally more likely than upward moves amongst those who switch from full-time to part-time work, particularly for women in Finland. In the UK, women are marginally more likely to upgrade by skill[51], while being substantially more likely to downgrade

[51] Based on a 3-category occupational ranking

than to upgrade by occupational wage. Connolly and Gregory (2008) find that a quarter of women switching into part-time work downgrade by skill, while 17% upgrade, using data from the British Household Panel (1991-2001) and a 15-category occupational ranking.

Table 4.4 Occupational transitions by skill – workers who switch from full-time to part-time (row %)

	By skill (1)				By occupational wage (2)			
	Female workers							
	Same	Up	Down	*N*	Same	Up	Down	*N*
Denmark	83.9	7.3	8.8	*281*	83.1	6.8	10.1	*281*
Netherlands	68.1	14.2	17.6	*756*	72.9	10.8	16.3	*756*
Belgium	74.2	13.5	12.4	*265*	73.1	13.5	13.4	*265*
France	92.0	4.4	3.7	*650*	91.8	3.6	5.3	*650*
Ireland	73.7	14.0	12.3	*349*	77.0	12.4	10.6	*349*
Italy	77.0	8.8	14.2	*639*	82.1	6.8	11.1	*639*
Greece	90.2	4.9	5.0	*237*	89.8	4.2	6.1	*237*
Spain	75.3	9.3	15.4	*348*	80.9	8.6	10.5	*348*
Portugal	74.9	12.6	12.6	*280*	89.8	4.2	6.0	*280*
Austria	70.7	13.5	15.8	*315*	77.1	8.5	14.4	*315*
Finland	75.1	5.3	19.6	*216*	78.5	3.2	18.3	*216*
Germany	76.9	10.0	13.2	*628*	78.5	7.7	13.8	*628*
UK	65.0	18.1	17.2	*692*	72.0	9.0	19.0	*692*
	Male workers							
Denmark	71.8	6.7	21.5	*61*	70.3	7.9	21.8	*61*
Netherlands	53.8	23.2	22.9	*235*	69.2	13.2	17.7	*235*
Belgium	71.9	16.2	11.9	*60*	64.8	23.3	11.1	*60*
France	89.5	4.9	5.7	*171*	85.3	8.7	6.0	*171*
Ireland	84.3	6.3	9.4	*187*	71.4	8.6	20.0	*187*
Italy	82.0	7.5	10.5	*285*	87.0	5.3	7.7	*285*
Greece	84.7	8.5	6.8	*242*	89.8	5.7	4.5	*242*
Spain	76.0	9.4	14.6	*160*	68.4	10.5	21.1	*160*
Portugal	79.4	7.0	13.6	*92*	83.0	7.0	10.0	*92*
Austria	68.0	17.3	14.7	*57*	72.2	12.3	21.6	*57*
Finland	73.6	10.5	15.9	*78*	78.3	12.1	9.5	*78*
Germany	64.1	15.7	20.2	*95*	65.5	11.1	23.3	*95*
UK	66.3	16.7	17.1	*99*	72.6	10.8	16.6	*99*

Individual base weights used.
Source: ECHP 1994-2001.

Although men are generally less likely than women to switch from full-time to part-time hours (Table 4.1), in about half of the studied countries, men who do so are more likely than women to downgrade occupationally. Thus, in Denmark, the Netherlands, France, Greece, Portugal and Germany men are more likely to downgrade by skill, with the largest gender difference in Denmark (13ppt). At the same time, in Denmark, the Netherlands, Ireland, Spain, Portugal, Austria and Germany, men are more likely than women to downgrade by occupational wage, with the largest percentage point difference in Denmark (12ppt) and Spain (11ppt). Amongst the countries where women are more likely to downgrade than men, the

largest gender differences are in Finland, 9ppt and 4ppt, and in Italy, 3ppt and 4ppt, by skill and occupational wage, respectively.

Labour market activity transitions: estimation results for women

Table A 4-26 to Table A 4-38 in Annex 4 report the estimated effects of childbirth on the relative hazard of switching from full-time employment to part-time work, unemployment or inactivity for adult women, controlling for human capital characteristics (number of years in the current job, age, highest level of education), household characteristics (giving birth in the past year, age of the youngest child, number of dependent children, marital status)[52], workplace characteristics (sector of employment, occupation) and dummies for years in full-time work (Model 1). The second specification additionally controls for activity at the last wave (part-time or unemployed/inactive) to capture the effects of intermittent full-time employment (Model 2).

Being married has significant positive associations with the hazard of moving into part-time work or inactivity for women in all the studied countries except Finland. In Denmark, married women are 52% more likely to switch from full-time to part-time work, everything else being equal. The effect becomes non-significant once activity at the last wave is controlled for, which suggests that married women in Denmark are more likely to experience intermittent employment. Married women in the Netherlands, Austria and Belgium are significantly more likely to move to part-time work or inactivity, although in Belgium the effect disappears when activity at the last wave is controlled for. In France, Italy and Germany, married women are more likely to switch from full-time to part-time work, while in Ireland, Greece and Spain, married women are more likely to become inactive than non-married women, everything else being equal. In Portugal, married women are less likely to become unemployed, but more likely to become inactive, everything else being equal. This could be explained by the relative scarcity of part-time work in the Mediterranean countries (Gutiérrez-Domènech, 2005b; Manning & Petrongolo, 2008). In the UK, married women who work full-time are more likely to move into part-time work and inactivity, but less likely to become unemployed. In Finland, married women are also

[52] The means of the demographic and human capital variables are reported in Table A 4-6 for all employed men and women, Table A 4-9for full-time workers and Table A 4-12 for part-time workers.

less likely to move from full-time work to unemployment, with marital status having no significant effect on the hazards of moving into part-time work or inactivity.

An interaction between having a newborn child and being married was tested (results not reported). In Finland, childbirth has a significant positive effect on moving into part-time work for married women only, while the positive effect of being married is only significant for women who gave birth within a year of the interview. In France, Greece and Portugal the interaction term is negative and significant, however. Only married women who did not have a recent childbirth are more likely to become inactive and only recent mothers who are unmarried are more likely to be inactive.

Broad occupational category is also associated with the hazard of exiting full-time employment. Overall, women who work full-time in higher status occupations are less likely to switch to part-time work, unemployment or inactivity. Thus, in Denmark women working in professional or associate professional occupations are less likely to switch to part-time work, while those working in sales or services are more likely to do so. There are some exceptions to this pattern, however. In France, professional women are twice as likely to move into part-time work as those in operative or elementary occupations. This may be due to the higher prevalence of part-time work amongst professionals in France. In Italy, full-time women in any of the six occupational categories are significantly less likely to become unemployed than those in operative or elementary occupations.

Full-time women who gave birth in year *t* are significantly more likely to switch to part-time work the following year in the Netherlands, Belgium (Model 1 only), Italy, Austria, and the UK (see Diagram 4.1 below). The relative hazard of switching to part-time work is around twice that for women who did not give birth in year *t*. Recent childbirth significantly increases the relative hazard of moving from full-time work to unemployment in Ireland, Italy, the UK (Model 1 only) and Finland. The relative risk of switching to unemployment for women who gave birth in these countries is around three to six times higher than for women who did not give birth that year. In the majority of the studied countries, the Netherlands, France, Italy, Greece (Model 1 only), Germany, Austria, the UK and Finland, recent childbirth

increases the relative hazard of moving from full-time employment to inactivity by two to four times the hazard for women who did not give birth that year. Conversely, in Portugal women who gave birth in year *t* are significantly less likely to switch to inactivity the following year. Only in Denmark and Spain is it the case that recent childbirth is not significantly related to the hazard of exiting full-time employment, everything else being equal.

Diagram 4.1 Effects of childbirth on the hazard of exiting full-time work for women

	Part-time	**Unemployment**	**Inactivity**
Denmark			
The Netherlands	+		+
Belgium	+ (Model 1 only)		
France			+
Ireland		+	
Italy	+	+	+
Greece			+ (Model 1 only)
Spain			
Portugal			-
Germany			+
Austria	+		+
The UK	+	+ (Model 1 only)	+
Finland		+	+

+ significant positive effect; - significant negative effect; $p<0.10$.

A new birth in the household does not affect the hazard of exiting full-time employment for men (results not reported). There are some exceptions, however. In Belgium the effect of a recent birth on moving into inactivity is significantly negative for full-time working men. In Greece a new birth has a positive effect on moving into unemployment and in Spain it has a positive effect on switching to part-time work, *ceteris paribus*.

Activity at the last wave (*t-1*) is another important predictor of the likelihood of exiting full-time employment for women. In Denmark, unemployment or inactivity in the previous wave significantly increases the hazard of moving to unemployment or inactivity the following year (*t+1*). In the Netherlands, part-time work in the previous year increases the hazard of switching to part-time work or inactivity the following year. So does unemployment or inactivity in the previous wave. In Belgium, part-time work, inactivity or unemployment in the previous wave increase the likelihood of moving to part-time work in the subsequent wave. In France, part-

time work in the previous wave increases the hazard of moving from full-time to part-time work in the following wave. In Ireland, part-time work in the previous wave increases the hazard of moving to part-time work or unemployment, while unemployment or inactivity in the previous wave increases the likelihood of switching to inactivity. Overall, these results suggest that intermittent work history is associated with a lower probability of remaining in full-time work for women, which is not a surprising finding.

Occupational transitions: estimation results for women

Table A 4-39 to Table A 4-51 in Annex 4 report the multinomial logit estimates of the relative hazard of moving up or down the occupational hierarchy in terms of skill (specification one) or occupational wage (specification two) as opposed to staying in an occupation of the same ranking for employed women. Both specifications control for the number of years in the current job, changes in hours (staying part-time, moving from full to part-time work, moving from part to full-time work, as opposed to staying full-time), employer changes, working in the public sector, as well as various personal and household characteristics, such as age, education, marital status, number of dependent children, age of the youngest child and a recent childbirth.

In all the countries where childbirth was found to be associated with an increased risk of moving from full-time to part-time work[53] for women (except Belgium, where switching hours is found to have no significant relationship with the hazards of upgrading or downgrading), switching from full- to part-time hours increases the risk of occupational downgrading (see Diagram 2):

1) The Netherlands - women who move from full-time to part-time work are more likely to downgrade by skill and by occupational wage than those who remain working full-time. In contrast, women who make the opposite move, from part-time to full-time work, are more likely to upgrade occupationally both by skill and wage.
2) Italy - moves from full to part-time work are associated with an increased risk of downgrading both by skill and occupational wage, while the opposite moves are linked to a somewhat higher risk of upgrading than downgrading.

[53] Netherlands, Belgium, Italy, Austria, and the UK

3) Austria - switching to part-time hours is linked to a somewhat higher risk of downgrading than upgrading by skill and to a higher risk of downgrading by occupational wage.
4) UK - switching to part-time hours increases the risk of downgrading both by skill[54] and by occupational wage, while, at the same time, decreasing the risk of upgrading by wage. As expected, switching to full-time hours increases the risk of upgrading by occupational wage in the UK.
5) The only other countries where switching from full to part-time work increases the risk of occupational downgrading, while the opposite move generally increases the risk of upgrading, are Germany, Finland and Spain (by skill only[55]).
6) In the following countries, switching from full-time to part-time work does not significantly affect the probability of occupational downgrading or upgrading (by skill or by wage) at all: Denmark, Belgium, France, Ireland, Greece and Portugal.
7) In all of the studied countries, except Belgium and Germany, those who remain in part-time work are less likely to either upgrade or downgrade than to remain in an occupational category of the same ranking.

Diagram 4.2 Effects of switching from full-time to part-time work on the hazard of exiting current occupational ranking for women

	By skill		**By occupational wage**	
	Move up	**Move down**	**Move up**	**Move down**
Denmark				
Netherlands		+		+
Belgium				
France				
Ireland				
Italy		+		+
Greece				
Spain		+		
Portugal				
Germany		+		+
Austria	+	+		+
UK		+	-	+
Finland		+		+

+ significant positive effect; - significant negative effect; $p<0.10$

[54] Connolly and Gregory (2008) also found substantial evidence of occupational downgrading by skill associated with moves to part-time work in Britain.
[55] Gutiérrez-Domènech (2005b) also finds no evidence of occupational downgrading by occupational hourly wage on switching from full-time to part-time work for women in Spain, but does not study occupational transitions by skill.

It is changing employer that is the most important predictor of moving into an occupation of a different ranking. The odds of occupational downgrading or upgrading are large and significant in all of the studied countries in both specifications. In the following countries changing employer is associated with a somewhat higher likelihood of downgrading than upgrading: Denmark, the Netherlands, France, Ireland, Italy, Austria (by skill only) and Finland (by wage only). In the UK, on the other hand, changing employer significantly increases both the probability of upgrading and downgrading (by skill and by wage), but the odds of upgrading are somewhat higher than the odds of downgrading, all else being equal. This suggests that, on balance, changing employer is more likely to lead to a career progression.

Tenure in the current job is another important predictor of occupational change in all countries except Finland and Austria, although no clear cross-national pattern emerges. In Denmark, women who spent less than nine years with the same employer are more likely to downgrade occupationally both by skill and wage. In the Netherlands, Belgium, Ireland, Greece and Germany, however, women who spent less than four years in their current job as opposed to nine or more years (the omitted category) are less likely to change their occupational ranking at all. In France, on the other hand, women with less than four years of tenure are more likely to upgrade occupationally both by skill and wage. In Italy, women with four to eight years of tenure are more likely to upgrade by skill, but also just as likely to upgrade as to downgrade by occupational wage. In Spain, women with less than four years of tenure are less likely to upgrade or to downgrade, but those with four to eight years in their current job are more likely to upgrade by skill. In Portugal, those with less than four years of tenure are less likely to upgrade by skill or wage. In the UK, those with four to eight years of tenure are more likely to upgrade by wage, everything else being equal.

Summary and conclusion

Childbirth is found to be related to the patterns of female labour market activity in the industrialised countries examined here. This chapter uses comparable longitudinal data from the ECHP for the period 1994 to 2001 to explore the

relationship between recent childbirth and the relative risks of switching to part-time work, inactivity or unemployment for full-time women, as well as the link between switching from full-time to part-time work and the risk of occupational downgrading, across 13 European countries.

In all of the studied countries, women are more likely than men to switch from full-time to part-time work or inactivity, on average. Recent childbirth is associated with an increased probability of leaving full-time work. Thus, full-time working women who gave birth within a year of the interview are more likely to switch to part-time work or inactivity the following year. In contrast, part-time working women who gave birth during one year are more likely to remain in their part-time status the following year. Once important human capital and workplace characteristics are controlled for, full-time female workers who gave birth in year *t* are significantly more likely to leave full-time employment in all studied countries except Denmark and Spain. Full-time working women are more likely to switch to part-time work than to remain working full-time in the Netherlands, Belgium, Austria and the UK, where female part-time rates are relatively high, but also in Italy, where part-time rates are generally low. At the same time, in Ireland, Italy, the UK and Finland, recent childbirth increases the probability of moving from full-time work to unemployment, while in the Netherlands, France, Italy, Greece, Germany, Austria, the UK and Finland, recent childbirth increases the risk of switching to inactivity.

Substantial evidence of occupational downgrading by skill and occupational hourly wage on switching from full-time to part-time work is found in the majority of the studied countries. Overall, downward occupational moves are substantially more likely for workers who switch from full-time to part-time work than in the working population at large, both for men and women. The opposite move, from part-time to full-time work, is usually associated with a higher risk of occupational upgrading. Although men are generally less likely than women to switch from full-time to part-time hours, in about half of the studied countries, men who do so are more likely than women to downgrade occupationally, on average. Thus, in Denmark, the Netherlands, France, Greece, Portugal and Germany, men are more likely than women to downgrade by skill when moving from full-time to part-time work. At the

same time, in Denmark, the Netherlands, Ireland, Spain, Portugal, Austria and Germany, men are more likely than women to downgrade by occupational wage.

In four out of five countries where childbirth is found to be associated with an increased risk of moving from full-time to part-time work for women (the Netherlands, Italy, Austria, and the UK), switching from full-time to part-time hours significantly increases the risk of occupational downgrading even after important personal and workplace characteristics are controlled for. This suggests that recent mothers in these countries are not only more likely to move from full-time to part-time work when returning to employment after childbirth, but they are also more likely to switch to an occupation of a lower ranking than before. However, as switching from full-time to part-time work is also found to be associated with occupational downgrading for men (either by skill or occupational wage or both) in most of the studied countries, childbirth appears to be important for women only as a potential trigger for the switch from full-time to part-time work, rather than for occupational downgrading as such. This suggests that if the quality of part-time jobs in the economy improves, there may be less occupational downgrading associated with moves from full-time to part-time employment for both men and women.

Chapter 5 Gender wage gaps across the distribution

The previous chapter examined the relationship between recent childbirth and the probability of switching from full-time to part-time work, inactivity or unemployment for mothers in 13 EU countries. In Britain the likelihood of switching from full-time work one year after childbirth into any of the three 'competing states' was found to be particularly high. This suggests that full-time working women with young children could be a non-representative sub-group of all women. If their characteristics are associated with greater earnings potential, it can be said that women are positively selected into full-time work. This chapter considers the possibility of sample selection for women working full-time, while focusing on their in-work situation relative to men.

This chapter also analyses data for five other countries with different family and employment policies and different levels and shapes of gender earnings gap distributions: Italy, France, Spain, Poland and the Czech Republic. As the analysis in Chapter 3 demonstrated, the countries studied in this chapter have distinct family and employment policies that may have an impact on gender equality in the labour market, although, as member states of the EU, they are all subject to a common equal pay and equal opportunities framework. This chapter documents the observed gender wage gaps across the distribution; examines the determinants of women's participation in full-time work; discusses the differences in earnings potential between full-time working women and all women; and analyses the gender differences in the distribution of personal characteristics and the returns to these characteristics among full-time workers in the studied countries.

Introduction and literature review

Although the EU is committed to gender equality in the labour market, women are still paid lower hourly wages than men, on average (European Commission, 2009). Reducing the gender wage gap has been part of the European Employment Strategy since 1999 (Plantenga & Remery, 2006). The Council of the European Union (Council Decision of 22 July 2003) adopted employment guidelines calling on the member states to achieve a substantial reduction in the gender pay gap by 2010.

According to the Structure of Earnings Survey 2007, the mean gender gap in gross hourly earnings ranges from 4% in Italy to 30% in Estonia, averaging 17% across the EU (European Commission, 2009).

In Britain, equal pay legislation has been in force since the mid-1970s[56], but a substantial gender earnings gap still exists (Anderson et al., 2001; Mumford & P. N. Smith, 2009). Joshi et al. (1998) provide a historical perspective on the development of the gender wage gap in Britain. Based on the New Earnings Survey, the median hourly earnings gap among full-time workers was 58% before the Equal Pay Act was enacted in the mid-1970s, 40% in 1980 and 25% in 1992. With regard to the differences between the earnings distributions, the gender wage gap was higher among lower earners than higher earners before the Equal Pay Act, but this pattern has been reversed after 1978. By the early 1990s, the gap narrowed considerably among the lowest earners but widened among top earners.

The raw gender gaps may hide important differences in individual characteristics, such as human capital endowments, and in returns to these characteristics. The value of decomposing the gender wage gap into the part related to differences in characteristics (the "explained part") and the part related to differences in returns (the "unexplained part") is well documented in the labour economics literature[57]. A meta-analysis of the international gender wage gap by Weichselbaumer & Winter-Ebmer (2005) covering the time period 1960s-1990s reveals that most of the decrease in unadjusted gender earnings differentials since the 1970s is due to more productive characteristics for female workers. See Altonji and Blank (1999) for a comprehensive survey of trends in average gender wage gaps in the US. In a recent study of earnings determinants in Britain using a matched employee-workplace dataset[58], Mumford and Smith (2009) find that only 17% of the gender earnings gap

[56] See Dickens (2007) for an analysis of the development of British employment equality law.
[57] Oaxaca (1973) and Blinder (1973) pioneered the decomposition of the gender earnings gap at the conditional mean. Juhn et al. (1993) and DiNardo et al. (1996) extended the Oaxaca-Blinder approach to the full conditional distribution. Donald et al. (2000) developed a flexible hazard-function based estimation approach in the presence of covariates; Machado & Mata (2005) proposed a counterfactuals-based technique to decompose the wage gap across the distribution using the quantile regression framework.
[58] The British Workplace Employee Relations Survey 2004.

is due to differences in characteristics, while the rest is due to differences in returns to these characteristics.

Moreover, gender wage differentials may be affected by the unequal labour supply of men and women. It is important to allow for differences in labour force attachment and the likelihood of participating in the labour market (or working full-time) among women ("non-random selection into employment") because those who do work may be a non-representative sub-sample of all women, which could result in the under- or over-estimation of the observed gender wage gap (Heckman, 1979; Buchinsky, 1998; Melly, 2006; Picchio & Mussida, 2010). It is particularly important to account for possible non-random selection of women into employment when comparing gender wage gaps in several countries because female employment rates vary substantially across the EU member states (Beblo et al., 2003; Olivetti & Petrongolo, 2008).

Furthermore, gender wage gaps evaluated at the mean often mask substantial variation in the gender differential across the earnings distribution. In recent years there has been an increased emphasis on studying gender wage gaps at different centiles, using quantile regression methods (Arulampalam et al., 2007; Albrecht et al., 2003; Albrecht et al., 2009; De la Rica et al., 2008; Nicodemo, 2009a). These studies find that the gender wage gap tends to vary across the distribution: it may be relatively larger among lower earners (the "sticky floors" effect) or among higher earners (the "glass ceiling" effect) or both (the "U-shaped" gap).

A number of recent studies use the quantile regression decomposition framework developed by Machado and Mata (2005) to decompose the gender wage gap across the distribution into the portion due to differences in the distribution of observed characteristics and the portion due to differences in the distribution of returns to these characteristics. Albrecht et al. (2009) further developed the Machado-Mata decomposition technique to account for sample selection of women into employment. In their study of gender wage gaps among full-time workers in the Netherlands, they report evidence of a glass ceiling effect and find that most of the gender wage gap is due to differences in the distribution of returns to labour market characteristics. They also find evidence of positive selection of women into full-time employment, most of

which is due to full-time working women having better rewarded characteristics than all women. They demonstrate that if all women worked full-time, the average log wage gap between male and female workers would have been even higher.

In an earlier study, Albrecht et al. (2003) document a glass ceiling effect for Sweden using 1998 data, which persists even after controlling for important human capital and workplace characteristics. They find that around half of the gender earnings gap among the better paid is due to gender differences in returns to labour market characteristics and around half to gender differences in the distribution of these characteristics. The authors did not account for women's selection into employment in this analysis.

Gender wage gaps tend to be lower in Southern Europe, even after adjusting for wage inequality in each country (Olivetti & Petrongolo, 2008). Since female employment rates are also lower in Southern European countries and women with more productive characteristics are more likely to work, Olivetti and Petrongolo argue that lower gender wage gaps in these countries are due to low-wage women being absent from the observed wage distribution. Having imputed the wages for non-employed women, they show that the resulting median gender wage gaps are higher than the observed median gaps, which suggests that women are more likely to be positively selected into employment than men. They find the largest discrepancy between the selection-corrected and observed gender wage gaps in Southern Europe and France. However, this study uses data from the ECHP 1994-2001 and leaves out the new accession states.

Similarly, Arulampalam et al. (2007) study gender gaps across the earnings distribution in eleven pre-enlargement EU countries, using harmonised data from the ECHP for 1995-2001. Without accounting for sample selection, they find that women are paid less than men along the distribution in all of the studied countries even if women had the same distribution of relevant observed characteristics as men. The study finds glass ceilings in 10 out of 11 countries, Spain being the only exception. Evidence of sticky floors is only found in Italy and Spain. The authors suggest that the observed cross-country differences in the size and shape of the

gender wage gaps can be due to differences in institutional settings, such as family policies and wage setting institutions.

De la Rica et al. (2008) examine gender wage gaps in Spain across the earnings distribution of full-time workers, using data for 1999. They also analyse the ECHP and use the Machado-Mata quantile regression decomposition framework. In contrast to the overall higher and increasing gender wage gaps across the distribution in most other European countries, the earnings gap in Spain is lower and flatter. Although they do not correct for selection, having sub-divided their sample of workers by education, they find evidence of a glass-ceiling effect for the highly educated workers and a sticky floor effect for the less educated workers. Del Rio et al. (2006) obtained similar results using Spanish data for 1995. Using data for Spain from the Wage Structure Survey 2002, covering workplaces with 10 or more employees, Felgueroso et al. (2008) demonstrate that the gender wage gap across the distribution differs by the collective bargaining level, even after the differences in observed characteristics are accounted for. Among workers covered by national and regional agreements, the gender wage gap increases steadily along the distribution, while for those under firm level agreements (who tend to work in larger workplaces), the gender wage gap, in contrast, decreases along the distribution. The study did not, however, account for sample selection into employment for women.

Picchio and Mussida (2010) investigate the wage gap across the distribution in Italy, using a hazard function based approach by Donald et al. (2000) combined with their own semi-parametric method to correct for possible non-random selection into the workforce. They use pooled data from the EU-SILC for the period 2004-2006. The study finds that Italian women are positively selected into employment to a much greater extent than men, with women who stay out of work being more likely to receive lower returns to their characteristics than comparable men. After adjusting for sample selection, the gender wage gap widens considerably both at the bottom of the distribution (from 17.9% to 25.6%) and at the top (from 17.3% to 24.5%), even if the distribution of characteristics is the same for men and women. The authors suggest that the somewhat greater effect of sample selection of women into work among lower earners may be due to Italy's relatively ungenerous work-family

reconciliation policies, described in Del Boca (2002), that make it difficult for lower skilled women with family commitments to participate in the labour market.

Nicodemo (2009a) investigates the gender gap across the earnings distribution among married individuals in five Mediterranean countries (Spain, France, Greece, Italy and Portugal), using data from the ECHP 2001 and the EU Statistics on Income and Living Conditions (EU-SILC) 2006. Substantial gender wage gaps are observed in each of the studied countries, with sticky floors being more prevalent than glass ceilings. After correcting for sample selection by married women into employment, the study finds that most of the gender wage gap is due to differences in rewards rather than in characteristics.

Grajek (2003) examines the gender wage gap in Poland during the transition period 1987-1996, using net monthly earnings data from the Polish Household Budget Survey. The mean gender wage gap has decreased by 10.2 log points over this period, suggesting that the transition to market economy favoured female workers, who were better educated, on average. In a comparative study of ten Eastern European countries, including Russia and Ukraine, Brainerd (2000) also finds that female relative wages increased most dramatically in Poland during the peirod 1986-1992. Most of this decrease in the wage gap, however, happened in 1989, a year before the market reforms, with the gap stabilising in the 1990s (Grajek, 2003). Using data for 1990, 1996 and 2001, Pollert (2005) finds that although the average gender wage gaps narrowed in the early transition years in most of the Central and Eastern European countries, they later widened in the 1990s in some countries (the Czech and Slovak Republics). Poland currently reports one of the lowest average hourly gender wage gaps in the EU, in contrast to the Czech Republic with one of the highest (European Commission, 2009).

This chapter investigates gender differences between the log hourly wage distributions of full-time employees in a sample of EU countries using the quantile regression decomposition framework (Machado & Mata, 2005), including allowance for possible non-random selection of women into full-time employment (Albrecht et al., 2009). The study uses comparable cross-sectional data for Italy, France, Spain,

Poland and the Czech Republic from the EU-SILC and data for Britain from the British Household Panel Survey (BHPS). Both datasets include information on earnings as well as individual and household characteristics. The chapter makes several original contributions to the existing research on gender wage gaps in the EU:

- It is the first study to cover both old and new accession countries, unlike Arulampalam et al. (2007); Olivetti and Petrongolo (2008) or Gannon et al. (2007). The chapter analyses the determinants of female full-time employment in selected countries (Britain, France, Italy, Spain, Poland and the Czech Republic), making allowance for sample selection of women into full-time work in the estimation of earnings functions and simulating the gender wage gaps that would be observed if all women worked full-time. It is the first such analysis to date for Britain, France, Spain, Poland and the Czech Republic[59].
- By focusing on six large European countries with different shapes and levels of unadjusted gender wage gap distributions among full-time employees, this chapter explores different drivers of gender earnings gaps.
- Finally, the study discusses the empirical results in the context of institutional differences in work/family reconciliation policies across the selected countries, making an original contribution to the comparative literature on women-friendly welfare state.

The rest of this chapter is organised as follows. The next section describes data and variables, justifies country and sample selection, presents descriptive wage statistics and discusses the control variables included in the analysis. First it compares the distribution of gender earnings gaps among full-time employees across the studied countries; then it presents the theoretical model of earnings and discusses the personal and labour market characteristics of full-time employees in five countries.

[59] Albrecht et al. (2009) use a similar decomposition methodology to analyse data for the Netherlands. De la Rica et al. (2008) use data for Spain and Arulampalam et al. (2007) include Spain and France in their study, but they do not allow for women's sample selection in their decomposition of gender wage gaps across the distribution. Picchio and Mussida (2010) study the gender wage gaps across the distribution in Italy for all employees, rather than for full-time employees only. They use a different sample selection adjustment technique. There are no studies to date that investigate gender wage gaps across the distribution with sample selection adjustment in Poland or the Czech Republic. See Chzhen and Mumford (2009) for an earlier version of the analysis for Britain.

The ensuing section discusses women's selection into full-time employment. The determinants of women's participation in full-time work are compared across the studied countries. The results from the simulation of women's wages that would be observed if all women worked full-time are then presented and discussed.

The penultimate section analyses the results from the earnings functions estimations and from the decompositions of the gender wage gaps. Firstly, the returns to personal characteristics at three different points in the earnings distribution (low earners, middle earners and high earners) are presented for male and female full-time employees in the studied countries in order to test the hypothesis that men tend to receive higher returns to their characteristics, even after controlling for women's differential propensity to work full-time. Secondly, the results from the simulation of gender wage gaps that would be observed if all women worked full-time are discussed. Finally, the results from the decomposition of gender earnings gaps among full-time employees are presented, in order to test the hypothesis that gender wage gaps in all of the studied countries are largely due to women receiving lower returns to their labour market characteristics than men, across the entire distribution.

The final section summarises the main findings and concludes the chapter.

Wage data and the earnings function

This chapter uses data from two datasets: the BHPS 2005 for Britain[60] and the EU-SILC 2007 for Italy, Spain, France, Poland and the Czech Republic. The EU-SILC is the main EU-wide instrument for collecting comparable micro-level information on income, poverty, social exclusion and living conditions annually. It was launched under EC Regulation no. 1177/2003 with 18 countries in 2004, with the rest of the EU-25 countries joining in 2005 and Bulgaria, Romania, Turkey and Switzerland joining in 2006. Unfortunately, the EU-SILC sample for Britain does not have valid information on the 'years in paid work' variable[61]. Since potential lifetime work

[60] Due to differences in sampling in the BHPS, individuals from Northern Ireland are not included in the analysis.

[61] Although the EU-SILC has information on the 'year when highest level of education was attained' which can be used to construct a proxy measure of work experience, it tends to over-estimate years in paid work, especially for women. For example, in Spain, the proxy measure exceeds the actual

experience (age minus years in education, minus age at the start of compulsory schooling) is considered to be an inferior measure of lifetime work experience in the literature (S. Polachek, 2006; Regan & Oaxaca, 2009), this chapter uses data from the BHPS for Britain, which contains information on years in paid work. Therefore, the results for Britain and the other five countries are not directly comparable, although similar variables are used in the analyses wherever possible.

The BHPS is a nationally representative, annual sample of private British households. It was launched in 1991. Each year, individual adult members of households are interviewed over a broad range of socioeconomic topics resulting in a rich and relevant data set. In 1992 and 1993 respondents were asked for information on their lifetime employment status and job histories which is used here to derive the work experience variable. This chapter uses the 2005/06 wave of data (Wave 15) because attitudinal questions were introduced in that wave (and not repeated since) that are important in the estimation of women's full-time work participation equation (Albrecht et al., 2009). There are no attitudinal questions in the EU-SILC, however.

The studied sample of EU countries covers different welfare regime and family policy clusters. Thus, Italy and Spain belong to the 'Latin Rim' welfare regime (Ferrera, 1996), while France is a conservative-corporatist welfare state and Britain is classed as a liberal welfare regime (Esping-Andersen, 1990). Poland and the Czech Republic are commonly classified as 'post-communist' welfare states (Fenger, 2007) with common pre-socialist Bismarckian (conservative-corporatist) roots (Aspalter et al., 2009). Furthermore, the countries studied here differ in terms of their family policies and the level of support for working mothers. In the literature France stands out as having the most advanced work-family reconciliation policies, compared with Britain, Italy and Spain (Lewis, 1992; Gauthier, 1996; J. Gornick & Meyers, 2003). However, the analysis in Chapter 3, using more recent data, shows that France ranks somewhat lower than the UK, Spain and Italy on a composite indicator of work-family reconciliation policies and gender-role attitudes[62]. Although Poland and the

measure by almost two years, on average, for full-time working men; three years for full-time working women; five years for part-time working women; and almost 15 years for non-working women.

[62] The composite indicator is the average of z-scores on FTE job-protected leave reserved for fathers; proportion of children aged 0-2 in formal childcare; the ratio of average tax transfers net of benefits

Czech Republic share a common socialist legacy of high levels of female labour force participation and state support for working mothers, they have been following a re-familialisation policy, moving towards the male-breadwinner model with gendered division of paid and unpaid labour since their transition to a market economy (Saxonberg & Sirovátka, 2006). Poland and the Czech Republic rank lowest on the composite index of work/family reconciliation policies in Chapter 3. Therefore, it is expected to find the largest negative effects of having young children on the propensity of mothers' working full-time in Poland and the Czech Republic.

None of the Nordic countries could be included in the analysis because their samples lack information on some of the key variables, such as years in paid work and workplace characteristics. This is unfortunate because the Nordic countries tend to have the highest level of state support for working mothers in Europe. At the same time, Germany could not be included because its EU-SILC sample does not have any regional information that would allow controlling for living in East or West Germany in the analysis[63].

The five selected EU-SILC countries as well as Britain have large enough sample sizes of full-time employees and provide valid (non-missing) information on such key variables as years in paid work, managerial duties and size of the workplace. Furthermore, these countries have markedly different shapes and levels of unadjusted gender wage gap distributions among full-time employees, allowing the investigation of different patterns of gender wage inequality.

This chapter focuses on full-time employees because the composition of the female labour force and the full-time share of female employees vary considerably across the EU. Across the six selected countries, female prime-age employment rates range from 60% in Italy to almost 76% in France, UK and the Czech Republic, while part-time shares of female employment range from around 10% in the Czech Republic

for single breadwinner households to that for dual earner households (couple family, 133% APW, two children aged 4 and 6); and egalitarian gender-role attitudes. See Table 3.19 in Chapter 3.

[63] Beblo et al. (2003) include a dummy variable for East Germany in the analysis of mean gender wage gaps in 1998. Because of the differences in the wage trends between East and West Germany, Antonczyk et al. (2010) limit their analysis of gender wage gaps across the distribution to West Germany only.

and Poland to 42% in the UK, according to the Labour Force Survey 2007 (Eurostat, 2010). After allowing for women's selection into full-time employment, the results are expected to be more comparable across the studied countries. Male part-time rates are uniformly low across the EU: only in the Netherlands does it exceed 10% (Eurostat, 2010).

The estimation samples are restricted to respondents aged 25 to 55 who are currently employed or, for women only, are out of the labour market. The age restriction is imposed in order to disregard the cross national age differences in the timing and pattern of entry into and exit from the labour force and it facilitates comparable research (Beblo et al., 2003; Albrecht et al., 2009; Picchio & Mussida, 2010).

It is important to note that unlike in the BHPS, where full-time employment is defined as work of 30 or more hours a week, full-time status is self-defined in the EU-SILC. Therefore, the definitions of full-time and part-time work may vary across the studied countries. However, part-time work in the EU-SILC does not usually exceed 35 hours a week and full-time work starts from around 30 hours a week[64]. Since the length of a usual working week varies across the studied EU-SILC countries[65], using self-defined measures of full-time work is appropriate in this study.

In both the BHPS and EU-SILC, non-working and part-time employed men[66] are excluded from the analysis as are the self-employed; the minority of workers with no expected weekly working hours; those reporting working more than 75 hours per week; and those with missing data on any of the important labour market or personal characteristics. Individuals with derived hourly earnings of less than £1 an hour or more than £100 an hour were also excluded from the BHPS sample; those with

[64] See notes about variable PL030 "self-defined current economic status" in the EU-SILC UDB Variables Description version 2007-2 from 01-08-09.
[65] Usual average weekly hours in main job range from 38.9 in France to 42.3 in the Czech Republic among full-time employees (male and female combined) and from 22.6 in Spain to 21.2 in Italy among part-time female employees.
[66] There were only 46 men employed part-time in the 25 to 55 age bracket in the BHPS data, most of whom have missing data on at least one of the important labour market or personal characteristics used in the analysis. The share of male employees aged 25-55 working part-time (in the EU-SILC sample) is 1% in the Czech Republic, 3% in Poland, Spain and France, and 4% in Italy.

derived hourly earnings in excess of 150 Euros or below the national minimum wage[67] were excluded from the EU-SILC sample.

Variable definitions and summary statistics for the sub-samples of full-time male and female workers, female part-time workers and non-working women are presented in Table 5.1 for Britain; Table 5.2 for Italy, Spain and Poland, and Table 5.3 for France and the Czech Republic. Summary statistics for selected deciles are provided in Annex 5 (Table A 5-2 to Table A 5-7).

The distribution of wages in the BHPS and the EU-SILC

The wage measure used in the analysis is the natural logarithm of gross hourly earnings. For Britain it is derived from gross monthly pay at last payment and total weekly hours (including paid overtime). Men's average hourly wages are substantially higher than women's in Britain (see Table 5.1a): the mean gender earnings gap among full-time workers is 16 log wage points.

At the same time, the wage measure in the EU-SILC is derived from current gross monthly earnings for the countries that have valid cases on this measure (Italy, Spain, Poland) and from gross annual cash or near cash income in the reference period for the countries that lack valid information on the monthly variable (France and the Czech Republic)[68]. Both measures include paid overtime. Total weekly hours in the main job, however, as used to derive gross hourly earnings, include both paid and unpaid regular overtime. Since men are more likely than women to provide unpaid overtime (see Engellandt & Riphahn, 2005 for Switzerland; Giannelli & Braschi, 2002 for Italy), thus reducing their derived hourly wages, the resulting gender wage gaps may be somewhat under-estimated.

Men's average hourly earnings are substantially higher than women's in all 26 countries in the EU-SILC 2007 (see Table A 5-1 Annex 5): the mean gender earnings

[67] For countries without a statutory minimum wage (e.g. Italy), those with hourly wages below 1 Euro were excluded from the sample.

[68] In both France and the Czech Republic, the income reference period is 12 months previous to fieldwork. Thus, the earnings information for these two countries refers to 2006 rather than 2007. It is not possible to link the cross-sectional and longitudinal files (or two cross-sectional files) in the EU-SILC to obtain current information on the same individuals.

gap amongst all full-time employees ranges from 3 log wage points (lwp) in Greece, Poland and Portugal to 34 lwp in Estonia. Across the five studied countries, the mean gender wage gap for full-time employees is lowest in Poland (3 lwp), Italy (4 lwp), middling in France (7 lwp) and Spain (8 lwp) and highest in the Czech Republic (23 lwp). In this context, the mean wage gap in Britain (16 lwp) is relatively high.

These mean log wage gaps may, however, disguise important differences across the wage distribution, such as those between low earners and high earners. Figure 5.1 plots the estimated kernel densities of full-time men and women's hourly earnings in the six studied countries. The distributions of male wages are consistently more symmetric than those of women, whose wages tend to be skewed to the left. The gender differences are the most noticeable in the Czech Republic, which is consistent with the finding of the largest mean gender earnings gap.

Figure 5.2 plots the raw (unadjusted) gap in log hourly earnings between male and female full-time employees at each centile of the distribution[69]. Figure 2A in the Annex shows the unadjusted gender log wage gaps across the distribution for all 26 EU-SILC countries. The wage gap in Britain, based on data from the BHPS 2005/06, shows some notable declines between the 50th and 70th centiles and subsequent increases across the highest three deciles suggesting the presence of a glass ceiling[70]. There does not, however, appear to be a sticky floor effect in the raw data[71]. The observed earnings gap for the UK based on data from the EU-SILC 2007 (Figure 2A) shows a similar pattern, with a pronounced glass ceiling effect. Focussing the analysis on a single point in the wage distribution (such as the mean or median) would mask these changes in the gender wage gap that occur across the earnings distribution.

The wage gap in Italy is positive and significant in the lower half of the distribution, but not significantly different from zero beyond the 70th centile. There is some evidence of a sticky floor, as the gap is highest at the bottom of the distribution and

[69] The 95% confidence interval is estimated via bootstrapping with 100 repetitions (see Melly, 2006).
[70] The gap is 17 log wage points at the 75th centile; 18 log wage points at the 90th centile; and 20 log wage points at the 95th centile.
[71] The gap at the 1st, 5th and 10th centiles is 15 log wage points, whilst the gap at the 25th centile is 16 log wage points.

tends to decrease overall. A similar shaped gender wage gap was found for all employees in Italy in Picchio and Mussida (2010), who also used the EU-SILC.

In Spain and in Poland, the gender wage gaps are also generally low (never exceeding 15 lwp) and they decrease along the distribution. The wage gap in Spain crosses the zero line at around the 7th decile and reverts back to significantly positive only at the very top of the distribution, suggesting some evidence of a glass ceiling for the highest earning full-time women[72]. In Poland, the gap reaches zero at the 6th decile, dropping below zero (to -10 lwp) between the 80th and the 95th centiles, and rises again at the very top. The negative gap between the 80th and the 95th centiles may be due to women's substantially higher levels of education among full-time employees in the top quintiles of their respective distributions (see Table A 5-5).

The unadjusted earnings gaps in France and in the Czech Republic increase along the distribution, with a particularly strong glass ceiling effect in the Czech Republic. The wage gap in France increases in an almost linear fashion along the distribution from zero to around 15 lwp at the 95th centile with an insignificantly small decrease afterwards. The earnings gap in the Czech Republic also increases along the distribution, but in a much less linear way. It rises steeply from 10 lwp to 25 lwp in the bottom quintile of the distribution, slowly drops to 20 lwp at the 6th decile, goes back to 30 lwp at the 9th decile and then accelerates rapidly to almost 45 lwp at the top of the distribution. These results confirm the pattern of variation in the mean gender wage gaps for full-time employees: the gap across the distribution is lowest overall in Poland and highest in the Czech Republic.

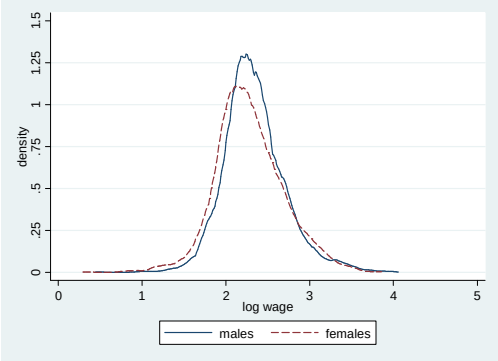
However, the unadjusted gender wage gaps among full-time employees are not strictly comparable across the countries studied here because of different female participation rates and the shares of women working full-time. For example, although the wage gap is much lower in Italy than in the Czech Republic, the female participation rate is lower; thus, women who work full-time in Italy are likely to have

[72] Arulampalam et al. (2007) find a decreasing earnings gap across the distribution in Spain for the period 1995-2001 in the combined sample of part-time and full-time workers, while de la Rica et al. (2008) document a sticky floors effect for lower educated workers and a glass ceiling effect for the higher educated using Spanish data for 1999.

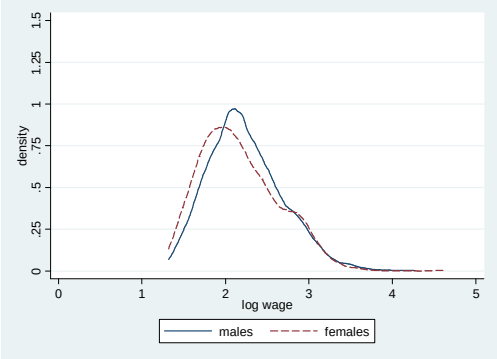
human capital characteristics associated with higher earnings than full-time working women in the Czech Republic, resulting in the lower observed gender wage gap in Italy.

Figure 5.1 Kernel density earnings estimates for full-time employees

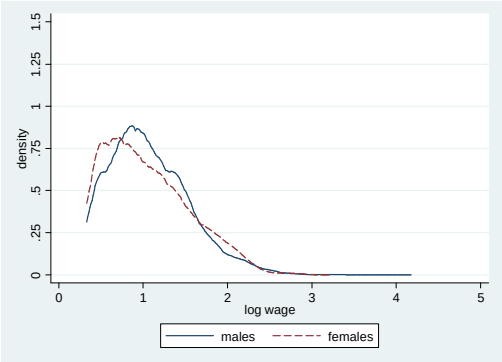
Italy (EU-SILC)



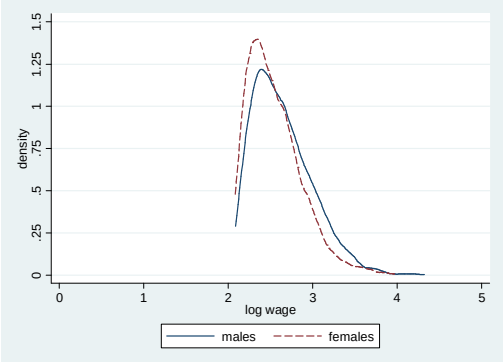
Spain (EU-SILC)



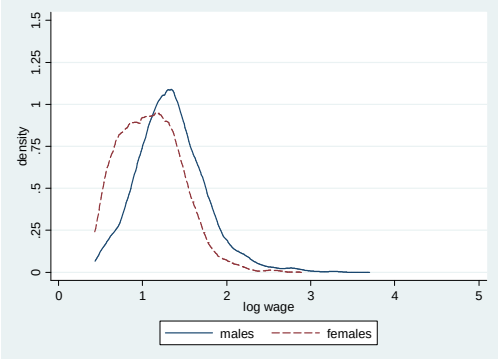
Poland (EU-SILC)



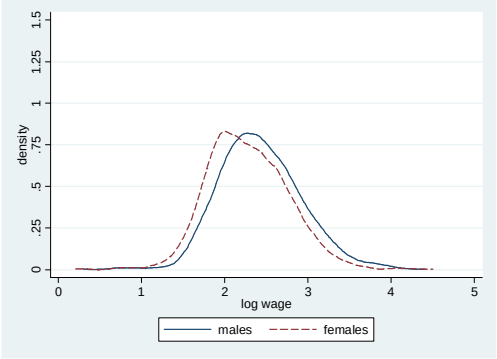
France (EU-SILC)



Czech Republic (EU-SILC)

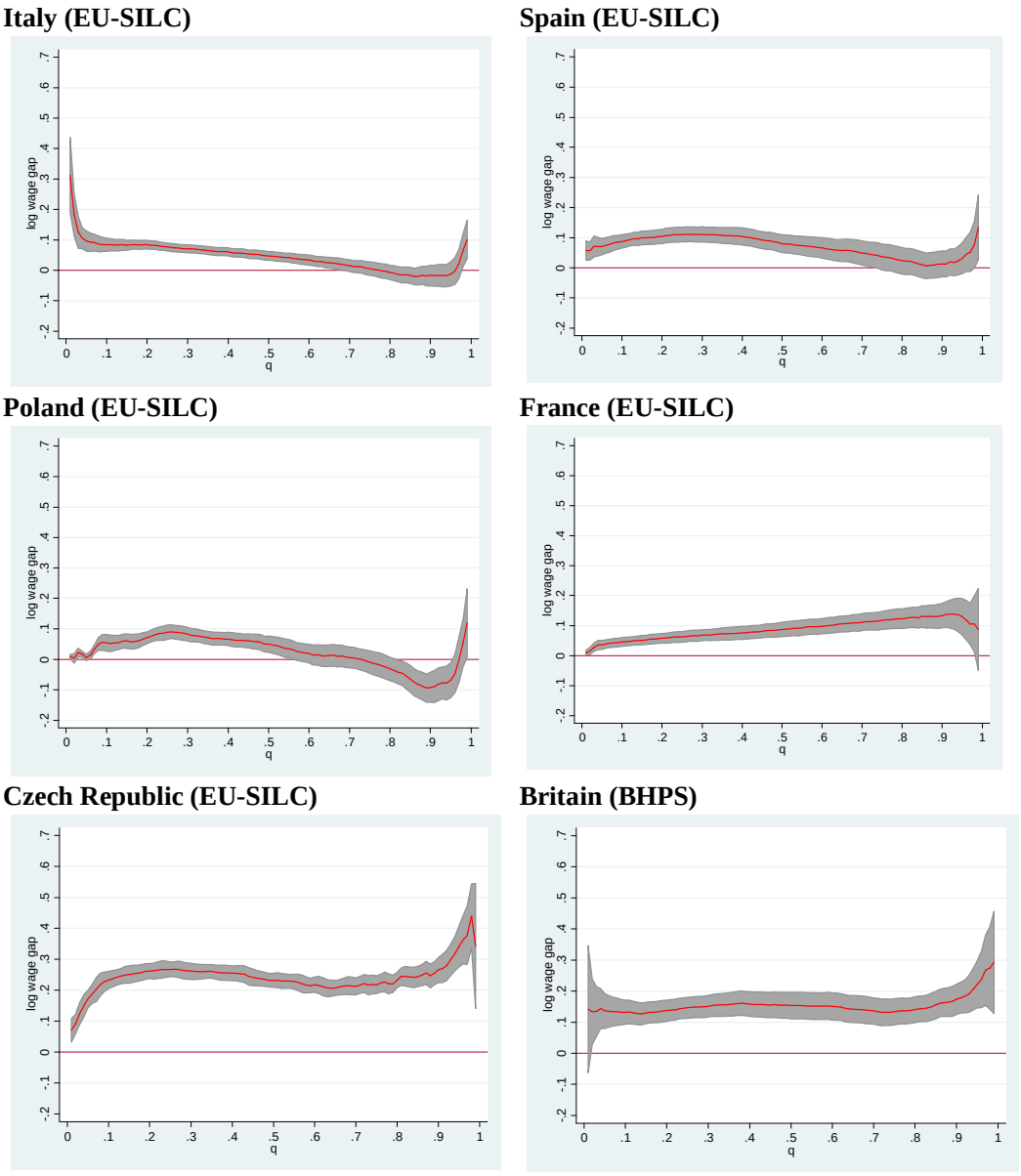


Britain (BHPS)



Source: EU-SILC 2007 for Italy, Spain, France, Poland and the Czech Republic; BHPS 2005 for Britain.

Figure 5.2 Unadjusted gender log wage gap among full-time employees



Source: EU-SILC 2007 for Italy, Spain, France, Poland and the Czech Republic; BHPS 2005 for Britain.

The determinants of wages

Most authors have adopted the human capital model by Becker (1962; 1964) as the theoretical basis for the earnings function, since Mincer's (1958) seminal paper. By treating education and experience as investments (human capital), Mincer was able to model individuals' earnings as a function of their investment choices. Assuming that individuals invest in human capital until the costs of investment equal the present value of future gains, Mincer obtained the now ubiquitous econometric

specification in which the natural logarithm of earnings is a linear function of years of schooling (S. Polachek, 2007).

The same approach is used here. At the individual employee level, it is assumed that wages increase in line with measures of accumulated skills such as education and years of work experience. Education is measured by the highest qualification level achieved. Work experience in the BHPS is the accumulated years of actual labour market work experience using the individual's employment history since first leaving full-time education[73] (Halpin, 2000). In the EU-SILC actual work experience is measured as the "number of years spent in paid work" since starting the first regular job either as an employee or self-employed[74].

The earnings function is augmented by the inclusion of further explanatory variables: marital status; occupation; having managerial or supervisory duties; firm size; and region. For Britain, private sector employment is also included. This variable is not available in the EU-SILC. The variables included in the EU-SILC but not in the BHPS earnings regressions are migrant status ("born outside the EU-25") and type of contract. (Variable definitions and summary statistics are provided in Table 5.1 for Britain; Table 5.2 for Italy, Spain and Poland; and Table 5.3 for France and the Czech Republic. Similar information for the allocation of characteristics across the earnings distribution for men and women are presented in Annex 5).

In all six countries studied here, men tend to have more years of work experience than women, although the mean gender difference is not statistically significant for full-time employees in Poland (Table 5.2). However, men working full-time are less likely to have a university degree than women, on average, in Italy, Spain, Poland and France. Men are as likely to have a university degree as women, on average, in the Czech Republic and in Britain. Women working part-time are substantially less likely to have a university degree, on average, than either full-time men or women in

[73] Work experience includes both full-time and part-time experience. A more detailed analysis of work-history in the BHPS by Olsen et al. (2010) finds a positive net effect of full-time work experience on wages and no net effect of part-time work experience on wages.

[74] Any time spent temporarily out of work while having a job (such as on maternity leave) is taken into account; it is up to the respondent whether or not to count part-time work experience (EU-SILC UDB Variables Description version 2007-2 from 01-08-09 (variable PL200)).

all of the studied countries except France, where part-time women (35%) are more likely to have a university degree than full-time men (32%).

In spite of full-time working women's higher educational qualifications, they are less likely to have managerial or supervisory duties or to work in senior managerial occupations than men in all of the studied countries. Men outstrip women by around 10 percentage points in having managerial or supervisory duties in all countries except Poland (where men lead by 4 ppt) and Britain (where men lead by 2 ppt), among full-time employees. Men are increasingly more likely to carry out managerial duties at the higher end of the earnings distribution (see Table A 5-2 to Table A 5-7 in the Annex). Having managerial duties is typically more prevalent than working in a managerial occupation and the correlation between the two is modest[75]. Part-time women are the least likely of all to have managerial duties or to work as managers.

In all of the studied countries women disproportionately outnumber men in clerical occupations and in service/sales occupations, while men are more likely to be concentrated in trades and operative occupations at the lower end of the occupational distribution and in managerial occupations at the top end of the occupational structure. Full-time women are about as likely as men to work in professional occupations and more likely than men to work as technicians and associate professionals. However, among full-time employees in Spain and Poland, women are substantially more likely to work in professional occupations than men, on average. Part-time female employees tend to be concentrated in lower status clerical, sales/service and elementary occupations in all of the studied countries, although some also work in higher skilled white-collar jobs. Occupation has been shown to be an important determinant of wages for full-time women relative to part-time women in Britain (Connolly & Gregory, 2008; Manning & Petrongolo, 2008) and for the pay of full-time men relative to part-time women (Mumford & P. N. Smith, 2009). According to the most recent data from the BHPS, occupational sex segregation

[75] In the British (BHPS) sample, the correlation coefficient between being a manager (ISCO 1) and having managerial duties is 0.47 in the combined sample of full-time employees (0.50 among men and 0.42 among women). The corresponding correlations are 0.14 in the Italian sample; 0.21 in the Spanish sample; 0.40 in the Polish sample; 0.23 in the French sample; and 0.38 in the Czech sample.

accounted for 17% of the average gender wage gap in the UK in 2007 (Olsen et al., 2010).

Men typically outnumber women in positions of responsibility in the EU. Women comprise only 30% of managers (directors, chief executives and managers of smaller enterprises) and 3% of directors of top quoted company boards across the EU (European Commission, 2009). According to the UK Equal Opportunity Commission (2005), women in Britain make up just 8% of the senior judiciary, 8% of senior police officers, 10% of top business leaders and 9% of national newspaper editors. Similar results are found for lawyers in the U.S. with only some 6% of law firms having managing partners who are female (National Association of Women Lawyers, 2008, pp.2-7).

The summary statistics tables also include information on the number of children in the household and the age of the youngest child. These variables are used in the estimation of women's probability of working full-time in order to correct for possible non-random selection into full-time work, but not included in the earnings functions themselves. Full-time working women are disproportionately less likely to have children under 16 in the household than are full-time men, part-time women or non-working women in all of the studied countries. Full-time female employees also tend to be the least likely to have children aged four or younger in the household. In France, however, full-time working women are more likely to have a pre-school age single child (9%) than full-time working men (8%) or part-time women (4%), although they are less likely to have two or more children with the youngest being under five years old. In all of the studied countries, full-time men and non-working women are the most likely to have pre-school children in the household, while part-time women are the most likely to have children aged five years or older. This pattern suggests that women with very young children may be relatively constrained in their ability to work, especially full-time.

Table 5.1 Britain - variable definitions and means (BHPS 2005)

Definitions	Full-time men	Full-time women	Part-time women	Non working women
(1)	(2)	(3)	(4)	(5)
Gross hourly wage	13.50	11.48	8.88	-
Log of gross hourly wage	**2.47**	**2.31**	**2.04**	**-**
Accumulated years of work experience	13.05	11.61	10.60	3.86
Non-labour income (1000s)	16.69	23.08	31.47	29.47
Age (years)	39.97	39.94	40.83	40.48
Highest level of education				
Degree	0.23	0.29	0.16	0.15
Other higher	0.42	0.36	0.37	0.23
A-levels	0.10	0.10	0.11	0.13
O-levels	0.15	0.15	0.19	0.21
Other secondary	0.05	0.05	0.07	0.11
No formal secondary or higher qualification	0.05	0.04	0.08	0.18
Married (or living in a de facto relationship)	0.63	0.52	0.76	0.62
Disagree that family suffers if mother works full-time	0.40	0.54	0.33	0.30
Age of youngest child in household				
No children under 16	0.55	0.67	0.30	0.37
5 years or younger	0.23	0.10	0.32	0.37
6-11 years	0.14	0.12	0.25	0.19
12-15 years	0.08	0.10	0.14	0.08
Managerial duties	0.47	0.45	0.16	-
Size of firm				
Less than 25	0.27	0.29	0.42	-
25-199	0.38	0.41	0.33	-
200 or over	0.36	0.30	0.25	-
Private sector	0.78	0.51	0.53	-
Occupational category				
Managers	0.21	0.15	0.05	-
Professionals	0.14	0.18	0.09	-
Assoc Professionals	0.16	0.19	0.10	-
Admin/Secretarial	0.05	0.23	0.23	-
Skilled Trades	0.18	0.02	0.02	-
Personal Services	0.01	0.10	0.18	-
Sales and Customer Services	0.02	0.06	0.19	-
Operatives	0.14	0.03	0.01	-
Elementary	0.09	0.04	0.14	-
Region				
South of England	0.29	0.27	0.30	0.30
London	0.08	0.10	0.07	0.09
East Midlands	0.23	0.21	0.24	0.24
North of England	0.25	0.26	0.27	0.26
Wales	0.05	0.05	0.05	0.03
Scotland	0.09	0.11	0.08	0.08
Number of observations	1747	1283	665	528

Source: British Household Panel Survey, Wave 15. Cross-sectional weights used.

Table 5.2 Variable definitions and means (EU-SILC 2007)

	Italy				Spain				Poland			
Definitions	Full-time men	Full-time women	Part-time women	Non-working women	Full-time men	Full-time women	Part-time women	Non-working women	Full-time men	Full-time women	Part-time women	Non-working women
Hourly wage (euro)	11.10	10.76	9.33	-	10.56	9.75	8.10	-	3.34	3.27	2.82	-
Log wage	2.33	2.29	2.15	-	2.25	2.17	1.99	-	1.08	1.05	0.90	-
Work experience (years)	17.27	15.09	14.21	6.02	18.21	15.06	14.32	8.26	16.90	16.42	13.25	11.36
Age	40.52	40.04	39.54	40.45	38.92	38.48	38.96	40.64	38.67	39.60	37.93	40.74
Log non-labour income	9.42	9.97	10.17	10.20	9.24	9.82	9.86	9.96	8.52	8.86	9.01	8.92
Highest level of education												
Lower secondary or below	0.44	0.27	0.39	0.58	0.39	0.24	0.42	0.56	0.06	0.03	0.06	0.17
Secondary/further	0.41	0.48	0.49	0.35	0.25	0.25	0.28	0.25	0.73	0.57	0.67	0.74
University	0.15	0.25	0.12	0.08	0.36	0.51	0.30	0.20	0.21	0.39	0.27	0.10
Born outside EU-25	0.08	0.07	0.09	0.07	0.07	0.07	0.11	0.07	0.00	0.00	0.01	0.00
Married	0.65	0.60	0.71	0.75	0.64	0.60	0.71	0.74	0.77	0.76	0.76	0.75
Age of youngest child in household												
No children under 16	0.56	0.64	0.41	0.52	0.58	0.62	0.44	0.53	0.48	0.55	0.50	0.47
One child aged 0-4	0.08	0.08	0.12	0.08	0.09	0.08	0.11	0.09	0.10	0.08	0.12	0.09
One child aged 5-10	0.07	0.05	0.11	0.07	0.07	0.07	0.12	0.08	0.10	0.09	0.08	0.09
One child aged 11-15	0.10	0.09	0.12	0.11	0.08	0.08	0.09	0.09	0.10	0.12	0.10	0.09
2 or more children, youngest aged 0-4	0.09	0.06	0.12	0.11	0.09	0.07	0.10	0.11	0.10	0.05	0.09	0.14
2 or more children, youngest aged 5-10	0.08	0.06	0.11	0.09	0.07	0.07	0.11	0.09	0.09	0.08	0.11	0.09
2 or more children, youngest aged 11-15	0.02	0.01	0.02	0.02	0.01	0.02	0.01	0.01	0.03	0.03	0.01	0.02
Managerial duties	0.29	0.19	0.11	-	0.32	0.23	0.09	-	0.24	0.20	0.09	-
Size of firm												
10 or fewer	0.28	0.29	0.47	-	0.28	0.32	0.55	-	0.35	0.36	0.51	-
11-149	0.35	0.35	0.30	-	0.33	0.31	0.26	-	0.24	0.26	0.32	-
50 or over	0.38	0.36	0.23	-	0.38	0.37	0.19	-	0.41	0.38	0.17	-
On permanent contract	0.89	0.86	0.75	-	0.79	0.78	0.60	-	0.78	0.82	0.49	-
*Occupational category**												
Legislators, senior officials and managers	0.02	0.01	0.01	0.04	0.03	0.01	0.00	0.02	0.05	0.05	0.01	0.02
Professionals	0.09	0.13	0.05	0.04	0.13	0.20	0.08	0.05	0.13	0.31	0.20	0.06
Technicians and associate professionals	0.19	0.33	0.23	0.14	0.13	0.14	0.08	0.07	0.12	0.18	0.12	0.10
Clerks	0.12	0.19	0.22	0.12	0.09	0.27	0.21	0.17	0.06	0.14	0.17	0.11
Service workers and shop and market sales workers	0.08	0.12	0.21	0.20	0.10	0.19	0.23	0.25	0.06	0.12	0.24	0.27
Skilled agricultural and fishery workers / Craft and related trades	0.24	0.06	0.05	0.19	0.26	0.05	0.03	0.12	0.32	0.06	0.05	0.23
Plant and machine operatives and assemblers	0.16	0.07	0.04	0.12	0.13	0.02	0.01	0.02	0.20	0.04	0.01	0.05
Elementary	0.09	0.09	0.18	0.15	0.12	0.12	0.35	0.31	0.06	0.11	0.21	0.16
Unweighted No. observations	6093	4012	1287	4597	3867	2719	695	3030	3995	3424	308	3105

Source: EU-SILC 2007. Cross-sectional weights used.
*Occupational category of the last job for non-working women.

Table 5.3 Variable definitions and means (EU-SILC 2007)

	France				Czech Republic			
Definitions	Full-time men	Full-time women	Part-time women	Non-working women	Full-time men	Full-time women	Part-time women	Non-working women
Hourly wage (euro)	14.54	13.39	14.22	-	4.23	3.28	2.84	-
Log wage	2.61	2.54	2.56	-	1.34	1.11	0.95	-
Work experience (years)	18.48	17.31	17.25	8.09	18.08	18.93	16.89	11.22
Age	39.89	40.01	41.43	39.53	39.03	41.11	40.50	37.03
Log non-labour income	9.21	9.45	10.00	10.18	8.67	9.03	9.21	9.19
Highest level of education								
Lower secondary or below	0.19	0.14	0.22	0.39	0.04	0.06	0.07	0.17
Secondary/further	0.49	0.42	0.44	0.40	0.78	0.78	0.77	0.73
University	0.32	0.44	0.35	0.21	0.18	0.16	0.16	0.10
Born outside EU-25	0.06	0.04	0.07	0.18	0.01	0.01	0.03	0.01
Married	0.53	0.47	0.67	0.59	0.65	0.68	0.84	0.67
Age of youngest child in household								
No children under 16	0.52	0.61	0.38	0.43	0.59	0.68	0.48	0.33
One child aged 0-4	0.08	0.09	0.04	0.07	0.08	0.02	0.07	0.19
One child aged 5-10	0.05	0.05	0.08	0.06	0.06	0.08	0.15	0.07
One child aged 11-15	0.08	0.09	0.11	0.08	0.09	0.12	0.08	0.06
2 or more children, youngest aged 0-4	0.13	0.06	0.17	0.23	0.08	0.01	0.06	0.23
2 or more children, youngest aged 5-10	0.11	0.07	0.18	0.11	0.08	0.07	0.10	0.09
2 or more children, youngest aged 11-15	0.02	0.02	0.03	0.02	0.02	0.03	0.06	0.01
Managerial duties	0.37	0.30	0.21	-	0.25	0.15	0.07	-
Size of firm								
10 or fewer	0.15	0.19	0.28	-	0.15	0.21	0.41	-
11-149	0.27	0.27	0.25	-	0.39	0.38	0.38	-
50 or over	0.58	0.54	0.47	-	0.46	0.41	0.21	-
On permanent contract	0.94	0.93	0.86	-	0.92	0.92	0.71	-
*Occupational category**								
Legislators, senior officials and managers	0.08	0.07	0.03	0.05	0.06	0.02	0.01	0.01
Professionals	0.14	0.15	0.10	0.07	0.10	0.11	0.05	0.06
Technicians and associate professionals	0.22	0.26	0.22	0.12	0.20	0.32	0.22	0.22
Clerks	0.07	0.24	0.23	0.18	0.04	0.16	0.08	0.10
Service workers and shop and market sales workers	0.06	0.15	0.20	0.25	0.07	0.15	0.25	0.26
Skilled agricultural and fishery workers / Craft and related trades	0.21	0.01	0.01	0.06	0.32	0.09	0.03	0.14
Plant and machine operatives and assemblers	0.16	0.04	0.01	0.06	0.17	0.06	0.05	0.07
Elementary	0.05	0.08	0.19	0.21	0.03	0.07	0.30	0.16
Unweighted No. observations	2773	1880	808	1295	3130	2666	118	1286

Source: EU-SILC 2007. Cross-sectional weights used.
*Occupational category of the last job for non-working women.

Allowance is made for possible non-random selection of women into full-time employment in the estimation of the earnings functions below. To identify the selection effect, additional information on the age of children present in the

household, non-labour income [76] and the worker's response to the attitudinal statement "the family suffers if the mother works full-time" are included in the analysis for Britain. Fortin (2005) and Albrecht et al., (2009) both stress the importance of including attitudinal (or belief) measures in the analysis of women's employment decisions. This may be particular important for beliefs that vary between individuals and cultural groups (such as the relationship between working hours and the perceived ability to be a successful mother). Full-time working women in Britain are less likely to have young children in the household and they are more likely to have positive attitudes[77] to the acceptability of mothers working full-time.

There is no information on attitudes in the EU-SILC, but the number and ages of dependent children as well as women's non-labour income should be sufficient as exclusion restrictions (i.e. they are present in the selection regression, but not in the earnings regression). Thus, it is assumed that these variables are associated with the decision to participate in the labour market full-time but not with earnings[78].

Estimation

The quantile regression model of Koenker and Bassett (1978) is employed to estimate earnings functions for males *(m*) and females *(f)*:

$$w_{im} = x_{im}'\beta_{\theta m} + u_{\theta im} \quad \text{with} \quad Quant_{\theta}(w_{im}|x_{im}) = x_{im}'\beta_{\theta m} \qquad i=(1,\ldots, n)$$

$$w_{if} = x_{if}'\beta_{\theta f} + u_{\theta if} \quad \text{with} \quad Quant_{\theta}(w_{if}|x_{if}) = x_{if}'\beta_{\theta f} \qquad i=(1,\ldots, n)$$

[76] In the BHPS, non-labour income is derived as total annual household income in the reference period (12 months before the interview) minus the individual's income from labour in the same period. Similarly, in the EU-SILC, non-labour income is annual gross household income (HY010) minus the individual's own gross earnings (PY010G), over the reference period (12 months before the interview or fieldwork).

[77] Although it could be argued that the attitude variable should be lagged, questions about gender-role attitudes were only asked in the 15th wave of the BHPS (2005/2006).

[78] In the British sample of full-time female employees, neither the age of children, nor non-labour income, nor attitude to working full-time is significantly correlated with average hourly earnings, having controlled for education, experience, marital status, age and region. Similarly, in the EU-SILC samples, non-labour income and the number/age of children are not correlated with average hourly earnings, everything else held equal. The only exception is the Czech Republic, where annual non-labour income (log) has a significant positive effect on hourly earnings for full-time working women. However, participation and full-time rates are also very high in the Czech sample, so the potential for sample selection is lower.

where w_i is the natural log of the average hourly earnings of individual i; x_i is a Kx1 vector of regressors measuring a range of individual characteristics; and $u_{\theta i}$ is a residual term. The distribution of the residual term $u_{\theta i}$ is unspecified, but the θth quantile of the error term $u_{\theta i}$ is assumed to be zero (Hao & Naiman, 2007). It can be shown that the estimates $\widehat{\beta_\theta}$, the quantile regression coefficients, are consistent estimates of the rates of return to observed characteristics at different quantiles in the conditional wage distribution (see, for example, Machado & Mata, 2005, p.447).

The need to allow for sample selection when estimating an earnings function, such as the non-random probability of women being employed full-time, is well documented by Heckman (1979). Buchinsky (1998) proposes a semi-parametric estimator for selection correction in the quantile regression model and provides examples. Albrecht et al., (2009) employ the Buchinsky method and extend the Machado-Mata (2005) decomposition method to account for selection in the quantile regression framework, when estimating $\beta(\theta)$ for women working full-time (*ff*):

$$w_{iff} = x_{iff}'\beta_{\theta ff} + h_\theta(z_{iff}'\gamma) + u_{\theta iff} \quad \text{with} \quad \text{Quant}_\theta(w_{iff}|z_{iff} = x_{iff}) = x_{iff}'\beta_{\theta f} + h_\theta(z_{iff}'\gamma) \qquad (3)$$

where z_{ff} is the set of variables that influence the probability that a woman works full-time (including a selection of x_f) for individual i; and the term $h_\theta(z_{iff}'\gamma)$ is analogous to the Mill's ratio in the Heckman procedure with parameters γ. (For identification, z_{ff} also includes at least one continuous variable not included in x_f.)

Albrecht et al. (2009) show the steps to simulate the selection-corrected distribution (the distribution of wages for all women, if all women worked full-time) via the adapted M-M algorithm[79]:

1. Estimate γ using a single-index method.
2. Sample θ from a uniform (0,1) distribution.
3. Estimate $\beta(\theta)$ and $h(.)$ using the Buchinsky approach.

[79] The comparable steps in the Machado-Mata procedure are: 1. Sample θ from a uniform (0,1) distribution; 2. compute $\hat{\beta}^B(\theta)$; 3. Sample x_A from the empirical distribution $\hat{G}_{X_A}$; 4. Compute $\hat{w}_{AB} = x_A\hat{\beta}^B(\theta)$; and 5. Repeat steps 1 to 4 M times

4. Sample x_A from the empirical distribution of women's characteristics $\hat{G}_{X_A}$.

5. Compute $\hat{w}_A = x_A\hat{\beta}(\theta)$

6. Repeat steps 2 to 5 *M* times.

The difference between the selection-corrected distribution (simulated following the above steps) and the actual distribution of full-time women's wages shows the effect of selection. Following Albrecht et al. (2009) this selection effect can be decomposed into a part due to observables and a part due to unobservables by modifying step 4 in the above algorithm and sampling from the empirical distribution of full-time women only, rather than all women. This produces a distribution of wages that would be observed if women who do not work full-time had the same distribution of observed characteristics as those who actually work full-time. The difference between this distribution and the distribution obtained in step 4 by sampling from data on all women gives the part of the selection effect due to observables. The portion due to unobservables is the difference between the distribution of wages obtained by sampling from data on full-time women and the actual distribution of full-time women's wages.

Table 5.4 and Table 5.5 provide results from standard probit and single index[80] (Ichimura, 1993) estimation of the determinants of participating in full-time work by women in Britain and in the five EU-SILC countries, respectively. Unsurprisingly, in all six countries women are found to be significantly more likely to be working full-time (rather than working part-time or not working) if they have more years of work experience and higher education qualifications. In Britain, women are also significantly more likely to work full-time if they disagree with the attitudinal statement "the family suffers if the mother works full-time".

In contrast, the presence of dependent children, particularly very young children, is typically strongly negatively associated with the probability of women working full-time. France is the only country where the negative effect of having one child aged

[80] The constant and the coefficient on the first continuous variable (years of work experience) are not identified in the single index model, they are normalised here by setting them equal to the corresponding values in the probit model, thereby making the results of the two models comparable.

four or younger on the propensity to work full-time is not statistically significant. This is possibly due to shorter paid parental leave for families with only one child in France and the accessibility of day care and early education facilities for young children, particularly those aged 3-5 years old (Fagnani & Boyer, 2008; Fagnani & Math, 2009; OECD, 2010). However, having two or more children, with the youngest being four or younger, has a significantly negative effect on the chances of working full-time even in France. Across the five EU-SILC countries, the negative effect of having one or more pre-school children in the household is strongest in Poland and the Czech Republic. This is not surprising, since these two countries scored very low on the composite index of work/family reconciliation policies in Chapter 3. In Britain, there is a significant positive interaction between having children aged five or younger and the attitude variable: the negative effect of having one or more young children in the household is smaller for those with a positive attitude to mothers working full-time.

Furthermore, higher non-labour income is typically negatively associated with the probability of women participating in full-time employment. In Britain, the negative effect of non-labour income is only significant for married women (Table 5.4). In all five EU-SILC countries, however, the negative effect of non-labour income is significant for women who are not married, with an additional negative effect for married women (in at least one of the two models) in all countries except Spain. Moreover, older women are less likely to work full-time in all of the studied countries. This appears to be a cohort effect. In Britain, women aged 45-55 are the least likely to work full-time rather than part-time or not at all.

Women born outside the EU-25 are significantly less likely to work full-time in Spain, Poland and in France in both models and in Italy in the single-index estimation only. Immigrant women in the Czech Republic appear to be more likely to work full-time (in the single-index estimation). However, the numbers of immigrants are very low in Poland and in the Czech Republic (under 1% amongst all women in the sample).

Table 5.4 Estimates of the incidence of full-time work among women (Britain)

	Probit (1)		Single Index (2)	
	B	SE	B	SE
Constant	-1.51***	0.15	-1.51	-
Work experience (years)	0.18***	0.01	0.18	-
Work experience squared (x 100)	-0.005***	0.001	-0.11***	0.0001
Age group (ref: 45-55)				
25-34	0.70***	0.09	0.48***	0.04
35-44	0.25**	0.08	-0.15***	0.03
Non-labour income (1000's)	0.001	0.003	0.0005	0.001
Married	0.01	0.10	-0.02	0.04
Positive working mother attitude	0.31***	0.07	0.08**	0.03
Youngest child aged 0-5	-1.44***	0.11	-1.57***	0.06
Youngest child aged 6-11	-0.88***	0.11	-0.31***	0.05
Positive working mother attitude x Youngest child age 0-5	0.37*	0.15	0.16*	0.06
Positive working mother attitude x Youngest child age 6-11	0.23	0.16	0.01	0.08
Married x non-labour income	-0.01**	0.004	-0.003*	0.001
Highest level of education (ref: minimal)				
Degree	1.06***	0.12	0.45***	0.06
Other higher	0.63***	0.12	0.16***	0.05
A-levels	0.54***	0.13	0.14*	0.06
O-levels	0.42**	0.12	-0.60***	0.04
Other	0.22	0.15	0.05	0.06
Inverse Mill's ratio	0.01	0.04	-	-
Number of observations	2476		2476	

Source: BHPS 2005-06, Wave 15. *** p<0.001, ** p<0.01, * p<0.05.
Note: The constant and work experience coefficients in the single index model are normalised. Controls are included for region.
Variables included in the earnings equation in the Heckman two-step procedure: actual work experience (quadratic), education, marital status, and regional controls.

Table 5.5 Estimates of the incidence of full-time work among women (EU-SILC)

	Probit (1)									
	Italy		**Spain**		**Poland**		**France**		**Czech Republic**	
	B	SE	B	SE	B	SE	B	SE	B	SE
Constant	2.40***	0.22	1.95***	0.26	3.39***	0.37	3.29***	0.26	4.68***	0.44
Actual work experience	0.17***	0.01	0.14***	0.01	0.21***	0.01	0.10***	0.01	0.21***	0.01
Actual work experience squared (x100)	-0.25***	0.0002	-0.22***	0.0002	-0.26***	0.0002	-0.10**	0.0002	-0.22***	0.0003
Age	-0.05***	0.003	-0.05***	0.003	-0.12***	0.004	-0.06***	0.004	-0.12***	0.01
Log non-labour income	-0.12***	0.02	-0.05*	0.02	-0.10*	0.04	-0.15***	0.02	-0.10*	0.04
Highest level of education (ref: university)										
Lower secondary or below	-1.16***	0.05	-0.98***	0.04			-0.76***	0.07	-1.59***	0.12
Secondary or further	-0.55***	0.04	-0.58***	0.05	1.06***	0.05	-0.46***	0.05	-0.88***	0.08
Married	0.28	0.32	-0.50	0.36	0.53	0.42	1.12*	0.52	1.31*	0.62
Born outside EU-25	-0.12	0.06	-0.16*	0.07	-1.31*	0.51	-0.32**	0.09	-0.08	0.26
Number and age of children (ref: no children under 16)										
1 child, aged 0-4	-0.32***	0.06	-0.61***	0.07	-0.55***	0.07	-0.08	0.10	-2.02***	0.10
1 child, aged 5-10	-0.41***	0.061	-0.35***	0.07	-0.18**	0.07	-0.22*	0.10	-0.24*	0.10
1 child, aged 11-15	-0.17**	0.05	-0.20**	0.06	0.07	0.06	-0.24**	0.08	0.33**	0.10
2 or more children, youngest aged 0-4	-0.61***	0.06	-0.76***	0.07	-0.82***	0.07	-1.02***	0.08	-2.02***	0.11
2 or more children, youngest aged 5-15	-0.43***	0.05	-0.40***	0.06	-0.19**	0.06	-0.61***	0.07	-0.05	0.09
Log non-labour income * Married	-0.04	0.03	0.03	0.04	-0.04	0.05	-0.11*	0.05	-0.12†	0.07
Inverse Mill's ratio	0.31***	0.03	0.22***	0.04	0.002	0.0232	0.14***	0.02	0.05*	0.02
Number of observations	9896		6444		6837		3983		4070	

	Single index (2)									
	Italy		**Spain**		**Poland**		**France**		**Czech Republic**	
	B	SE	B	SE	B	SE	B	SE	B	SE
Constant	2.40	-	1.95	-	3.39	-	3.29	-	4.68	-
Actual work experience	0.17	-	0.14	-	0.21	-	0.10	-	0.21	-
Actual work experience squared (x100)	-0.25***	0.0001	-0.20***	0.0001	-0.26***	0.0001	-0.09***	0.0001	-0.23***	0.0001
Age	-0.04***	0.002	-0.05***	0.002	-0.12***	0.003	-0.06***	0.003	-0.11***	0.003
Log non-labour income	-0.14***	0.01	-0.03**	0.01	-0.10***	0.02	-0.12***	0.01	-0.09***	0.02
Highest level of education (ref: university)										
Lower secondary or below	-1.23***	0.04	-0.92***	0.04			-0.52***	0.04	-1.35***	0.06
Secondary or further	-0.57***	0.03	-0.39***	0.03	0.87***	0.04	-0.35***	0.03	-0.67***	0.04
Married	0.22**	0.07	-0.35	0.23	0.65*	0.25	0.57***	0.12	0.87*	0.35
Born outside EU-25	-0.20***	0.04	-0.19***	0.04	-0.62**	0.24	-0.24***	0.05	0.20*	0.10
Number and age of children (ref: no children under 16)										
1 child, aged 0-4	-0.29***	0.04	-0.54***	0.05	-0.40***	0.044	-0.02	0.05	-1.58***	0.06
1 child, aged 5-10	-0.44***	0.04	-0.40***	0.05	-0.21***	0.04	-0.11*	0.05	0.03	0.05
1 child, aged 11-15	-0.27***	0.03	-0.19***	0.05	0.09*	0.04	-0.16***	0.04	0.31***	0.05
2 or more children, youngest aged 0-4	-0.53***	0.04	-0.69***	0.05	-0.68***	0.04	-0.62***	0.04	-1.97***	0.06
2 or more children, youngest aged 5-15	-0.42***	0.04	-0.49***	0.04	-0.16***	0.04	-0.38***	0.03	0.03	0.04
Log non-labour income * Married	-0.03***	0.01	0.02	0.02	-0.06*	0.03	-0.06***	0.01	-0.07†	0.04
Number of observations	9896		6444		6837		3983		4070	

Source: EU-SILC 2007. *** p<0.001, ** p<0.01, * p<0.05, † p<0.10.
Note: The constant and work experience coefficients in the single index model are normalised.
Controls are included for region.
Variables included in the earnings equation in the Heckman two-step procedure: actual work experience (quadratic), education, marital status, immigrant status, and regional controls.

Figure 5.3 plots the selection effect or, in other words, the difference between the (simulated)[81] selection-corrected distribution and the actual distribution of full-time women's wages in six countries. This selection effect is then decomposed into the portion related to observable characteristics and the portion related to unobservable characteristics. By modifying the algorithm and sampling from the empirical distribution of full-time women only (Albrecht et al., 2009), a distribution of wages that would be observed if women who do not work full-time had the same distribution of observed characteristics as those who actually do work full-time is simulated. The difference between this distribution and the distribution obtained by sampling from data on all women gives the portion of the selection effect due to observables (Figure 5.4). The portion due to unobservables (Figure 5.5) is the difference between the distribution of wages obtained by sampling from data on full-time women and the actual distribution of full-time women's wages.

In Britain, the selection effect can be seen to be positive throughout, generally sitting between 10 and 20 log wage points; with some evidence of both a sticky floor and a glass ceiling. Figure 5.3 reveals that the women observed to be working full-time in Britain have higher earnings potential in this work than do British women in general; this is especially true for women in the lowest and the highest deciles of the distribution. The selection effect is due to differences in the observed characteristics (Figure 5.4) and differences in the unobserved characteristics (Figure 5.5), but the former dominate.

In Italy, the overall selection effect is large and positive throughout, but highest at the bottom of the distribution (50 lwp). This suggests that Italian women working-full-time have the characteristics associated with the highest earnings potential, particularly among lower earners[82]. The portion of the selection effect due to differences in observed characteristics (Figure 5.4), such as education, work experience, migrant status, as well as the relevant household characteristics, is also highest at the bottom of the distribution (30 lwp), indicating that women who work

[81] The term $h_0(z_{iff}\hat{\gamma})$ (equation 3) is a power series expansion of the single index selection probability estimated with a semi-parametric least squares procedure (Ichimura, 1993) .
[82] This finding is in line with that in Picchio and Mussida (2010), who use a different selection correction method to adjust for selection into employment, rather than full-time work.

full-time have higher levels of human capital and fewer family-related constraints on their employment. At the same time, Figure 5.5 shows significant unobserved differences between full-time women and all women, also highest at the bottom of the distribution (20 lwp). Thus, it is the highest earning women in Italy who are the most likely to be self-selected into full-time work, both in terms of their observed and unobserved characteristics. The absence of statutory minimum wage in Italy may be one of the reasons why lower skilled women are more likely to stay out of full-time employment.

The selection effect is positive and significant throughout in Spain, gradually falling from around 30 lwp to 10 lwp (Figure 5.3). This suggests that the highest earners are the least likely to be self-selected into full-time employment. Figure 5.4 shows that the portion of the selection effect due to differences in observable characteristics is positive and significant at around 25 lwp throughout the distribution, with a steep decrease beyond the 8th decile. It can be seen from Figure 5.5 that the portion of the selection effect due to unobservables is less substantial, at around 5 lwp throughout, but largely near zero beyond the 6th decile. This suggests that full-time working women are more likely to have the observed characteristics associated with higher earnings potential, rather than unobserved characteristics (not controlled for in the model; Table 5.5).

It is notable that the size of the selection effect in the lower half of the distribution is considerably larger in Italy than in Spain, although it is similar in the second half of the earnings distribution. A possible explanation could be related to differences in tax/benefit regimes with respect to secondary earners in couples in these countries, discussed in Chapter 3. Secondary earners (on 67% of the Average Production Wage) in couples with children tend to lose a higher proportion of their earnings to taxes and benefit withdrawals in Italy than in Spain, especially in comparison with primary earners and lone parents on the same earnings (see Figure 3.14 in Chapter 3). Furthermore, there is no statutory minimum wage in Italy. Thus, women with lower earnings potential in Italy may find it less worthwhile to enter employment.

The selection effect is positive but modest in Poland. It steadily increases along the distribution from 5 lwp to around 15 lwp at the 9th decile and beyond. The selection effect is largely due to significant differences in observable characteristics between full-time female employees and all women, while the portion due to unobservables is not statistically significant, except for a small negative effect in the middle and at the end of the distribution (Figure 5.4 and Figure 5.5). Thus, the individual characteristics controlled for in the participation equation, such as education, years of work experience, migrant status, marital status, non-labour income and the number and age of children, largely explain the differences in the likelihood of working full-time (as opposed to working part-time or not working at all) for women. This suggests that lower levels of education and experience as well as family commitments make it difficult for women to participate in the labour market and to work longer hours in particular.

It is a curious finding that the selection effect is greater in Poland than in the Czech Republic, although employment and full-time work rates are comparable in these countries [83]. Furthermore, both countries rank very low on the work/family reconciliation index in Chapter 3. Both lack statutory paternity leave provisions and non-transferable parental leave entitlements for fathers, while allowing mothers to stay at home on job-protected parental leave until the child is three years old. The only difference is that the parental leave is more generously paid in the Czech Republic (50 FTE weeks) than in Poland (16 FTE weeks). Both countries have low formal childcare enrolment rates for pre-school children, similar tax/benefit regimes for secondary earners in couples and relatively traditional gender-role attitudes. However, there is a difference in the conditions attached to paid parental leave: in Poland the parental allowance is means tested and is not paid if the parent is working or if the child attends a kindergarten; in the Czech Republic, the parental benefit is flat rate (with three options differing by duration and payment) and parents are allowed to work full- or part-time (Moss & Korintus, 2008). Hence, Polish mothers with greater earnings potential may find it more worthwhile to forgo the parental leave and return to work (although they may still be constrained by the availability of

[83] Employment rates are 65% and 57% in the Czech Republic and Poland, respectively, in the effective sample used in the analysis. Full-time shares of female employment are 96% and 92%, respectively.

childcare places). Indeed, Table 5.2 and Table 5.3 (summary statistics) show that the differences in educational qualifications across the three activity groups of women (full-time, part-time and non-working) are greater in Poland; these differences are even more pronounced for mothers of very young children[84].

In France the selection effect is positive and modest: it remains at around 10 lwp across the entire distribution, plunging beyond the 9th decile. It can be seen from Figure 5.4 and Figure 5.5 that the overall selection effect is entirely due to differences in observed characteristics between women who work full-time and all French women, since the differences due to unobserved characteristics are not significantly different from zero. These findings suggest that women who work full-time in France are more likely to have the observed characteristics associated with higher earnings, but this selection effect is modest by international standards (compared with findings for Spain and Italy, for example). This is not a surprising finding given that family and employment policies in France aim to make it easier for French women to combine work and family if they wish to work (Fagnani & Math, 2009).

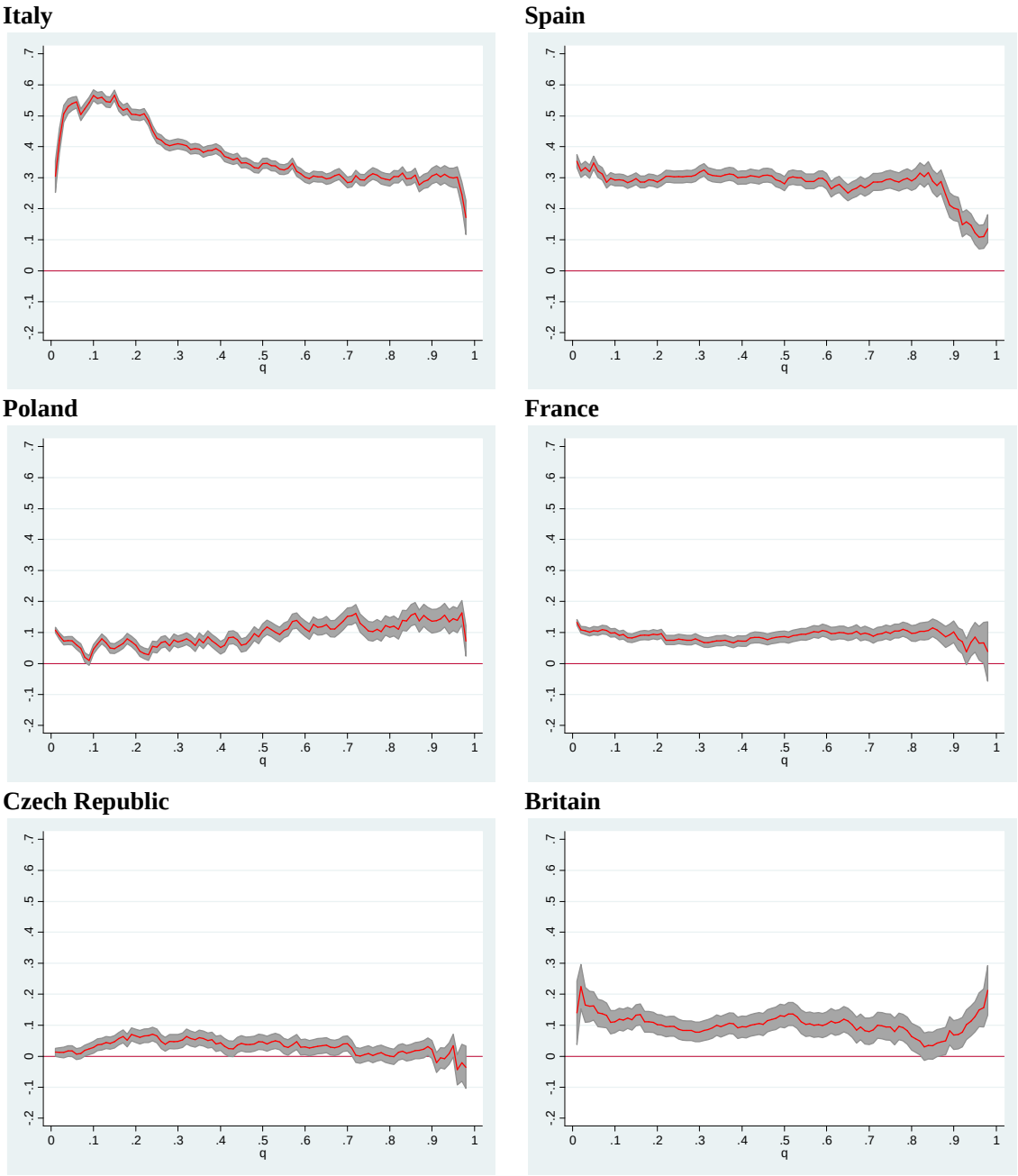
The selection effect is even smaller in the Czech Republic (Figure 5.3) and also largely due to differences in observed characteristics (Figure 5.4 and Figure 5.5) The overall selection effect does not exceed 5-7 lwp at any point in the distribution and it is not significantly different from zero beyond the 6th decile. Women in the Czech Republic have some of the lowest non-participation and part-time rates in the EU (Eurostat, 2010), so it is not surprising that little evidence of selection into full-time work is found.

To sum up, the overall selection effect is positive and large in Italy and in Spain, small by comparison in Britain, France and Poland, and negligible in the Czech Republic. The positive selection effect in Italy and in Spain is due to differences in

[84] For women with children aged 0-4, there is a significant association between activity status and having a university degree ($p<0.0001$) in Poland, with full-time working women being much more likely to be university educated (51%) than part-time working women (45%) or non-working women (19%). In the Czech Republic, the association is not significant at 1% ($p=0.04$); part-time women (39%) are more likely to be university educated than full-time women (25%) or non-working women (17%).

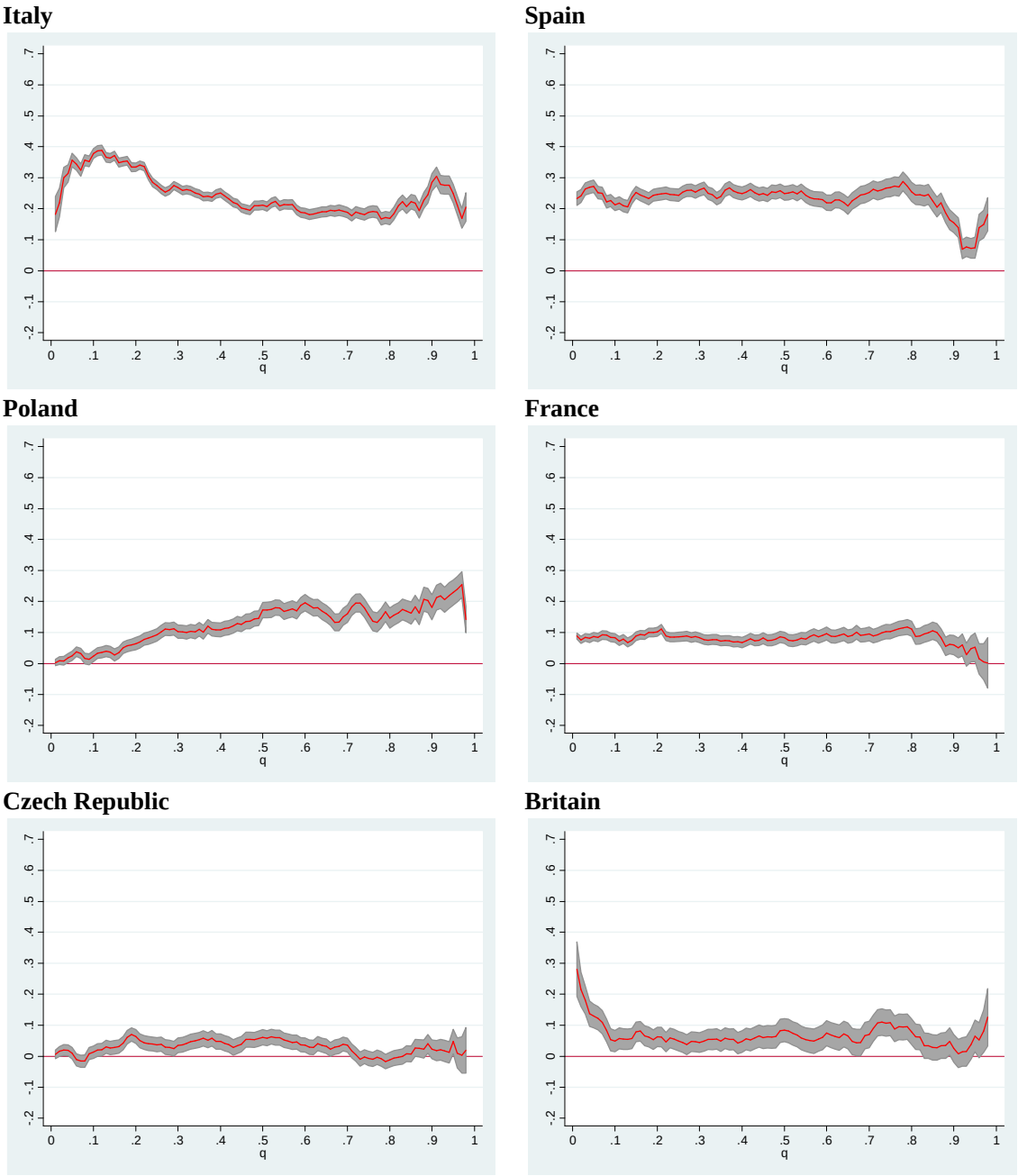
both observable and unobservable characteristics, but the part related to observables dominates. In contrast, the positive selection effect in Britain, France, Spain, Poland and the Czech Republic is almost entirely due to differences in observable characteristics. Allowance for selection is made accordingly in the estimation of the earnings functions for full-time working women below.

Figure 5.3 Log wage gap between actual full-time women and the wages that would be observed if all women worked full-time



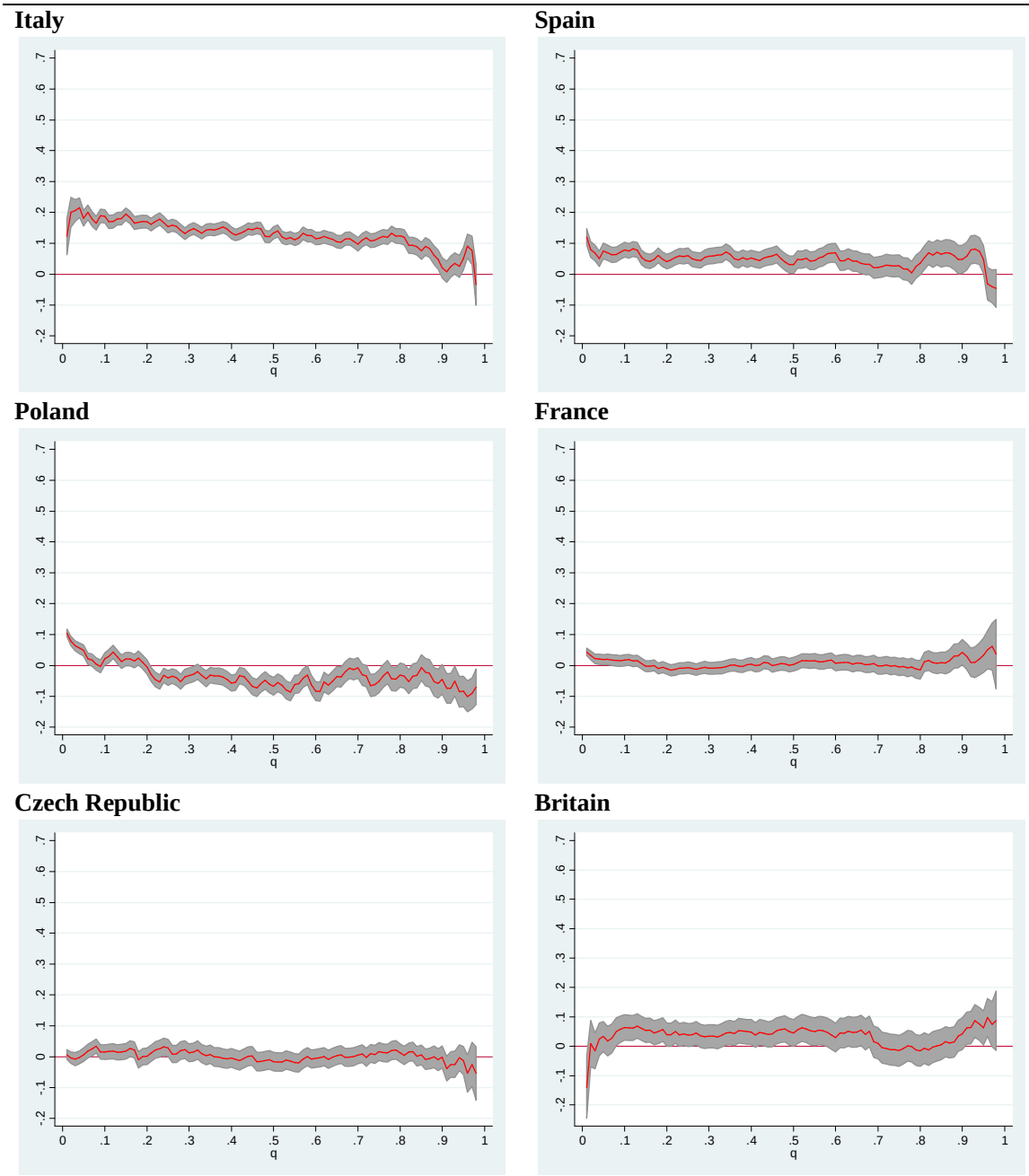
Source: EU-SILC 2007 for Italy, Spain, France, Poland and the Czech Republic; BHPS 2005 for Britain.

Figure 5.4 The portion of the selection effect due to differences in observed characteristics between full-time female employees and all women



Source: EU-SILC 2007 for Italy, Spain, France, Poland and the Czech Republic; BHPS 2005 for Britain.

Figure 5.5 The portion of the selection effect due to differences in unobserved characteristics between full-time female employees and all women



Source: EU-SILC 2007 for Italy, Spain, France, Poland and the Czech Republic; BHPS 2005 for Britain.

Earnings function results

Selected results (at the 20th quantile, the median and the 80th quantile) from the quantile regressions for log hourly earnings for men (equation 1) and women with Buchinsky selection correction (equation 3)[85] working full-time are presented in Table 5.6 for Britain and Tables 5.7 through 5.11 for the other five countries.

There are substantial gains associated with higher education qualifications and work experience for men and women. Contrary to what might be expected, however, women have higher returns to having a university degree than men in all five EU-SILC countries, but particularly so in Spain and Poland. Thus, it appears that it is not simply differences in returns to academic qualifications that drive the raw gender wage gaps in earnings in these countries. The only exception is Britain, where the returns to educational qualifications (A-Level and above) are higher for men than for women at each of the selected quantiles.

Workplace characteristics tend to be crucial predictors of earnings. There are positive returns to having managerial duties, working in a larger workplace, having a permanent contract (EU-SILC only), and having a white-collar high-skilled occupation throughout the distribution for full-time men and women in all of the studied countries. The returns associated with carrying managerial duties are typically higher for men than for women, especially at the top end of the earnings distribution. Notably, the returns tend to rise across the distribution for men, but not for women. Working in a larger workplace also tends to carry higher returns for men than for women. These results suggest that differential returns associated with these workplace characteristics play a role in driving the observed gender wage gaps in the studied countries.

The returns to working in the ISCO-1 'managerial' occupation (legislators, senior officials and managers) tend to increase across the distribution for men and women in all six countries. The returns are higher for men than for women in Britain (at the 2nd decile only), Spain (at the 2nd decile and the median), in Poland (at the 2nd decile

[85] The function $h_\theta(z_{ff}'\hat{\gamma})$ is a power series approximation (using the inverse Mill's ratio from the Heckman's two-step procedure) of the filtered single index selection probability (see Table 5.4 for Britain and Table 5.5 for the EU-SILC countries). See Albrecht et al. (2009, p.385).

only), and in the Czech Republic (at the 8th decile only). On the contrary, the returns are higher for women than for men in Italy and in France (at the 8th decile). Women tend to have higher returns to working in professional (ISCO-2) and associate professional occupations (ISCO-3), with the returns typically increasing across the distribution, in each of the studied countries. In contrast, men tend to have substantially higher returns to working in skilled trades and craft occupations than women. These tend to be the occupations heavily dominated by men (see summary statistics tables above).

Being married is positively associated with wages for men in all of the studied countries, but carries no wage premium (or penalty) for women. Married men tend to earn around 10% more at each selected point in the distribution in all six countries. Having been born outside the EU-25 carries a significant penalty for both men and women in Italy and Spain, as well as in the Czech Republic (at the median and for men only). However, immigrant workers in Spain are not a homogenous group, with immigrants from non-Spanish speaking countries facing the largest wage gap relative to native Spanish workers (Nicodemo, 2009b). Interestingly, there is a significant immigrant penalty at the median and a premium at the 2nd decile for women in Poland, with no significant effects for men, although immigrants make up less than 1% of female and male full-time employees in the sample.

To sum up, men tend to have higher returns across the distribution from workplace characteristics, such as having managerial duties and working in a larger workplace, than women. The returns associated with being married are ubiquitously high for men, but virtually nil for women. However, the returns associated with having a university degree are higher for women in all of the studied countries except Britain. As regards occupational characteristics, women tend to have higher returns associated with working in professional and associate professional occupations, but the premiums to working in skilled trades and craft occupations are higher for men. Men tend to have higher returns to working in managerial occupations than women at the bottom of the distribution in Britain, Italy, Spain and Poland and at the top of the distribution in the Czech Republic. However, women tend to have higher returns

to working in managerial occupations at the top of the distribution in Britain and in France.

Table 5.6 Regression results for full-time men and women (Britain)

	Men			Women (with selection correction)		
quantile	20th	50th	80th	20th	50th	80th
Work experience (years)	0.04***	0.04***	0.04***	0.02**	0.02**	0.03***
Work exp squared (x 100)	-0.10***	-0.11***	-0.12***	-0.07*	-0.02	-0.05**
Highest level of education (ref: minimal)						
Degree	0.39***	0.40***	0.36***	0.26**	0.29***	0.29**
Other higher	0.21***	0.20***	0.15*	0.13	0.13*	0.16*
A-levels	0.19**	0.22***	0.17*	0.08	0.12*	0.08
O-levels	0.11	0.12**	0.07	0.05	0.10	0.01
Other secondary	0.06	0.11	0.04	0.01	0.01	0.09
Married	0.08**	0.09***	0.09**	-0.01	0.02	-0.05
Managerial duties	0.10***	0.15***	0.20***	0.14***	0.11***	0.14***
Size of firm (ref: 200 or over)						
Under 25	-0.19***	-0.19***	-0.16***	-0.09*	-0.12***	-0.13***
25-199	-0.07**	-0.08***	-0.06	-0.02	-0.01	-0.04
Private sector	-0.00	0.02	0.06*	-0.06	-0.02	-0.01
Occupational category (ref: elementary)						
Managers	0.42***	0.47***	0.48***	0.29***	0.48***	0.69***
Professionals	0.49***	0.52***	0.54***	0.62***	0.75***	0.71***
Assoc Professionals	0.34***	0.34***	0.37***	0.41***	0.52***	0.52***
Admin/Secretarial	0.15*	0.16***	0.22**	0.25***	0.27***	0.28**
Skilled Trades	0.18***	0.17***	0.19***	-0.03	0.05	0.06
Personal Services	0.09	0.10	0.14	0.09	0.13*	0.15
Sales and customer serv.	0.02	-0.01	0.07	0.04	0.10	0.17
Operatives	0.12***	0.10*	0.13**	0.14	0.12	0.15
Region (ref: South)						
Scotland	-0.08	-0.12***	-0.06	-0.03	-0.05	-0.03
Wales	-0.13**	-0.15***	-0.13***	-0.07	-0.05	-0.07
London	0.18**	0.12*	0.18*	0.18**	0.13*	0.13*
East and Midlands	-0.07	-0.12***	-0.14**	-0.06	-0.09*	-0.08
North, Yorkshire and Humber	-0.05	-0.13***	-0.12***	-0.03	-0.06*	-0.09
Lambda	-	-	-	-1.06**	-0.78*	-0.15
Lambda^2	-	-	-	1.82*	1.25	0.35
Lambda^3	-	-	-	-1.14*	-0.77	-0.23
Lambda^4	-	-	-	0.23	0.15	0.05
Constant	1.46***	1.69***	1.89***	1.64***	1.75***	1.82***
Pseudo R-Square	0.25	0.31	0.31	0.28	0.35	0.35
Number of observations	1747			1283		

Source: BHPS 2005/06.

*** p<0.001, ** p<0.01, * p<0.05.

Bootstrapped standard errors with 100 replications.

Table 5.7 Regression results for full-time men and women (Italy)

	Men			Women (with selection correction)		
quantile	20th	50th	80th	20th	50th	80th
Actual work experience	0.02***	0.02***	0.02***	0.03***	0.03***	0.04***
Actual work experience squared (x1000)	-0.34***	-0.35***	-0.36***	-0.38***	-0.45***	-0.54***
Highest level of education (ref: secondary)						
Lower secondary or below	-0.07***	-0.08***	-0.10***	-0.19***	-0.19***	-0.23***
University	0.11***	0.16***	0.22***	0.16***	0.20***	0.30***
Born outside EU-25	-0.08***	-0.08***	-0.07**	-0.08*	-0.09**	-0.05
Married	0.10***	0.08***	0.10***	-0.01	0.02	0.004
Managerial duties	0.05***	0.09***	0.13***	0.03*	0.03*	0.03
Size of firm (ref: 50 or over)						
10 or fewer	-0.13***	-0.10***	-0.09***	-0.15***	-0.12***	-0.09***
11-49	-0.05***	-0.04***	-0.06***	-0.06***	-0.03**	-0.03
On permanent contract	0.15***	0.11***	0.04	0.12***	0.08***	0.005
Occupational category (ref: elementary)						
Legislators, senior officials and managers	0.13*	0.27***	0.54***	0.26***	0.42***	0.56***
Professionals	0.26***	0.32***	0.47***	0.41***	0.44***	0.55***
Technicians and associate professionals	0.17***	0.18***	0.16***	0.28***	0.25***	0.31***
Clerks	0.12***	0.09***	0.07**	0.19***	0.13***	0.14***
Service workers and shop and market sales workers	0.07**	0.05*	0.09*	0.11**	0.05*	0.03
Skilled agricultural and fishery workers / Craft and related trades	0.05*	0.02	-0.01	0.02	-0.05*	-0.04
Plant and machine operatives and assemblers	0.08***	0.06***	0.06**	0.08*	0.04	0.01
Region (ref: North)						
Central	-0.03**	-0.03**	-0.04**	-0.05***	-0.04***	-0.03
South	-0.12***	-0.09***	-0.09***	-0.17***	-0.09***	-0.05
Islands	-0.07**	-0.05**	-0.03	-0.05	-0.02	-0.02
Lambda	-	-	-	0.14	-0.07	-0.02
Lambda^2	-	-	-	0.13	0.31*	0.33
Lambda^3	-	-	-	-0.07	-0.10*	-0.11
Constant	1.68***	1.91***	2.19***	1.44***	1.70***	1.85***
Pseudo R Square	0.17	0.20	0.25	0.23	0.26	0.30
Unweighted No. observations	6093			4012		

Source: EU-SILC 2007.

*** p<0.001, ** p<0.01, * p<0.05.

Bootstrapped standard errors with 100 replications.

Table 5.8 Regression results for full-time men and women (Spain)

	Men			Women (with selection correction)		
quantile	20th	50th	80th	20th	50th	80th
Actual work experience	0.02***	0.02***	0.02***	0.02***	0.03***	0.03***
Actual work experience squared (x1000)	-0.23**	-0.32***	-0.34***	0.34**	-0.40***	-0.35**
Highest level of education (ref: secondary)						
Lower secondary or below	-0.10***	-0.13***	-0.13***	-0.13***	-0.14***	-0.17***
University	0.07***	0.10***	0.12***	0.13***	0.19***	0.20***
Born outside EU-25	-0.10**	-0.07*	-0.09**	-0.10**	-0.10**	-0.17***
Married	0.09***	0.09***	0.10***	0.03	0.001	0.04
Managerial duties	0.08***	0.08***	0.10***	0.06**	0.09***	0.11**
Size of firm (ref: 50 or over)						
10 or fewer	-0.23***	-0.20***	-0.16***	-0.19***	-0.15**	-0.13***
11-49	-0.16***	-0.13***	-0.12***	-0.08***	-0.06**	-0.06**
On permanent contract	0.08***	0.11***	0.10***	0.10***	0.09***	0.06*
Occupational category (ref: elementary)						
Legislators, senior officials and managers	0.50***	0.54***	0.60***	0.40	0.41***	0.61***
Professionals	0.50***	0.49***	0.51***	0.60	0.64***	0.61***
Technicians and associate professionals	0.25***	0.22***	0.24***	0.24	0.28***	0.28***
Clerks	0.20***	0.17***	0.17***	0.20	0.21***	0.19***
Service workers and shop and market sales workers	0.11**	0.06*	0.13***	0.09	0.07**	0.07*
Skilled agricultural and fishery workers / Craft and related trades	0.12***	0.07**	0.05	0.01	-0.02	-0.04
Plant and machine operatives and assemblers	0.17***	0.12***	0.12***	0.12	0.17	0.22**
Region (ref: North)						
Central	-0.04*	-0.06***	-0.05	-0.01	-0.06**	-0.09**
South	-0.07**	-0.08***	-0.06*	-0.03	-0.06**	-0.09***
East	0.00	-0.00	-0.02	0.03	-0.03	-0.05*
Lambda	-	-	-	0.86**	0.64*	0.07
Lambda^2	-	-	-	-1.39**	-0.70	0.25
Lambda^3	-	-	-	0.87**	0.39	-0.21
Lambda^4	-	-	-	-0.17**	-0.07	0.05
Constant	1.62***	1.83***	2.05***	1.19***	1.34***	1.76***
Pseudo R Square	0.22	0.28	0.31	0.28	0.35	0.39
Unweighted No. observations	3867			2719		

Source: EU-SILC 2007.

*** p<0.001, ** p<0.01, * p<0.05.

Bootstrapped standard errors with 100 replications.

Table 5.9 Regression results for full-time men and women (Poland)

	Men			Women (with selection correction)		
quantile	20th	50th	80th	20th	50th	80th
Actual work experience	0.01*	0.01***	0.02***	0.02***	0.02***	0.02***
Actual work experience squared (x1000)	-0.07	-0.18*	-0.37***	-0.38***	-0.36**	-0.44***
Highest level of education (ref: secondary)						
Lower secondary or below	-0.03	-0.04	-0.02	-0.02	-0.02	-0.03
University	0.16***	0.21***	0.28***	0.27***	0.32***	0.41***
Born outside EU-25	-0.13	-0.35	-0.05	0.15*	-0.19*	-0.29
Married	0.06***	0.09***	0.11***	0.04**	0.03	-0.00
Managerial duties	0.13***	0.16***	0.16***	0.07**	0.05*	0.07*
Size of firm (ref: 50 or over)						
10 or fewer	-0.12***	-0.11***	-0.11***	-0.04*	-0.04**	-0.04*
11-49	-0.14***	-0.14***	-0.17***	0.00	0.00	-0.03
On permanent contract	0.11***	0.13***	0.12***	0.07***	0.09***	0.12***
Occupational category (ref: elementary)						
Legislators, senior officials and managers	0.47***	0.50***	0.71***	0.39***	0.62***	0.70***
Professionals	0.44***	0.54***	0.63***	0.40***	0.54***	0.66***
Technicians and associate professionals	0.29***	0.34***	0.38***	0.26***	0.40***	0.51***
Clerks	0.17***	0.19***	0.22***	0.17***	0.27***	0.32***
Service workers and shop and market sales workers	0.04	0.06	0.08	0.03	0.07***	0.09**
Skilled agricultural and fishery workers / Craft and related trades	0.12***	0.17***	0.23***	0.01	0.07*	0.09*
Plant and machine operatives and assemblers	0.16***	0.21***	0.24***	0.16***	0.24***	0.30***
Region (ref: North)						
Central	0.04*	0.07***	0.08*	0.05*	0.07***	0.08**
South	0.09***	0.10***	0.08**	0.01	0.02	0.03
East	0.03	-0.004	-0.04	0.02	0.03	0.02
Lambda	-	-	-	0.01	-0.07	-0.13
Lambda^2	-	-	-	0.04	0.08	0.11
Lambda^3	-	-	-	-0.01	-0.01	-0.02
Constant	0.29***	0.43***	0.65***	0.07	0.21***	0.46***
Pseudo R Square	0.18	0.22	0.24	0.24	0.32	0.35
Unweighted No. observations	3995			3424		

Source: EU-SILC 2007.

*** p<0.001, ** p<0.01, * p<0.05

Bootstrapped standard errors with 100 replications

Table 5.10 Regression results for full-time men and women (France)

	Men			Women (with selection correction)		
quantile	20th	50th	80th	20th	50th	80th
Actual work experience	0.01***	0.02***	0.01***	0.01***	0.01***	0.01***
Actual work experience squared (x1000)	-0.13*	-0.24***	-0.18*	-0.12	-0.08	-0.10
Highest level of education (ref: secondary)						
Lower secondary or below	-0.02	-0.01	-0.07***	-0.04*	-0.06**	-0.05
University	0.05**	0.08***	0.14***	0.11***	0.12***	0.16***
Born outside EU-25	-0.05	-0.02	0.02	0.00	0.04	0.01
Married	0.06***	0.06***	0.04*	0.00	-0.01	0.02
Managerial duties	0.03	0.07***	0.08***	0.02	0.03	0.05*
Size of firm (ref: 50 or over)						
10 or fewer	-0.15***	-0.18***	-0.14***	-0.09***	-0.11***	-0.08**
11-49	-0.09***	-0.12***	-0.11***	-0.06***	-0.07***	-0.06**
On permanent contract	0.06	0.08***	0.10**	0.05*	0.07*	0.08**
Occupational category (ref: elementary)						
Legislators, senior officials and managers	0.39***	0.49***	0.51***	0.39***	0.49***	0.60***
Professionals	0.35***	0.41***	0.44***	0.30***	0.38***	0.48***
Technicians and associate professionals	0.16***	0.19***	0.21***	0.20***	0.26***	0.27***
Clerks	0.08**	0.07*	0.06	0.08***	0.09***	0.12***
Service workers and shop and market sales workers	0.07	0.05	0.01	0.09***	0.10***	0.12***
Skilled agricultural and fishery workers / Craft and related trades	0.07**	0.07**	0.04	0.04	0.07	0.09
Plant and machine operatives and assemblers	0.05*	0.06*	0.07	0.05	-0.00	0.05
Region (ref: West)						
North	-0.01	-0.01	-0.07*	0.003	-0.01	-0.01
South	0.02	0.02	-0.01	0.04	0.01	0.02
East	0.01	0.00	0.03	0.004	0.01	-0.02
Lambda	-	-	-	-0.10	0.10	0.01
Lambda^2	-	-	-	0.11	-0.04	0.05
Lambda^3	-	-	-	-0.02	0.02	-0.0002
Constant	2.08***	2.15***	2.34***	1.97***	2.01***	2.13***
Pseudo R Square	0.19	0.26	0.29	0.19	0.28	0.32
Unweighted No. observations	2773			1880		

Source: EU-SILC 2007.

*** p<0.001, ** p<0.01, * p<0.05

Bootstrapped standard errors with 100 replications

Table 5.11 Regression results for full-time men and women (Czech Republic)

	Men			Women (with selection correction)		
quantile	20th	50th	80th	20th	50th	80th
Actual work experience	0.02***	0.01**	0.01*	0.01**	0.01***	0.01*
Actual work experience squared (x1000)	-0.44 ***	-0.32***	-0.31*	-0.24**	-0.34***	-0.21*
Highest level of education (ref: secondary)						
Lower secondary or below	-0.10	-0.07	-0.05	-0.07**	-0.07**	-0.07
University	0.18***	0.17***	0.20***	0.22***	0.20***	0.22***
Born outside EU-25	-0.14	-0.16*	-0.24	0.04	0.06	0.05
Married	0.07***	0.09***	0.11***	-0.02	-0.02	-0.01
Managerial duties	0.13***	0.13***	0.15***	0.09***	0.13***	0.13***
Size of firm (ref: 50 or over)						
10 or fewer	-0.21***	-0.22***	-0.22***	-0.14***	-0.11***	-0.10***
11-49	-0.07***	-0.10***	-0.14***	-0.07***	-0.06***	-0.09***
On permanent contract	0.12***	0.08*	0.04	0.09***	0.06***	0.09*
Occupational category (ref: elementary)						
Legislators, senior officials and managers	0.30***	0.45***	0.63***	0.43***	0.46***	0.57***
Professionals	0.32***	0.42***	0.58***	0.45***	0.51***	0.53***
Technicians and associate professionals	0.29***	0.33***	0.37***	0.38***	0.43***	0.45***
Clerks	0.15*	0.17**	0.28***	0.24***	0.32***	0.36***
Service workers and shop and market sales workers	0.15**	0.22***	0.31***	0.05*	0.04	0.05
Skilled agricultural and fishery workers / Craft and related trades	0.15***	0.19***	0.25***	0.05	0.09***	0.12**
Plant and machine operatives and assemblers	0.11**	0.15**	0.22***	0.12**	0.14***	0.15**
Region (ref: East)						
Central	0.11***	0.08***	0.12**	0.10***	0.12***	0.16***
Moravia	0.03	0.004	0.02	-0.01	-0.001	-0.02
North	-0.02	-0.04	-0.02	-0.01	0.01	0.03
Lambda	-	-	-	0.30*	0.17	0.22
Lambda^2	-	-	-	-0.34	-0.21	-0.28
Lambda^3	-	-	-	0.10	0.08	0.10
Constant	0.57***	0.88***	1.09***	0.41***	0.57***	0.78***
Pseudo R Square	0.17	0.18	0.21	0.25	0.30	0.26
Unweighted No. observations	3130			2666		

Source: EU-SILC 2007.
*** p<0.001, ** p<0.01, * p<0.05, † p<0.10
Bootstrapped standard errors with 100 replications

Figure 5.6 compares the (simulated) selection-adjusted gender earnings gap with the raw gender earnings gap in Figure 5.2 by overlaying the two plots for each country. The selection-adjusted gender wage gap shows the difference between the distribution of men's full-time wages and the distribution of wages that women would earn if all women worked full-time. The extent to which the two plots are distinct (their confidence intervals not overlapping) indicates the degree to which

women's selection into full-time employment makes a difference to gender earnings gaps among full-time employees.

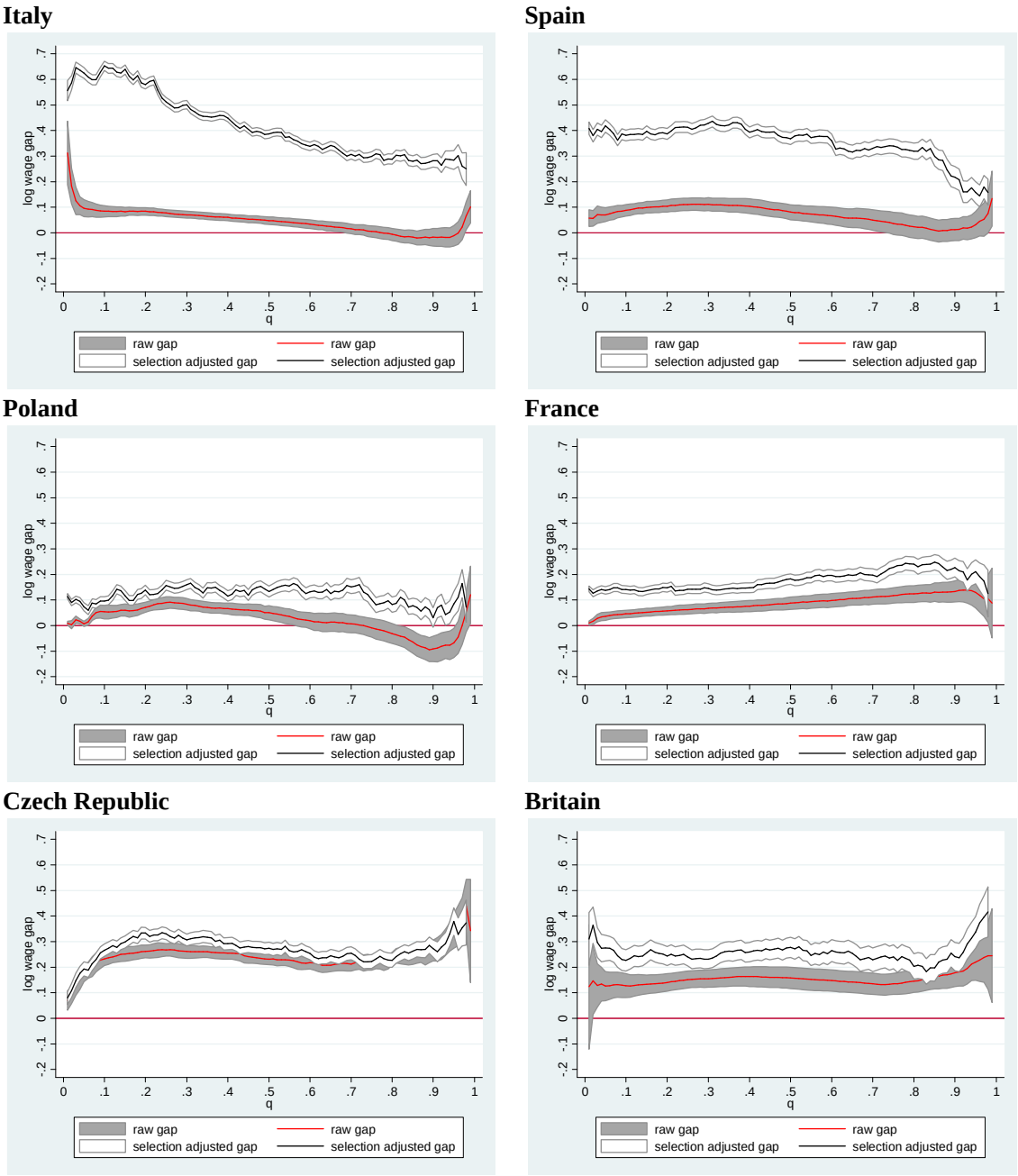
Consistent with the finding of a large positive selection effect in Italy, the selection-adjusted earnings gap is substantially larger than the observed raw gap at all points in the distribution, particularly at the bottom. There is a strong evidence of a sticky floors effect: if all women worked full-time, the gender wage gap would be largest for the lowest earners (60 lwp), dropping to 30 lwp at the top of the distribution. The findings are quite similar for Spain, although the gap is lower: the selection-adjusted gap is larger than the observed gap, especially at the bottom of the distribution. It is relatively stable at 40 lwp in the bottom half of the distribution, decreasing to 10 lwp at the very top.

In line with the finding of moderately positive selection effects in Britain, Poland and in France, the selection adjusted earnings gap in these countries is not substantially larger than the observed gap in absolute terms. However, it is large in relative terms: if all women worked full-time, the gender earnings gaps would be almost twice as high as currently observed in these countries. Furthermore, there is some evidence of a glass ceiling effect in France and in Britain. The two plotted gaps in Britain have very similar shapes and they overlap beyond the 8th decile, suggesting that the gender gap for the highest earners would not change significantly if all women worked full-time.

The selection-adjusted earnings gap in the Czech Republic closely matches the raw gap, with the confidence intervals intersecting at all points in the distribution except the section between the 2nd and 4th deciles, where the selection adjusted gap is somewhat larger. This is consistent with the finding of a small positive selection effect for women in that part of the distribution. Thus, if all women worked full-time, the gender wage gap across the distribution would not be significantly different from the gap currently observed. This is related to women working full-time having a largely similar distribution of characteristics to that of all women. This is not surprising given that the vast majority of prime-age women already work, and most of them work full-time.

To sum up, if all women worked full-time in each of the studied countries, the gender wage gap would be noticeably higher in the Southern-European countries (Italy and Spain) and somewhat higher in Britain, Poland and France, while it would hardly change from the current levels in the Czech Republic. It is important to note that this analysis is limited in a sense that it does not take into account any macro-level changes that would occur if all women worked full-time in the studied countries or whether they would all be able to find work. The purpose of the analysis is to illustrate the differences in the sizes of the selection effect in these countries.

Figure 5.6 Gender log wage gap between full-time men's wages and the wages that would be observed if all women worked full-time



Source: EU-SILC 2007 for Italy, Spain, France, Poland and the Czech Republic; BHPS 2005 for Britain.

Finally, Figure 5.7 provides the counterfactual distribution of the gender earnings gap for full-time employees that would be observed if women retained their own distribution of characteristics but were rewarded for them in the same way as men. The characteristics included in the simulation are the same as those in the earnings

function above. The simulated gap is substantially lower than the observed (raw) gap between full-time men and women's earnings across the distribution in each of the studied countries, which suggests that a substantial part of the raw gender wage gap is related to women earning lower returns to their labour market characteristics than men.

In Britain, Spain and France, the counterfactual gender wage gap would be negligible, suggesting that the earnings gaps currently observed are largely due to differences in the returns to characteristics. In Italy the simulated wage gap would be negative in the middle part of the distribution (around -5 lwp) and not significantly different from zero otherwise. This suggests that not only do men receive higher returns to their characteristics, but also that among middle-earners, women have a distribution of characteristics associated with somewhat greater earnings potential than men. It appears that full-time women's higher levels of education across the distribution (see Table A 5-5) are associated with this difference.

Similarly, the wage gap would be reversed in Poland, reaching -15 lwp at the top of the distribution. This indicates that women in Poland have a distribution of observed characteristics associated with higher earnings potential than men. If they received the same returns to these characteristics as men, female employees would be better paid than male full-time employees. Full-time female employees in Poland are more likely to have a university degree (39%) than male employees (21%), on average. In fact, more women have degrees than men within each quintile of the respective earnings distributions (for example, 81% of women in the top quintile of their earnings distribution have a university degree, compared with 50% of men; Table A 5-5). Women are also more likely than men to have a permanent contract within each quintile of the distribution and to work in a professional (ISCO-2) occupation. Although men have slightly more years of work experience across the distribution than women and are somewhat more likely to have managerial duties, these differences are negligible.

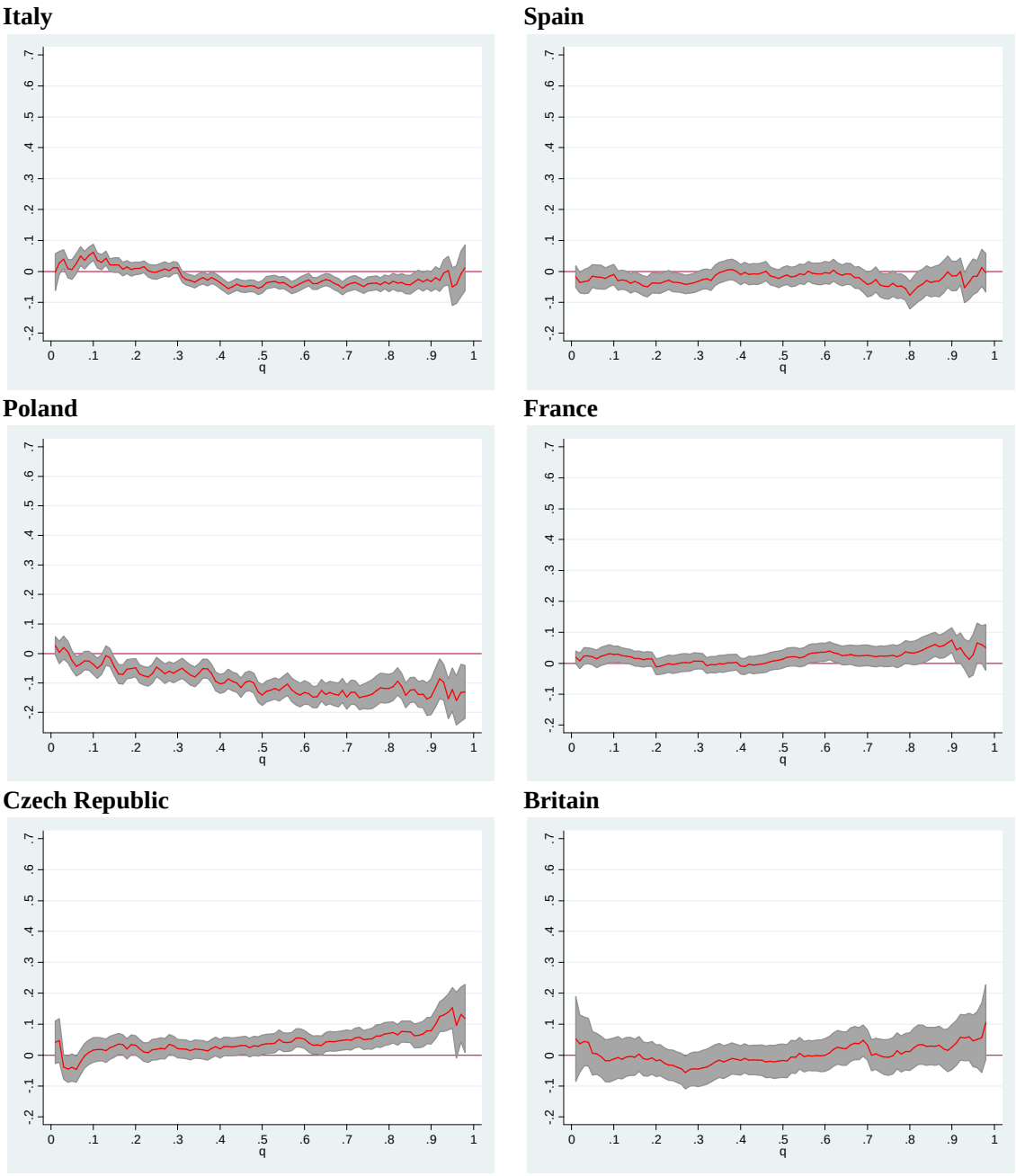
Finally, if full-time women were paid like men, the wage gap would disappear in the bottom half of the distribution in the Czech Republic, but remain positive in the top

half, with a glass ceiling effect indicated. It would still be substantially lower than currently observed (below 20 lwp). These results indicate that at least a small part of the large unadjusted gender wage gap in the Czech Republic (Figure 2) is due to gender differences in the distribution of characteristics. While male and female full-time employees tend to have quite similar levels of education and work experience, men are more likely to have managerial duties, to work in managerial occupations, and to work in larger workplaces than women across the distribution (Table A 5-7).

To sum up, substantial unexplained gender differences in returns to observable characteristics for full-time employees are found in each of the studied countries. If full-time female employees were paid like men, the observed gender wage gaps across the distribution would disappear or even reverse (in Poland and, to a smaller extent, in Italy). Only in the Czech Republic is some evidence of gender differences in the distribution of characteristics found, and only among top earners: if Czech women were paid like men, a moderate positive wage gap in the top quintile of the distribution would remain. This gap would still be much lower than currently observed.

Even so, given the evidence of positive selection into full-time work for women in five out of six countries studied here, if all women worked full-time (including those with lower earnings potential), the gender wage gaps due to differences in the distribution of observed characteristics would likely persist in these countries even if women had male returns to these characteristics.

Figure 5.7 Log wage between full-time men and women paid like men



Source: EU-SILC 2007 for Italy, Spain, France, Poland and the Czech Republic; BHPS 2005 for Britain.

Summary and conclusion

This chapter has investigated the gender earnings gap across the distribution, using the quantile regression decomposition method (Machado & Mata, 2005) with sample selection adjustment to account for possible non-random presentation of women into full-time work (Albrecht et al., 2009), in six large European countries.

The mean gender wage gap among prime-age full-time employees is lowest in Poland (3 lwp) and highest in the Czech Republic (24 lwp). However, the mean gender wage gaps hide substantial variation in the earnings gap across the distribution. In Italy, Spain and in Poland, the relatively small earnings gap decreases across the distribution, while in France and in Britain the earnings gap increases steadily, indicating a glass ceiling effect. The highest overall earnings gap is observed in the Czech Republic: it has an S-shape with steep increases both in the bottom and top deciles of the distribution.

Non-random selection of women into full-time employment plays an important role in Italy and Spain and, to a smaller extent, in Britain, France and Poland. Thus, women who work full-time tend to have the characteristics associated with a higher earning potential. For the Czech Republic alone, little evidence of a selection effect is found. Among the determinants of women's full-time employment (as opposed to part-time work or non-participation), the number and age of dependent children are found to play an important role. In Poland and the Czech Republic, the presence of pre-school children has the strongest negative effect on the propensity to work full-time. This is consistent with those countries' low ranking on the work/family reconciliation index in Chapter 3.

If all women worked full-time in each of the studied countries, the gender earnings gap would be lowest in Poland and in France, largest in Italy and Spain and middling in the Czech Republic and Britain. However, in Italy and Spain it would be substantially greater than currently observed, as women with lower earnings potential (re-)entered the labour market on a full-time basis, while in the Czech Republic the selection-adjusted gender earnings gap would largely remain at the current high level.

This is consistent with the finding of a very low selection effect in the Czech Republic.

Substantial unexplained gender differences in returns to observable characteristics for full-time workers are found in all of the studied countries: if full-time female employees were paid like men, the observed gender wage gaps across the distribution would largely disappear or even reverse. In Italy, Spain, Britain and France, the gender wage gap for full-time employees would become insignificant. In Poland it would actually reverse, with increasingly larger gender wage gaps in favour of women towards the top of the earnings distribution.

Only in the Czech Republic would a small gender wage gap in favour of men remain at the top of the distribution, largely due to women having a distribution of workplace characteristics associated with a lower earnings potential than men. However, if all women in the studied countries worked full-time, including those with lower rewarded productive characteristics, a gender wage gap would be likely to persist even if women were paid like men.

In each of the countries studied here, there is a scarcity of women in higher status positions in the workplace. Full-time women are substantially less likely to work in managerial occupations and to hold supervisory duties than men both on average and within each quintile of the earnings distribution. They are also typically less likely to work in larger organisations and to have permanent contracts. To address the issue of gender differences in workplace characteristics in more depth, the next chapter focuses on occupational gender segregation in 26 European countries.

Chapter 6 Cross-national variation in occupational gender segregation

This thesis focuses on two forms of gender inequality in the labour market: pay gaps and occupational segregation. The previous chapter analysed the gender gap across the earnings distribution of full-time employees in five countries with different work/family reconciliation policies and different levels of earnings inequality. In each of these countries, women tend to receive lower returns to their labour market characteristics than men, including workplace characteristics such as the major International Standard Classification of Occupations (ISCO) group of the occupation they work in. Female full-time employees are substantially less likely to work in managerial occupations and to hold supervisory duties in the workplace.

Both men and women working full-time are at risk of occupational downgrading by skill or occupational hourly wage when they switch to part-time work, according to the findings in Chapter 4 for 13 of the old-EU member states. However, women are more likely to switch to part-time work than men, on average, especially after having a child. Recent childbirth is found to be associated with a higher probability of moving from full-time to part-time work for women in the Netherlands, Belgium, Austria, the UK and Italy. In all of these countries except Belgium, switching to part-time work substantially increases the likelihood of moving into an occupation with lower educational requirements or average hourly wages than before. This chapter analyses implications of this potential occupational gender segregation[86] in the enlarged EU in more depth.

Women in the EU are concentrated in a narrow range of occupations, in spite of dramatic increases in labour force participation in recent decades (European Commission, 2009). Gender-based occupational segregation is one of the most durable aspects of labour markets around the world. As such, it increasingly attracts the attention of policy-makers and researchers. With nearly half the labour force effectively excluded from many occupations, human capital is wasted and the labour markets stay fairly rigid and inefficient (Anker, 2001). Moreover, occupational

[86] Occupational gender segregation and occupational segregation by sex are used interchangeably here.

gender segregation adversely affects women's status, income, and expected returns on human capital investment, perpetuating gender inequality into future generations.

To address the fourth research question of the thesis ("how does occupational gender segregation vary across the EU?"), this chapter focuses on gender differences in occupational distributions in 25 European countries and explores cross-national variation in occupational gender segregation levels using summary measures and log-linear methods. It seeks to shed light on the macro-level factors associated with cross-national differences in segregation levels. The following section reviews recent research on occupational gender segregation, relevant economic and sociological theories of segregation and measurement issues in segregation studies. The rest of the chapter describes the data, variables and methods used in the analysis and presents the empirical results.

Literature review

This section introduces the subject of occupational segregation by sex and gives an overview of recent literature on theories of segregation, research findings and issues in measurement.

Occupational gender segregation refers to "inequality in the distribution of male and female workers across occupational groups" (Chakravarty & Silber, 2007, p.185). Thus, it is a different concept from "concentration", which denotes the over-representation of men or women in a particular occupation, while segregation refers to the entire occupational structure. The two concepts are closely related, as "segregation measures the combined effect of concentration in all the occupations involved" (Blackburn & Jarman, 2006, p.290). Furthermore, the horizontal and vertical dimensions of occupational segregation are often distinguished in the literature. Vertical segregation refers to occupational hierarchy, either in the same field (e.g. surgeons versus general practitioners) or across the entire occupational structure (e.g. manual versus professional occupations), whereas horizontal segregation denotes unequal distribution of men and women across occupations with somewhat similar requirements, but in entirely different areas of work (e.g. female

carers versus male refuse collectors), according to Fortin and Huberman[87] (2002). Horizontal segregation can also be defined as the gender divide across lower status manual and non-manual occupations (i.e. women being concentrated in non-manual semi-professional, clerical, sales and service occupations and under-represented in manual occupations such as trades and crafts) (Charles, 2003). Blackburn and Jarman (2006) argue that it is vertical segregation that is central to the study of inequality. However, horizontal segregation is no less important if female-dominated occupations are undervalued (see Grimshaw & Rubery, 2007) and women have no access to better rewarded male-dominated occupations with broadly similar educational and/or skill requirements.

The main strands of gender occupational segregation research include inter-temporal patterns in segregation over the 20th century (Gross, 1968 for the US; Hakim, 1979 for Great Britain; Jacobs, 1989a for 56 countries; Rubery & Fagan, 1993 for the EU; Fortin & Huberman, 2002 for Canada; P. England, 2006 for the US), patterns of cross-national variation in occupational segregation (Charles, 1992; Anker, 1998; J. Dolado et al., 2003), segregation in specific professions (e.g. Truss, 1993 for secretarial occupations), occupational segregation as a predictor of gender wage gaps (e.g. F. D. Blau & Kahn, 2003), and the relationship between occupational segregation and female employment (Bettio, 2002) as well as other macro-level factors (Charles, 1992; Nermo, 2000). The literature on occupational segregation in European countries is relatively scarce and somewhat outdated. More recent studies include Dex et al. (2008) for England and Wales and Dolado et al. (2003) for the EU compared with the US.

Using data for Britain from the 1980 General Household Survey, Miller (1987) found that occupational segregation, based on six broad occupational categories, made a relatively small contribution to the overall gender wage gap amongst married adults. Thus, even if male and female employees had similar occupational distributions, the gender wage gap would only be 5 percentage points lower than the observed 60% gap. Most of the wage differences were found within broad occupational groups.

[87] The example of horizontal segregation in Fortin and Huberman (2002) is female nurses versus male truck drivers, but it can be plausibly argued that these occupations require different skills and qualifications.

Blau and Kahn (2003) also find a positive but small and insignificant effect of occupational segregation (based on 75 occupational categories), after controlling for collective bargaining coverage, parental leave, unemployment insurance and job protection policies, in their international study of gender wage gaps in 22 industrialised countries over the 1985-1994 period.

Dex et al. (2008) examine the changes in male and female occupational distributions between 1981 and 2001, using Census data for England and Wales. The proportion of women in managerial occupations rose from 5% to 11% by 2001, but remained below that of men (19%). At the same time, the proportion of women in professional and associate professional groups rose from 17% to 24%, almost catching up with the percentage of men in such occupations (26%). At the same time, the proportion of women in administrative and secretarial occupations and in personal service occupations fell from 30% to 23% and from 21% to 13%, respectively. However, the movement of women out of typically female occupations was not matched by the movement of men into them, as the proportions of men in these occupations remained very low over the studied period.

Dolado et al. (2002; 2003) find higher levels of occupational gender segregation in the EU than in the US in 1999, using the index of dissimilarity[88] with 108 occupations. They use data from the 1999 European Labour Force Survey for 13 EU countries and the 1999 Current Population Survey for the US. Southern European countries are found to have more similar (low) levels of segregation to the US, with the largest differences found for Scandinavian countries, Austria, Germany and the UK. The study confirms earlier results for Europe by Rubery and Fagan (1993) and Anker (1998), covering the 1980s. Differences in segregation levels between the EU and the US are found to be particularly high for the group of highly educated women aged 35-44. Dolado et al. (2003) find that the sex composition effect[89] dominates in explaining the reduction of occupational segregation across age cohorts, rather than

[88] The "Index of Dissimilarity" was developed by Duncan and Duncan (1955) to study residential racial segregation and has been widely used in studies of occupational gender segregation since the study by Gross (1968).
[89] The effect of the sex composition of occupations, holding the size of occupations constant.

the occupational mix effect[90]. For example, the sex composition effect explains 85% and 91% of the decrease in occupational segregation for highly educated women aged 25-34 relative to the 35-44 group in the US and in the EU, respectively. The study finds a positive correlation between the level of occupational segregation and the share of part-time jobs in the economy, but no significant correlation between occupational segregation and the 'unexplained' component of the gender wage gap.

Theoretical explanations of occupational segregation

Neo-classical economic theories have been very influential in explaining occupational gender segregation. For instance, Polachek (1981) showed that women's intermittent labour force participation was associated with a substantial proportion of the difference in the male and female occupational distributions, using data from the US National Longitudinal Survey. If women had zero 'home time', the number of women in professional and managerial occupations would increase by 35% and 133%, respectively, while the presence of women in menial occupations would decrease by more than one-quarter (S.W. Polachek, 1981, p.68). This suggested women's expected life cycle labour force participation patterns were related to their occupational 'choices': women would prefer occupations with lower rates of human capital depreciation during their time out of the labour force. Furthermore, a complementary human capital approach suggested that women would opt for occupations with higher starting wages and lower returns to experience in the knowledge that their labour force participation would be interrupted (Zellner, 1975). Similarly, Becker (1993, p.56) argued that the household responsibilities of married women limited their time and energy for market activities and investment in market-specific human capital, which could explain much of the gender difference in earnings and occupational attainment. Anticipating lower returns in the labour market, women would further reduce their investment in market capital. Thus, the human capital model is sometimes used to describe the persistent occupational segregation by sex in terms of women's lower productivity in the labour market (due to their lower endowments, higher family constraints, and preferences for jobs more compatible with their household activities).

[90] The effect of the occupational mix of the economy, holding the sex composition of occupations constant.

However, the main assumptions of the human capital theories of occupational gender segregation have been criticized. These theories emphasize the life cycle utility maximising labour supply behaviour of women, largely ignoring that occupational choices are often made in a short-term perspective in response to social and economic constraints and opportunities (Jacobs, 1989b). Furthermore, according to Anker (2001), the human capital theory does not fully explain the persistence of occupational segregation by sex in developed countries in light of women's increasing education and labour market experience, falling intensity of household chores due to the use of modern household appliances[91], and the prevalence of female-headed households. Although occupational gender segregation has decreased in many countries over the past several decades, Anker (2001, p.132) argues that it remains very high.

Furthermore, female dominated occupations do not necessarily have lower human capital depreciation rates or higher starting wages. For instance, England (1984) found no significant interaction between the length of time out of labour force and the female share in the occupation, controlling for education and experience, using 1974 data for women from the US Panel Study of Income Dynamics. Thus, wage depreciation during 'home time' did not vary between typically male and female occupations. Furthermore, the study found higher wage returns for women working in male-dominated occupations, both at the start of the career and later on, contesting Zellner's (1975) hypothesis that typically female occupations had higher starting wages and lower returns to experience.

In spite of the criticisms of the human capital model in relation to occupational segregation, other neo-classical theories are often used to explain gender differences in occupational attainment. For instance, the theory of statistical discrimination (see Arrow, 1998) posits that given the differences in average productivity between two groups in the presence of high information costs associated with evaluating the productivity of each (prospective) worker, it may be rational for employers to

[91] However, there are still considerable gender differences in the division of child-care labour in two-parent families, with mothers performing more of the time-consuming care labour (e.g. physical care and travel) than fathers even if both participate in the labour market, as indicated by time-use surveys in developed countries (Finch, 2006; Craig, 2006).

discriminate against individuals from the *on average* less productive group based on their readily observable characteristics (e.g. sex, race). Although this theory is relevant to recruitment, it is less useful for understanding gender discrimination in promotion, since information costs are much lower (Anker, 2001). Moreover, statistical discrimination arguably offers a more viable explanation of occupational segregation in segmented, rather than competitive, labour markets (Jacobs, 1989b).

The compensating differentials model, another neo-classical theory, is also sometimes used to explain women's preference for some occupations and lower pay in female-dominated occupations. It states that women seek occupations with good working conditions and fringe benefits. Since these occupations are partly rewarded in non-monetary terms, their actual pay is lower. However, there is little empirical support for this model with respect to occupational segregation, since many of the low-paid female-dominated occupations do not have 'pleasant working conditions' (Anker, 2001, p.135) and jobs with onerous physical environments do not always carry a significant wage premium for either men or women (Kilbourne et al., 1994)[92]. However, due to gendered division of domestic labour, women may opt for female-dominated and lower paid occupations with flexible working conditions out of necessity, without preferring flexible working conditions to a greater extent than men (Bettio & Verashchagina, 2009b, p.41).

Similar to the economic theories that emphasise personal preferences, Hakim (1991; 1995) argues that women in industrialised countries fall into at least two 'qualitatively different' groups in terms of their commitment to market employment: those who prioritise long term career plans and full-time work, with their orientation to work similar to that of men; and those who prefer the domestic sphere, make little investment in market skills and seek flexible jobs most compatible with family life. The latter group of women would thus be more likely to choose lower status, routine work occupations (often working part-time), while the former group of women tend to work in higher paid and higher status occupations (Hakim, 1995). Thus, occupational segregation reflects the outcomes of the personal preferences of different types of women. This argument has been widely criticised in sociological

[92] Based on data from the US National Longitudinal Study, 1968-1981 waves.

literature on the grounds that many women aspire to both career and family fulfilment (Ginn et al., 1996; Crompton & Harris, 1998) and that there is no empirical evidence to support Hakim's claim that women have unconstrained life choices or that women with different work histories have entirely opposing attitudes to employment (McRae, 2003). In her later work, Hakim (2000) elaborated the preference theory, arguing that both the career-centred and home-centred women were the minority, with the majority[93] of women aiming to combine careers with motherhood. In spite of the earlier critique of Hakim's argument, the idea that careers are central for only a minority of women found empirical support (McRae, 2003). Furthermore, based on the preference theory, Esping-Andersen (2002) argues that the 'women-friendly' policies are only relevant to the (majority) group of women who favour the dual roles of mothers and workers and, being unwilling to forgo motherhood for the sake of a career, tend to work in flexible, female-dominated occupations.

In contrast to theories of occupational segregation that emphasise individual choice, non-economic (e.g. feminist) theories maintain that occupational segregation can be shaped by societal context, which includes major institutions (such as education systems, welfare regimes) and the ideas of masculinity and femininity prevailing in the society (Crompton & Harris, 1998). Such theories highlight the role of gender stereotypes held by employers and societies at large in affecting differential occupational attainment of men and women. As the discussion in Chapters 2 and 3 showed, even welfare state institutions in industrialised countries, such as the tax and benefit rules and parenthood leave provisions, are founded on the assumption of gendered division of labour, with women being responsible for unpaid care work and men for paid market work (see Orloff, 2009).

Since household chores and childcare are still widely seen as women's responsibility, employers may be biased against female workers, thus perpetuating the stereotypes. This, in turn, helps explain why women make fewer investments in labour market skills and why they are more likely to choose the fields of study less rewarded in the labour market. Moreover, typically female activities have been and still are

[93] "Potentially encompassing 80% of all adult females" (Hakim, 2000, p.165).

culturally devalued, as demonstrated by the pay penalty associated with working in a female-dominated occupation and the generally low esteem attached to unpaid caring work, according to England (2006). Feminist theories also predict that women are over-represented in occupations that are most consistent with their 'female' characteristics and most similar to the tasks they do at home, such as looking after children. Anker found support for this theory in his study of occupational segregation in 41 countries: he concluded that female-dominated occupations closely reflected typical gender stereotypes about women (1998, p.276).

The influence of labour market discrimination on observed occupational gender segregation in industrialised countries has also been suggested in both sociological and economic research. However, no conclusive evidence of a causal link exists so far. The ways in which women gravitate towards lower-paying occupations because of "gender biases in hiring and promotion" are very hard to document and measure (de Ruijter & Huffman, 2003). Deeply rooted gender role attitudes that make it difficult for women to enter male-dominated occupations have been commonly cited as the source of horizontal occupational sex segregation (e.g. Fortin & Huberman, 2002). Likewise, "social attitudes and cultural biases" discriminate against women and keep them from reaching high-level occupations typically occupied by men, resulting in vertical segregation (OECD, 2002, p.95). Furthermore, women who succeed in entering typically male occupations may face severe obstacles to career advancement (Bergmann, 2005). It has been argued that both employees' preferences and labour market discrimination may determine gender differences in occupational distributions, but it is difficult to distinguish between the two empirically (F. D. Blau & Kahn, 2000, p.89).

One of the ways to glean an insight into the forces behind occupational segregation by sex is to study international variation in the extent to which employed men and women are found in different types of jobs. Although causal inferences are hard to make, comparative studies help explore the ways in which differences in institutions are associated with differences in segregation levels. The next sub-section reviews comparative scholarship on occupational gender segregation.

Cross-national studies of occupational gender segregation

Although historical analysis of occupational gender segregation in individual countries tend to dominate the research field, cross-national studies have recently become more common. Such studies find remarkably different levels of occupational segregation across countries, although differences across Western European countries tend to be smaller (Jacobs & Lim, 1992; Rubery & Fagan, 1993; Charles, 1992; Anker, 1998; Nermo, 2000; J. Dolado et al., 2003). Not only concerned with comparing the levels of segregation, some of these studies explicitly address the question of what macro-economic factors influence cross-national variation in segregation, mostly using log-linear modelling methods (e.g. Charles, 1992; Charles & Grusky, 1995; Nermo, 2000). Log-linear modelling has long been used in social mobility sociological research (see Erikson & Goldthorpe, 2002) and became popular in cross-country sex segregation research in the 1990's.

Charles (1992) analysed cross-national variation in occupational sex segregation in 25 industrialised countries, using occupational macro-level International Labour Organisation statistics for 1985. The aim of the study was to explain the international variation in sex segregation levels with relevant economic, social and cultural macro-level characteristics. The analysis involved log-linear modelling of observed frequencies in a 300-cell matrix (6 occupations; 2 sexes; 25 countries). The study found overall positive effects of the size of the employee class, the size of the service sector, and corporatism on segregation, as well as negative (i.e. more 'integrative') effect of fertility rates, gender egalitarianism[94] and labour force growth. None of the new accession EU member states were included in the study, however.

Nermo (2000) examines sex segregation in the labour market in seven countries (Sweden, Norway, Finland, UK, US, Austria and Spain), net of employment sector and work time effects, also using log-linear modelling. The study uses cross-nationally comparable micro-data from the Luxembourg Employment Study[95]. A stronger association between sex and occupation is found for Finland, Norway and

[94] Gender egalitarianism index was based on principal component analysis of three dummy variables: legal availability of abortion on request; marital rape defined as a crime; and at least 12 weeks of statutory paid maternity leave.

[95] 1989 data for the UK, 1990 for Finland, Norway, Sweden and the US, 1991 for Austria, and 1993 for Spain (Nermo, 2000, p.304).

the UK than for Sweden, Austria, Spain or the US, although overall the levels of sex segregation are broadly similar across the seven countries[96]. Cross-national variation in the distribution of employment sector (services versus manufacturing) across sex and occupation is found to have an effect on the relative strength of association between occupation and sex across countries. Evidence of higher segregation in the service sector than in the industrial sector is found for the US, Sweden, Finland and Austria, while the reverse is found for Spain. Part-time work, however, is not found to have an influence on the cross-national pattern of sex segregation.

Charles (2003) studies vertical and horizontal dimensions of occupational gender segregation in a cross-national perspective in 10 industrialised countries[97], using data from the 1990 ILO labour force statistics. None of the new accession states is included. Vertical segregation is defined on the aggregated level of major ISCO groups by an internationally comparable measure of occupational status[98]. Horizontal segregation is defined in terms of non-manual (managerial; professional; associate professional; clerical; service/sales) and manual (agriculture; craft; operative and labourer) occupational groups. A model that allows for both horizontal and vertical segregation shows that: 1) women tend to be under-represented in the manual sector and 2) women's occupations have lower average socio-economic scores in both manual and non-manual sectors.

Controlling for vertical segregation, the highest levels of horizontal segregation are found in France and Sweden and the lowest levels are found in Portugal and Italy (Charles, 2003). The strongest vertical segregation is observed in France and the UK, while Portugal and Italy show the lowest levels of segregation. The finding of weak segregation on both dimensions in Italy and Portugal suggests that women tend to be positively selected into higher status white-collar work and negatively selected into lower status blue-collar work due to the low availability of low status non-manual occupations (e.g. service/sales) that are female-dominated in most other countries

[96] A log linear model of constant segregation across the studied countries mis-classified only 7% of the cells in the 1120-cell contingency table with categories of occupation, sex, country, work-time and sector of employment (Nermo, 2000, p.314).
[97] Belgium, France, Germany, Italy, Portugal, Sweden, Switzerland, UK, US, and Japan.
[98] The socio-economic index by Ganzeboom and Treiman (1996). The ranking of the socio-economic index (SEI) of occupations matches the ranking of the ISCO major groups with the exception of managerial occupations that are ranked second on the SEI measure and first on the ISCO measure.

(2003, p.275). Cross-national variation in the dimensions of occupational segregation is found to be related to macro-level cultural and structural variables. Gender egalitarianism[99] is found to be related to lower levels of vertical segregation in the white collar sector, while post-industrialism[100] is found to be positively associated with horizontal segregation and vertical segregation in the blue-collar sector. Similarly, Mandel and Semyonov (2006) find that developed welfare states with large public service sectors are characterised by higher levels of female labour force participation and, at the same time, over-representation in female-typed (non-manual) occupations and under-representation in managerial occupations.

The measurement of occupational segregation

This section overviews the benefits and the limitations of the most common approaches to measuring occupational gender segregation. The prevailing method relies on constructing scalar segregation indices which denote the extent of deviation from a counterfactual integrated structure of employment.

The Index of Dissimilarity (ID) was proposed by Duncan and Duncan (1955) for the study of residential racial segregation in the US and was later adopted for the study of occupational gender segregation (Gross, 1968). The ID has been by far the most popular summary index of occupational gender segregation, particularly in single-country studies without time trends. It is straightforward in both its computation and interpretation.

The ID is defined as follows:

$ID = 1/2 \sum_{j=1}^{J} \left| \frac{fj}{F} - \frac{mj}{M} \right|$, where

f_j and m_j denote the number of women and men in the *j*th occupation, while F and M are the total numbers of women and men in the labour force, respectively. The ID can be interpreted as the proportion of either men or women who would have to leave the occupations previously dominated by their group, without replacement, in

[99] Defined as the proportion of national respondents in the 1990 World Values Survey disagreeing with the statement that 'men have greater rights to jobs during periods of high unemployment' .
[100] Measured as the mean of standardised scores on service-sector size and size of the employee sector.

order to achieve a gender-integrated occupational distribution (Watts, 1995, p.3). The value of the index ranges between 0 (full integration) and 1 (complete segregation, i.e. men and women work in entirely different occupations). By definition, the ID assumes that a fully integrated occupational structure would be achieved if in each occupational category the share of female and male employees were the same as the share of female and male workers in the total labour force, respectively. Thus, an integrated occupational structure can exist even if men substantially outnumber women in the labour force (and in each occupation). The ID satisfies four important properties of a gross index of segregation (Watts, 1998): organizational equivalence[101], size invariance[102], gender symmetry[103], and the principle of transfers in its weak form[104].

However, the ID has several well documented conceptual and methodological limitations. On a conceptual level, it is criticised for obscuring the sources of segregation by summarising all the deviations from an integrated occupational distribution in a single measure (Charles, 1992). Furthermore, in a cross-country comparative perspective, the same value of the segregation index may denote different types of occupational inequality and have different implications in terms of status, pay and career opportunities (Rubery & Fagan, 1995). At the same time, the main methodological limitation of the index is its sensitivity to the size of occupations (i.e. the ID fails to exhibit *occupations invariance*). This makes the ID less useful for the analyses of variation of segregation over time or across countries because the size of occupations can vary across countries or across time. To address this issue, a size-standardised version of the index that controls for the size of occupations was proposed by Gibbs (1965). It was used for comparative and historical studies of segregation (Gross, 1968; Das Gupta, 1987; Jacobs, 1989a). Although it controls for differences in occupational sizes, the size-standardised index

[101] Organizational equivalence refers to the invariance of the index to either a combination of two occupations with similar gender distributions or a division of an occupational category into two groups with identical segregation patterns.
[102] Size invariance denotes the invariance of the index to proportional changes of the populations of men and women.
[103] Gender-symmetry refers to the index being unaffected if data on females is replaced by the corresponding data on males.
[104] The principle of transfers in its weak form stipulates that if a female worker moves from a female-dominated occupation to a male-dominated occupation and her former place is taken by a male employee from a male-dominated occupation, the magnitude of the index falls.

is criticised for its sensitivity to differences in the participation rate of the minority group, i.e. it is not *composition invariant* (Semyonov et al., 2000). This can be a serious concern if the size-standardised ID is used to compare occupational gender segregation across countries with different female participation rates. The original ID does not have this limitation, as it is invariant to the sex composition of the labour force. However, Jacobs (1993) argues that the limitations of the index of dissimilarity are not significant enough to merit its replacement. This may explain why the index of dissimilarity has remained widely used, although often in conjunction with other indices.

Furthermore, the value of ID may vary with the level of aggregation of occupational categories. The more narrowly defined the occupational categories are, the higher the measured level of segregation tends to be. This suggests that occupational segregation is likely to be more pronounced across narrowly defined job categories than across broad occupational groups, which often mask the level of segregation within them. However, using highly disaggregated occupational categories becomes problematic if there are very few cases in some of them, since such small occupations will disproportionately affect the overall value of ID (Jacobs, 1993). Most cross-national studies of occupational sex segregation use highly aggregated occupational categories (e.g. one-digit ISCO) instead of more narrowly defined ones, because they are more comparable across countries (Watts, 1998). A common approach in cross-country studies using a segregation index is to check that the cross-national pattern of segregation based on highly aggregated occupations is the same as that obtained from more disaggregated ones (Nermo, 2000).

Alternative indices of segregation were proposed in sociological research to counter the failure of the index of dissimilarity to exhibit occupational invariance (e.g. Karmel & Maclachlan, 1988; Charles & Grusky, 1995), but they tend to have limitations of their own. The Karmel-MacLachlan (1988) index is neither occupation nor composition invariant, so it is not useful for cross-national studies, while the logarithmic index[105] proposed by Charles and Grusky (1995) does not exhibit

[105] $A = \frac{1}{J}\sum_{j=1}^{J}\left|\ln\frac{fj}{mj} - \frac{1}{J}\left[\sum_{j=1}^{J}\ln\frac{fj}{mj}\right]\right|$, where fj and mj are the numbers of women and men, respectively, in occupation j.

organizational equivalence and is sensitive to the extent of occupational disaggregation (Watts, 1998). However, the logarithmic index derived from log-linear models of gender, occupations and national factors, can be used for cross-national studies of occupational segregation because it is both occupation and composition invariant (Charles, 1992). As a margin-free measure of occupational segregation, it is a suitable approach for the analysis of cross-national variation in the association between occupations and gender rather than for the study of absolute levels of segregation, which are influenced by the occupational structure and the gender composition of the labour force (Nermo, 2000).

At the same time, a different strand of segregation research adapted the methodology of income inequality analysis. Hutchens (2004) proposed an index measure ("square root index"), showed that it satisfied seven properties of a good index of segregation and illustrated how it could be applied to occupational segregation by sex. The square root index S is defined as follows:

$S = \sum_{j=1}^{NJ} \left[\left(\frac{fj}{F}\right) - \sqrt{\frac{fj}{F} \cdot \frac{mj}{M}} \right]$, where

f_j and m_j denote the number of women and men in the *j*th occupation. One of its useful properties is that the total index is 'additively decomposable' by subgroups of occupations, so the total index can be decomposed into segregation 'within' the sub-groups and 'between' the subgroups. By comparison, the ID lacks this property, while the Charles (1992) and Charles and Grusky (1995) structural approach allows modelling 'within' and 'between' sub-group effects in a log-linear framework. However, unlike the logarithmic index derived from log-linear modelling by Charles (1992), the square root index exhibits organisational equivalence (property P4 'insensitivity to proportional divisions' in Hutchens (2004)).

Similarly to the ID, the square root index ranges from 0 (full integration) and 1 (total segregation), although it lacks the simple interpretation of the ID. The square root index S can be interpreted as the sum across all occupational categories of each occupation's deviations from "distributional evenness", while for each occupation this deviation is the difference between the geometric mean of the shares of different sexes in the absence of segregation (i.e. the counterfactual) and the geometric mean

of the observed shares (Jenkins et al., 2008, p.24). In the absence of segregation, the proportion of women working in the *j*th occupation out of all female workers would be equal to the proportion of men in the *j*th occupation out of all male workers ($f_j/F=m_j/M$). The square root index is invariant to both occupational structure (i.e. number and size of occupations) and composition of the labour force (Mora & Ruiz-Castillo, 2008).

Thus, the square root index is the suitable measure of occupational gender segregation across countries. This index has been notably underused in cross-national studies of occupational segregation, although it has been employed in cross-national research on social segregation in secondary schools (Jenkins et al., 2008). This chapter makes an original contribution to the cross-country comparative literature on occupational gender segregation by using both the ID and the square root index to compare the levels of occupational segregation in the enlarged EU.

Data and methods

This chapter uses two summary indices to compare the levels of segregation across 25 European countries: the Duncan and Duncan (1955) index of dissimilarity (ID) and the square root index S (Hutchens, 2004). The ID is chosen for its parsimony and because it is widely used in sex segregation literature in spite of being sensitive to differences in occupational structure. The square root index is used because it is proven to be a good index of segregation (2004); it can be decomposed into the within and between components; and is relatively under-used in sex segregation literature, while it has become popular in the studies of educational segregation (e.g. Jenkins et al., 2008). To the extent that the two indices result in different cross-country patterns of segregation, the difference could be attributed to the ID being sensitive to occupational structure differences, which can be further investigated.

Data from the EU-SILC 2007 is used for the analysis in this chapter. See Chapter 5 for the description of the dataset. Measures of segregation are based on the eight major (one-digit) and 26 minor (two-digit) ISCO-88 groups[106] available in the EU-SILC 2007. The armed forces category is excluded because it is almost entirely

[106] EU-SILC variable PL050. See Annex 4 of the EU-SILC UDB Variables Description version 2007-08-09 for a full list of two-digit occupational groups.

composed of men. The EU-SILC does not offer a finer degree of disaggregation than the two-digit groups. The aggregated one-digit groups are:

- Legislators, senior officials and managers;
- Professionals;
- Technicians and associate professionals;
- Clerks;
- Service workers and shop and market sales workers;
- Skilled agricultural and fishery workers combined with craft and related trades workers;
- Plant and machine operators and assemblers;
- Elementary occupations.

Both full-time and part-time employees are used in the analysis, although the self-employed are excluded to facilitate comparison with the results presented in Chapters 4 and 5. Similarly to the analysis in the two previous chapters, the working sample is limited to adults in the 25-55 age bracket.

In order to test whether there is a significant variation in the levels of segregation across the 25 studied countries, log-linear modelling with iterative proportional fitting (see Deming & Stephan, 1940; Agresti, 2007) is used to model observed frequencies (cell counts) in contingency tables with four or five categorical variables. Importantly, all of these variables are treated as 'responses', rather than one dependent and a number of independent variables, as it would be the case with logistic regression. This is because the relationships amongst all of these variables are the object of interest.

To illustrate, for a four-way contingency table (with categorical variables W, X, Y, and Z), the most complex *saturated* model with all main effects and interaction terms is:

$$\log \mu_{ijkl} = \gamma + \gamma_i^W + \gamma_j^X + \gamma_k^Y + \gamma_l^Z + \gamma_{ijk}^{WXY} + \gamma_{ijl}^{WXZ} + \gamma_{ikl}^{WYZ} + \gamma_{jkl}^{XYZ} + \gamma_{ijkl}^{WXYZ}$$

where, μ_{ijkl} is the cell count in each cell; *i, j, k,* and *l* are the dimensions[107] of the contingency table; and γ are effect parameter estimates. This model would fit the data perfectly, but it is not parsimonious.

In contrast, a *complete independence* model would not have any interaction terms:

$$\log \mu_{ijkl} = \gamma + \gamma_i^W + \gamma_j^X + \gamma_k^Y + \gamma_l^Z$$

Between the most complex saturated model and the simplest complete independence model, a range of models that exclude the four-way interaction term γ_{ijkl}^{WXYZ}, but include any two-way or three-way interaction terms can be fitted.

The goodness of fit of a restricted model is assessed using the likelihood ratio statistic. Its p-value tests the null hypothesis that the fitted model is the same as the saturated model. Therefore, a non-significant p-value indicates that the restricted model is not significantly different from the saturated model, explaining all of the variation in the data. On the other hand, the finding of statistical significance suggests that the restricted model does not explain all of the variation in the data. It is also possible to compare the fits of two nested models by taking the ratio of their likelihood ratio statistics.

Results

Table 6.1 shows the values of ID (column 1) and the square root index S (column 2), including its 'within' (column 3) and 'between' (column 4) components. Since the two indices use different scales, their standardised values (z-scores) are reported in Figure 6.1. On both indices, Italy ranks lowest, while Estonia scores highest. The pattern of variation is similar using the two measures, as the relatively high level of correlation (R=0.78) indicates (Figure 6.2). However, there are some notable exceptions. Greece and Luxembourg score considerably lower on the ID than on the square root index S, while Austria and France score higher on the ID than on S.

[107] In a simple two-way table, *i* and *j* would be the rows and columns.

Since ID is not occupation invariant, in contrast to the square root index, the occupational structure in the outlier countries merits further investigation. In Luxembourg, the relatively gender-integrated associate professionals group (24.5% of all employees are in this category) is the fourth largest such group, while service/sales occupations (10%) is the second smallest category, across the studied countries. Male-dominated operative and craft occupations are also some of the smallest groups (Table A 6-4 in Annex 6). Because heavily gender segregated occupations, such as sales/services, crafts and operatives are relatively small in Luxembourg, compared with other countries, the standardized value of the ID is much lower than the value of S (Figure 6.2). Greece also has a higher value of S than the ID, although the difference is not large. Greece has the smallest managerial category (1.5% of all employees are managers) of all the studied countries, but it's heavily dominated by men (79% of all managers are men). On the other hand, the clerical occupations (17.2%) and sales/services (17.9%) are the third largest groups. However, in Greece these occupations are not as heavily dominated by women as in other countries: 38% of clerical employees and 52% of sales/services employees are men, see Table A 6-3). This may explain why the relative ranking of the ID for Greece is not as large as the ranking of the square root index.

In contrast, Austria and France rank higher on the ID than on S. Austria has the smallest professionals category (8.3% of all employees), but it is not dominated by either men or women (56% of professionals are women, Figure A3 in the Annex). Because this category is relatively small compared to other countries, the fact that it is gender-integrated is not captured sufficiently by the relative value of the ID, but it still counts for the square root index ranking. Similarly, France has a relatively small professional category (12.5% of all employees), but its composition is gender balanced (47% of women).

There is no clear pattern of variation in the ID and S scores by welfare regime. However, the new accession states tend to be more segregated (particularly the three Baltic countries), Hungary being the exception; the Southern-European countries

tend to have lower levels of segregation by sex, while the liberal countries (UK[108] and Ireland) and conservative-corporatist Continental countries have middling scores. Social-democratic Nordic countries also have middling segregation levels: Iceland, Sweden, Norway and Denmark all have below average scores on both indices. Finland is the exception, as it has the second highest score on the ID and an above average value of S. According to Bettio and Veraschagina (2009b), who find a similar pattern of occupational gender segregation[109] across the enlarged EU in 2007, with the Baltic countries exhibiting the highest segregation levels, using three-digit occupations data from the EU Labour Force Surveys 1992-2007, there has been notable convergence in segregation over the past decade. Thus, segregation decreased in most of the Nordic countries and increased in many of the Mediterranean and Eastern-European countries (2009b, p.32). Although it is not clear why the Baltic countries are so highly segregated, national experts suggest that women have historically had access to higher education and professions, with limited representation in the top positions, however (2009b, pp.99-100).

In an earlier study of occupational segregation in 15 old-EU countries using data from the 2000 Labour Force Survey, Bettio (2002) also observes the highest value of the ID in Finland and the lowest value in Italy and Greece. However, Sweden and Denmark rank higher than Luxembourg, Germany and Austria. This is not surprising, given the finding in Bettio and Veraschagina (2009b) of converging segregation levels in the EU. Overall, the levels of the ID in Bettio (2002) are considerably larger than in the present study, but the level of disaggregation of occupational groups[110] is considerably higher too. Using finer occupational categories tends to result in higher values of the ID, everything else being equal. Moreover, as the ID is not occupation invariant and the occupational structures in the studied countries are likely to have changed since 2000, the values of ID in this chapter are not strictly comparable with those in the earlier study.

[108] Unfortunately, it is not possible to do the analysis separately for Britain and Northern Ireland because there is no regional information for Britain in the EU-SILC 2007.
[109] Using the ID and Karmel and MacLachlan (1988) indices.
[110] 110 occupations, 3-digit ISCO 88 groups.

The square root index is decomposed into the portion due to differences across the two-digit ISCO groups within the one-digit groups and the portion due to differences between the major (one-digit) groups. Since the one-digit groups are ordered hierarchically according the level of skill [111] (i.e. from manual low skilled 'elementary' occupations to high-skilled white-collar managerial occupations), the 'between' differences can be roughly interpreted as vertical segregation, while the 'within' differences can be considered horizontal segregation [112]. Using this framework, Scandinavian countries (except Iceland) and Liberal countries have higher levels of vertical than horizontal segregation. A closer look at female shares within one-digit occupational groups in these countries (see Table A 6-3) reveals that women are disproportionately over-represented in clerical and sales/service occupations and under-represented in crafts/related trades in operative occupations.

[111] "ISCO 88 groups jobs together in occupations and more aggregate groups mainly on the basis of the similarity of skills required to fulfil the tasks and duties of the jobs" (ILO) http://www.ilo.org/public/english/bureau/stat/isco/isco88/index.htm

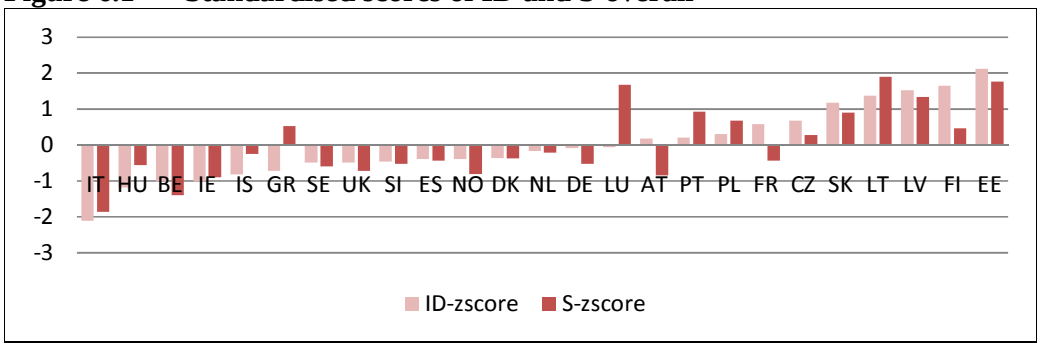
[112] For example, within Elementary occupations, there are female-dominated 'Domestic and related helpers, cleaners and launderers' and male-dominated 'garbage collectors and related labourers' as well as 'manufacturing labourers' and other labourers.

Table 6.1 Levels of segregation in 25 countries

	ID (1)	S-overall (2)	S within 1-digit groups (3)	S between1-digit groups (4)
AT	0.482	0.166	0.061	0.105
BE	0.434	0.148	0.067	0.081
CZ	0.502	0.202	0.117	0.086
DE	0.471	0.176	0.056	0.120
DK	0.460	0.181	0.073	0.109
EE	0.560	0.250	0.125	0.125
ES	0.459	0.179	0.076	0.103
FI	0.541	0.208	0.084	0.124
FR	0.498	0.179	0.064	0.114
GR	0.446	0.210	0.090	0.120
HU	0.427	0.175	0.093	0.082
IE	0.434	0.164	0.061	0.103
IS	0.442	0.185	0.096	0.089
IT	0.390	0.133	0.074	0.059
LT	0.530	0.254	0.147	0.107
LU	0.472	0.247	0.134	0.113
LV	0.536	0.236	0.114	0.122
NL	0.468	0.186	0.078	0.109
NO	0.459	0.167	0.060	0.107
PL	0.487	0.215	0.106	0.109
PT	0.483	0.223	0.140	0.082
SE	0.455	0.174	0.068	0.106
SI	0.456	0.176	0.100	0.076
SK	0.522	0.222	0.127	0.095
UK	0.455	0.170	0.064	0.106

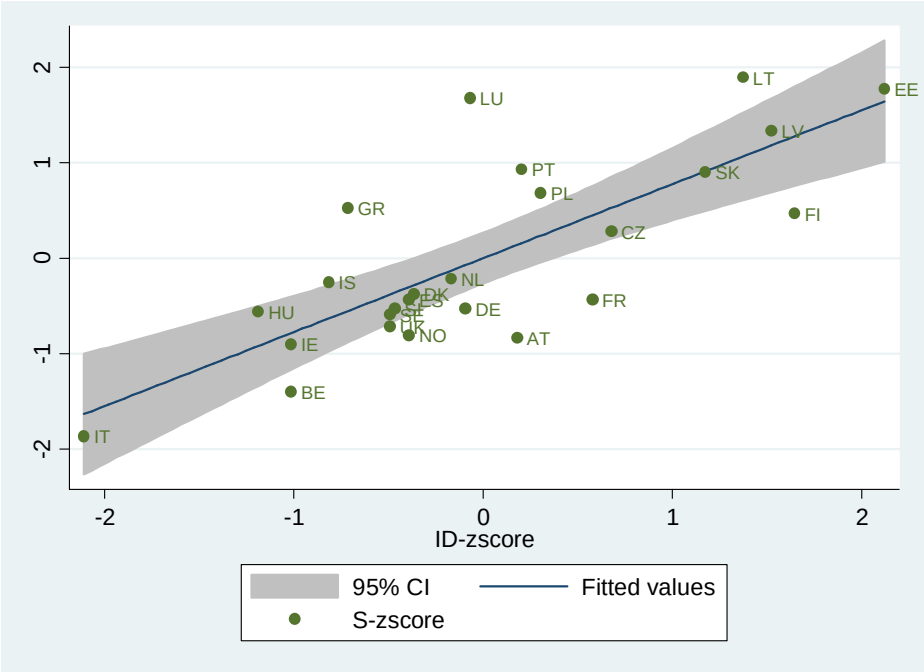
Source: EU-SILC 2007
Base: employees (both full-time and part-time)
The ID is based on 26 (2-digit) ISCO occupational groups; S is based on 2-digit and 1-digit ISCO groups.

Figure 6.1 Standardised scores of ID and S-overall



Source: EU-SILC 2007.
Base: employees (both full-time and part-time), aged 25-55.
Scores ordered by the value of ID.

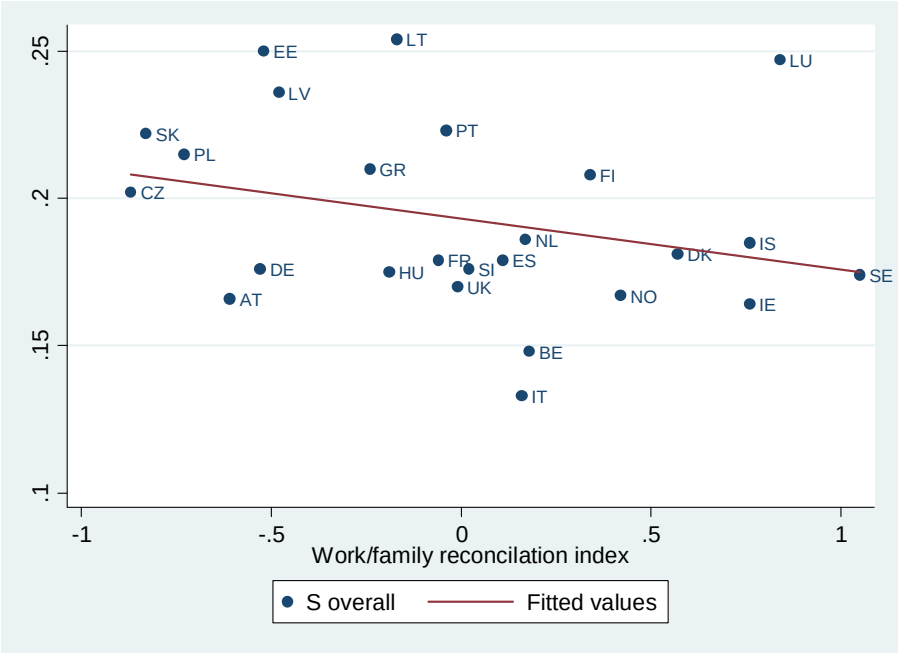
Figure 6.2 Standardised S-overall by standardised ID across 25 countries



Source: EU-SILC 2007.
Base: employees (both full-time and part-time), aged 25-55.
R=0.78 (p<0.001).

Unsurprisingly, the square root index is negatively correlated with the work/family reconciliation index constructed in Chapter 3 (Figure 6.1). However, the strength of the correlation is rather weak (R=-0.29). The work/family reconciliation index was found to be associated with the ID to a greater extent (R=-0.46, p<0.05) in the analysis in Chapter 3. The strength of the correlation between S and the policy index would be higher if the outlier Luxembourg were excluded (R=-0.45, p<0.05). Analysing the 'within' and 'between' components of S separately shows that the former (R=-0.30) is more strongly correlated with the policy index than the latter (R=-0.05). This suggests that the policy environment is more important for gender differences in occupational attainment across the groups with comparable requirements but in different fields of work (e.g. computing professionals vs. health professionals) than across hierarchical groups (e.g. managers vs. clerical workers). Overall, these results indicate that the extent of occupational gender segregation amongst employees, particularly horizontal segregation, tends to be lower in countries with more gender-egalitarian work/family reconciliation policies and prevailing gender-role attitudes.

Figure 6.3 Work/family reconciliation index by the square root index S



Source: OECD Family Database (version June 2009) Table PF7.1; Moss and Korintus (2008); OECD Tax/Benefit Calculator (accessed on 29/04/2010); EVS 1999.; EU-SILC 2007, employees aged 25-55.
R=-0.29 (R=-0.45, p<0.05 if Luxembourg is excluded).

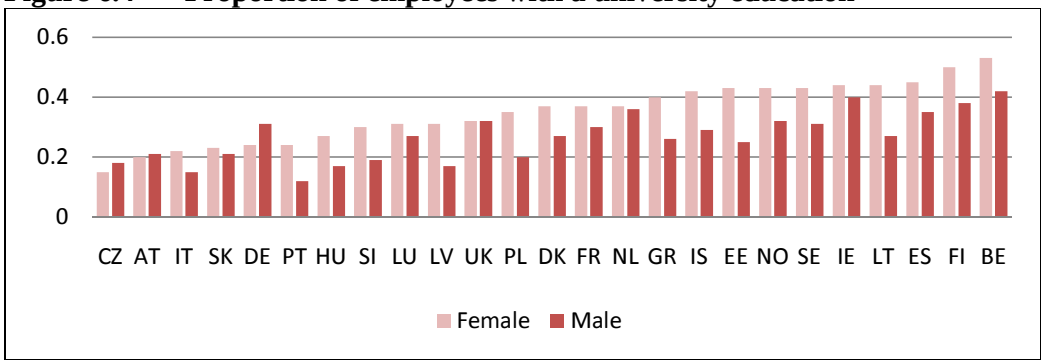
Although the summary indices show that levels of segregation vary across the EU, they give no indication of whether this variation is statistically significant. Furthermore, it is not clear whether these differences are driven by variation in the levels of part-time employment, education or other characteristics of the labour force, although both indices implicitly control for the differences in the gender composition of the labour force and the square root index, but not the ID, is invariant to differences in occupational structures. Table 6.2 displays the proportions of full-time employees with a university education, while Table 6.3 shows the proportions of male and female employees working part-time in each country. Both tables indicate substantial variation in part-time rates and higher education rates, controlling for gender, across the studied countries. Therefore, it could be that differences in the composition of the labour force by part-time/full-time status as well as by the highest level of education could explain most of the observed cross-country variation in the levels of segregation.

Table 6.2 Proportion of employees with a university education

Country	Female	Male
AT	0.20	0.21
BE	0.53	0.42
CZ	0.15	0.18
DE	0.24	0.31
DK	0.37	0.27
EE	0.43	0.25
ES	0.45	0.35
FI	0.50	0.38
FR	0.37	0.30
GR	0.40	0.26
HU	0.27	0.17
IE	0.44	0.40
IS	0.42	0.29
IT	0.22	0.15
LT	0.44	0.27
LU	0.31	0.27
LV	0.31	0.17
NL	0.37	0.36
NO	0.43	0.32
PL	0.35	0.20
PT	0.24	0.12
SE	0.43	0.31
SI	0.30	0.19
SK	0.23	0.21
UK	0.32	0.32

Source: EU-SILC 2007.
Base: employees (both full-time and part-time), aged 25-55.

Figure 6.4 Proportion of employees with a university education



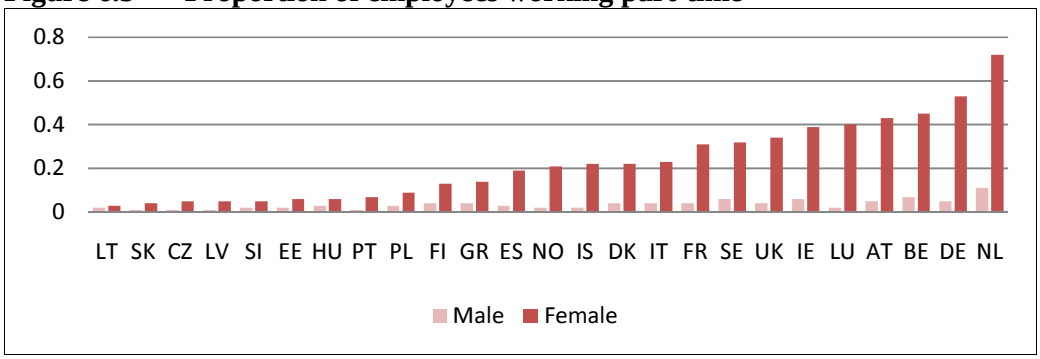
Source: EU-SILC 2007.
Base: employees (both full-time and part-time), aged 25-55.

Table 6.3 Proportion of employees working part-time

Country	Female	Male	Total
AT	0.43	0.05	0.22
BE	0.45	0.07	0.25
CZ	0.05	0.01	0.03
DE	0.53	0.05	0.27
DK	0.22	0.04	0.13
EE	0.06	0.02	0.04
ES	0.19	0.03	0.10
FI	0.13	0.04	0.08
FR	0.31	0.04	0.18
GR	0.14	0.04	0.08
HU	0.06	0.03	0.04
IE	0.39	0.06	0.23
IS	0.22	0.02	0.12
IT	0.23	0.04	0.13
LT	0.03	0.02	0.02
LU	0.40	0.02	0.18
LV	0.05	0.01	0.03
NL	0.72	0.11	0.40
NO	0.21	0.02	0.11
PL	0.09	0.03	0.06
PT	0.07	0.01	0.04
SE	0.32	0.06	0.19
SI	0.05	0.02	0.03
SK	0.04	0.01	0.03
UK	0.34	0.04	0.20

Source: EU-SILC 2007.
Base: employees (both full-time and part-time), aged 25-55.

Figure 6.5 Proportion of employees working part-time



Source: EU-SILC 2007.
Base: employees aged 25-55.

To test the hypothesis that the variation in part-time work rates explains some of the cross-country variation in the relationship between sex and occupation (i.e. occupational segregation), three nested models with country, occupation, sex and part-time work status are fitted and compared (Table 6.4). The data (observed frequencies) are arranged on the country level in a four-dimensional 800-cell contingency table: 25 countries x 2 sexes x 8 occupational groups x 2 work time groups. Iterative proportional fitting is used to predict the counts in each cell. The fit

of each model is evaluated using the likelihood ratio chi-square statistic L^2. Model 1 in Table 6.4 is a complete independence model (C + O + S + PT) that assumes that the effects of the four variables are independent of each other. In other words, the main effects of each variable are modelled (as they would be in a cross-tab with a Pearson chi-square test), but the association between any two or three of these variables is not allowed to vary across the categories of another variable. For instance, the association between occupation and sex (occupational segregation) cannot vary by country or part-time work status. As expected, such a model offers a very bad fit, as indicated by the statistical significance of the likelihood ratio statistic at $p<0.001$. If the model offered a good fit, the likelihood ratio statistic would not be statistically significant at conventional levels. Thus, there are likely to be interaction effects amongst the four dimensions that the tested model cannot account for.

A more realistic model needs to allow the association between occupation and sex to differ across the studied countries. Figure 6.1 above shows that both the ID and S indices range between -2 and +2 standard deviations across 25 countries. Also, the level of S is found to be negatively correlated with the work/family reconciliation index (Figure 6.3), which indicates that segregation levels may be different in countries with diverse policy environments and prevailing social norms.

Moreover, the model needs to account for the potential associations between working time status, occupation and sex. Both neo-classical and feminist theories discussed in section 6.1 suggest that women may opt for occupations more compatible with their family and caring responsibilities. Since part-time work is one of the ways to reconcile the demands of job and family, and occupations tend to differ in their prevalence of part-time hours[113], the level of segregation could be different amongst full-time and part-time employees. At the same time, women are predominantly more likely to work part-time than men, but male and female part-time rates tend to co-vary[114] (Table 6.3). Thus, it could be expected that in countries where part-time work is more common for men and women, segregation levels amongst part-time

[113] For instance, part-time rates tend to be lowest amongst workers in managerial and operative occupations and highest amongst workers in clerical, service/sales and elementary occupations.
[114] There is a high positive correlation (R=0.84) between male and female part-time work rates (Table 6.3).

employees would be lower because women and men would work in more similar occupations. Segregation levels would also be lower amongst full-time employees, since women who opt for occupations more compatible with their family responsibilities and less career-oriented women would be more likely to work part-time instead. Thus, observed segregation levels would be lower overall. Indeed, Figure 6.6 shows that the index of segregation S amongst part-time employees tends to be lower in countries with higher part-time work rates (R=-0.61). The negative correlation is somewhat stronger between the level of S amongst full-time employees and the total part-time rate (R=-0.64), but weaker between the overall level of segregation and part-time rate (R=-0.50). However, it appears that part-time work rate is primarily related to the 'within' component of occupational segregation (see Figure 6.7) (R=-0.65) than to the 'between' component (R=0.14). This suggests that in countries with higher part-time work rates, men and women tend to work in more similar occupations within larger hierarchical one-digit groups (e.g. services/sales), rather than across these groups.

Thus, Model 2 allows for three-way interactions between country, occupation and part-time work (C*O*PT); country, sex and part-time work (C*S*PT); and occupation, sex and part-time work (O*S*PT). A three-way interaction allows the association between each pair of the three variables to vary across the levels of the third variable, within each level of the fourth variable that is not included in the interaction term. For instance, the term C*S*PT allows the association between sex and part-time work to vary across countries, within each fixed level of occupation. Notably, Model 2 does not include the three-way interaction term between country, occupation and sex, which would denote the cross-country variation in the relationship between occupation and sex net of part-time work. Therefore, the levels of segregation are assumed to be the same in all countries (constant segregation model), controlling for part-time work.

Compared with the baseline mutual independence model, Model 2 improves the fit significantly. The L^2 /L_b^2 contrast in Table 7.2 shows the improvement of fit. Thus, Model 2 accounts for almost 97% of variation[115] under Model 1. However, the

[115] $1 \pm L^2 / L_b^2 = 1 \pm 3.2 = 97(\%)$.

likelihood ratio statistic in Model 2 is still statistically significant, suggesting that the model of constant segregation does not offer a perfect fit. This is not surprising, since a constant segregation model does not seem to be realistic.

Finally, Model 3 is identical to Model 2 except for the inclusion of another three-way interaction term (O*S*C), which allows for the cross-national variation in occupational segregation by sex. The inclusion of this term offers a further substantial improvement of fit, but the model still does not fit perfectly (L^2 is still statistically significantly different from zero at $p<0.001$). Thus, although the variation in part-time work rates explains some of the variation in occupational segregation, a model with only four factors and all of the interaction effects short of a saturated model (which would include all possible interactions, including a four-way interaction term) does not predict the observed cell counts perfectly. This suggests more variables may need to be added to the model to try to account for the observed variation[116].

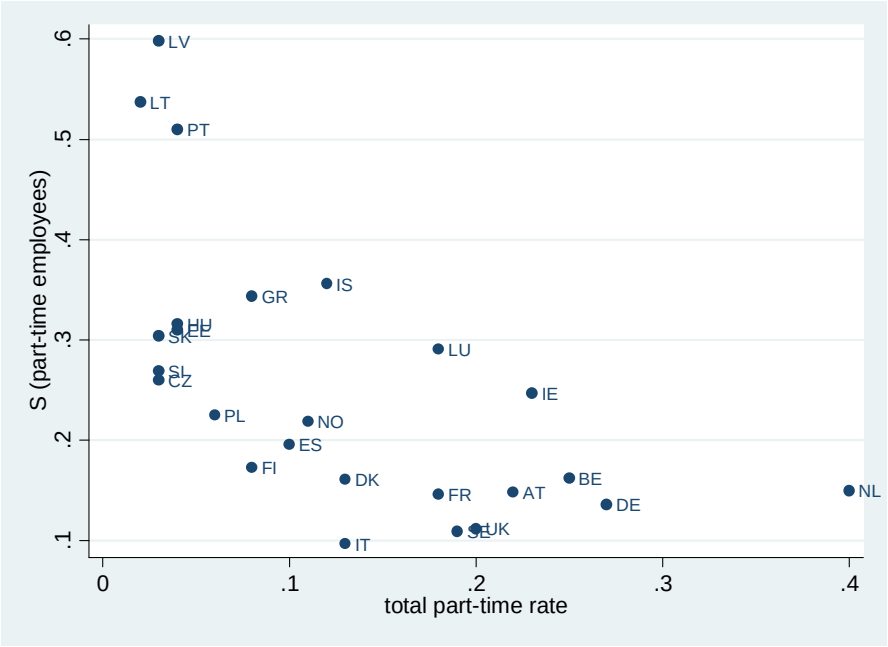
Table 6.4 Models with country, occupation, sex and part-time work

Model *(Model 1 as baseline)*	L^2	df	L^2 / L_b^2
Model 1: (C + O + S + PT)	81,000***	766	100
Model 2: (C*O*PT+ C*S*PT + O*S*PT)	2,600***	336	3.2
Model 3: (C*O*PT+ C*S*PT+ O*S*PT+**O*S*C**)	308***	168	0.38

L^2 Likelihood-ratio chi-square statistic
C – country; O – occupational group; S – sex; PT – part time rate.
Number of individuals: 145,144; number of cells: 800.
***p<0.001.

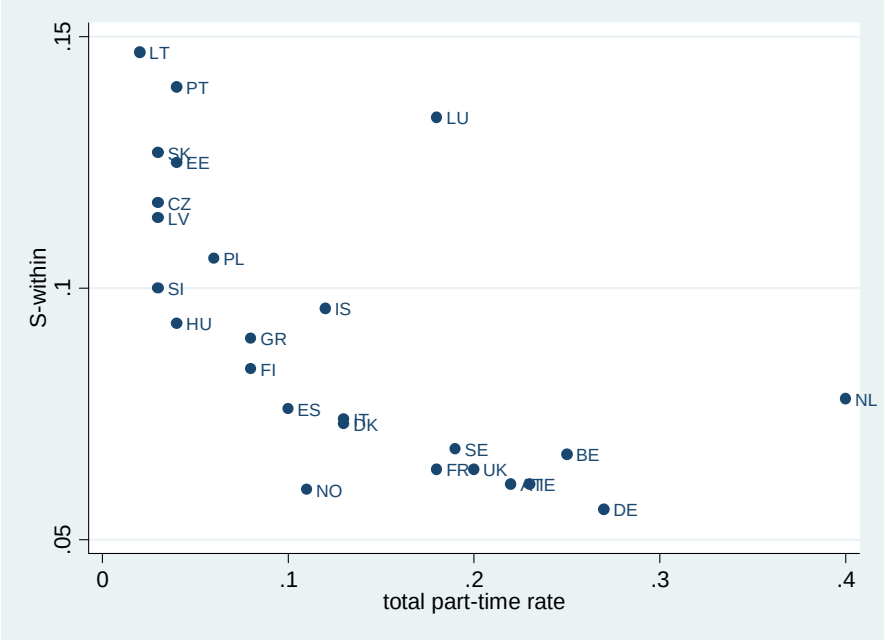
[116] A four-way model similar to Model 3 with education level instead of part-time work does not fit the data perfectly either (L^2 =815, df=336, p<0.001;1200 cells).

Figure 6.6 Square root index by part-time rate



Source: EU-SILC 2007.
Base: employees aged 25-55.
R=-0.61 (p<0.01).

Figure 6.7 'Within' component of the square root index and part-time rate



Source: EU-SILC 2007.
Base: employees aged 25-55.
R=-0.65 (p<0.001).

Given that the composition of the labour force in the countries studied here varies by the level of education (see Figure 6.4), the next model adds an education variable to

test the hypothesis that, along with part-time work rates, the variation in education levels explains most of the variation in segregation levels by sex. In line with the neo-classical theories discussed in section 6.1, it could be argued that women who invest in education and market skills would be less likely to gravitate towards female-dominated occupations. Thus, it would be expected to find the lowest levels of segregation amongst higher educated employees.

Table 6.5 shows three nested models with five terms: country, occupation, sex, part-time work and education[117]. The data are arranged in a 2,400-cell matrix: 25 countries x 2 sexes x 8 occupational groups x 2 working time groups x 3 education groups. In contrast to the previous models, the variation in degree levels is now allowed for, including all the interaction effects with each of the four other factors. Five different four-way interaction terms can now be included. The mutual independence Model 1, as before, fits badly. Model 2, which includes all of the four-way interaction terms except the one between country, sex, occupation and education (C*O*S*E), offers a substantial improvement[118] in fit compared with the base model. Crucially, it includes a four-way interaction term between country, sex, occupation and part-time work (C*O*S*PT), which allows for the cross-country variation in the levels of occupational gender segregation (C*S*O) to vary by part-time status. Yet Model 2 still does not fit perfectly, as indicated by the significance of its likelihood ratio statistic ($p<0.001$). If this model offered a perfect fit, it would indicate that there is no cross-national variation in sex segregation levels by the level of education, given cross-national differences in the occupational distribution and in the composition of the labour force by sex, education and part-time status.

However, when the fourth interaction term (C*S*O*E) is added to Model 2, which allows for occupational segregation (S*O) to vary across countries and the three levels of education, the model has a much smaller likelihood-ratio statistic. It is no longer significant at 5%, with $p=0.812$. This is a perfect fit, especially considering the large sample size (145,144 employees across 25 countries). Compared with Model 2, Model 3 improves fit by 31% (313/1,000) with a loss of 336 degrees of

[117] Three groups by the highest education qualification: lower secondary or below; upper secondary or further; university degree (see Chapter 5).
[118] Model 2 explains more than 99% of variation under Model 1 (1±0.006).

freedom[119]. In other words, Model 3 accounts for about 69% of the variation under Model 2 (1±0.31=69%). This suggests that cross-national variation in the level of occupational segregation differs across the levels of education, holding part-time status constant (C*O*S*E). At the same time, the cross-national variation in segregation also varies across the levels of part-time status, within each level of education (C*O*S*PT). Thus, the variation in both education and part-time work levels appears to be important. This is not surprising in light of the finding in Chapter 4 that switching from full-time to part-time work tends to be related to occupational downgrading by skill, for both men and women. Furthermore, education is typically found to be associated with individual occupational attainment in the sociological literature (Sewell et al., 1969; Ganzeboom & Treiman, 1996).

Table 6.5 Models with country, occupation, sex, part-time work status, and education

Model *(Model 1 as baseline)*	L^2	df	L^2 / L_b^2
Model 1: (C + O + S + PT + E)	180,000***	2364	100
Model 2: (**C*O*S*PT** +C*S*PT*E+O*S*PT*E +C*O*PT*E)	1,000***	672	0.006
Model 3: (Model 2 + **C*O*S*E**)	312.9 (p= 0.812)	336	0.002

L^2 Likelihood-ratio chi-square statistic.
C – country; O – occupational group; S – sex; PT – part time rate; E – highest level of education.
Number of individuals: 145,144; number of cells: 2400.
***p<0.001.

To investigate in which countries the level of segregation differs noticeably by the highest educational qualification, Table 6.6 shows the square root index S (based on 26 occupational groups) separately for employees with lower secondary education or below (column 1), upper secondary education (column 2) and higher education (column 3). Figure 6.8 orders the indices sorted by the overall level of S. As expected, in each of the studied countries segregation is lowest amongst university educated employees. This finding is, by and large, in line with the neo-classical theories as well as with Hakim's (1995) preference theory: women who invested in their education and market skills are more likely to work in more gender-integrated occupations. However, there is some cross-country variation in the extent to which the level of segregation differs amongst lower-educated employees.

[119]Df in model 2 (672) – Df in model 3 (336). Degrees of freedom = number of cells – (number of parameters – number of constraints).

In 14 out of 25 countries studied here, the level of segregation is inversely related to education: the largest values of S are observed for employees without upper secondary education, while the lowest levels of segregation are found for those with university education. Thus, it is among the lowest educated employees that men and women are the most likely to work in entirely different occupations. This lends support to the hypothesis that women with lower human capital endowments are more likely to self-select into typically female occupations (e.g. personal services as opposed to craft and related trades), either because they choose to specialise in tasks more compatible with their homemaking responsibilities, because they are less career-oriented, or because they expect employers to see them as such. Most of the countries in this group are Southern-European (Spain, Italy and Greece), Continental (Belgium, Germany, Luxembourg, and the Netherlands) and Baltic (Estonia, Latvia and Lithuania). The largest differences by the level of education are observed in Luxembourg and Lithuania[120].

Countries with larger differences in the level of segregation between the lowest and highest educated employees also tend to have larger gender wage gaps at the bottom of the earnings distribution for full-time employees (see Figure A 5-1 inAnnex 5). This suggests that, among those without upper secondary education, women tend to be concentrated in lower paid occupations than men. Overall, there appears to be a weak positive association between the level of horizontal segregation (as measured by the relative contribution of the 'within' component of the square root index, see Table 6.1) and the total level of segregation amongst employees with the lowest level of education (R=0.18)[121]. Thus, men and women without upper secondary education tend to be employed in entirely different fields of work (e.g. women are most likely to work in sales and personal services, while men are more likely to work in crafts and related trades, as well as in operative occupations; see Table A 6-6).

The other 11 countries have the highest levels of segregation amongst employees with upper secondary/further education, followed by those with lower education. All

[120] There is no apparent association between the prevalence of employees with lower education and the value of S amongst lower educated employees (R=-0.01). For instance, 31% and 5% of employees have lower secondary education or below in Luxembourg and Lithuania, respectively.
[121] There is no apparent association between the overall level of horizontal segregation and the value of S amongst employees with upper secondary education (R=-0.02) or university education (R=0.08).

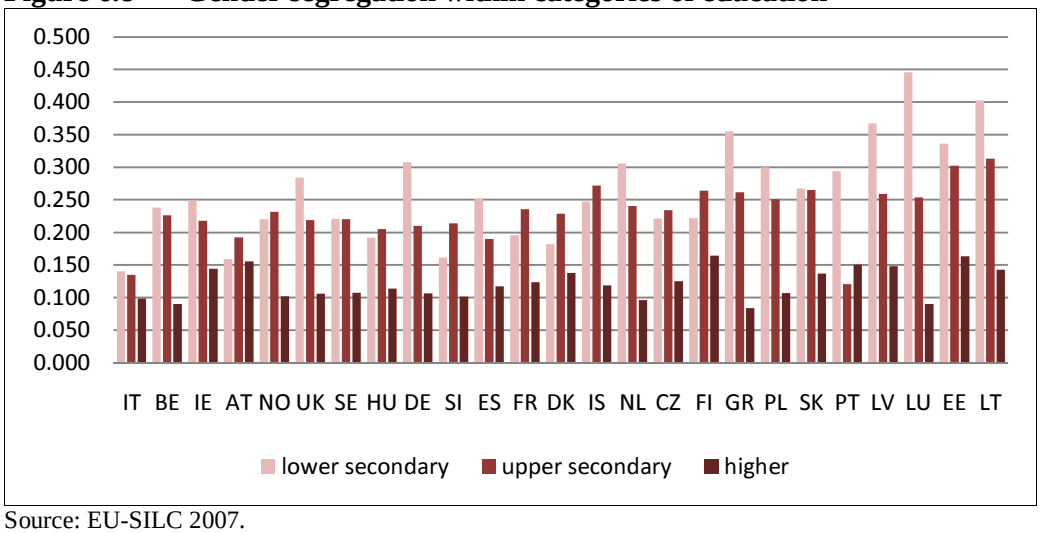
of the Nordic countries fall into this group, along with Austria, Czech Republic, France, Hungary, Portugal, and Slovenia. Nordic countries tend to have below average levels of segregation amongst employees with the lowest level of education (see Figure A 6-1 in Annex 6) and middling segregation levels amongst those with upper secondary education (Figure A 6-2). This could be related to more egalitarian gender-role attitudes as well as to the more 'women-friendly' policy environment (see Chapter 3). However, as regards the segregation levels among university educated employees, Nordic countries drift apart in the rankings. While Norway, Sweden and Iceland have below average levels of segregation, Denmark and Finland score higher than average, with Finland producing the highest index of S of all the countries studied here (Figure A 6-3). This could be related to particularly high female shares in clerical occupations, 81% and 76%, and in sales/services occupations, 78% and 77%, in Finland and in Denmark, respectively (Table A 6-3). Even amongst those with a university education, the female shares in clerical occupations are 94% and 75% in Finland and Denmark, respectively.

Table 6.6 Gender segregation within categories of education

	S – lower secondary or below (1)	S – upper secondary/further (2)	S – university/higher (3)
AT	0.159	0.192	0.155
BE	0.238	0.226	0.091
CZ	0.221	0.234	0.125
DE	0.308	0.210	0.107
DK	0.182	0.228	0.138
EE	0.336	0.302	0.164
ES	0.252	0.190	0.117
FI	0.222	0.264	0.164
FR	0.195	0.235	0.124
GR	0.355	0.262	0.084
HU	0.192	0.205	0.114
IE	0.249	0.218	0.144
IS	0.247	0.272	0.118
IT	0.140	0.135	0.099
LT	0.403	0.313	0.143
LU	0.446	0.254	0.091
LV	0.367	0.259	0.148
NL	0.306	0.240	0.096
NO	0.220	0.231	0.102
PL	0.300	0.251	0.107
PT	0.294	0.120	0.150
SE	0.220	0.220	0.108
SI	0.161	0.214	0.101
SK	0.268	0.265	0.137
UK	0.284	0.219	0.105

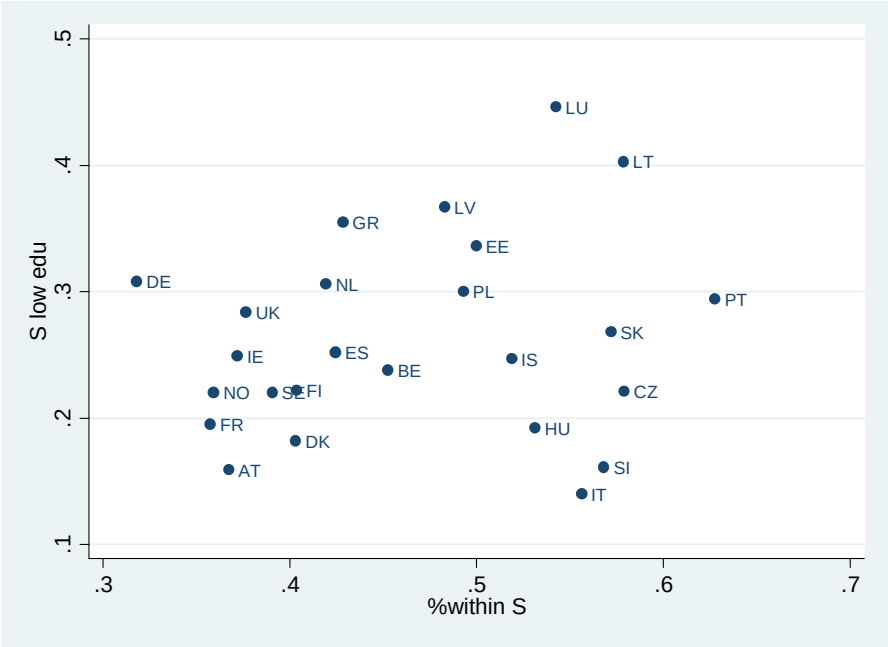
Source: EU-SILC 2007.
Base: employees (both full-time and part-time), aged 25-55.

Figure 6.8 Gender segregation within categories of education



Source: EU-SILC 2007.
Base: employees (both full-time and part-time), aged 25-55.

Figure 6.9 S within the lowest education category by the '% within' overall S



Source: EU-SILC 2007.
Base: employees (both full-time and part-time), aged 25-55.
R=0.18 (R=0.24 if Germany is excluded).

Summary and conclusion

This chapter has analysed the differences in occupational distributions of male and female employees in 25 European countries and studied the cross-national variation in occupational gender segregation levels. It started by reviewing recent research on occupational gender segregation, relevant economic and sociological theories of segregation by sex, and measurement issues in segregation studies. This chapter makes an original contribution to the cross-country comparative literature on occupational gender segregation by employing both the widely used Duncan and Duncan (1955) Index of Dissimilarity and the square root index S (Hutchens, 2004) to compare the levels of occupational segregation in the enlarged EU. The square root index is increasingly being used in education segregation comparative research, but not in gender segregation studies. Previous comparative studies on occupational gender segregation in the EU do not include any of the new accession states (Charles, 1992; Charles, 2003; Nermo, 2000; Bettio, 2002; J. Dolado et al., 2003).

Based on the index measures of segregation, substantial levels of occupational segregation by sex are found in 25 European countries. Italy ranks lowest, while

Estonia scores highest on both indices. The pattern of variation is very similar using the two measures. The only exceptions are Greece and Luxembourg, which rank considerably lower on the ID than on the square root index S, while Austria and France rank higher on the ID than on S. These differences in rankings are largely due to the ID being sensitive to differences in the occupational structure across the studied countries, which are further explored in the Results section. The 25 countries are almost equally split according to whether the vertical component or the horizontal component of segregation dominates. In three Scandinavian countries, the UK and Ireland, the vertical dimension prevails.

Although there is no clear pattern of variation in ID and S scores by welfare regime, the new accession states tend to be more segregated, while the Southern-European countries tend to have lower levels of gender segregation. Nordic countries are found to have middling segregation levels, with the exception of Finland that scores high on both indices. However, there is some evidence of segregation levels being associated with the work/family reconciliation policy environment. The level of occupational segregation by sex, especially horizontal segregation within aggregated hierarchical groups, tends to be lower in countries with more gender egalitarian work/family reconciliation policies and prevailing gender-role attitudes.

Moreover, the cross-national variation in the association between occupation and sex is found to be significant and to a large extent due to differences in part-time work rates and the education levels of the labour force. Thus, the observed counts in a five-way contingency table with country, occupation, sex, part-time work and education level can be perfectly fitted with a model that allows for all possible four-way interaction effects among these variables. Accounting for the education composition of the labour force is found to be particularly important, since a four-way model with country, occupation, sex and part-time work, including all possible three-way interactions, does not offer a perfect fit. Moreover, even when education is included, the model does not fit well until the four-way interaction term between country, occupation, sex and education is included. It allows the cross-national variation in sex segregation to vary across different categories of education, for each fixed category of work-time status. The finding of the importance of education

composition of the labour force is not surprising, since education is likely to be associated with individual occupational attainment.

In each of the studied countries segregation is lowest amongst university educated employees. This finding is largely consistent with the neo-classical theories that emphasise personal preferences: women who invested in their education and market skills are less likely to work in female-dominated occupations. Moreover, in the majority of the countries studied here, the level of segregation is highest amongst the employees with the lowest level of education (lower secondary or below). This suggests that men and women with lower human capital endowments tend to self-select into occupations compatible with more traditional gender-role stereotypes, such as the female-dominated personal services occupations and male-dominated manual lower skilled operative occupations. The largest differences in the value of the segregation index by the level of education are observed in Luxembourg and Lithuania.

Nordic countries tend to have lower levels of segregation amongst employees without upper secondary education, compared with other countries, and middling segregation levels amongst those with upper secondary or further education. This could be related to more egalitarian gender-role attitudes as well as to the more 'women-friendly' policy environment, which protect lower educated women from concentrating in typically female occupations. There is no Nordic clustering in segregation levels amongst university educated employees, however. While Norway, Sweden and Iceland have lower to middling levels of segregation, Denmark and Finland score higher than average, with Finland topping the rankings. This could be due to university educated women being disproportionately over-represented in clerical occupations in these countries.

Finally, the next chapter draws together the results of the empirical studies in this thesis. It reiterates the research questions raised in the introduction, discusses the findings, limitations and avenues for further research, and concludes.

Chapter 7 Conclusion

In spite of significant increases in female labour market participation and educational achievement in the EU in recent decades, women still lag behind men in terms of employment rates, earnings and occupational attainment. The overarching aim of this thesis was to shed light on the interplay between the characteristics of individuals associated with productivity, labour market returns to these characteristics, and country-level work-family reconciliation policies in influencing female employment and gender inequalities in terms of earnings and occupational attainment. The analysis focused on prime-age employees in 25 European countries, including new EU member states. This concluding chapter briefly reviews the main findings of the thesis, bringing together the different elements of the study; discusses its theoretical and empirical contributions to existing research, as well as the limitations of the study; reflects on the policy implications of the findings; and suggests directions for future research.

Review of the study

The literature review discussed comparative scholarship on the welfare state and work-family reconciliation policies in Europe, placing this thesis in a theoretical context, identifying research gaps in the literature and demonstrating the contribution of this work. It concluded that although the existing welfare state and family policy typologies are useful for the study of female employment, particularly amongst women with children, they are not perfectly suited to comparative studies of wage gaps and occupational segregation.

Chapter 3 then set the policy context for the thesis. It investigated the variation in duration, generosity and gender neutrality of parenthood leave schemes; availability of childcare for pre-school children; gender biases in tax/benefit systems; and prevailing gender-role attitudes in 25 European countries, using comparable macro data compiled by the OECD as well as micro data from international surveys. It summarised the most relevant policy and social norms features in a composite indicator and explored its relationship with female employment rates, average gender wage gaps and occupational gender segregation.

Given this work/family reconciliation policy context, Chapter 4 focused on the relationship between recent motherhood and adverse labour market outcomes for women. It examined the association between recent childbirth and the relative risks of switching to part-time, inactivity or unemployment for full-time working women in 13 pre-enlargement EU countries[122]. It used micro-level longitudinal data from the European Community Household Panel for the period 1994 to 2001. Once important human capital and workplace characteristics are controlled for, full-time working women who gave birth within a year of the interview are found to be likely to remain full-time the following year only in Denmark and Spain. Full-time female workers are more likely to switch to part-time employment than to remain working full-time in the Netherlands, Belgium, Austria and the UK, where female part-time participation rates are relatively high, but also in Italy, where part-time participation rates are generally low. Furthermore, substantial evidence of occupational downgrading by skill or occupational hourly wage on switching from full-time to part-time work is found for both men and women in the majority of the studied countries. However, since transitions from full-time to part-time work are observed for women more often than for men, and part-time work is found to be a more stable state for women, occupational downgrading appears to be a more serious issue for female workers. Moreover, in four out of five countries where recent childbirth is found to be associated with an increased risk of moving from full-time to part-time work, full-time to part-time transitions are linked to a higher risk of occupational downgrading, even after relevant personal and workplace characteristics have been controlled for.

Chapters 5 and 6 focused on two measures of gender inequality in the labour market in the enlarged EU, gender wage gaps and occupational segregation, using recent micro-data from the EU-SILC. Chapter 5 examined the differences in the log hourly wage distributions of men and women working full-time using quantile regression methods, focusing on Britain, Italy, Spain, Poland and the Czech Republic. Given the finding of recent childbirth being associated with leaving full-time work in Chapter 4 for women, potential self-selection of full-time female employees was considered. Finally, Chapter 6 analysed the differences in occupational distributions of male and

[122] Excluding Sweden and Luxembourg.

female employees in 25 European countries and studied the cross-national variation in occupational gender segregation levels.

To condense the findings across all the chapters of this thesis that covered the enlarged EU, Table 7.1 summarises the main indicators of interest: the work/family reconciliation index (column 1); female participation rate (column 2); participation rate of married women without a university education, with the youngest child aged 0-4 (column 3); median log hourly gender wag gap amongst employees (column 4); and the square root index of occupational gender segregation (column 5). No distinct group of countries scores highly on all the indicators, but some regional clusters emerge.

Table 7.1 Summary of work/family reconciliation and gender equality in the labour market indicators

	Work/family reconciliation index (1)	Total female participation rate (2)	Female participation rate (married, no university education, youngest child aged 0-4) (3)	Median gender wage gap (all employees) (4)	Occupational segregation Index S (5)
CZ	-0.87	0.70	0.20	0.22	0.202
SK	-0.83	0.81	0.58	0.23	0.222
PL	-0.73	0.67	0.48	0.05	0.215
AT	-0.61	0.69	0.30	0.23	0.166
DE	-0.53	0.71	0.45	0.19	0.176
EE	-0.52	0.80	0.45	0.4	0.25
LV	-0.48	0.77	0.52	0.25	0.236
GR	-0.24	0.42	0.32	0.08	0.210
HU	-0.19	0.69	0.27	0.07	0.175
LT	-0.17	0.81	0.55	0.25	0.254
FR	-0.06	0.76	0.54	0.08	0.179
PT	-0.04	0.74	0.78	0.08	0.223
UK	-0.01	0.72	0.49	0.22	0.170
SI	0.02	0.77	0.81	0.04	0.176
ES	0.11	0.60	0.40	0.11	0.179
IT	0.16	0.57	0.45	0.06	0.133
NL	0.17	0.75	0.64	0.14	0.186
BE	0.18	0.71	0.57	0.07	0.148
FI	0.34	0.76	0.40	0.15	0.208
NO	0.42	0.80	0.70	0.18	0.167
DK	0.57	0.78	0.74	0.12	0.181
IE	0.76	0.66	0.43	0.14	0.164
IS	0.76	0.80	0.62	0.17	0.185
LU	0.84	0.67	0.58	0.15	0.247
SE	1.05	0.83	0.72	0.16	0.174

Source: EU-SILC 2007; OECD Family Database (version June 2009) Table PF7.1; Moss and Korintus (2008); OECD Tax/Benefit Calculator (accessed on 29/04/2010); EVS 1999.

All the Nordic countries (classified as social-democratic welfare states by Esping-Andersen (1990) and 'dual-breadwinner' states by Lewis (1992)) score in the top ten on the policy index and average female participation rates. With the exception of Finland, they also have above average rates of participation of married women without a university education with their youngest child under five. Finland's outlier status may be due to its long and relatively generous parental leave, which is unusual for Nordic countries, enabling women in Finland to look after their children at home until the youngest child is three years old (see Table 3.2 in Chapter 3). At the same time, all the Nordic countries have middling levels of occupational segregation and gender wage gaps.

The two liberal welfare regime countries, the UK and Ireland, are not as similar. The UK sits in the middle of the policy index ranking, with exactly 12 countries above and below. Accordingly, it has middling female participation rates on both measures (for all women and for married women with lower education and younger children). Although the median gender wage gap is relatively high in the UK, occupational segregation here is one of the lowest. Indicating that although men and women tend to work in quite similar broad occupational categories (particularly in white-collar occupations), men are still better paid, on average. Ireland, however, ranks in the top four on the policy index due to its above average performance on the tax/benefit neutrality component (see Table 3.19 in Chapter 3), although it ranks below average on the gender-neutrality of parenthood leave, childcare and gender-role attitude components of the index. While female participation rates in Ireland are among the lowest, the median gender wage gap is middling and occupational segregation is relatively low. This suggests positive selection by women into employment; those who actually work are more likely to have higher earnings potential and to work in less segregated occupations.

The corporatist-conservative welfare states do not appear to form a consistent cluster either. The three Benelux countries score highly on the policy index (in the top ten), although they rank differently on various components of the index. Luxembourg tops the scale on the measure of gender-neutrality of parenthood leave, due to its paternity leave provisions and generous parental leave reserved for fathers (although, in

practice, the take-up rate is not high). It also scores above average on the tax/benefit gender-neutrality measure and the proportion of children aged 0-2 in formal childcare. However, Luxembourg has a below average score on the measure of gender-role attitudes. In contrast, Belgium has above average scores on the parenthood leave, childcare and attitude components of the index, but its tax/benefit system appears to be somewhat biased towards single-earner families. The Netherlands has relatively high enrolment rates of children under three in formal childcare and more egalitarian gender-role attitudes, but it has below average scores on the parenthood leave and tax/benefit components. However, participation rates of lower educated married women with younger children are relatively high in all three countries, while the median wage gaps are middling (although lower in Belgium). Yet, these countries are wide apart on the index of occupational segregation: Belgium is the second least segregated country of all, Luxembourg is the third most segregated country, and the Netherlands has middling segregation levels.

Austria and Germany sit in the bottom fifth of the policy index ranking, with consistently below average scores on each of the components of the index discussed in Chapter 3. It is not surprising, then, to find lower female participation rates in these countries, especially amongst lower educated prime-age married women with younger children (30% in Austria and 45% in Germany). This suggests that women with lower earnings potential may find it more difficult to reconcile their work and family lives. This lends some support to Gauthier's (1996) family policy typology which classifies Germany as a 'pro-traditional' country, whose family policy is characterised by longer family leave and low provision of formal childcare. Although Austria and Germany have some of the largest gender wage gaps, they have below average segregation levels. This implies that although men and women may work in broadly similar occupations, men are better paid, on average. Lower female participation levels also suggest positive selection into full-time work.

France does not fit neatly into any cluster. In some ways it is similar to the Benelux countries, but in others it is closer to Germany and Austria. In Gauthier's (1996) family policy typology, France is described as a 'pro-family/pro-natalist' country with a policy emphasis on helping mothers combine childbearing with employment.

Its ranking on the work/family reconciliation policy index is somewhat below average, although France scores highly on the childcare and attitudes components of the index. The multivariate analysis in Chapter 5 shows no significant relationship in France between having one child aged four or younger and women's propensity to work full-time (as opposed to working part-time or not participating). France has higher female participation rates than the Benelux countries, Germany or Austria, although lower than that in Nordic countries. However, France slides downwards in the rankings when the participation rate of married lower-educated women with younger children is considered. It scores higher than Austria and Germany, but lower than the Benelux or Nordic countries (with the exception of Finland). The finding of a lower participation rate for women with lower earnings potential and more family constraints on their employment is consistent with a moderate (positive) selection effect found for women in France in Chapter 5.

Southern-European ('Latin Rim') countries have middling scores on the policy index (lowest in Greece and highest in Italy and Spain), but they rank differently on the various components of the index discussed in Chapter 3. Italy does better than average on the parenthood leave component, while Spain and Portugal have above average scores on the childcare component. Greece and Italy have above average ranks on the tax/benefit component, while Spain and Italy have above average scores on the attitude index. Nevertheless, these countries as a group have some of the lowest female participation rates. Greece, Italy and Spain, in fact, have the lowest total female participation rates of prime-age women in all of the studied countries. Portugal is an outlier, with a participation rate closer to that of the UK. The Southern-European countries drift further apart when the participation rates of lower educated married women with younger children are considered. Greece, Spain and Italy are still in the bottom half of the rankings, but they have higher participation rates than the Czech Republic, Hungary or Austria. Remarkably, Portugal has the second highest participation rate amongst this group of women, behind Slovenia. This pattern suggests that although the Southern-European countries may not have the most 'women-friendly' or gender-neutral family and employment policies, other macro-level factors, not directly considered in this thesis, must play a role in influencing female participation rates.

The Southern-European countries also have similar gender wage gaps, all relatively low (below the cross-country average). The gender gaps across the earnings distribution in Italy and Spain were investigated in more detail in Chapter 5. There is evidence of sticky floors (the wage gap is larger amongst lower earners and decreases along the distribution) and relatively large selection effects (women with higher earnings potential tend to select into full-time work) for these two countries. However, there is no obvious Southern-European cluster with respect to occupational segregation: Italy has the lowest level of segregation, Spain falls in the middle of the cross-country distribution, while Greece and Portugal have above average segregation levels. In Spain, Italy and Greece, the level of segregation is found to be inversely related to the level of education (see Figure 6.8 in Chapter 6): segregation levels are largest amongst employees without upper-secondary education and lowest amongst the university educated. In Portugal, the level of segregation is disproportionately larger among the lowest educated employees, but similar among those with upper-secondary or further education and those with higher education.

Finally, the new EU member states all rank in the bottom half of the policy index, except Slovenia which sits next to the UK in the middle of the ranking. The Czech and Slovak Republics, as well as Poland, have the lowest values of the policy index; they consistently score below average on all four components of the index discussed in Chapter 3. As expected, all the new member states rank in the bottom half of the female participation distribution, with the lowest participation rates found in Poland, Hungary and the Czech Republic. Furthermore, they all have below average participation rates for married women with lower education and younger children, except middle-ranking Slovenia. The clustering falls apart, however, with respect to gender inequality outcomes. While Slovenia, Poland and Hungary have some of the lowest median gender wage gaps of all, the Czech and Slovak Republics, as well as the Baltic trio, have the largest wage gaps across the studied countries (along with the UK and Austria). The wage gaps across the distribution in Poland and the Czech Republic were examined in greater depth in Chapter 5. A moderate selection effect is found for women in Poland and virtually no selection for those in the Czech Republic. This may explain why wage gaps are lower on average in Poland and

higher in the Czech Republic: women with lower earnings potential are less likely to work at all in Poland, while there are fewer differences in the characteristics of women who work and those who do not in the Czech Republic. As regards occupational segregation, all the new member states except Hungary and Slovenia rank in the top of the cross-country distribution, with the highest segregation levels observed in the Baltic countries.

The Baltic countries appear to stand out from the rest of the new accession states. They have some of the highest gender earnings gaps and segregation levels. Their work/family reconciliation policies are characterised by longer and more generous parenthood leave available to couples (including provisions reserved to fathers), but some of the lowest formal childcare enrolment rates for children aged 0-2. Lithuania and Estonia have more traditional gender-role attitudes than any other new accession country, but Latvia scores higher on the combined indicator of attitudes than the rest of the new member states.

Overall, this thesis finds mixed evidence that the countries in Central and Eastern Europe, including the Baltic countries, form a separate type with respect to their work/family reconciliation policies relevant to gender equality in the labour market. Firstly, these countries are rather heterogeneous, with the three Baltic countries perhaps forming their own cluster. Secondly, on some indicators the new member states are more similar to Southern-European and to more traditional continental European countries such as Austria and Germany. This supports the finding of the ideal-type analysis in Aspalter et al. (2009) that the Czech and Slovak republics, Hungary, Poland and Slovenia have been returning to their pre-socialist Bismarckian roots, thus being more similar to Austria and Germany. There is also some support to the claim in Saxonberg and Sirovatka (2006) that the Czech and Slovak republics, Hungary and Poland have been following a re-familialisation policy since their transition to a market economy.

However, it has to be reiterated that the composite index of work/family reconciliation policies is not very highly correlated with any of the gender equality indicators in Table 7.1 (see Chapter 3 for a more detailed discussion). Table 7.2 presents a correlation matrix of the studied indicators from the previous table. There

is a positive and significant correlation between the composite index and the participation rate of married women without university education, with the youngest child aged 0-4 (R=0.48), but the correlation with the total female participation rate is much weaker and not significant (R=0.11). As discussed in Chapter 3, this is not surprising because family policies are more likely to affect women who are the least attached to the labour market. The correlations between the composite index and the median gender wage gap for all employees as well as the segregation index S are negative but not statistically significant. Although the direction of the associations is as expected, they are understandably weak because work/family reconciliation policies have wider goals than gender equality in the labour market (e.g. female labour supply, child well-being, fertility), while wage gaps and occupational segregation may be influenced by various other labour market factors. A significant positive linear association (R=0.43) is found between the total female participation rate and the median gender wage gap, but no significant correlation between the participation rate of lower educated women with family constraints is observed. Finally, the correlation between the median gender wage gap and the index of occupational gender segregation (R=0.48) is positive and significant, which suggests that male-dominated occupations tend to be better paid.

Table 7.2 Correlation matrix of gender equality in the labour market indicators and the work/family policies reconciliation index

	Work/family reconciliation index	Total female participation rate	Female participation rate (married, no university education, youngest child aged 0-4)	Median gender wage gap (all employees)
Total female participation rate	0.11			
Female participation rate (married, no university education, youngest child aged 0-4)	0.48*	0.54*		
Median gender wage gap (all employees)	-0.28	0.43*	-0.18	
Occupational segregation Index S	-0.29	0.20	0.02	0.48*

Source: EU-SILC 2007; OECD Family Database (version June 2009) Table PF7.1; Moss and Korintus (2008); OECD Tax/Benefit Calculator (accessed on 29/04/2010); EVS 1999.
* $p<0.05$

To sum up, this thesis concludes that the existing work-family reconciliation policies in the EU have not caught up sufficiently with the dramatic advances in women's labour market position. To various extents, they retain elements of the traditional male breadwinner model. Even in the Nordic countries, which rank highest on most measures of gender equity in work/family reconciliation policies analysed in Chapter 3, women tend to earn less than men, on average, and to work in a narrower range of occupations than their male counterparts. At the other extreme, Eastern-European and Southern-European countries tend to have more traditional gender-role attitudes and a policy environment less compatible with the dual-earner/dual-carer model of the family, but women who do work, particularly those who work full-time, tend to enjoy more equality with men in terms of their wages and occupational attainment (although there are some exceptions to this pattern). This is consistent with positive selection into full-time work, whereby women with the highest earnings potential and fewer family constraints on their employment are more like to participate in the labour market and to work longer hours.

Strengths and weaknesses of the thesis

The thesis has made several original contributions to the comparative welfare state research area by examining the variation between countries in work/family reconciliation policy and gender-role attitudes relevant to gender equality in the labour market, and by analysing individual level determinants of gender inequalities in the enlarged EU. In doing so, this thesis used a multi-disciplinary approach, drawing on the literature and methods from the fields of labour economics and comparative social policy. It employed a variety of modern and advanced quantitative techniques in Chapters 4, 5 and 6, complementing them with a less statistically complex policy analysis in Chapter 3.

A general contribution of this thesis is its coverage of the EU-25, including both old and new EU member states, as opposed to earlier studies that focus on the EU-15.

Amongst its more specific contributions, the thesis explores a gender-sensitive analysis of work/family reconciliation policies using a wider range of indicators than most of the previous studies that focused primarily on parenthood leave and

childcare policies (J. Gornick & Meyers, 2003; De Henau et al., 2006; De Henau et al., 2007; Ray et al., 2010). Furthermore, the study explicitly includes information on gender-role attitudes, instead of treating cultural differences between countries implicitly as country fixed effects (e.g. Jaumotte, 2003).

The thesis also makes an original contribution to the existing research on gender wage gaps in the EU. The study in Chapter 5 is the first analysis to date for Britain, France, Spain, Poland and the Czech Republic that makes allowance for sample selection of women into full-time work in the estimation of earnings functions, while simulating the gender wage gaps that would be observed if all women worked full-time, as well as decomposing the gender wage gap across the entire distribution (as opposed to the mean or the median) into the part due to differences in individual characteristics and the part due to differences in the returns to these characteristics.

Finally, the analysis in Chapter 6 makes an original contribution to the cross-country comparative literature on occupational gender segregation by using the square root index (Hutchens, 2004) to compare the levels of occupational segregation in the enlarged EU. Although this segregation measure is increasingly popular in education studies, it has not been used in cross-country comparative gender segregation research to date. The study compared the findings based on the square root index and the widely-used Index of Dissimilarity, investigating the differences in the results.

This thesis also has several limitations. Some of these limitations have to do with the quality and availability of data. For instance, it was not possible to carry out the analysis of gender segregation at the level of industry or sector (i.e. public/private) because the EU-SILC does not provide information on sector of work and several countries lack information on industry (i.e. Nordic countries and the Netherlands). Meanwhile, the analysis in Chapter 5 used a different data source for Britain than for the other four countries because the British sample in the EU-SILC lacks data on years in paid work. At the same time, data on gender-role attitudes used in Chapter 3 is somewhat out of date (1999/2000). Thus, the results from the analysis of gender-role attitudes need to be interpreted with some caution. Although more recent (2008) data from the European Values Study are now available, the last round of the survey

excludes several of the studied countries[123]. Also, these data were not published until late July 2010, shortly before this thesis was finalised. Finally, the analysis of labour market activity and occupational transitions in Chapter 4 covers the period 1994-2001, using data from the ECHP, while the data on wages and occupational segregation in Chapters 5 and 6 are from the EU-SILC 2007. Similarly, Chapter 3 analyses policy indicators as of 2006/2007. Although the ECHP is a more suitable dataset for the longitudinal analysis in Chapter 4, the age of the data source makes comparison of findings with the rest of the thesis more difficult.

Furthermore, the analysis in Chapter 3 is mostly bivariate and does not allow the identification of causal relationships between the studied macro-level factors. Thus, it cannot be ascertained whether or to what extent the studied work-family reconciliation policies affect the labour force participation of women, gender wage gaps and occupational gender segregation. Meanwhile, the analysis does not include a wider range of macro-level indicators that are likely to be connected with wages and occupational segregation, such as the measures of labour market regulation, collective bargaining and wage determination practices. However, as this thesis focuses on work/family reconciliation policies and gender-role attitudes, labour market institutions are somewhat outside its scope.

Policy implications

The findings of this thesis suggest that higher levels of female employment do not necessarily ensure gender parity in pay and occupational attainment. Thus, although Nordic countries tend to have higher female participation rates, even among women with lower earnings potential and more family constraints on employment, they have middling gender wage gaps and occupational gender segregation. Rather than promoting work-family reconciliation policies in order to increase female labour supply for its own sake, greater attention needs to be paid to the quality of female employment and gender equality in terms of pay and occupational attainment. Moreover, family and employment policies geared towards the facilitation of work and family lives do not influence all women equally. It is those with lower levels of education and younger children whose participation rates are found to be more

[123] Britain, Iceland, Italy, Sweden, and Norway.

strongly related to the work/family reconciliation policy environment in the studied countries.

Although work/family reconciliation policies are not found to be a panacea for promoting gender equality in the labour market, there is some evidence that more gender-egalitarian policies with respect to parenthood leave, childcare facilities for very young children and fiscal rules affecting secondary earners in couples are related to smaller gender wage gaps and lower levels of occupational segregation, particularly its horizontal dimension. Although the strength of these relationships is only moderate, there appears to be some scope for promoting gender equality in the labour market by making it easier for women to work without compromising either their careers or fertility. Thus employment and family policies may need to explicitly promote a gender-neutral dual-earner/dual-carer model of the family in which both men and women do unpaid caring and paid labour market work. Otherwise, women have to face a trade-off between having children and pursuing a career, which results either in the situation of low employment and low fertility or in the scenario of relatively high employment and fertility combined with high levels of occupational segregation and gender wage gaps.

Although some of the countries studied here appear to be relative laggards with respect to their work/family reconciliation policies, there may be substantial policy opportunities. Thus, parenthood leave designs have been evolving in recent decades, as the EU introduced minimum statutory guarantees for maternity leave and parental leave. For instance, the parenthood leave system in Germany has gradually moved away from a more traditional male-breadwinner model characterised by a long period of leave available to mothers at low rates of pay to a more gender-egalitarian system that encourages fathers to share parental leave[124] (Erler, 2009). Although Germany and several other EU countries do not guarantee legal entitlements to paternity leave, it is not inconceivable that such provisions will be instituted in the near future. The EU, perhaps, has a role to play in this area. Similarly, the availability and affordability of childcare facilities for pre-school children may improve faster in the countries with the least developed provision. For instance, relatively low availability

[124] If fathers take at least two months of parental leave, the length of parental leave benefit extends from 12 months to 14 months. See notes to Table 3.1 in Chapter 3. See Erler (2009) for a discussion of the evolution of parenthood leave in Germany since 1878.

of formal childcare facilities in Central and Eastern European countries may offer a policy opportunity to develop a coherent and integrated childcare and early education system, similarly to the experience of Nordic countries that were latecomers in pre-school programmes provision (Morgan, 2008).

Directions for future research

Although this thesis examines the cross-country variation in work/family reconciliation policies, it does not establish the extent in practice to which the dual-earner/dual-carer model of the family is prevalent in the EU. For instance, harmonised time-use data would allow the degree to which men and women share domestic and caring tasks to be measured. A potential source of such data is the European Social Survey 2004. The analysis of the gender division of domestic labour in couple households would thus complement the study of gender inequality in the labour market.

Also, the analysis of individual labour market transitions in Chapter 4 based on the ECHP data for 1994-2001 could be replicated using the longitudinal component of the EU-SILC 2007. Although it is only a four-year rotation panel, there are four years of data on the same individuals for the period 2004-2007, which can make it possible to explore the effect of childbirth on their labour market transitions. However, sample size is likely to be a problem for smaller countries, since only one of the four sub-samples in each country will have data spanning four years[125]. Also, the EU-SILC database provides a less comprehensive list of relevant variables than the ECHP. It lacks information on the sector of work, and some information is missing on years in paid work, size of workplace and type of contract for several countries.

Finally, an extension of the analysis in this thesis might look into fertility and child poverty patterns in the enlarged EU. Given the career-fertility trade-offs that higher educated women tend to face in countries with less effective work/family reconciliation policies (Esping-Andersen, 2009), it may be worthwhile to explore how far the policy index constructed in Chapter 3 is associated with fertility

[125] See "EU-SILC User Database Description Version 2007-2 from 01-08-09" pp. 37-39.

measures. Furthermore, since a lack of sufficient job-protected family leave or accessible and affordable childcare services for younger children may prevent mothers from entering employment, particularly if they have lower human capital endowments, their children may be vulnerable to poverty. Thus, the relationship between the policy index and child poverty indicators could also be fruitfully investigated in future work.

References

Agresti, A. (2007) *An introduction to categorical data analysis*. 2nd ed. Wiley-Blackwell.

Albrecht, J., Björklund, A. & Vroman, S. (2003) Is there a glass ceiling in Sweden? *Journal of Labor Economics*, 21 (1), pp.145-177.

Albrecht, J., Van Vuuren, A. & Vroman, S. (2009) Counterfactual distributions with sample selection adjustments: econometric theory and an application to the Netherlands. *Labour Economics*, 16 (4), pp.383–396.

Alesina, A. & Ichino, A. (2007) Gender based taxation. *Harvard University, Department of Economics, Cambridge, Mass*.

Algan, Y. & Cahuc, P. (2006) Job protection: the macho hypothesis. *Oxford Review of Economic Policy*, 22 (3), pp.390-410.

Allison, P.D. (1984) *Event history analysis: Regression for longitudinal event data*. Newbury Park, Sage Publications, Inc.

Altonji, J.G. & Blank, R.M. (1999) Race and gender in the labor market. *Handbook of Labor Economics*, pp.3143–3259.

Anderson, T., Forth, J., Metcalf, H. & Kirby, S. (2001) *The gender pay gap: final report to the Women and Equality Unit*. London: The Cabinet Office.

Anker, R. (1998) *Gender and jobs: sex segregation of occupations in the world*. International Labour Office Geneva.

Anker, R. (2001) Theories of occupational segregation by sex: an overview. In: M. F. Loutfi ed. *Women, gender and work*. p.129.

Antonczyk, D., Fitzenberger, B. & Sommerfeld, K. (2010) Rising wage inequality, the decline of collective bargaining, and the gender wage gap. *Labour Economics*, 17 (5), pp.835-847.

Apps, P. & Rees, R. (2007) Taxation of Couples. *IZA Discussion Papers No. 2910*.

Arrow, K.J. (1998) What has economics to say about racial discrimination? *Journal of Economic Perspectives*, 12 (2), pp.91-100.

Arulampalam, W., Booth, A.L. & Bryan, M.L. (2007) Is there a glass ceiling over Europe? Exploring the gender pay gap across the wage distribution. *Industrial and Labor Relations Review*, 60 (2), pp.163–186.

Aspalter, C., Jinsoo, K. & Sojeung, P. (2009) Analysing the welfare state in Poland, the Czech Republic, Hungary and Slovenia: an ideal-typical perspective. *Social Policy & Administration*, 43 (2), pp.170–185.

Baker, M., Gruber, J. & Milligan, K. (2008) Universal child care, maternal labor supply, and family well-being. *Journal of Political Economy*, 116 (4), pp.709-745.

Bardasi, E. & Gornick, J. (2008) Working for less? Women's part-time wage penalties across countries. *Feminist Economics*, 14 (1), pp.37-72.

Baum, C.L. (2003) The effects of maternity leave legislation on mothers' labor supply after childbirth. *Southern Economic Journal*, 69 (4), pp.772–800.

Baxter, J. & Kane, E.W. (1995) Dependence and independence: a cross-national analysis of gender inequality and gender attitudes. *Gender and Society,* 9 (2), pp.193–215.

Beblo, M., Beninger, D., Heinze, A. & Laisney, F. (2003) Measuring selectivity-corrected gender wage gaps in the EU. *ZEW DP*, 03–74.

Beblo, M. & Wolf, E. (2000) How much does a year off cost? Estimating the wage effects of employment breaks and part-time periods. *Center for European Economic Research (ZEW)*, Discussion Paper No. 00-69.

Becker, G.S. (1964) *Human capital: a theoretical and empirical analysis, with special reference to education*. University of Chicago Press.

Becker, G.S. (1962) Investment in human capital: a theoretical analysis. *The Journal of Political Economy*, 70 (S5), p.9.

Becker, G.S. (1993) *A Treatise on the family*. Enl. ed. Cambridge, Mass, Harvard University Press.

Bergmann, B. (2005) *The Economic emergence of women*. 2nd ed. New York, Palgrave MacMillan.

Bettio, F. (2002) The pros and cons of occupational gender segregation in Europe. *Canadian Public Policy/Analyse de Politiques*, pp.65–84.

Bettio, F. & Verashchagina, A. (2009a) Fiscal system and female employment in Europe. *EGGE – European Network of Experts on Employment and Gender Equality issues*.

Bettio, F. & Verashchagina, A. (2009b) *Gender segregation in the labour market: root causes, implications and policy responses in the EU*. European Commission.

Blackburn, R.M. & Jarman, J. (2006) Gendered occupations: exploring the relationship between gender segregation and inequality. *International Sociology*, 21 (2), p.289.

Blau, D.M. & Robins, P.K. (1988) Childcare costs and family labor supply. *Review of Economics & Statistics*, 70 (3), p.374.

Blau, F.D. & Kahn, L.M. (2000) Gender differences in pay. *The Journal of Economic Perspectives*, 14 (4), pp.75–99.

Blau, F.D. & Kahn, L.M. (2003) Understanding international differences in the gender pay gap. *Journal of Labor Economics*, 21 (1), pp.106–144.

Blinder, A.S. (1973) Wage discrimination: reduced form and structural estimates. *The Journal of Human Resources*, 8 (4), pp.436–455.

Bradshaw, J. & Finch, N. (2002) *A comparison of child benefit packages in 22 countries*. Department for Work and Pensions.

Bradshaw, J., Hoelscher, P. & Richardson, D. (2007) An index of child well-being in the European Union. *Social Indicators Research*, 80 (1), pp.133-177.

Brainerd, E. (2000) Women in transition: changes in gender wage differentials in Eastern Europe and the former Soviet Union. *Industrial and Labor Relations Review*, 54 (1), pp.138-162.

Brewer, M. & Paull, G. (2006) Newborns and new schools: critical times in women's employment. *Research Report No. 308 Department for Work and Pensions*.

Bruning, G. & Plantenga, J. (1999) Parental leave and equal opportunities: experiences in eight European countries. *Journal of European Social Policy*, 9 (3), p.195.

Buchinsky, M. (1998) The dynamics of changes in the female wage distribution in the USA: a quantile regression approach. *Journal of Applied Econometrics*, 13 (1), pp.1–30.

Buddelmeyer, H., Mourre, G. & Ward, M. (2005) Part-time work in EU countries: labour market mobility, entry and exit. *IZA Discussion Paper No. 1550*.

Cerami, A. (2006) *Social policy in Central and Eastern Europe: the emergence of a new European welfare regime*. Lit Verlag.

Chakravarty, S.R. & Silber, J. (2007) A generalized index of employment segregation. *Mathematical Social Sciences*, 53 (2), pp.185-195.

Charles, M. (1992) Cross-national variation in occupational sex segregation. *American Sociological Review*, 57 (4), pp.483–502.

Charles, M. (2003) Deciphering sex segregation: vertical and horizontal inequalities in ten national labor markets. *Acta Sociologica*, 46 (4), pp.267-287.

Charles, M. & Grusky, D.B. (1995) Models for describing the underlying structure of sex segregation. *American Journal of Sociology*, pp.931–971.

Chzhen, Y. & Mumford, K. (2009) Gender gaps across the earnings distribution in

Britain: are women bossy enough? *IZA Discussion Paper No. 4331*.

Connelly, R. (1992) The effect of child care costs on married women's labor force participation. *Review of Economics & Statistics*, 74 (1), pp.83-90.

Connolly, S. & Gregory, M. (2008) Moving down: women's part-time work and occupational change in Britain 1991-2001. *Economic Journal*, 118 (526), pp.F52–F76.

Craig, L. (2006) Does father care mean fathers share? A comparison of how mothers and fathers in ontact families spend time with children. *Gender Society*, 20 (2), pp.259-281.

Crompton, R. (1999) *Restructuring gender relations and employment: the decline of the male breadwinner*. Oxford University Press, USA.

Crompton, R. & Harris, F. (1998) Explaining women's employment patterns: 'orientations to work' revisited. *The British Journal of Sociology*, 49 (1), pp.118-136.

Crompton, R. & Lyonette, C. (2008) Mothers' employment, work-life conflict, careeres and class. In: J. Scott, S. Dex, & H. Joshi eds. *Women and employment: changing lives and new challenges.* Cheltenham, Edward Elgar Publishing.

Das Gupta, P. (1987) Comment on Suzanne M. Bianchi and Nancy Rytina's "The decline in occupational sex segregation during the 1970s: census and CPS comparisons". *Demography*, 24 (2), pp.291-295.

De Henau, J., Meulders, D. & O'Dorchai, S. (2007) Parents' care and career: comparing parental leave policies. In: *Social policies, labour markets and motherhood: a comparative analysis of European countries.* Cambridge University Press, pp.63-106.

De Henau, J., Meulders, D. & O'dorchai, S. (2006) The childcare triad? indicators assessing three fields of child policies for working mothers in the EU-15. *Journal of Comparative Policy Analysis: Research and Practice*, 8 (2), p.129.

De la Rica, S., Dolado, J.J. & Llorens, V. (2008) Ceilings or floors? Gender wage gaps by education in Spain. *Journal of Population Economics*, 21 (3), pp.751–776.

Del Boca, D. (2002) The effect of child care and part time opportunities on participation and fertility decisions in Italy. *Journal of Population Economics*, 15 (3), pp.549–573.

Del Boca, D., Pasqua, S. & Pronzato, C. (2008) Motherhood and market work decisions in institutional context: a European perspective. *Oxford Economic Papers*, 61 (Supplement 1), pp.i147-i171.

Deming, W.E. & Stephan, F.F. (1940) On a least squares adjustment of a sampled frequency table when the expected marginal totals are known. *The Annals of Mathematical Statistics*, 11 (4), pp.427–444.

Dex, S., Joshi, H., Macran, S. & McCulloch, A. (1998) Women's employment transitions around childbearing. *Oxford Bulletin of Economics and Statistics*, 60 (1), pp.79–98.

Dex, S., Joshi, H., Neuburger, J. & Bukodi, E. (2008) Changes in women's paid work. In: J. Elliott & R. Vaitilingam eds. *Now We Are 50: Key Findings from the National Child Development Survey*. London, Centre for Longitudinal Studies, pp.38-49.

Dex, S., Ward, K. & Joshi, H. (2008) Changes in women's occupations and occupational mobility over 25 years. In: J. Scott, S. Dex, & H. Joshi eds. *Women and employment: changing lives and new challenges*. Cheltenham, Edward Elgar Publishing.

Dickens, L. (2007) The road is long: thirty years of equality legislation in Britain. *British Journal of Industrial Relations*, 45 (3), pp.463–494.

DiNardo, J., Fortin, N.M. & Lemieux, T. (1996) Labor market institutions and the distribution of wages, 1973-1992: a semiparametric approach. *Econometrica: Journal of the Econometric Society*, 64 (5), pp.1001–1044.

Dolado, J., Felgueroso, F. & Jimeno, J.F. (2003) Where do women work? Analysing patterns in occupational segregation by gender. *Annales d'Economie et de Statistique*, pp.293–315.

Dolado, J.J., Felgueroso, F. & Jimeno-Serrano, J.F. (2002) Recent trends in occupational segregation by gender: a look across the Atlantic. In: A. Argadona & J. Gual eds. *The social dimensions of employment: institutional reforms in labour markets*. p.81.

Donald, S.G., Green, D.A. & Paarsch, H.J. (2000) Differences in wage distributions between Canada and the United States: an application of a flexible estimator of distribution functions in the presence of covariates. *The Review of Economic Studies*, 67 (4), pp.609–633.

Duncan, O. & Duncan, B. (1955) A methodological analysis of segregation indexes. *American Sociological Review*, 20 (2), pp.210–217.

Engellandt, A. & Riphahn, R.T. (2005) Temporary contracts and employee effort. *Labour Economics*, 12 (3), pp.281-299.

England, P. (2006) Toward gender equality: progress and bottlenecks. In: F. D. Blau, M. C. Brinton, & D. B. Grusky eds. *The declining significance of gender*. New York, Russel Sage Foundation, pp.245–265.

England, P. (1984) Wage appreciation and depreciation: a test of neoclassical

economic explanations of occupational sex segregation. *Social Forces*, 62 (3), pp.726–749.

Equal Opportunities Commission (2005) Sex and power: who runs Britain?

Erikson, R. & Goldthorpe, J.H. (2002) Intergenerational inequality: a sociological perspective. *The Journal of Economic Perspectives*, 16 (3), pp.31-44.

Erler, D. (2009) Germany: taking a Nordic turn? In: S. Kamerman & P. Moss eds. *The Politics of Parental Leave Policies: Children, Parenting, Gender and the Labour Market*. Bristol, The Policy Press, p.119.

Escobedo, A. (1999) Doing cross-national work on parental leave. In: P. Moss & F. Deven eds. *Parental Leave: Progress or Pitfall*. NIDI/CBGS Publications, pp.173–92.

Esping-Andersen, G. (2002) A new gender contract. In: G. Esping-Andersen ed. *Why we need a new welfare state*. pp.68–96.

Esping-Andersen, G. (2009) *Incomplete revolution: adapting welfare states to women's new roles*. Polity Press.

Esping-Andersen, G. (1999) *Social foundations of postindustrial economies*. Oxford University Press.

Esping-Andersen, G. (1990) *The three worlds of welfare capitalism*. Polity Press.

Esping-Andersen, G. (1996) *Welfare states in transition: national adaptations in global economies*. Sage Publications Ltd.

European Commission (2009) *Indicators for monitoring the Employment Guidelines including indicators for additional employment analysis. 2009 compendium.* European Communities.

European Commission (1984) Memorandum on income taxation and income treatment for men and women presented by the European Commission to the Council.

European Commission (2009) *Report on equality between women and men 2009*. European Communities.

European Commission (2010) *Report on equality between women and men 2010*. European Communities.

European Union (2000) Charter of Fundamental Rights of the European Union. *Official Journal of the European Communities*, 43 (C364). Available from: <http://www.europarl.europa.eu/charter/pdf/text_en.pdf> [Accessed 8 September 2010].

European Union (2003) Regulation (EC) NO 1177/2003 of the European Parliament

and of the Council of 16 June 2003 concerning Community statistics on income and living conditions (EU-SILC). *Official Journal of the European Union*, 46 (L165).

Eurostat (2010) Labour Force Survey Series - Detailed annual survey results: full-time and part-time employment [Internet]. Available from: [Accessed 15 March 2010].

Fagnani, J. & Boyer, D. (2008) France. In: P. Moss & M. Korintus eds. *International review of parental leave policies and related research 2008*. Employment Relations Research Series. London, Department for Business Enterprise and Regulatory Reform, pp.200-206.

Fagnani, J. & Math, A. (2009) France: gender equality a pipe dream? In: S. Kamerman & P. Moss eds. *The politics of parental leave policies*. The Policy Press, pp.103-118.

Felgueroso, F., Pérez-Villadóniga, M.J. & Prieto-Rodriguez, J. (2008) The effect of the collective bargaining level on the gender wage gap: evidence from Spain. *The Manchester School*, 76 (3), pp.301–319.

Fenger, H.J.M. (2007) Welfare regimes in Central and Eastern Europe: incorporating post-communist countries in a welfare regime typology. *Contemporary Issues and Ideas in Social Sciences*, 3 (2).

Ferrera, M. (1996) The 'Southern model' of welfare in social Europe. *Journal of European Social Policy*, 6 (1), p.17.

Finch, N. (2006) Gender equity and time use: how do mothers and fathers spend their time? In: J. Bradshaw & A. Hatland eds. *Social policy, employment and family change in comparative perspective*. Edward Elgar Pub.

Fortin, N.M. (2005) Gender role attitudes and the labour-market outcomes of women across OECD countries. *Oxford Review of Economic Policy*, 21 (3), p.416.

Fortin, N.M. & Huberman, M. (2002) Occupational gender segregation and women's wages in Canada: An historical perspective. *Canadian Public Policy/Analyse de Politiques*, pp.11–39.

Fraser, N. (1994) After the family wage: gender equity and the welfare state. *Political Theory*, 22 (4), pp.591-618.

Gannon, B., Plasman, R., Ryex, F. & Tojerow, I. (2007) Inter-industry wage differentials and the gender wage gap: evidence from European countries. *Economic and Social Review*, 38 (1), p.135.

Ganzeboom, H.B. & Treiman, D.J. (1996) Internationally comparable measures of occupational status for the 1988 International Standard Classification of Occupations. *Social Science Research*, 25, pp.201–239.

Gauthier, A.H. (2002) Family policies in industrialized countries: is there convergence? *Population (english edition)*, (2002/3), pp.447–474.

Gauthier, A.H. (1996) *The state and the family: a comparative analysis of family policies in industrialized countries*. Oxford University Press Oxford.

Gerhard, U., Knijn, T. & Weckwert, A. (2005) *Working mothers in Europe*. Edward Elgar Publishing.

Giannelli, G.C. & Braschi, C. (2002) Reducing hours of work: does overtime act as a brake upon employment growth? An analysis by gender for the case of Italy. *IZA Discussion Paper No. 557*.

Gibbs, J.P. (1965) Occupational differentiation of Negroes and Whites in the United States. *Social Forces*, 44 (2), pp.159–165.

Ginn, J., Arber, S., Brannen, J., Dale, A., Dex, S., Elias, P., Moss, P., Pahl, J., Roberts, C. & Rubery, J. (1996) Feminist fallacies: a reply to Hakim on women's employment. *British Journal of Sociology*, 47 (1), pp.167–174.

Gornick, J. & Meyers, M. (2003) *Families that work: policies for reconciling parenthood and employment*. New York, Russel Sage Foundation.

Gornick, J.C., Meyers, M.K. & Ross, K.E. (1997) Supporting the employment of mothers: policy variation across fourteen welfare states. *Journal of European Social Policy*, 7 (1), p.45.

Gornick, J.C. & Meyers, M.K. (2008) Creating gender egalitarian societies: an agenda for reform. *Politics & Society*, 36 (3), pp.313-349.

Grajek, M. (2003) Gender pay gap in Poland. *Economics of Planning*, 36 (1), pp.23-44.

Grimshaw, D. & Rubery, J. (2007) *Undervaluing women's work*. Manchester, Equal Opportunities Commission.

Gross, E. (1968) Plus ca change...? The sexual structure of occupations over time. *Social Problems*, pp.198–208.

Gustafsson, S. (2001) Optimal age at motherhood. Theoretical and empirical considerations on postponement of maternity in Europe. *Journal of Population Economics*, 14 (2), pp.225–247.

Gustafsson, S., Kenjoh, E. & Wetzels, C. (2002) The role of education in postponement of maternity in Britain, Germany, the Netherlands and Sweden. *The Gender Dimension of Social Change: The Contribution of Dynamic Research to the Study of Women's Life Courses, The Policy Press, Bristol*, pp.55–79.

Gustafsson, S.S., Wetzels, C.M., Vlasblom, J.D. & Dex, S. (1996) Women's labor

force transitions in connection with childbirth: A panel data comparison between Germany, Sweden and Great Britain. *Journal of population economics*, 9 (3), pp.223–246.

Gutiérrez-Domènech, M. (2005a) Employment after motherhood: a European comparison. *Labour Economics*, 12 (1), pp.99–123.

Gutiérrez-Domènech, M. (2005b) Employment transitions after motherhood in Spain. *Labour*, 19 (s1), pp.123–148.

Haas, L. (2008) Parental leave and gender equality: lessons from the European Union. *Review of Policy Research*, 20 (1), pp.89–114.

Hakim, C. (1995) Five feminist myths about women's employment. *The British Journal of Sociology*, 46 (3), pp.429-455.

Hakim, C. (1991) Grateful slaves and self-made women: fact and fantasy in women's work orientations. *European Sociological Review*, 7 (2), p.101.

Hakim, C. (1979) Occupational segregation: a comparative study of the degree and pattern of the differentiation between men and women's work in Britain, the United States and other countries. *Department of Employment Research Paper*, 9.

Hakim, C. (2000) *Work-lifestyle choices in the 21st century: preference theory*. Oxford University Press, USA.

Halman, L. (2001) *The European values study: A third wave: Source book of the 1999/2000 European Values Study Surveys*. WORC, Tilburg University.

Halpin, B. (2000) BHPS work-life history files, version 2. *Colchester: ESRC Research Centre on Micro-social Change, University of Essex*.

Hao, L. & Naiman, D.Q. (2007) *Quantile regression*. Sage Publications.

Heckman, J.J. (1979) Sample selection bias as a specification error. *Econometrica*, 47 (1), pp.153–161.

Hutchens, R. (2004) One measure of segregation. *International Economic Review*, 45 (2), pp.555-578.

Ichimura, H. (1993) Semiparametric least squares (SLS) and weighted SLS estimation of single-index models. *Journal of Econometrics*, 58 (1-2), pp.71–120.

Immervoll, H. & Barber, D. (2006) Can parents afford to work? Childcare costs, tax-benefit policies and work incentives. *IZA Discussion Papers No. 1932*.

Immervoll, H., Kleven, H.J., Kreiner, C.T. & Verdelin, N. (2008) An evaluation of the tax-transfer treatment of married couples in European countries. *EPRU*

Working Paper Series.

Jacobs, J.A. (1989a) Long-term trends in occupational segregation by sex. *American Journal of Sociology*, 95 (1), pp.160–173.

Jacobs, J.A. (1989b) *Revolving doors: sex segregation and women's careers*. Stanford Univ Pr.

Jacobs, J.A. (1993) Theoretical and measurement issues in the study of sex segregation in the workplace: research note. *European Sociological Review*, 9 (3), pp.325-330.

Jacobs, J.A. & Lim, S.T. (1992) Trends in occupational and industrial sex segregation in 56 countries, 1960-1980. *Work and Occupations*, 19 (4), pp.450-486.

Jaumotte, F. (2003) Labour force participation of women: empirical evidence on the role of policy and other determinants in OECD countries. *OECD Economic Studies*, pp.51–108.

Jenkins, S.P., Micklewright, J. & Schnepf, S.V. (2008) Social segregation in secondary schools: how does England compare with other countries? *Oxford Review of Education*, 34 (1), p.21.

Joshi, H., Paci, P. & Waldfogel, J. (1998) What do we know about unequal pay? In: H. Joshi & P. Paci eds. *Unequal pay for women and men: evidence from the British Birth Cohort Studies*. Cambridge, MIT Press, pp.1–22.

Juhn, C., Murphy, K.M. & Pierce, B. (1993) Wage inequality and the rise in returns to skill. *Journal of Political Economy*, 101 (3), pp.410-442.

Kalmijn, M. (2003) Country differences in sex-role attitudes: cultural and economic explanations. In: W. Arts, J. Hagenaars, & L. Halman eds. *The cultural diversity of European unity: findings, explanations and reflections from the European Values Study*. Brill.

Kamerman, S. & Moss, P. (2009) *The politics of parental leave policies: Children, parenting, gender and the labour market*. Bristol: The Policy Press.

Karmel, T. & Maclachlan, M. (1988) Occupational sex segregation — increasing or decreasing? *Economic Record*, 64 (3), pp.187–195.

Kilbourne, B.S., Farkas, G., Beron, K., Weir, D. & England, P. (1994) Returns to skill, compensating differentials, and gender bias: effects of occupational characteristics on the wages of white women and men. *The American Journal of Sociology*, 100 (3), pp.689-719.

Kilkey, M. (2000) *Lone mothers between paid work and care: the policy regime in twenty countries*. Aldershot, Ashgate.

Koenker, R. & Bassett, G. (1978) Regression quantiles. *Econometrica*, 46 (1), pp.33–50.

Korpi, W. (2000) Faces of inequality: gender, class, and patterns of inequalities in different types of welfare states. *Social Politics: International Studies in Gender, State & Society*, 7 (2), p.127.

Korpi, W. (1989) Power, politics, and state autonomy in the development of social citizenship: Social rights during sickness in eighteen OECD countries since 1930. *American sociological review*, 54 (3), pp.309–328.

Lambert, P.A. (2008) The comparative political economy of parental leave and child care: evidence from twenty OECD countries. *Soc Pol*, 15 (3), pp.315-344.

Lewis, J. (1992) Gender and the development of welfare regimes. *Journal of European social policy*, 2 (3), p.159.

Lewis, J. (2006) Work/family reconciliation, equal opportunities and social policies: the interpretation of policy trajectories at the EU level and the meaning of gender equality. *Journal of European Public Policy*, 13 (3), pp.420–437.

Lewis, J., Campbell, M. & Huerta, C. (2008) Patterns of paid and unpaid work in Western Europe: gender, commodification, preferences and the implications for policy. *Journal of European Social Policy*, 18 (1), pp.21-37.

Lohkamp-Himmighofen, M. & Dienel, C. (2000) Reconciliation policies from a comparative perspective. In: L. Hantrais ed. *Gendered Policies in Europe: Reconciling Employment and Family Life*. London, Macmillan Press ltd, pp.49–67.

Lück, D. & Hofäcker, D. (2003) Rejection and acceptance of the male breadwinner model: which preferences do women have under which circumstances. In: *First Annual Conference of ESPAnet, Copenhagen*. pp.11–13.

Machado, J.A. & Mata, J. (2005) Counterfactual decomposition of changes in wage distributions using quantile regression. *Journal of Applied Econometrics*, 20 (4), pp.445–466.

Mahon, R. (2006) The OECD and the work/family reconciliation agenda: competing frames. J. Lewis ed. *Children, changing families and welfare states*, pp.173-197.

Mandel, H. & Semyonov, M. (2006) A welfare state paradox: state interventions and women's employment opportunities in 22 countries. *American Journal of Sociology*, 111 (6), pp.1910-1949.

Manning, A. & Petrongolo, B. (2008) The part-time pay penalty for women in Britain. *The Economic Journal*, 118 (526), pp.F28–F51.

Marshall, T.H. (1950) *Citizenship and social class and other essays*. Cambridge,

Cambridge University Press.

McCaffery, E.J. (2008) Where's the sex in fiscal sociology? Taxation and gender in comparative perspective. *University of Southern California Law School Working Paper Series*, 70.

McDonald, P. (2000) Gender equity, social institutions and the future of fertility. *Journal of population Research*, 17 (1), pp.1–16.

McRae, S. (2003) Constraints and choices in mothers' employment careers: a consideration of Hakim's preference theory. *The British Journal of Sociology*, 54 (3), pp.317-338.

Meghir, C. & Phillips, D. (2008) Labour supply and taxes. *Institute for Fiscal Studies, WP*, 8 (04).

Melly, B. (2006) Estimation of counterfactual distributions using quantile regression. *University of St. Gallen, Discussion Paper*.

Meulders, D. & O'Dorchai, S. (2007) The position of mothers in a comparative welfare state perspective. In: *Social policies, labour markets and motherhood*. Cambridge, Cambridge University Press, pp.3-27.

Miller, P.W. (1987) The wage effect of the occupational segregation of women in Britain. *The Economic Journal*, 97 (388), pp.885–896.

Mincer, J. (1958) Investment in human capital and personal income distribution. *The Journal of Political Economy*, 66 (4), pp.281–302.

Mincer, J. & Polachek, S. (1974) Family investments in human capital: earnings of women. *The journal of political economy*, 82 (2), pp.76–108.

Mora, R. & Ruiz-Castillo, J. (2008) A defense of an entropy based index of multigroup segregation. *Economics Working Papers, Universidad Carlos III de Madrid*, 07-76.

Morgan, K.J. (2008) The Political Path to a Dual Earner/Dual Carer Society: Pitfalls and Possibilities. *Politics Society*, 36 (3), pp.403-420.

Moss, P. (2008) Making parental leave parental: an overview of policies to increase fathersuse of leave. *International Review of Leave Policies and related research*, pp.79–84.

Moss, P. & Deven, F. (1999) Parental leave: progress or pitfall. *Research and Policy Issues in Europe*.

Moss, P. & Korintus, M. eds. (2008) *International review of leave policies and related research 2008*. London, Department for Business Enterprise and Regulatory Reform.

Mumford, K. & Smith, P.N. (2009) What determines the part-time and gender earnings gaps in Britain: evidence from the workplace. *Oxford Economic Papers,* 61 (Supplement 1), pp.56-75.

National Association of Women Lawyers (2008) *Report on the Third Annual Survey*.

Nermo, M. (2000) Models of cross-national variation in occupational sex segregation. *European Societies,* 2 (3), p.295.

Nicodemo, C. (2009a) Gender pay gap and quantile regression in European families. *IZA Discussion Paper No. 3978.*

Nicodemo, C. (2009b) Heterogeneity across immigrants in the Spanish labour market: advantage and disadvantage. *Working Papers, wpdea0909, Department of Applied Economics at Universitat Autonoma of Barcelona*.

Oaxaca, R. (1973) Male-female wage differentials in urban labor markets. *International Economic Review*, 14 (3), pp.693–709.

O'Connor, J.S. (1996) From women in the welfare state to gendering welfare state regimes. *Current Sociology*, 44 (2).

O'Connor, J.S. (1993) Gender, class and citizenship in the comparative analysis of welfare state regimes: theoretical and methodological issues. *The British Journal of Sociology*, 44 (3), pp.501–518.

OECD (2007) *Benefits and Wages 2007: OECD Indicators*. OECD.

OECD (2001) *OECD Employment Outlook*. Paris, OECD.

OECD (2008) *OECD Employment Outlook*. Paris, OECD.

OECD (2002) *OECD Employment Outlook*. Paris, OECD.

OECD (2010) OECD Family database [Internet].

OECD (2005) *Taxing working families*. OECD Publishing.

OECD (2009) Use of childbirth-related leave by mothers and fathers. In: *OECD Family Database*. OECD - Social Policy Division - Directorate of Employment, Labour and Social Affairs. Available from: <www.oecd.org/els/social/family/database>.

Olivetti, C. & Petrongolo, B. (2008) Unequal pay or unequal employment? A cross-country analysis of gender gaps. *Journal of Labor Economics,* 26 (4), pp.621–654.

Olsen, W., Gash, V., Vandecasteele, L., Walthery, P. & Heuvelman, H. (2010) The gender pay gap in the UK: 1995-2007. *Government Equalities Office*.

Ondrich, J., Spiess, C.K. & Yang, Q. (1996) Barefoot and in a German kitchen: federal parental leave and benefit policy and the return to work after childbirth in Germany. *Journal of Population Economics*, 9 (3), pp.247–266.

Ondrich, J., Spiess, C.K., Yang, Q. & Wagner, G.G. (2003) The liberalization of maternity leave policy and the return to work after childbirth in Germany. *Review of Economics of the Household*, 1 (1), pp.77–110.

Orloff, A. (1993) Gender and the social rights of citizenship: the comparative analysis of gender relations and welfare states. *American sociological review*, 58 (3), pp.303–328.

Orloff, A. (1996) Gender in the welfare state. *Annual Review of Sociology*, 22 (1), pp.51–78.

Orloff, A. (2009) Gendering the comparative analysis of welfare states: an unfinished agenda. *Sociological Theory*, 27 (3), pp.317-343.

Paoli, P. & Parent-Thirion, A. (2003) *Working conditions in the acceding and candidate countries*. Dublin, European Foundation for the Improvement of Living and Working Conditions.

Pascall, G. & Kwak, A. (2005) *Gender regimes in transition in Central and Eastern Europe*. Policy Press.

Peracchi, F. (2002) The European community household panel: A review. *Empirical Economics*, 27 (1), pp.63–90.

Picchio, M. & Mussida, C. (2010) Gender wage gap: a semi-parametric approach with sample selection correction. *IZA Discussion Papers No. 4783*.

Plantenga, J. & Remery, C. (2006) *The gender pay gap. Origins and policy responses. A comparative review of thirty European countries.*

Plantenga, J. & Remery, C. (2009) *The provision of childcare services: a comparative review of 30 European countries*. European Communities.

Plantenga, J., Remery, C., Figueiredo, H. & Smith, M. (2009) Towards a European Union gender equality index. *Journal of European Social Policy*, 19 (1), p.19.

Plantenga, J., Remery, C., Siegel, M. & Sementini, L. (2008) Childcare services in 25 European Union member states: the Barcelona targets revisited. *Comparative Social Research*, 25, pp.27–53.

Polachek, S. (2007) Earnings over the lifecycle: the Mincer earnings function and its applications. *IZA Discussion Papers No. 3181*.

Polachek, S. (2006) How the human capital model explains why the gender wage gap narrowed. In: F. D. Blau, M. C. Brinton, & D. B. Grusky eds. *The declining significance of gender?* Russell Sage Foundation New York.

Polachek, S. (1981) Occupational self-selection: a human capital approach to sex differences in occupational structure. *The Review of Economics and Statistics*, 63 (1), pp.60-69.

Pollert, A. (2005) Gender, transformation and employment in Central Eastern Europe. *European Journal of Industrial Relations*, 11 (2), pp.213-230.

Powell, L.M. (1997) The impact of child care costs on the labour supply of married mothers: evidence from Canada. *Canadian Journal of Economics*, 30 (3), pp.577–594.

Pronzato, C.D. (2009) Return to work after childbirth: does parental leave matter in Europe? *Review of Economics of the Household*, 7 (4), pp.341–360.

Ray, R., Gornick, J.C. & Schmitt, J. (2008) Parental Leave Policies in 21 Countries: Assessing Generosity and Gender Equality. *CEPR Reports and Issue Briefs*.

Ray, R., Gornick, J.C. & Schmitt, J. (2010) Who cares? Assessing generosity and gender equality in parental leave policy designs in 21 countries. *Journal of European Social Policy*, forthcoming.

Regan, T.L. & Oaxaca, R.L. (2009) Work experience as a source of specification error in earnings models: implications for gender wage decompositions. *Journal of Population Economics*, 22 (2), pp.463–499.

de la Rica, S., Dolado, J.J. & García-Peñalosa, C. (2008) On gender gaps and self-fulfilling expectations: theory, policies and some empirical evidence. *IZA Discussion Papers*, 3553.

del Río, C., Gradín, C. & Cantó, O. (2006) The measurement of gender wage discrimination: the distributional approach revisited. *Society for the Study of Economic Inequality Working Paper Series*, 25.

Rosenfeld, R.A. & Birkelund, G.E. (1995) Women's part-time work: A cross-national comparison. *European Sociological Review*, 11 (2), p.111.

Rostgaard, T. (2004) Family support policy in Central and Eastern Europe–a decade and a half of transition. *Synthesis Report, The Council of Europe and UNESCO, Paris*.

Rubery, J. & Fagan, C. (1995) Gender segregation in societal context. *Work Employment Society*, 9 (2), pp.213-240.

Rubery, J. & Fagan, C. (1993) *Occupational segregation of women and men in the European Community*. Commission of the European Communities, Equal Opportunities Unit, DG VB 4.

Rubery, J., Smith, M. & Fagan, C. (1999) *Women's employment in Europe: trends and prospects*. Routledge.

de Ruijter, J.M.P. & Huffman, M.L. (2003) Gender composition effects in the Netherlands: a multilevel analysis of occupational wage inequality. *Social Science Research*, 32 (2), pp.312-334.

Sainsbury, D. (1994) *Gendering welfare states*. Sage Publications Ltd.

Saurel-Cubizolles, M.J., Romito, P., Escriba-Aguir, V., Lelong, N., Pons, R.M. & Ancel, P.Y. (1999) Returning to work after childbirth in France, Italy, and Spain. *European Sociological Review*, 15 (2), p.179.

Saxonberg, S. & Sirovátka, T. (2006) Failing family policy in post-communist Central Europe. *Journal of Comparative Policy Analysis: Research and Practice*, 8 (2), pp.185–202.

Scharle, Á. (2007) The effect of welfare provisions on female labour supply in Central and Eastern Europe. *Journal of Comparative Policy Analysis: Research and Practice*, 9 (2), pp.157–174.

Semyonov, M., Haberfeld, Y., Cohen, Y. & Lewin-Epstein, N. (2000) Racial composition and occupational segregation and inequality across American cities. *Social Science Research*, 29 (2), pp.175-187.

Sewell, W.H., Haller, A.O. & Portes, A. (1969) The educational and early occupational attainment process. *American Sociological Review*, 34 (1), pp.82-92.

Shapiro, D. & Mott, F.L. (1994) Long-term employment and earnings of women in relation to employment behavior surrounding the first birth. *Journal of Human Resources*, 29 (2), pp.248–275.

Stickney, L. & Konrad, A. (2007) Gender-role attitudes and earnings: a multinational study of married women and men. *Sex Roles*, 57 (11), pp.801-811.

Stier, H., Lewin-Epstein, N. & Braun, M. (2001) Welfare regimes, family-supportive policies, and women's employment along the life-course. *American Journal of Sociology*, 106 (6), pp.1731–60.

Stotsky, J.G. (1997) How tax systems treat men and women differently. *Finance and Development*, 34, pp.30–33.

Truss, C.J. (1993) The secretarial ghetto: myth or reality? A study of secretarial work in England, France and Germany. *Work, Employment & Society*, 7 (4), p.561.

Uunk, W., Kalmijn, M. & Muffels, R. (2005) The impact of young children on women's labour supply: a reassessment of institutional effects in Europe. *Acta Sociologica*, 48 (1), pp.41-62.

Waldfogel, J. (1998) The family gap for young women in the United States and Britain: can maternity leave make a difference? *Journal of labor economics*,

16 (3), pp.505–545.

Warren, T. (2008) Universal disadvantage? *European Societies*, 10 (5), pp.737–762.

Watts, M. (1998) Occupational gender segregation: index measurement and econometric modelling. *Demography*, 35 (4), pp.489–496.

Watts, M.J. (1995) Trends in occupational segregation by race and gender in the U.S.A., 1983-92: a multidimensional approach. *Review of Radical Political Economics*, 27 (4), pp.1-36.

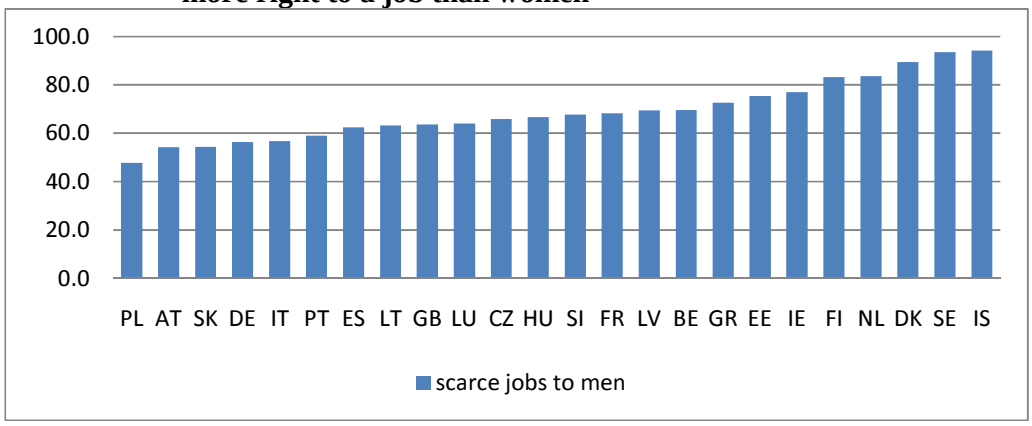
Weichselbaumer, D. & Winter-Ebmer, R. (2005) A meta-analysis of the international gender wage gap. *Journal of Economic Surveys*, 19 (3), pp.479-511.

Whelan, C.T. & Maitre, B. (2007) Measuring material deprivation with EU-SILC: Lessons from the Irish survey. *European Societies*, 9 (2), pp.147–173.

Zellner, H. (1975) The determinants of occupational segregation. In: C. B. Lloyd ed. *Sex, discrimination, and the division of labor*. Columbia University Press.

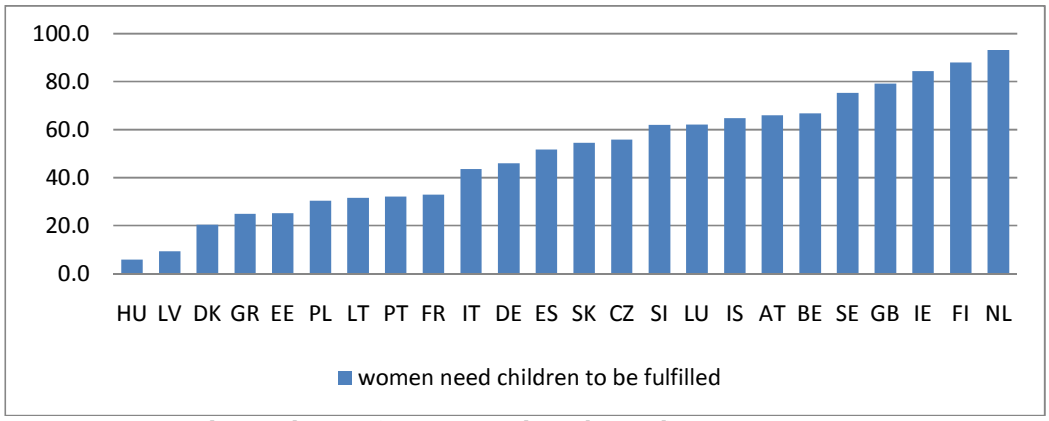
Annex 3 Annex for Chapter 3

Figure A 3-1 % respondents disagreeing that "When jobs are scarce, men have more right to a job than women"



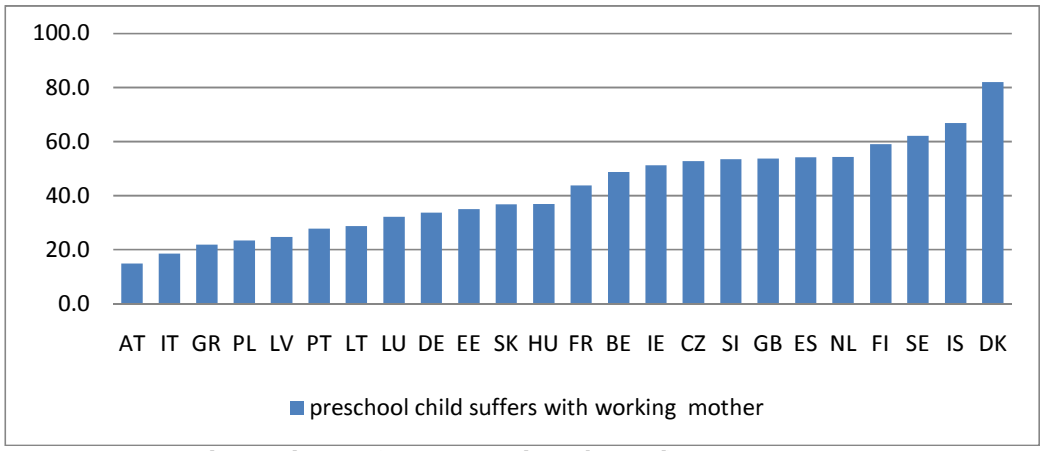
Source: European values study 1999 (cross-sectional weights used).

Figure A 3-2 % respondents disagreeing that "A woman has to have children in order to be fulfilled"



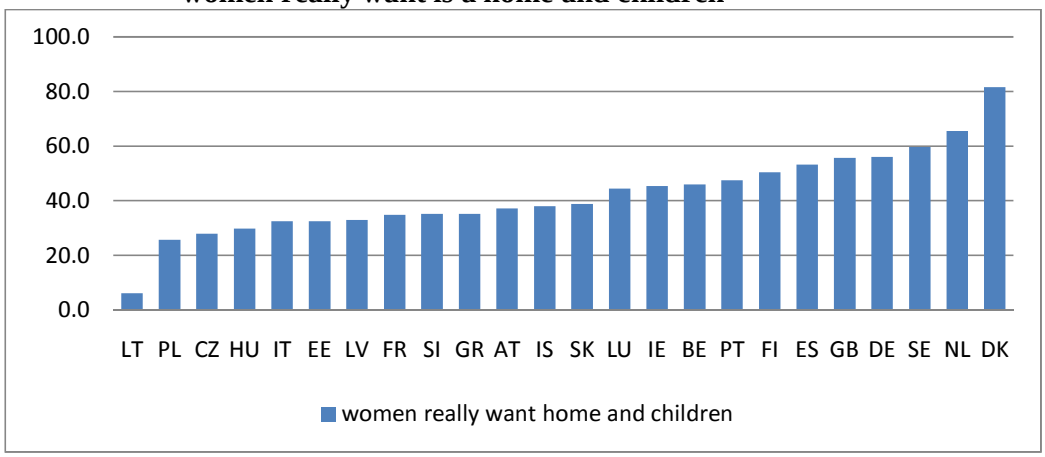
Source: European values study 1999 (cross-sectional weights used).

Figure A 3-3 % respondents disagreeing that "A pre-school child is likely to suffer if his or her mother works"



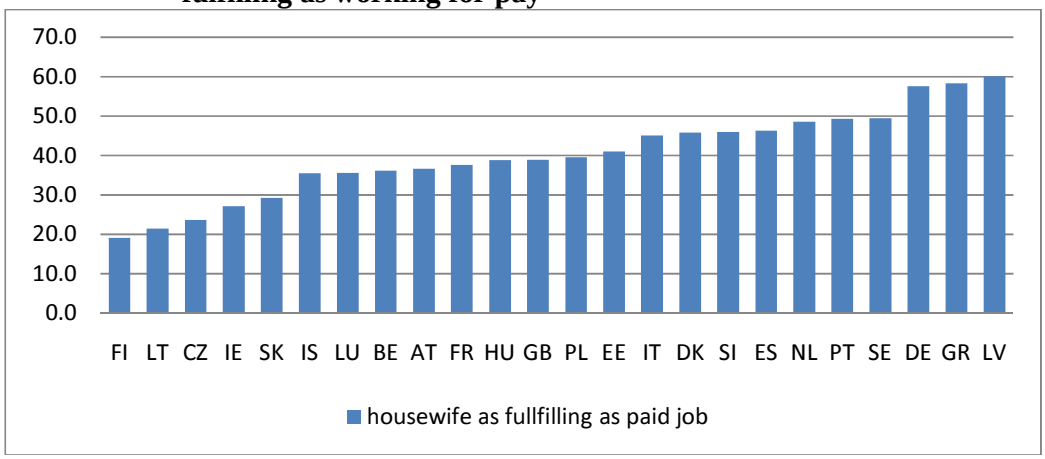
Source: European values study 1999 (cross-sectional weights used).

Figure A 3-4 % respondents disagreeing that "A job is alright but what most women really want is a home and children"



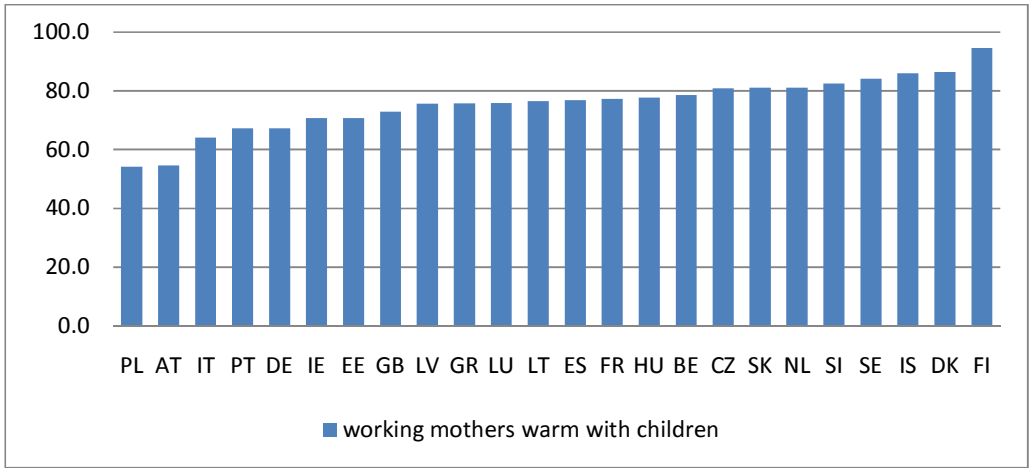
Source: European values study 1999 (cross-sectional weights used).

Figure A 3-5 % respondents disagreeing that "Being a housewife is just as fulfilling as working for pay"



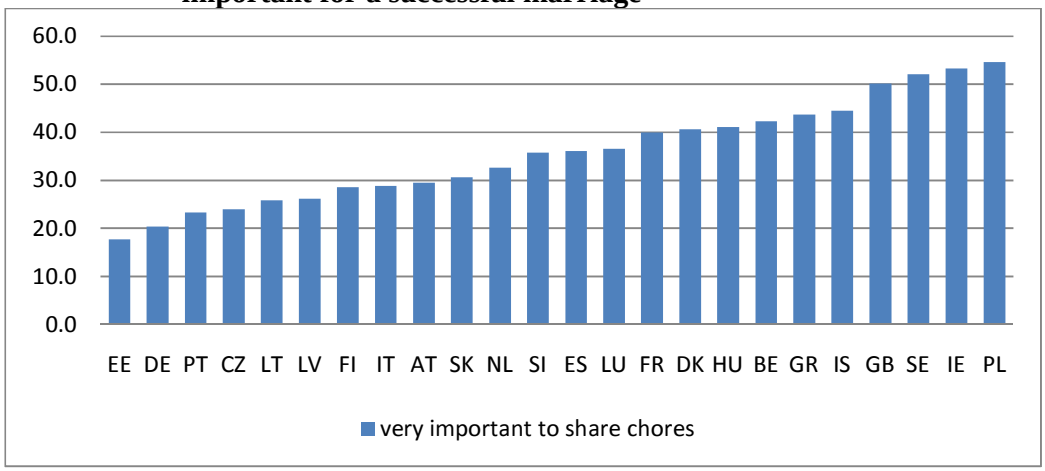
Source: European values study 1999 (cross-sectional weights used).

Figure A 3-6 % respondents agreeing that "A working mother can establish just as warm and secure a relationship with her children as a mother who does not work"



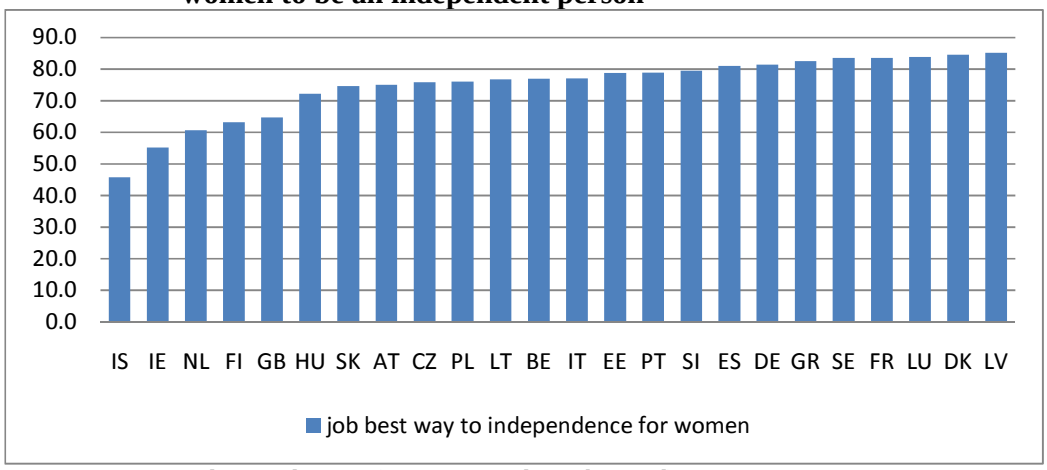
Source: European values study 1999 (cross-sectional weights used).

Figure A 3-7 % respondents agreeing that "Sharing household chores is important for a successful marriage"



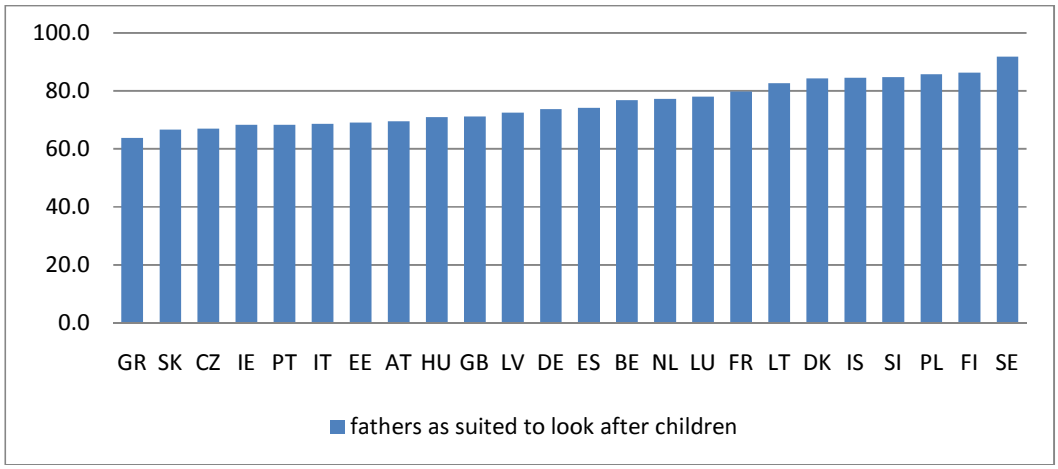
Source: European values study 1999 (cross-sectional weights used).

Figure A 3-8 % respondents agreeing that "Having a job is the best way for a women to be an independent person"



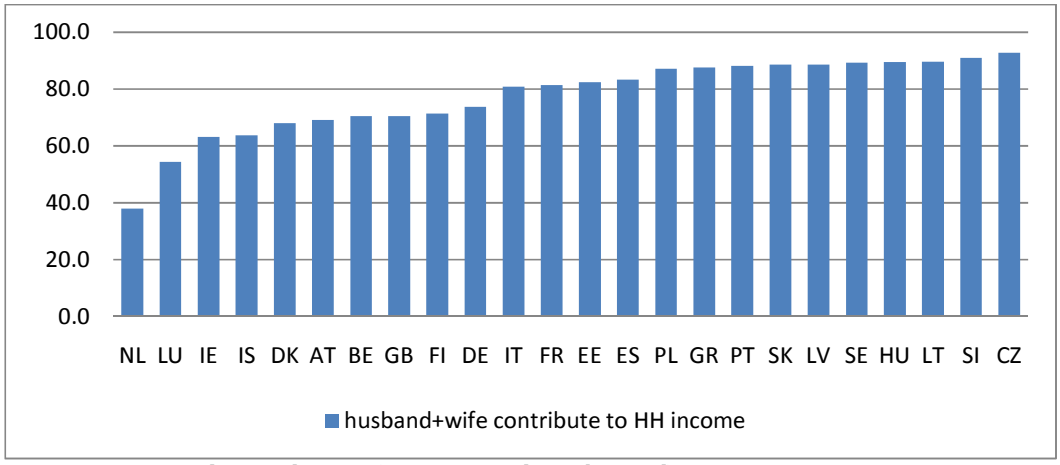
Source: European values study 1999 (cross-sectional weights used).

Figure A 3-9 % respondents agreeing that "In general, fathers are as suited to look after their children as mothers"



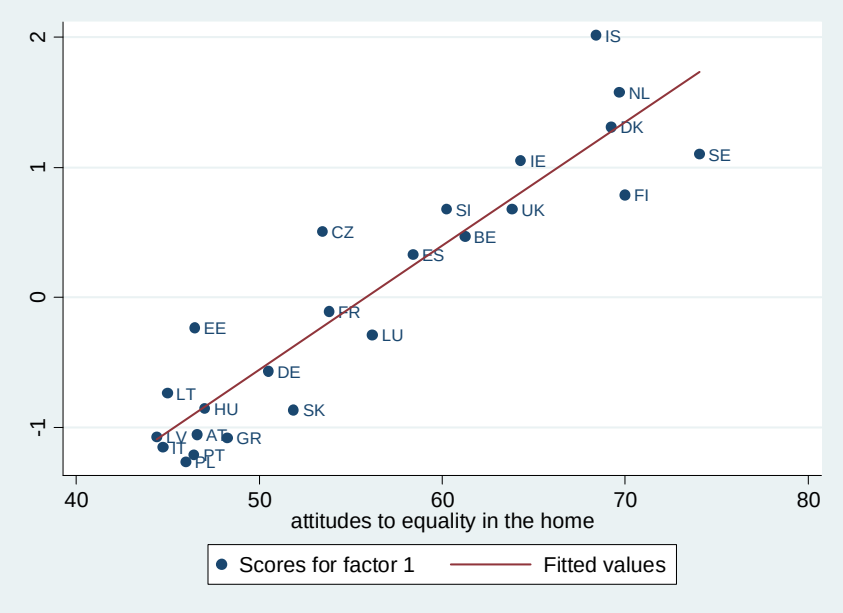
Source: European values study 1999 (cross-sectional weights used).

Figure A 3-10 % respondents agreeing that "Both the husband and wife should contribute to household income"



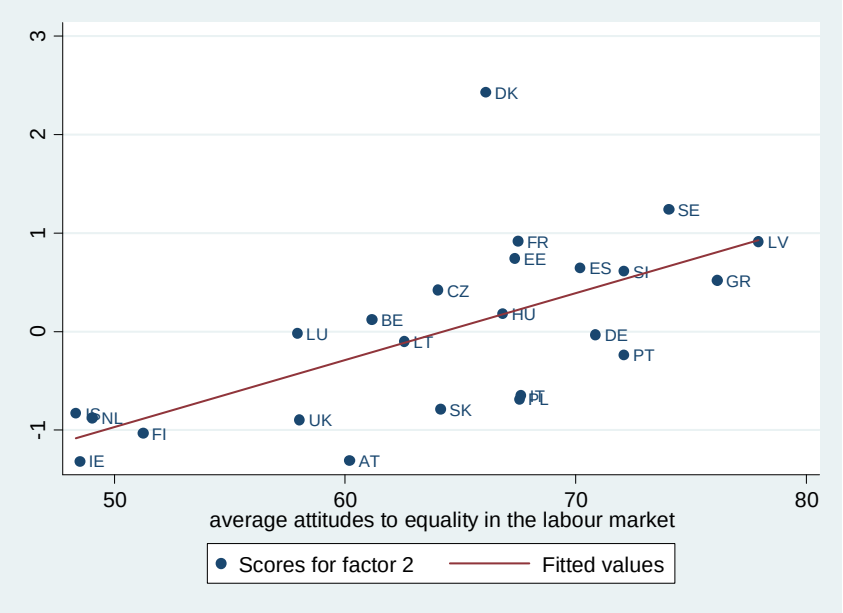
Source: European values study 1999 (cross-sectional weights used).

Figure A 3-11 Average scale on 'attitudes to equality in the home' and factor scores



Source: European values study 1999 (cross-sectional weights used).
R=0.92

Figure A 3-12 Average scale on 'attitudes to equality in the economic sphere' and factor scores



Source: European values study 1999 (cross-sectional weights used).
R=0.64

Table A 3-1 Summary of maternity leave legislation (as of 2006/2007)

	Payment	Eligibility	Flexibility in use	Financing
AT	100% of average income for the last three months of employment before taking leave for employees; **there is no ceiling on payment** (16 weeks)	No qualifying conditions	None	State/SI
BE	Employees in the private sector: first month at 82 per cent of earnings plus 75 per cent for the remaining weeks with a ceiling of €86.34 per day. Public sector: statutory civil servants receive full salary; contractual civil servants, as for private sector. 15 weeks (11 weeks FTE)	All insured women (employees)	The start of maternity leave can be delayed until one week before birth.	SI
CZ	Sixty-nine per cent of gross daily wage up to a ceiling of CZK479 (approximately €20) for a calendar day. 28 weeks (14 weeks FTE)	All women residents. An employee must have contributed to sickness insurance for at least 270 days during the last two years	None except for when leave can be started before birth.	Health insurance
DE	100% of earnings, **with no ceiling on payments**. 14 weeks (14 FTE)	All insured women	None	SI + employer
DK	100 % up to (DKR 3515 p/w) 18 weeks (18 FTE)	6 weeks of residence (OECD). A period of work of at least 120 hours in 13 weeks preceding the paid leave (Moss and Korintus, 2008).	None	Employer
EE	100% of average earnings (calculated on employment in the previous calendar year). **There is no ceiling on the benefit**. 28 weeks (28 FTE)	All insured mothers	None except for when leave can be started before birth; taking leave is obligatory	SI
ES	One hundred per cent of earnings up to a ceiling of €3,074 a month. A flat-rate benefit (€527 per month or €17 per day) is paid for 42 days to all employed women who do not meet eligibility requirements. 16 weeks (16 FTE)	180 days insurance contributions paid in last 5 years (OECD). At least 180 days insurance contributions in the previous seven years, or 360 days during working life (Moss and Korintus, 2008)	Mothers may take leave part time except for the six weeks following birth	State
FI	During the first 56 days of leave, the payment is equal to 90 per cent of annual earnings up to a ceiling of €46,207, with a lower percentage for higher earnings; after this initial period of leave, benefit is paid at 70 per cent of earnings up to €30,033, again with a lower percentage for higher earnings. Half of all mothers with an employment contract receive full pay during the first three months of the maternity leave. During this period the daily benefit is paid to the employer. Mothers not employed and those whose annual earnings are less than €6,513 before the birth get a minimum flat-rate allowance of €15.20 a working day (€380/month). 17.5 weeks (16.9 weeks FTE)	All parents are eligible	None	SI
FR	One hundred per cent of earnings, up to a ceiling of €2,773 a Month. 16 weeks (16 FTE)	All employees and self-employed workers (Moss and Korintus, 2008). 10 months insurance contributions (OECD)	Two weeks can be taken before or after birth.	SI
GR	100% of earnings, **with no ceiling in payment.** 17 weeks (17 FTE)	200 days work in last 2 years (OECD)	None	SI/employer

HU	70% of average daily earnings, **with no ceiling on payments.** 24 weeks (16.8 FTE).	All insured women (OECD). Women employees and self–employed women with at least 180 days of previous employment are entitled to benefit payment for the period of maternity leave (Moss and Korintus, 2008)	The start date can be between four weeks before birth and the birth its	SI
IE	70% of earnings, subject to a minimum of €151.60 per week and up to a ceiling of €232.40 a week for 26 weeks; the remaining 16 weeks are unpaid. 42 weeks (18.2 FTE)	39 ins. contributions paid in the 12 months pre-leave	None except for when leave can be started before birth	State
IS	80% of earnings up to a ceiling of €6,000 per month. 13 weeks (10.4 FTE).	for those who have been in the workforce during the preceding 24 months (Moss and Korintus, 2008). > 6 months in workforce (OECD)	Two weeks just after the birth, but can take leave on a part-time basis and work part time after that. Can take it as several blocks of time.	IS
IT	80% of earnings **with no ceiling** for salaried workers. 20 weeks (16 FTE).	All women residents (OECD). All women employees and self-employed women with social security membership (Moss and Korintus, 2008).	After the 20-week period: 4 weeks before the birth and 16 weeks after; or 8 weeks before the birth and 12 after	SI
LT	100%. 21 weeks (FTE)	Insured women with 3 months of insurance during the last 12 months or at least 6 months during the last 24 months (OECD)		SI
LU	100 % (with minimum and maximum payments) 16 weeks (FTE.	All insured women		SI
LV	100% of the average gross wages upon which contributions have been paid during 6 months. 19 weeks (FTE).	All insured women		SI
NL	One hundred per cent of earnings up to a ceiling equivalent to the maximum daily payment for sickness benefit (€177). 16 weeks (FTE)	All women employees (all insured women)	Pregnant workers are not allowed to work from four weeks before the expected delivery date	SI
NO	Either 100% or 80%, up to a ceiling of €50,140. The lower rate of benefit gives a longer leave period. *No statutory maternity leave*, but 9 weeks reserved for mother (Moss and Korintus, 2008). Varies if period of parental leave is 48 weeks: pay is 100% of earnings; for a year pay is 80% of earnings up to maximum EUR 50,140 (OECD). **9 weeks (FTE) assuming shorter parental leave overall.**	6 out of preceding 10 months in work (either parent) and have earned at least half the basic national insurance benefit payment over the previous year	None	State
PL	100% of average earnings for 12 months before birth**, with no ceiling on payments**. 18 FTE.	No qualifying conditions (OECD). Insured employees (Moss and Korintus, 2008).	None except for when leave can be started before birth	SI / employer
PT	100% of earnings, with no ceiling on payments. 17 FTE	6 months insurance contributions	Women can choose when to take 30 of the 90 days. Women (or men) can take 120 calendar days at 100 % of earnings or 150 calendar days at 80%. **The mother**	State

			must take at least six weeks leave after which the remaining entitlement can be transferred to the father	
SE	*No statutory maternity leave*, but pregnant women are eligible for 50 days of leave paid at 80% of income if they work in jobs considered injurious or involving risk to the foetus. Other pregnant women may use paid Parental leave or sick leave up to 60 days before the baby is due. 80% up to a ceiling of EUR 43,070 (and min. EUR 19 per day) (OECD). 12 weeks (9.6 FTE)	All parents are eligible	Paid leave can be taken at any time until a child's eighth birthday. Parents can take paid leave full-time, half-time, quarter-time or one-eighth time, with the length of leave extended accordingly. Parents can take leave in one continuous period or as several blocks of time.	State
SI	100% of average earnings of the entitled person during the 12 months prior to the leave. Minimum payment at 55% of the minimum wage. Women not insured at the time of leave but who have been insured for at least 12 months in the last 3 years before leave receive 55 to 105% of the minimum wage. 15 weeks FTE.	All insured women + women who have been insured for at least 12 months in the last three years preceding the leave	None	SI
SK	55% net wage up to a low maximum (350 SKK / day – 7500 SKK /month). 28 weeks (15.4 FTE)	All women residents		SI
UK	90% of woman's average earnings for six weeks with no ceiling plus a flat-rate payment of £117.18 (approximately 18.5% of AW) for 33 weeks. Plus 13 weeks unpaid. 52 weeks (11.5 FTE)	Continuous employment for 26 weeks, into the 15th week before the baby is due	None except for when leave can be started before birth.	Employer (refunded for at least 92%).

Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008).

Table A 3-2 Summary of paternity leave legislation (as of 2006/2007)

	Payment	Eligibility	Flexibility in use
AT	No statutory paternity arrangements (but collective agreements generally providing for one or two days)		
BE	3 days: 100% (employer); Next: 82 % up to max. (health insurance) . 2 weeks (1 week FTE)	All male employees	Must be taken during the first month of the child's life, but can be distributed throughout this month except for the first three days, which must be taken immediately after childbirth
CZ	No statutory entitlement		
DE	No statutory entitlement		
DK	2 weeks, to be taken during the first 14 weeks after birth. 100 % up to (DKR 3515 p/w)	Anyone in a recognised partnership, including same sex partnerships	
EE	100% of average earnings (calculated on earnings from six previous calendar months) up to a ceiling of three times average monthly earnings. 2 weeks (FTE)	All public servants and other employed fathers with permanent employment contracts	Must be taken during the mother's maternity leave or two months after the birth of a child
ES	100% of earnings, paid by the Social Security Fund, with a ceiling of up to €3,074 a month, except for the first two days which remain paid by employers. 2 weeks (FTE)	All employees fulfilling contributory requirements (i.e. at least 180 days in the previous seven years, or 360 days during working life)	The first two days have to be used at the time of birth. The 13 days of paternity leave can be used during or immediately after the end of maternity leave. **10 weeks maternity leave may be transferred to the father if both parents fulfil conditions**.
FI	Earnings-related benefit, with payment equal to 70% of annual earnings up to €30,034, with a lower percentage for higher earnings. 8 weeks incl. father's month (5.7 weeks FTE)	**12 'bonus' days are only for fathers who take the last two weeks of parental leave**	The one to 18 days can be taken in four segments, the 12 bonus days in one segment
FR	100% of earnings, up to a ceiling of €2,773 a Month. 2 weeks (FTE)	As maternity leave	Must be taken within the four months following the birth.
GR	100%. 0.4 weeks FTE (2 days)	Male employees	Must be taken at the time of the child's birth.
HU	One hundred per cent of father's average daily wage. 1 week (FTE)	All employed fathers	to be taken during the first two months of the child's life
IE	No general statutory entitlement, but 14 weeks of unpaid parental leave (individual entitlement). 3 paid days leave are used to be granted by employers at birth (OECD)	All employees who have completed one year's continuous employment with their present employer	Transfer of Parental leave entitlements from one parent to another if both parents are employed by the same employer, subject to the employer's agreement
IS	80% of earnings up to a ceiling of €6,000 per month. 13 weeks (10.4 FTE)	All men who have been economically active prior to childbirth are eligible for leave	The father can take leave on a part-time (50 per cent) basis and work part time. It is also possible to take leave in one continuous period or as several blocks of time
IT	There is no general statutory entitlement		
LT	100%. 4 weeks.	Insured employed fathers with 7 months of insurance during the last 24 month	
LU	100%. 0.4 weeks (2 days)	Has to be working/employed to be eligible	
LV	80% of the average gross wages upon which contributions have been paid during 6 months . 2 weeks (1.6 FTE)	Insured employed fathers	
NL	100% of earnings, with no upper ceiling, paid by the employer. 0.4 weeks (2 working days). FTE	has to be working/employed to	Leave can be taken within four weeks after the birth of the child

		be eligible	
NO	2 weeks „daddy days" are unpaid. Remaining 6 weeks of statutory father quota of parental leave paid at 100% if the total of leave of the father does not exceed 35 weeks; otherwise paid at 80%.	All employed fathers have the right to leave, but payment is negotiated and paid by the employer	none
PL	No general statutory entitlement, but part of maternity leave over 14 weeks may be used by father in limited cases. 4 weeks (FTE) for 1st child		
PT	One hundred per cent of earnings, with no ceiling on payments. Obligatory. 1 week.	6 months insurance contributions	The five days may be taken during the first month after birth
SE	Ten days (+ 60 days = fathers' quota, see 'Parental leave'). Eighty per cent of earnings up to a ceiling of SEK403,000 per year (2007) (€43,070). 11.7 weeks (9.3 FTE)	To get the maximum amount of compensation, a father needs to be employed for at least 240 days before the date of birth.	Can be used at any time during the first 60 days after childbirth.
SI	During the first 15 days of the paternity leave, 100% of average earnings up to a ceiling of 2.5 times the average wage, with a minimum payment of 55 per cent of the minimum wage. For the remaining 75 days the father is paid social security contributions based on the minimum wage (approximately €80 per month). 13 weeks (2.8 FTE)	Seventy-five calendar days may be taken as full-time leave up to the child's third birthday. If they are taken as individual days, the length of the leave is equal to 70 per cent of the eligible calendar days.	Fathers are obliged to take at least 15 days of full-time leave during the child's first six months
SK	No general statutory entitlement		
UK	Flat-rate payment of £117.18 (approximately €150) a week for 2 weeks. FTE 0.3 weeks.	Those who have worked continuously for their employer for 26 weeks ending with the 15th week before the baby is due.	to be taken during the first eight weeks of the child's life

Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008).

Table A 3-3 Summary of parental leave legislation (as of 2006/2007)

	Payment	Eligibility	Flexibility in use	Entitle-ment
AT	Parental leave is unpaid, but a childcare benefit is available to all families who meet the eligibility conditions, whether or not parents take parental leave. 3 options: 1) a long period: €436 a month for 30 months of for 36 months if both parents apply 2) mid-range option: €626 a month for 20 months (or 24 months for 2 parents) 3) a short option: (€800 for 15 months or 18 months for both parents. 104 weeks (17 FTE)	All employees are entitled to take parental leave	Leave may be taken by one parent only (mother or father) or by both parents on an alternating basis (the whole period can be divided into a maximum of three parts alternating between parents, with each part at least three months). Both parents cannot take leave at the same time except for one month the first time they alternate leave.	Family
BE	€698.65 per month if leave taken full time. 26 weeks **per couple** (5.6 FTE) 12 weeks **per parent** (2.6 FTE)	All employees who have completed one year's employment with their present employer (during the last 15 months) and who have, or expect to have, parental responsibility for a child	FT leave may be taken full-time, or half time over 6 months or for one day a week over 15 months. For half-time leaven the total duration of 6 months can be split into blocks, minimum 2 months. 80% part time work may be split in blocks of at least 3 months. The following rule also available: one month at full-time + 2 months at half time + 5 months at one-fifth.	Ind.
CZ	3 options of parental benefit: 1) long option: basic rate of €305 per months until age of 21 months + reduced rate (€150) until age 48 months 2) mid-range option: €305 until child reaches 36 months 3) short option: €455 until age of 24 months, only for women entitled to maternity benefit 10% of APW (or EUR 121 pm) 156 weeks (50.3 FTE)	There are no special requirements; however, each parent has to ask for formal approval of the employer.	Parents can work, full time or part time, while receiving parental benefit. Both parents can take **parental leave** at the same time, but only one of them is entitled to **parental benefit**. They can alternate in receiving benefit as often they want. Parents can place a child under three years in a childcare facility for up to five days a month without losing parental benefit; they can also have a three-year-old in kindergarten for up to four hours each day without losing benefit.	Leave is an individual entitlement (but only one parent is entitled to the benefit
DE	Replacement rate of 67% of a parents' average earnings during the 12 months preceding childbirth, up to a ceiling of EUR 1800 per months; minimum payment is EUR 300 even for parents without prior income. **Low income supplement**: for every EUR 2 of monthly earnings below EUR 1000, their childrearing benefit increases by 0.1 per cent. **Speed premium bonus**: if another child is born within the 24 months the childrearing benefit is increased by 10%. **Both parents are equally entitled to the childrearing benefit but if the father takes at least 2 months of leave the overall length of benefit payment is extended to 14 months.** 156 weeks (34.8 FTE)	• Parental leave: all parents gainfully employed at date of birth. • Childrearing benefit: all parents, if not employed for more than 30 hours a week	Instead of 12(+2) months the childrearing benefit may be spread over 24(+4) months, but the monthly benefit level is reduced so that the overall payment remains the same. Parents receiving a childrearing benefit may work up to 30 hours a week. The final year of Parental leave may be taken up to a child's eighth birthday with the employer's agreement. Both parents are entitled to take leave at the same time and both can take-up to two leave intervals	Family
DK	One hundred per cent of earnings up to a ceiling of DKK703 (€100) per working day before taxes for full-time employees, or DKK3,515 (€470) weekly. 32 weeks (FTE)	Eligibility for an employee is based on a period of work of at least 120 hours in 13 weeks preceding the paid leave.	Possibility to work part time with reduced payment accordingly. Between 8 and 13 weeks can be taken later; any further period must be agreed with the employer. This entitlement is per family. Parents can prolong the 32 weeks leave to 40 weeks (for all)	Ind., but the total leave period cannot exceed more than 32 weeks **per**

			or 46 weeks (only employees). The benefit level is reduced over the extended leave period, so that the total benefit paid equals 32 weeks at the full rate of benefit.	**family**.
EE	2 types of payment, neither of which is specifically linked to parental leave: 1) Parental benefit: 100% of average earnings in the previous calendar year for 435 days (62 weeks) with a ceiling at 3 times of the average wage (€1620 per months in 2008) 2) Childcare benefit: flat-rate payment (EUR 38.5 per month), paid from the end of parental leave benefit until the child reaches age 3, for both working and non-working parents. 156 weeks (62 weeks FTE)	Fathers are eligible for parental benefit when their child has reached 70 days of age	Parental leave may be used in one part or in several parts at any time until a child is three years of age. When a parent takes up employment after the birth of a child, the parental benefit is reduced	Family
ES	None. 156 weeks (0 FTE)	All employees, though employees on temporary contracts can only claim leave that is shorter than their contract period	Each parent is entitled to take leave until three years after childbirth. Leave is an individual right. There are no limits to the number of periods of leave that can be taken until the child is three years, with no minimum period	Ind, but 156 per family
FI	**Parental leave**. During the first 30 days of leave, the payment is equal to 75% of annual earnings up to €46,207, with a lower percentage for higher earnings. After this initial period of leave, the payment is 70% of earnings up to €30,033, with a lower percentage for higher earnings. The minimum flat-rate allowance is €15.20 a working day (€380/month). Moss and Kortintus, 2008. 26 weeks (158 working days). **Homecare leave** (child not in municipal childcare) . up to 3rd birthday of younger child taken after paid parental leave. basic allowance : €294 p/m for first child + subsequent € 94,09 p/m (if under 3 years) or € 60,46 p/m (if over 3 years), possible supplements. **Overall: 156 weeks (appx. 35.8 FTE).**	Entitlements based on residence in Finland	Each parent can take leave in two parts, of at least 12 days duration. Leave can be taken part time, at 40–60 per cent of full-time hours, but only if both parents take part-time leave and only with the employer's agreement. Benefit payments are reduced accordingly. The 'father's month' can be taken within six months from the end of the Parental leave period provided that the child has been taken care of at home by the mother or the father until the start of the 'father's month'	Family
FR	Complément de libre choix d'activité (CLCA) – is available to all families who meet the eligibility condition whether or not they are on parental leave. It is a flat-rate payment (€536 per month, *appx20% AW in 2007*), paid to families whose income is below a certain level (in practice, about 90 per cent of families are eligible). However, to parents with only **one** child it is only paid until **six months** after the end of the Maternity leave; in other families it is paid until the child reaches **three** years of age. Complément optionnel de libre choix d'activité (COLCA) – is available to large families (with at least three children, the youngest born since July 2006): an allowance of €766 per month is paid on condition that one parent stops working completely. However, the duration is only for one year. Large families can choose between COLCA and CLCA. 156 weeks (31.1 FTE 2+ children, *6.3FTE if 1*	All employees are eligible for Parental leave if they have worked at least one year for their employer before the birth of a child. Eligibility for CLCA becomes more restrictive the fewer children a parent has: for example with three children the eligibility condition is to have worked for two out of the five years preceding birth (two out of the four years for parents with two children), but with	Parents taking leave may work between 16 and 32 hours per week. • If parents work part time, the CLCA payment is reduced. If both parents work part time, they can each receive CLCA but the total cannot exceed one full CLCA payment. For the higher allowance paid for large families (COLCA), one parent must stop work completely.	Ind. , but payment per family

	child).	only one child it is necessary to have worked without a break for two years preceding birth.		
GR	Unpaid. 14 weeks (3.5 months per parent). 0 FTE 30 weeks per family. 0FTE	Leave is an individual entitlement. All employees who have completed one year's continuous employment with their present employer are eligible. For an employee to be entitled, his/her spouse must work outside the home.	Leave may be taken up to the time the child turns three and a half years. Leave may be taken in several blocks of time subject to agreement with the employer	Ind.
HU	• **GYES (for non-insured parents):** Flat-rate benefit equal to the amount of the minimum old-age pension approximately €105pm) in 2007. 156 weeks (*23 weeks FTE)* for uninsured parents, or from the end of GYED until the 3rd birthday for insured parents. • **GYED (for insured parents):** Benefit of 70 per cent of earnings, up to a ceiling of (€355 per month) in 2007. from the end of the Maternity leave period until the child's second birthday. 80 weeks (56 weeks FTE)	**GYES**: all parents. **GYED:** either of the parents living with the child is eligible as long as she/he has been employed for at least 180 days within the two years before the birth of the child; however, only one parent can actually take GYED.	Both are family entitlements **except for GYED up to the child's first birthday, which is an entitlement only for mothers.** A parent taking GYES cannot work until the child's first birthday, but can then work unlimited hours while still receiving the full benefit until the child's third birthday.	Family
IE	14 weeks (0 FTE) per parent per child. 28 weeks (0FTE) per family.	All employees who have completed one year's continuous employment with their present employer	Leave may be taken up to the child's eighth birthday. Leave may be taken in separate blocks of a minimum of six continuous weeks or more favourable terms subject to employer's agreement. • Transfer of Parental leave entitlements from one parent to another if both parents are employed by the same employer, subject to the employer's agreement.	Ind.
IS	**Parental leave**: 80% of earnings up to a ceiling (approximately €6,000 per month), for those who have been in the workforce during the preceding 24 months. **Childcare leave**: Each parent may take 13 weeks unpaid leave until the child is eight years old. Total: 39 weeks **per couple** (0 FTE) according to Moss and Korintus (2008)	All parents who have been economically active prior to childbirth are eligible for parental leave	Leave can be taken in one continuous period or as several blocks of time.	Joint 13 weeks of paid leave PLUS 13 weeks each
IT	Thirty per cent of earnings when leave is taken for a child under three years; unpaid if taken when a child is three to eight years, unless annual earnings are under approximately 2.5 times the amount of minimum earnings (for 2004, €13,396). 43 weeks (10 months) **per couple** (13 weeks FTE). 26 weeks (6 months) **per parent** (7.8 weeks FTE).	All employed parents, except domestic workers and home helps. Self-employed workers are generally entitled to three months, which can be taken only during the first year after the child's birth	Fathers taking 3 months Paternity leave are entitled to one month of additional Parental leave. Leave can be taken at any time until a child is eight years old. There are two options for taking this leave: a single leave period up to a maximum of six months; or shorter leave periods amounting to a maximum of six months. It is	Ind., but the total amount of leave taken by two parents cannot exceed 10 months

			possible for each parent to take leave at the same time	
LT	100% after the expiry of the maternity leave until child is 1 year and 85% for the remaining period. 104 weeks (88.3 FTE) according to the OECD		Parental benefit is paid to persons who are on child care leave or continued to work during the child care period.	Family?
LU	6 months per parent per child (12 months if work under 50 % full time), to be taken after maternity leave, and before the child's birthday for the other parent . €1840 per month during 6 months if full time; €920 per month during 12 months if part time. 52 weeks (12 months) **per couple** (26 weeks FTE) 26 weeks (6 months) **per parent** (13 weeks FTE)			Ind.
LV	70% of the average gross wage upon which contributions have been paid during 12 months . 52 weeks (36.4 FTE) according to the OECD			Family?
NL	1) 3 months per parent per child (6 months if half part time work) One parent at a time (mother has priority) 2) Right to change working time Unpaid, except civil servant (75%) or favourable collective agreements For participants in the life course saving scheme, tax reduction of half the statutory minimum wage (50% of €1,335 a month) . 26 weeks per couple (0 FTE) 13 weeks per parent (0FTE)	All employees who have completed one year's continuous employment with their present employer	Flexibility: leave to be taken in blocks of at least one month. Also 4 months adoption unpaid leave (for child up to 12)	Ind.
NO	Maximum length is 54 weeks with 100% paid leave. Of these, 9 weeks are for the mothers (included under maternity leave) and 6 weeks are for the fathers. The remaining 39 weeks are a family entitlement and may be taken by either mother or father. 100% if one parent take up to 29 weeks of the family entitlement (up to maximum 400,872 NOK) a year - 80 % if parent take more than 29 weeks of the family entitlement (up to 39 weeks) 29 weeks (29 weeks FTE)	The eligibility rules are the same for fathers and mothers. They must be employed for 6 of the last 10 months prior to birth and have earned at least half the basic national insurance benefit payment over the previous year	Family entitlement: it is possible to choose a longer period of leave (39 weeks) paid at 80 per cent of earnings, or a shorter (29 weeks) paid at 100 per cent.	Family, but some quotas for mothers and fathers
PL	€115 per month for 24 months; Means-tested benefit at household level for 3 years at maximum if monthly household income is less than €145. 156 weeks (16.1 FTE)	Employees with a work record of at least six months	Leave can be taken until a child's fourth birthday.	Family
PT	3 months per parent per child (non-transferable). Unpaid, except for 15 (calendar) „daddy days", paid at 100% 26 weeks per couple (0 FTE)	All employees with a record of six months (continuous or intermittent) of insurance contributions.	The three months leave may be taken up to the child's sixth birthday and can be taken: a) on a full-time basis for three months; b) on a half-time basis for a period of 12 months per parent; or c) on an alternating basis, i.e. working half time and full time up to a maximum of three months full time per parent	Ind.
SE	(480 days to be shared between the parents, 60 days reserved each parent) 360 days at 80 per cent of earnings up to a ceiling of SEK403,000 per year (2007) (€43,070); the	All parents are entitled to paid parental leave, but paid leave at 80% of earnings requires	The length of leave is counted in days to enhance flexibility of use. Paid and unpaid leave can be combined to enable parents to stay at	Family, but some weeks reserved for each

	remaining 90 days at a flat-rate payment of SEK180 a day (€20). Total: appx. 72 weeks (FTE 52.8)	parents to have had an income of over SEK180 a day for 240 days before the expected date of delivery or adoption.	home longer. Paid leave can be taken at any time until a child's eighth birthday. Parents can take paid leave full-time, half-time, quarter-time or one-eighth time, with the length of leave extended accordingly (e.g. one day of full-time leave becomes two days of half-time leave and four days of quarter-time leave). Parents can take leave in one continuous period or as several blocks of time. An employee taking Parental leave has the right to stay away from work for a maximum of three periods each year.	parent
SI	100% of average earnings up to a ceiling. 37 weeks FTE	Insured: covered by parental leave insurance that forms part of the social security insurance	Each parent is entitled to half of the total, but this individual right may be transferred between parents. Parental leave may be taken as 520 days of a half-time leave combined with part-time work (half of the normal working hours per day). If Parental leave is taken half time, the benefit paid is reduced accordingly. Up to 75 days may be taken at any time up to the child's eighth birthday, as full-time or part-time leave or by individual days. In this last case, the length of the leave is equal to 70 per cent of the eligible calendar days.	Family, Each parent is entitled to half the total, but this individual right may be transferred between parents
SK	Up to child's 3rd birthday; Individual right to be taken after maternity leave SKK 3790 pm; (SKK 1200 if the parent is working or on sick-pay) 156 weeks (30.7 FTE)			Ind., but payment per family
UK	Thirteen weeks per parent per child (i.e. an individual right), with a maximum of four weeks leave to be taken in any one calendar year 26 weeks per couple (0FTE) 13 weeks per parent (0FTE)	All employees who have completed one year's continuous employment with their present employer and who have, or expect to have, parental responsibility for a child.	• Leave may be taken in blocks or in multiples of one week, up to four weeks per year. • Leave may be taken up to the child's fifth birthday.	Ind.

Source: *OECD Family Database* (version June 2009) Table PF7.1; Moss and Korintus (2008).

Annex 4 Annex for Chapter 4

Table A 4-1 Part-time share of total female employment (age 25-59) (%)

	1994	1995	1996	1997	1998	1999	2000	2001
Greece	6.7	7.2	7.4	7.0	9.0	9.2	7.1	6.3
Finland	N/A	12.1	11.6	11.7	13.0	12.6	12.2	12.1
Portugal	10.7	10.3	11.1	12.9	14.3	13.2	13.0	12.7
Spain	14.4	15.6	16.2	16.6	16.1	16.8	16.0	16.6
Italy	12.6	13.1	13.0	13.8	14.4	15.8	17.3	18.0
Denmark	30.3	30.7	30.4	29.6	30.5	28.7	30.0	27.0
Luxembourg	21.4	21.9	19.6	21.4	24.2	25.4	26.9	27.3
Sweden	N/A	40.4	38.7	38.4	38.3	37.5	33.3	28.4
France	27.0	28.0	28.5	29.9	30.6	30.9	30.5	30.0
Ireland	23.0	24.3	23.4	23.8	30.7	30.8	30.6	31.6
Austria	N/A	29.4	31.1	31.3	32.7	35.1	35.7	35.9
Belgium	29.3	30.8	31.2	31.9	33.6	40.4	40.6	37.8
Germany	36.7	36.9	36.1	37.6	38.7	39.3	40.2	41.5
UK	45.3	44.7	44.9	44.2	43.9	43.4	43.3	42.9
Netherlands	68.5	68.8	69.5	68.4	67.9	68.8	70.7	71.2

Source: Eurostat, Labour Force Survey; data sorted on 2001 values.

Table A 4-2 Involuntary part-time share of total female part-time employment (age 25-59) (%)

	1994	1995	1996	1997	1998	1999	2000	2001
Netherlands	3.4	4.7	3.8	3.6	3.7	2.9	3.1	1.8
UK	10.5	10.4	9.4	9.2	8.4	7.3	6.8	6.5
Luxembourg	8.8	7.1	N/A	7.4	7.1	8.8	6.2	7.3
Austria	N/A	5.5	8.8	8.0	12.5	8.5	8.0	9.0
Ireland	20.1	19.3	18.6	16.1	19.6	14.1	12.0	10.5
Germany	9.0	9.2	11.5	13.1	13.3	12.6	11.6	11.5
Belgium	25.3	24.9	23.2	21.7	22.4	15.4	18.7	15.6
Denmark	19.9	19.7	17.5	15.7	16.6	18.7	16.3	16.5
France	34.5	33.6	34.2	37.1	23.7	22.5	21.7	21.1
Spain	18.1	20.6	23.1	25.2	25.6	24.4	22.7	21.6
Sweden	N/A	27.8	30.3	31.0	30.1	29.4	24.6	26.5
Portugal	24.3	29.9	29.9	29.3	31.2	33.6	35.2	27.1
Italy	30.9	30.2	30.9	31.6	31.7	31.7	30.8	31.3
Finland	N/A	53.8	52.3	51.7	42.5	51.0	47.0	44.3
Greece	35.7	33.6	35.2	39.4	45.1	44.4	45.1	50.8

Source: Eurostat, Labour Force Survey; data sorted on 2001 values.

Table A 4-3 Summary statistics – labour market activity by country (%)

	Employed	Full-time	Unemployed	Inactive	
Women					*N (ALL)*
Denmark	76.9	85.0	9.0	14.1	*9,567*
Netherlands	53.8	56.7	14.2	32.0	*22,129*
Belgium	56.3	76.2	12.1	31.6	*10,199*
France	64.5	83.5	8.8	26.7	*23,802*
Ireland	45.4	71.8	2.8	51.8	*13,302*
Italy	47.6	87.5	7.2	45.2	*32,950*
Greece	41.1	92.3	7.6	51.2	*20,542*
Spain	40.2	86.2	11.0	48.8	*27,467*
Portugal	65.9	93.1	6.3	27.7	*20,232*
Austria	66.5	76.6	3.6	29.9	*11,525*
Finland	74.4	93.4	10.5	15.1	*11,428*
Germany	60.5	77.0	7.6	31.9	*25,229*
UK	64.9	69.0	2.3	32.8	*18,679*
Men					*N (ALL)*
Denmark	87.5	98.1	5.6	6.9	*9,139*
Netherlands	89.0	96.3	4.7	6.2	*19,821*
Belgium	86.4	98.2	7.4	6.2	*8,744*
France	87.0	97.6	6.9	6.1	*20,676*
Ireland	79.9	94.2	14.0	6.1	*12,646*
Italy	81.7	97.9	8.6	9.7	*31,481*
Greece	86.8	97.5	5.9	7.3	*19,193*
Spain	79.4	97.8	11.8	8.8	*26,556*
Portugal	88.1	98.8	4.5	7.4	*18,861*
Austria	91.1	98.5	3.8	5.0	*11,028*
Finland	82.7	97.3	9.7	7.6	*11,100*
Germany	84.1	98.3	7.6	8.3	*24,372*
UK	86.1	97.9	4.4	9.5	*15,543*

Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-4 Summary statistics – workplace characteristics by country (%)

	Supervisor	Intermediate supervisor	Not a supervisor	Public sector	Temporary contract	Log wage	
Women							*N (ALL)*
Denmark	8.8	15.5	75.7	55.7	9.8	4.56	*7,425*
Netherlands	6.0	12.6	81.4	33.6	12.4	3.07	*12,130*
Belgium	6.4	14.8	78.8	36.5	14.1	5.88	*6,094*
France	7.7	18.5	73.8	40.1	8.4	3.91	*15,199*
Ireland	9.6	17.5	73.0	33.5	17.8	1.64	*6,150*
Italy	4.3	14.2	81.5	35.6	10.9	2.47	*14,926*
Greece	3.9	5.9	90.2	28.2	19.3	7.00	*8,001*
Spain	4.7	15.3	80.0	26.6	33.8	6.64	*11,134*
Portugal	3.0	7.2	89.8	22.4	16.8	6.18	*12,312*
Austria	6.2	18.5	75.3	27.7	9.6	4.62	*7,209*
Finland	8.2	17.5	74.3	48.2	15.3	3.95	*8,929*
Germany	0.0	-	-	35.0	9.9	2.84	*15,661*
UK	19.1	16.9	64.1	35.8	5.3	1.70	*12,235*
Men							
Denmark	21.1	14.3	64.6	25.0	9.4	4.68	*8,064*
Netherlands	17.1	19.2	63.7	21.2	7.7	3.24	*18,117*
Belgium	16.0	24.0	60.0	25.8	8.4	5.98	*7,661*
France	18.4	23.9	57.6	25.8	6.7	4.05	*18,117*
Ireland	18.3	17.2	64.5	25.8	8.3	1.85	*10,614*
Italy	11.5	19.0	69.5	22.9	9.3	2.53	*25,451*
Greece	8.7	9.4	81.9	23.1	18.2	7.11	*16,582*
Spain	10.9	20.8	68.2	16.0	29.7	6.75	*21,411*
Portugal	7.6	7.9	84.4	13.8	14.4	6.31	*16,556*
Austria	14.0	30.4	55.6	22.1	8.1	4.85	*9,985*
Finland	20.6	16.6	62.8	23.7	11.0	4.12	*9,605*
Germany	0.0	-	-	20.0	7.1	3.06	*21,070*
UK	30.1	16.4	53.5	17.1	3.5	1.98	*13,456*

Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-5 Summary statistics – occupational categories by country (%)

	ISCO 1	ISCO 2	ISCO 3	ISCO 4	ISCO 5	ISCO 6	ISCO 7	ISCO 8	ISCO 9	*N (EMPL)*
Women										
Denmark	3.6	15.6	27.8	20.7	19.8	1.0	1.3	3.8	6.2	*7,425*
Netherlands	7.6	19.3	26.9	21.9	15.1	0.8	1.4	2.1	4.9	*12,130*
Belgium	2.9	26.5	14.1	28.4	14.1	0.4	2.5	1.7	9.5	*6,094*
France	3.6	8.9	23.4	28.2	18.2	1.1	1.9	5.1	9.5	*15,199*
Ireland	5.6	19.8	11.1	23.3	20.9	1.1	2.1	7.7	8.3	*6,150*
Italy	1.6	15.7	13.3	29.6	14.8	1.6	9.6	3.1	10.7	*14,926*
Greece	9.3	20.9	9.9	21.2	13.8	5.5	7.7	2.4	9.2	*8,001*
Spain	6.8	20.9	12.4	15.1	18.6	3.5	4.3	2.4	15.9	*11,134*
Portugal	5.7	10.5	9.7	13.6	17.6	8.4	12.4	5.3	16.8	*12,312*
Austria	3.9	5.8	16.6	25.0	23.7	6.6	4.0	1.9	12.3	*7,209*
Finland	6.0	23.4	20.3	16.2	19.3	3.2	3.3	1.7	6.6	*8,929*
Germany	3.4	13.1	33.3	19.1	16.0	1.0	5.0	3.4	5.7	*15,661*
UK	13.1	14.4	15.6	25.4	20.3	0.2	1.6	3.6	5.8	*12,235*
Men										
Denmark	10.2	19.3	17.0	5.9	5.5	2.5	18.9	12.7	7.9	*8,064*
Netherlands	17.0	19.9	19.4	7.9	5.6	1.3	15.2	9.1	4.7	*18,117*
Belgium	9.7	17.2	13.7	15.4	6.4	1.7	15.1	11.0	9.8	*7,661*
France	7.6	11.4	19.5	7.8	5.8	3.1	22.6	16.8	5.6	*18,117*
Ireland	13.8	12.5	9.9	7.0	6.9	9.9	16.6	13.1	10.3	*10,614*
Italy	4.7	7.1	12.0	16.0	11.0	3.5	26.1	10.0	9.7	*25,451*
Greece	13.1	14.1	5.6	9.1	8.2	10.6	23.0	12.0	4.3	*16,582*
Spain	9.7	10.5	10.9	6.6	9.0	5.7	25.0	12.4	10.3	*21,411*
Portugal	10.3	7.9	7.5	6.5	9.3	5.4	31.7	13.3	8.2	*16,556*
Austria	10.3	4.8	16.1	8.7	9.9	6.9	26.0	10.9	6.4	*9,985*
Finland	12.8	16.5	14.5	4.8	4.5	5.8	22.1	13.8	5.1	*9,605*
Germany	7.5	16.0	16.8	6.4	5.5	1.5	29.0	11.3	6.0	*21,070*
UK	22.0	14.8	10.9	7.9	5.8	1.6	19.7	12.2	5.1	*13,456*

Individual base weights used.
ISCO 1: legislators, senior officials and managers; ISCO 2 professionals; ISCO 3 technicians and associate professionals; ISCO 4 clerks; ISCO 5 Service workers and shop and market sales workers; ISCO 6 skilled agricultural and fishery workers; ISCO 7 craft and related trades workers; ISCO 8 plant and machine operators and assemblers; ISCO 9 elementary occupations.
Source: ECHP 1994-2001.

Table A 4-6 Summary statistics – demographic characteristics by country (%)

	Age	ISCED 5-7	ISCED 3	ISCED 0-2	No children	One child	Two children	Three or more children	Age youngest child	New birth	Married	N (EMPL)
Women												
Denmark	39.61	35.3	45.2	19.4	47.9	23.9	21.0	7.2	6.52	8.2	66.8	7,425
Netherlands	39.22	11.8	30.7	57.5	52.6	16.5	22.4	8.5	7.53	4.7	69.1	12,130
Belgium	39.62	35.5	33.3	31.2	47.7	22.1	21.2	9.0	7.15	5.7	72.1	6,094
France	39.83	26.8	29.5	43.7	46.1	24.1	21.9	8.0	7.03	7.4	68.4	15,199
Ireland	39.01	14.8	40.4	44.8	37.3	21.3	22.0	19.4	7.20	7.8	70.2	6,150
Italy	39.25	9.3	40.4	50.3	52.5	25.3	17.3	5.0	7.70	5.1	74.4	14,926
Greece	39.65	21.8	31.6	46.6	50.8	21.1	23.7	4.4	8.50	3.9	79.6	8,001
Spain	38.87	23.7	17.4	58.9	49.1	23.9	21.6	5.5	7.79	5.3	71.4	11,134
Portugal	39.24	11.3	12.6	76.1	45.5	28.1	20.3	6.1	8.05	4.8	75.1	12,312
Austria	39.06	8.7	64.4	27.0	50.5	22.9	20.5	6.1	7.71	4.9	68.8	7,209
Finland	40.66	40.6	38.9	20.4	50.2	20.6	19.9	9.3	7.18	6.6	62.2	8,929
Germany	39.75	18.2	62.7	19.0	52.9	24.5	17.0	5.6	8.21	3.2	68.7	15,661
UK	40.37	38.6	13.1	48.3	48.6	20.3	21.5	9.6	7.32	6.0	67.3	12,235
Men												
Denmark	39.70	32.7	49.0	18.3	53.6	21.0	18.7	6.7	6.25	8.1	59.6	8,064
Netherlands	39.11	13.9	31.3	54.8	57.7	13.9	20.6	7.8	7.13	4.8	63.6	18,117
Belgium	39.29	37.0	35.3	27.7	53.5	19.8	19.1	7.6	6.63	6.2	66.6	7,661
France	39.71	24.9	34.6	40.5	51.3	21.3	20.0	7.4	6.76	7.4	63.1	18,117
Ireland	39.19	18.4	35.2	46.4	45.7	16.1	20.4	17.8	6.79	7.9	66.7	10,614
Italy	39.20	10.6	39.5	49.9	56.2	22.6	16.2	4.9	7.41	5.1	66.7	25,451
Greece	39.78	24.5	34.4	41.2	50.8	20.2	24.6	4.4	8.02	4.9	71.9	16,582
Spain	38.71	24.7	19.2	56.1	53.6	20.7	20.7	5.1	7.51	5.0	65.4	21,411
Portugal	38.97	9.5	12.4	78.2	49.2	26.0	19.3	5.5	7.70	5.2	72.6	16,556
Austria	38.95	8.5	78.1	13.4	56.7	18.4	18.9	6.0	7.27	5.2	62.6	9,985
Finland	40.62	29.2	46.6	24.2	55.4	17.9	17.8	8.9	6.95	6.5	57.3	9,605
Germany	39.65	26.6	60.5	12.9	59.9	19.3	15.9	4.9	8.01	3.0	60.7	21,070
UK	40.51	49.0	13.1	37.8	54.5	16.4	20.2	8.9	6.86	6.4	67.5	13,456

Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-7 Full-time workers only – summary statistics (%)

Women	Supervisor	Intermediate supervisor	Not a supervisor	Log wage	*N (ALL)*
Denmark	9.9	15.6	74.5	4.56	*6,322*
Netherlands	9.0	15.8	75.2	3.10	*6,548*
Belgium	7.9	16.7	75.4	5.88	*4,606*
France	8.9	19.9	71.2	3.92	*12,635*
Ireland	11.8	19.8	68.4	1.70	*4,361*
Italy	4.7	15.0	80.2	2.45	*13,025*
Greece	4.1	6.1	89.7	6.99	*7,375*
Spain	5.4	16.8	77.7	6.67	*9,635*
Portugal	3.1	7.5	89.4	6.18	*11,298*
Austria	7.8	21.7	70.5	4.63	*5,449*
Finland	8.6	17.7	73.7	3.95	*8,315*
Germany	0.0	0.0	0.0	2.85	*12,358*
UK	25.0	18.9	56.1	1.79	*8,401*
Men					
Denmark	21.4	14.5	64.1	4.68	*7,909*
Netherlands	17.6	19.3	63.1	3.24	*17,457*
Belgium	16.2	24.1	59.8	5.97	*7,523*
France	18.8	24.1	57.1	4.05	*17,653*
Ireland	18.8	17.5	63.7	1.86	*10,057*
Italy	11.6	19.1	69.2	2.53	*24,889*
Greece	8.9	9.4	81.6	7.11	*16,143*
Spain	11.1	21.1	67.8	6.75	*21,018*
Portugal	7.7	8.0	84.3	6.31	*16,365*
Austria	14.0	30.6	55.5	4.85	*9,843*
Finland	21.0	16.8	62.2	4.13	*9,384*
Germany	0.0	0.0	0.0	3.07	*20,829*
UK	30.4	16.6	53.0	1.99	*13,200*

Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-8 Full-time workers only – summary statistics (%)

	ISCO 1	ISCO 2	ISCO 3	ISCO 4	ISCO 5	ISCO 6	ISCO 7	ISCO 8	ISCO 9	*N (EMPL)*
Women										
Denmark	4.1	17.2	28.4	20.2	18.4	0.8	1.4	4.3	5.3	*6,322*
Netherlands	10.4	22.4	27.3	20.5	10.7	0.6	1.6	2.5	3.9	*6,548*
Belgium	3.7	26.3	14.6	30.3	12.3	0.5	2.8	2.0	7.6	*4,606*
France	4.1	8.6	24.7	28.6	17.8	1.2	2.0	5.7	7.3	*12,635*
Ireland	7.2	21.7	12.4	23.7	16.8	1.3	2.2	8.8	5.9	*4,361*
Italy	1.7	14.9	13.5	30.1	15.1	1.5	10.1	3.2	9.8	*13,025*
Greece	9.9	19.1	10.2	22.1	14.3	5.2	7.9	2.6	8.7	*7,375*
Spain	7.5	21.9	13.0	15.9	18.3	3.7	4.4	2.5	12.8	*9,635*
Portugal	5.8	10.2	9.9	14.5	17.6	7.9	12.8	5.7	15.5	*11,298*
Austria	4.8	6.3	18.1	24.8	22.1	8.2	4.1	2.1	9.4	*5,449*
Finland	6.3	23.7	20.3	16.2	19.0	3.2	3.5	1.7	6.1	*8,315*
Germany	4.2	13.6	33.3	18.7	14.5	1.2	5.9	3.9	4.6	*12,358*
UK	17.1	16.8	16.9	24.3	15.0	0.2	1.9	4.1	3.7	*8,401*
Men										
Denmark	10.4	19.3	17.0	5.8	5.4	2.5	19.1	12.9	7.6	*7,909*
Netherlands	17.3	19.7	19.5	7.8	5.4	1.2	15.5	9.1	4.5	*17,457*
Belgium	9.8	17.0	13.6	15.3	6.4	1.7	15.2	11.0	9.8	*7,523*
France	7.7	11.0	19.5	7.8	5.8	3.0	22.8	17.0	5.4	*17,653*
Ireland	14.5	12.7	10.2	7.2	7.0	9.8	16.8	13.5	8.3	*10,057*
Italy	4.7	6.7	12.0	16.1	11.0	3.5	26.3	10.1	9.5	*24,889*
Greece	13.4	13.4	5.6	9.2	8.3	10.4	23.2	12.2	4.3	*16,143*
Spain	9.8	10.3	10.9	6.4	8.9	5.6	25.3	12.5	10.2	*21,018*
Portugal	10.3	7.6	7.5	6.5	9.4	5.3	31.8	13.4	8.1	*16,365*
Austria	10.3	4.6	16.1	8.6	9.8	7.0	26.1	11.0	6.5	*9,843*
Finland	13.1	16.5	14.1	4.6	4.2	5.9	22.4	14.1	4.9	*9,384*
Germany	7.6	15.6	16.8	6.4	5.3	1.5	29.4	11.3	6.0	*20,829*
UK	22.2	14.7	10.8	7.7	5.6	1.6	20.0	12.4	5.0	*13,200*

Individual base weights used.
ISCO 1: legislators, senior officials and managers; ISCO 2 professionals; ISCO 3 technicians and associate professionals; ISCO 4 clerks; ISCO 5 Service workers and shop and market sales workers; ISCO 6 skilled agricultural and fishery workers; ISCO 7 craft and related trades workers; ISCO 8 plant and machine operators and assemblers; ISCO 9 elementary occupations.
Source: ECHP 1994-2001.

Table A 4-9 Full-time workers only – summary statistics (%)

	Age	ISCED 5-7	ISCED 3	ISCED 0-2	No children	One child	Two children	Three or more children	Age youngest child	New birth	Married	N (EMPL)
Women												
Denmark	39.50	40.8	45.7	13.5	45.7	25.7	22.0	6.7	6.73	7.4	68.3	*6,322*
Netherlands	36.17	18.2	26.9	54.8	81.3	9.3	7.4	2.0	8.56	2.3	43.7	*6,548*
Belgium	37.29	54.0	30.7	15.3	51.0	22.7	20.5	5.9	6.81	6.3	63.0	*4,606*
France	39.42	33.9	32.0	34.1	48.8	27.3	20.0	3.9	7.47	6.0	62.8	*12,635*
Ireland	36.00	29.4	48.5	22.2	58.1	18.7	15.5	7.7	6.73	7.0	52.7	*4,361*
Italy	38.43	14.1	51.2	34.7	56.0	25.9	15.0	3.1	7.78	4.8	67.8	*13,025*
Greece	38.08	36.4	34.6	29.1	52.6	21.7	22.4	3.3	8.60	3.7	69.1	*7,375*
Spain	37.55	41.4	21.1	37.5	57.2	21.4	17.5	3.9	7.98	4.0	59.0	*9,635*
Portugal	37.86	15.6	14.8	69.6	43.5	30.1	21.4	5.0	7.96	5.0	73.0	*11,298*
Austria	38.18	11.2	66.9	21.9	61.3	21.0	14.0	3.6	8.08	5.5	57.5	*5,449*
Finland	41.29	45.4	36.3	18.2	51.0	21.1	19.6	8.3	7.81	4.5	63.5	*8,315*
Germany	38.65	23.7	62.0	14.3	66.4	21.8	9.7	2.0	8.91	3.5	55.4	*12,358*
UK	39.88	48.7	13.4	38.0	65.0	18.1	13.3	3.6	8.69	3.3	60.4	*8,401*
Men												
Denmark	40.05	34.4	49.1	16.5	51.0	21.8	20.1	7.0	6.34	8.1	63.6	*7,909*
Netherlands	38.97	14.6	31.6	53.8	55.5	14.4	21.7	8.4	7.04	5.2	66.4	*17,457*
Belgium	38.96	39.4	36.0	24.6	51.2	21.2	20.0	7.6	6.60	6.5	69.1	*7,523*
France	39.82	25.3	36.0	38.6	48.0	22.8	21.7	7.6	6.77	7.8	67.0	*17,653*
Ireland	39.12	22.5	40.3	37.2	42.9	17.1	22.2	17.8	6.73	8.6	71.1	*10,057*
Italy	39.69	11.0	40.0	48.9	50.8	25.5	18.3	5.5	7.33	5.8	72.9	*24,889*
Greece	40.19	25.3	34.3	40.4	46.7	21.5	27.0	4.8	7.93	5.4	76.4	*16,143*
Spain	39.16	26.4	19.2	54.4	48.9	22.6	23.2	5.3	7.48	5.6	71.4	*21,018*
Portugal	38.98	10.1	12.2	77.7	45.3	27.9	21.1	5.7	7.68	5.5	76.5	*16,365*
Austria	38.93	8.7	78.8	12.5	54.6	19.0	20.1	6.3	7.29	5.4	64.6	*9,843*
Finland	40.61	32.1	46.9	21.0	50.7	19.4	19.9	10.0	6.98	7.0	62.7	*9,384*
Germany	39.77	28.9	60.2	10.8	56.4	21.2	17.4	5.0	8.04	3.3	64.8	*20,829*
UK	40.28	51.0	13.3	35.6	53.4	17.0	21.2	8.4	6.87	6.4	69.3	*13,200*

Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-10 Part-time workers only – summary statistics (%)

	Supervisor	Intermediate supervisor	Not a supervisor	Log wage	
Women					*N (ALL)*
Denmark	2.6	14.8	82.6	4.54	*1,103*
Netherlands	2.2	8.4	89.4	3.05	*5,582*
Belgium	1.9	8.9	89.2	5.87	*1,488*
France	1.8	11.4	86.8	3.89	*2,564*
Ireland	3.3	11.1	85.6	1.49	*1,789*
Italy	1.6	8.5	89.9	2.57	*1,901*
Greece	0.9	3.2	95.9	7.08	*626*
Spain	0.5	6.1	93.4	6.50	*1,499*
Portugal	0.4	2.9	96.7	6.14	*1,014*
Austria	1.6	9.1	89.3	4.58	*1,760*
Finland	2.3	14.4	83.3	3.90	*614*
Germany	0.0	0.0	0.0	2.84	*3,303*
UK	6.0	12.3	81.7	1.52	*3,834*
Men					
Denmark	1.9	7.7	90.4	4.48	*155*
Netherlands	4.8	14.3	80.9	3.23	*660*
Belgium	7.1	19.7	73.2	6.11	*138*
France	4.2	15.6	80.1	4.22	*464*
Ireland	2.5	6.1	91.5	1.61	*557*
Italy	4.9	11.9	83.3	2.71	*562*
Greece	2.3	6.5	91.2	7.24	*439*
Spain	3.8	9.0	87.1	6.79	*393*
Portugal	0.5	3.4	96.0	6.54	*191*
Austria	16.6	20.8	62.6	4.96	*142*
Finland	6.2	7.1	86.5	3.83	*221*
Germany	0.0	0.0	0.0	2.94	*241*
UK	9.0	3.2	87.8	1.71	*256*

Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-11 Part-time workers only – summary statistics (%)

	ISCO 1	ISCO 2	ISCO 3	ISCO 4	ISCO 5	ISCO 6	ISCO 7	ISCO 8	ISCO 9	*N (EMPL)*
Women										
Denmark	1.2	6.9	24.6	23.5	28.0	2.2	1.0	1.2	11.5	*1,103*
Netherlands	4.0	15.2	26.3	23.7	20.8	1.0	1.2	1.6	6.1	*5,582*
Belgium	0.4	27.1	12.7	22.3	19.7	0.0	1.4	0.9	15.5	*1,488*
France	1.0	10.5	16.9	26.2	20.5	1.0	1.3	1.9	20.7	*2,564*
Ireland	1.5	15.0	7.6	22.5	31.5	0.8	1.8	4.8	14.5	*1,789*
Italy	0.4	21.6	12.1	26.0	12.8	2.2	5.8	2.4	16.8	*1,901*
Greece	2.1	43.3	6.0	11.0	7.8	8.5	5.2	0.5	15.6	*626*
Spain	2.6	14.6	8.9	10.0	20.3	2.1	3.7	2.2	35.5	*1,499*
Portugal	4.3	14.5	6.7	1.6	17.6	14.4	6.7	0.1	34.0	*1,014*
Austria	1.0	4.2	11.7	25.8	28.8	1.6	3.7	1.3	21.8	*1,760*
Finland	0.9	19.2	20.7	15.6	23.6	3.4	0.9	1.2	14.6	*614*
Germany	0.8	11.3	33.3	20.5	20.9	0.5	1.9	1.5	9.4	*3,303*
UK	4.2	8.9	12.6	27.9	32.1	0.1	1.0	2.6	10.5	*3,834*
Men										
Denmark	2.0	21.1	18.0	7.8	10.9	4.9	8.6	4.8	21.9	*155*
Netherlands	8.5	26.1	18.2	8.1	10.2	1.9	7.8	8.6	10.9	*660*
Belgium	0.8	29.3	16.6	18.3	7.4	0.6	11.8	7.3	7.8	*138*
France	1.7	29.8	17.0	5.9	5.6	7.7	11.8	8.5	12.0	*464*
Ireland	2.3	9.9	5.1	4.8	4.9	11.7	12.5	6.6	42.2	*557*
Italy	0.9	25.6	10.9	10.6	10.7	3.4	16.1	3.9	18.0	*562*
Greece	2.8	41.9	5.8	3.6	4.0	16.3	17.8	2.6	5.3	*439*
Spain	4.9	17.8	9.9	18.5	10.8	8.4	11.3	5.3	13.1	*393*
Portugal	7.2	27.5	5.7	0.6	2.0	13.3	25.1	2.5	16.1	*191*
Austria	10.5	16.8	18.6	15.4	16.1	0.5	15.6	4.0	2.5	*142*
Finland	2.6	15.8	26.7	13.7	12.2	2.8	10.8	3.8	11.4	*221*
Germany	4.1	33.9	18.5	6.7	18.0	2.2	4.7	7.0	4.9	*241*
UK	13.4	18.1	13.7	15.9	12.0	1.9	7.6	5.3	12.2	*256*

Individual base weights used.
ISCO 1: legislators, senior officials and managers; ISCO 2 professionals; ISCO 3 technicians and associate professionals; ISCO 4 clerks; ISCO 5 Service workers and shop and market sales workers; ISCO 6 skilled agricultural and fishery workers; ISCO 7 craft and related trades workers; ISCO 8 plant and machine operators and assemblers; ISCO 9 elementary occupations.
Source: ECHP 1994-2001.

Table A 4-12 Part-time workers only – summary statistics (%)

	Age	ISCED 5-7	ISCED 3	ISCED 0-2	No children	One child	Two children	Three or more children	Age youngest child	New birth	Married	N (EMPL)
Women												
Denmark	42.39	32.9	46.5	20.6	48.4	20.2	21.1	10.2	7.44	4.2	82.7	*1,103*
Netherlands	39.56	13.8	28.7	57.5	39.9	21.9	29.8	8.3	7.27	6.9	76.6	*5,582*
Belgium	38.56	41.2	33.9	24.9	31.9	26.0	29.6	12.5	6.94	8.1	81.0	*1,488*
France	40.10	26.5	28.5	45.0	41.7	23.2	27.6	7.6	7.15	7.0	74.8	*2,564*
Ireland	39.56	14.5	45.5	40.0	25.2	26.1	29.0	19.7	7.26	8.4	77.0	*1,789*
Italy	38.64	17.6	46.9	35.4	41.6	34.2	19.7	4.4	7.57	5.5	77.6	*1,901*
Greece	38.45	49.5	22.1	28.3	44.9	26.0	26.1	2.9	7.45	5.6	73.9	*626*
Spain	36.78	29.9	18.1	52.0	48.8	25.5	20.7	4.9	7.80	5.1	64.0	*1,499*
Portugal	41.34	16.7	7.0	76.3	48.6	27.3	18.6	5.5	8.35	4.6	78.6	*1,014*
Austria	38.62	9.0	64.0	27.0	30.7	31.7	31.7	6.0	7.97	4.7	79.7	*1,760*
Finland	39.92	36.6	44.6	18.8	47.5	17.5	21.6	13.4	7.35	5.0	70.4	*614*
Germany	41.45	19.6	66.1	14.4	38.0	34.3	22.0	5.7	9.22	0.8	85.5	*3,303*
UK	41.42	35.0	13.1	51.9	35.0	23.5	31.8	9.8	7.56	5.6	81.2	*3,834*
Men												
Denmark	36.93	41.0	46.3	12.7	64.0	13.3	15.0	7.8	5.75	10.1	40.2	*155*
Netherlands	40.46	14.2	26.5	59.3	57.7	15.4	21.3	5.6	8.36	3.8	54.7	*660*
Belgium	39.73	49.5	33.3	17.2	62.1	11.5	19.9	6.6	6.17	4.7	48.0	*138*
France	40.48	36.2	26.8	37.0	56.7	16.8	17.0	9.6	6.60	7.2	51.7	*464*
Ireland	40.74	13.1	26.5	60.4	52.6	14.6	17.9	14.9	6.68	5.0	58.0	*557*
Italy	39.32	26.5	33.1	40.5	55.8	21.8	18.0	4.5	7.48	6.2	63.9	*562*
Greece	40.21	44.2	14.5	41.3	55.0	17.7	24.3	3.1	8.51	3.5	67.2	*439*
Spain	36.22	39.5	20.6	39.9	65.7	15.0	14.6	4.7	6.32	5.3	48.2	*393*
Portugal	40.58	22.4	15.7	61.9	56.6	18.9	15.6	8.9	7.05	7.2	58.4	*191*
Austria	37.28	22.8	74.1	3.1	63.7	15.5	12.2	8.6	6.36	5.5	46.2	*142*
Finland	39.41	27.8	45.6	26.6	70.6	9.6	16.7	3.0	6.28	4.8	41.9	*221*
Germany	38.10	34.0	49.7	16.4	80.6	5.8	7.6	6.0	6.62	1.8	35.2	*241*
UK	40.53	56.1	10.3	33.6	67.2	14.0	11.7	7.2	6.33	9.6	48.5	*256*

Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-13 Labour market transition patterns among women in Denmark

	Year t+1				Total %
	Those who gave birth in Year t				
Year t	**Full-time**	**Part-time**	**Unemployed**	**Inactive**	
Full-time					
Row %	91.3	3.6	2.8	2.3	100.0
Column %	82.3	19.1	18.0	9.4	58.9
Part-time					
Row %	14.4	77.6	0.0	8.0	100.0
Column %	1.4	45.2	0.0	3.6	6.5
Unemployed					
Row %	38.3	13.5	32.1	16.2	100.0
Column %	8.8	18.1	52.1	16.8	14.9
Inactive					
Row %	24.8	9.9	13.9	51.3	100.0
Column %	7.5	17.6	29.9	70.3	19.7
Total %	65.3	11.1	9.2	14.4	100.0
	Those who did not give birth in Year t				
Full-time					
Row %	90.7	3.6	3.3	2.4	100.0
Column %	89.3	20.2	28.2	11.8	66.0
Part-time					
Row %	20.5	68.1	6.2	5.2	100.0
Column %	3.7	68.4	9.6	4.7	12.0
Unemployed					
Row %	27.8	8.7	41.2	22.3	100.0
Column %	3.7	6.4	47.3	14.6	8.8
Inactive					
Row %	17.0	4.5	8.6	69.9	100.0
Column %	3.4	5.0	14.9	69.0	13.3
Total %	67.0	11.9	7.7	13.5	100.0

Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-14 Labour market transition patterns among women in the Netherlands

	Year t+1				Total %
	Those who gave birth in Year t				
Year t	**Full-time**	**Part-time**	**Unemployed**	**Inactive**	
Full-time					
Row %	49.6	35.5	3.8	11.2	100.0
Column %	74.7	14.0	3.7	4.6	15.0
Part-time					
Row %	5.6	85.1	2.1	7.2	100.0
Column %	19.0	75.7	4.6	6.7	33.9
Unemployed					
Row %	1.4	9.1	46.7	42.8	100.0
Column %	1.9	3.1	39.6	15.4	13.1
Inactive					
Row %	1.1	7.2	21.3	70.4	100.0
Column %	4.4	7.2	52.2	73.3	37.9
Total %	10.0	38.1	15.5	36.5	100.0
	Those who did not give birth in Year t				
Full-time					
Row %	85.3	9.9	2.0	2.8	100.0
Column %	84.3	12.4	4.7	2.8	31.0
Part-time					
Row %	12.9	77.9	2.8	6.4	100.0
Column %	9.4	72.0	4.8	4.8	22.8
Unemployed					
Row %	6.0	9.4	49.7	34.9	100.0
Column %	2.8	5.6	55.4	16.8	14.8
Inactive					
Row %	3.5	7.9	14.8	73.9	100.0
Column %	3.5	10.0	35.1	75.6	31.4
Total %	31.4	24.7	13.2	30.7	100.0

Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-15 Labour market transition patterns among women in Belgium

	Year t+1				Total %
	Those who gave birth in Year t				
Year t	**Full-time**	**Part-time**	**Unemployed**	**Inactive**	
Full-time					
Row %	85.7	11.2	1.5	1.5	100.0
Column %	88.2	25.0	5.6	4.0	48.1
Part-time					
Row %	19.1	71.1	2.7	7.1	100.0
Column %	7.6	61.2	3.8	7.2	18.6
Unemployed					
Row %	4.4	8.8	66.3	20.5	100.0
Column %	1.4	6.1	76.5	16.8	15.1
Inactive					
Row %	7.0	9.3	10.2	73.5	100.0
Column %	2.7	7.8	14.1	72.0	18.1
Total %	46.8	21.6	13.1	18.5	100.0
	Those who did not give birth in Year t				
Full-time					
Row %	90.0	5.7	2.1	2.2	100.0
Column %	89.6	17.8	7.7	2.9	42.3
Part-time					
Row %	16.3	74.2	4.8	4.6	100.0
Column %	5.0	70.6	5.4	1.8	12.9
Unemployed					
Row %	9.0	5.9	70.8	14.4	100.0
Column %	2.6	5.3	75.7	5.5	12.3
Inactive					
Row %	3.8	2.7	4.0	89.6	100.0
Column %	2.9	6.3	11.2	89.8	32.5
Total %	42.5	13.6	11.5	32.4	100.0

Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-16 Labour market transition patterns among women in France

	Year t+1				Total %
	Those who gave birth in Year t				
Year t	**Full-time**	**Part-time**	**Unemployed**	**Inactive**	
Full-time					
Row %	80.8	7.0	2.0	10.3	100.0
Column %	84.1	28.3	11.9	11.2	43.6
Part-time					
Row %	21.9	62.6	1.1	14.4	100.0
Column %	5.2	57.6	1.5	3.6	9.9
Unemployed					
Row %	15.9	4.6	53.4	26.1	100.0
Column %	3.9	4.4	74.4	6.7	10.2
Inactive					
Row %	7.9	2.9	2.5	86.7	100.0
Column %	6.9	9.8	12.2	78.6	36.3
Total %	41.9	10.7	7.4	40.1	100.0
	Those who did not give birth in Year t				
Full-time					
Row %	90.7	4.1	2.4	2.8	100.0
Column %	89.4	21.5	16.4	6.1	55.3
Part-time					
Row %	26.6	61.2	5.9	6.2	100.0
Column %	5.2	63.7	7.9	2.7	10.9
Unemployed					
Row %	16.1	7.3	63.8	12.8	100.0
Column %	2.5	6.0	66.6	4.3	8.5
Inactive					
Row %	6.6	3.6	3.0	86.8	100.0
Column %	3.0	8.8	9.2	86.9	25.3
Total %	56.1	10.4	8.2	25.3	100.0

Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-17 Labour market transition patterns among women in Ireland

	Year t+1				Total %
	Those who gave birth in Year t				
Year t	**Full-time**	**Part-time**	**Unemployed**	**Inactive**	
Full-time					
Row %	77.1	14.0	2.6	6.3	100.0
Column %	85.6	23.6	36.1	3.4	29.1
Part-time					
Row %	8.1	69.7	6.0	16.2	100.0
Column %	4.3	56.6	40.4	4.2	14.0
Unemployed					
Row %	0.0	13.9	19.8	66.4	100.0
Column %	0.0	1.5	18.0	2.3	1.9
Inactive					
Row %	4.8	5.7	0.2	89.3	100.0
Column %	10.0	18.3	5.6	90.1	55.0
Total %	26.2	17.2	2.1	54.5	100.0
	Those who did not give birth in Year t				
Full-time					
Row %	86.3	6.8	1.9	4.9	100.0
Column %	83.5	15.5	25.2	3.1	32.0
Part-time					
Row %	21.5	62.4	2.1	14.0	100.0
Column %	8.4	57.4	11.3	3.6	13.0
Unemployed					
Row %	23.6	11.2	40.0	25.2	100.0
Column %	1.9	2.1	43.0	1.3	2.6
Inactive					
Row %	3.9	6.7	1.0	88.4	100.0
Column %	6.2	25.0	20.5	92.0	52.4
Total %	33.1	14.1	2.4	50.4	100.0

Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-18 Labour market transition patterns among women in Italy

	Year t+1				Total %
	Those who gave birth in Year t				
Year t	**Full-time**	**Part-time**	**Unemployed**	**Inactive**	
Full-time					
Row %	85.8	7.8	2.3	4.1	100.0
Column %	83.2	39.7	16.7	3.3	38.3
Part-time					
Row %	37.5	51.3	0.3	10.8	100.0
Column %	6.1	43.8	0.4	1.5	6.4
Unemployed					
Row %	18.4	3.1	39.4	39.1	100.0
Column %	2.5	2.1	40.1	4.3	5.3
Inactive					
Row %	6.5	2.2	4.4	86.9	100.0
Column %	8.2	14.4	42.8	91.0	50.0
Total %	39.5	7.5	5.2	47.8	100.0
	Those who did not give birth in Year t				
Full-time					
Row %	90.4	3.8	1.8	4.1	100.0
Column %	86.2	29.7	11.0	3.8	41.6
Part-time					
Row %	40.9	48.2	2.4	8.4	100.0
Column %	5.7	54.2	2.2	1.2	6.0
Unemployed					
Row %	15.7	3.3	52.7	28.2	100.0
Column %	2.7	4.7	59.9	4.8	7.6
Inactive					
Row %	5.2	1.4	4.0	89.4	100.0
Column %	5.4	11.5	27.0	90.3	44.8
Total %	43.6	5.4	6.7	44.4	100.0

Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-19 Labour market transition patterns among women in Greece

	Year t+1				Total %
	Those who gave birth in Year t				
Year t	**Full-time**	**Part-time**	**Unemployed**	**Inactive**	
Full-time					
Row %	88.0	3.2	2.1	6.7	100.0
Column %	81.8	28.3	14.7	4.5	35.3
Part-time					
Row %	55.8	37.7	0.0	6.6	100.0
Column %	7.0	45.3	0.0	0.6	4.8
Unemployed					
Row %	19.3	7.0	40.4	33.3	100.0
Column %	3.2	11.1	50.0	3.9	6.3
Inactive					
Row %	5.7	1.1	3.4	89.9	100.0
Column %	8.0	15.4	35.4	91.0	53.6
Total %	38.0	4.0	5.1	53.0	100.0
	Those who did not give birth in Year t				
Full-time					
Row %	88.53	2.62	3.29	5.56	100
Column %	84.88	35.94	18.13	4.03	37.37
Part-time					
Row %	48.48	34.04	3.61	13.87	100
Column %	3.93	39.47	1.68	0.85	3.16
Unemployed					
Row %	19.82	2.18	45.92	32.07	100
Column %	4.03	6.36	53.68	4.94	7.93
Inactive					
Row %	5.41	0.96	3.49	90.14	100
Column %	7.16	18.23	26.5	90.18	51.54
Total %	38.98	2.72	6.78	51.52	100

Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-20 Labour market transition patterns among women in Spain

	Year t+1				Total %
	Those who gave birth in Year t				
Year t	**Full-time**	**Part-time**	**Unemployed**	**Inactive**	
Full-time					
Row %	86.3	6.3	5.1	2.4	100.0
Column %	73.7	27.6	10.4	1.1	24.2
Part-time					
Row %	27.1	53.2	5.7	14.0	100.0
Column %	4.9	49.2	2.4	1.3	5.1
Unemployed					
Row %	21.6	0.6	42.8	35.0	100.0
Column %	9.4	1.3	44.8	8.0	12.4
Inactive					
Row %	5.8	2.1	8.6	83.6	100.0
Column %	11.9	21.9	42.4	89.7	58.3
Total %	28.3	5.5	11.8	54.4	100.0
	Those who did not give birth in Year t				
Full-time					
Row %	86.3	3.2	5.0	5.5	100.0
Column %	81.8	19.4	16.6	3.9	34.3
Part-time					
Row %	28.5	47.8	8.5	15.2	100.0
Column %	4.3	46.0	4.6	1.7	5.5
Unemployed					
Row %	18.7	4.7	45.0	31.6	100.0
Column %	5.8	9.2	49.3	7.4	11.2
Inactive					
Row %	6.0	3.0	6.2	84.9	100.0
Column %	8.1	25.4	29.6	86.9	49.0
Total %	36.2	5.7	10.2	47.9	100.0

Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-21 Labour market transition patterns among women in Portugal

	Year t+1				Total %
	Those who gave birth in Year t				
Year t	**Full-time**	**Part-time**	**Unemployed**	**Inactive**	
Full-time					
Row %	91.0	2.6	5.0	1.3	100.0
Column %	91.7	27.3	35.2	3.9	63.9
Part-time					
Row %	16.3	60.0	16.1	7.6	100.0
Column %	1.0	39.3	7.1	1.5	4.0
Unemployed					
Row %	18.9	12.0	50.0	19.1	100.0
Column %	2.4	15.7	44.2	7.3	8.1
Inactive					
Row %	12.7	4.6	5.1	77.6	100.0
Column %	4.8	17.8	13.5	87.4	24.0
Total %	63.4	6.2	9.1	21.3	100.0
	Those who did not give birth in Year t				
Full-time					
Row %	91.2	1.7	3.4	3.7	100.0
Column %	89.5	23.9	35.7	8.3	61.2
Part-time					
Row %	32.2	52.1	2.4	13.3	100.0
Column %	2.4	53.5	1.9	2.2	4.6
Unemployed					
Row %	35.0	1.8	43.9	19.4	100.0
Column %	3.6	2.6	48.3	4.5	6.3
Inactive					
Row %	10.1	3.2	2.9	83.8	100.0
Column %	4.5	20.1	14.1	85.1	27.9
Total %	62.3	4.5	5.7	27.5	100.0

Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-22 Labour market transition patterns among women in Germany

	Year t+1				Total %
	Those who gave birth in Year t				
Year t	**Full-time**	**Part-time**	**Unemployed**	**Inactive**	
Full-time					
Row %	60.0	13.0	0.8	26.3	100.0
Column %	90.6	61.2	15.1	25.0	50.7
Part-time					
Row %	29.4	70.0	0.0	0.6	100.0
Column %	3.2	24.0	0.0	0.0	3.7
Unemployed					
Row %	1.4	11.9	49.1	37.6	100.0
Column %	0.1	1.5	26.2	1.0	1.3
Inactive					
Row %	4.7	3.2	3.3	88.8	100.0
Column %	6.1	13.3	58.8	74.0	44.3
Total %	33.6	10.7	2.5	53.2	100.0
	Those who did not give birth in Year t				
Full-time					
Row %	88.3	4.1	4.0	3.7	100.0
Column %	85.8	12.9	26.0	5.7	46.7
Part-time					
Row %	19.0	68.5	2.5	10.0	100.0
Column %	5.8	67.3	5.1	4.9	14.6
Unemployed					
Row %	24.6	6.6	47.8	20.9	100.0
Column %	4.0	3.5	52.1	5.5	7.8
Inactive					
Row %	6.8	8.0	4.0	81.3	100.0
Column %	4.4	16.4	16.9	83.9	30.8
Total %	48.1	14.9	7.2	29.8	100.0

Individual base weights used.
Source: ECHP 1994-2001.

Table A 4-23 Labour market transition patterns among women in the UK

	Year t+1				Total %
	Those who gave birth in Year t				
Year t	**Full-time**	**Part-time**	**Unemployed**	**Inactive**	
Full-time					
Row %	70.8	15.6	2.1	11.5	100.0
Column %	79.0	16.1	42.0	5.3	24.6
Part-time					
Row %	14.3	65.9	1.6	18.2	100.0
Column %	11.9	50.8	24.1	6.3	18.4
Unemployed					
Row %	5.5	12.6	5.3	76.6	100.0
Column %	0.5	1.0	8.2	2.8	1.9
Inactive					
Row %	3.5	13.9	0.6	82.1	100.0
Column %	8.6	32.1	25.8	85.6	55.1
Total %	22.1	23.8	1.2	52.9	100.0
	Those who did not give birth in Year t				
Full-time					
Row %	88.2	6.2	1.2	4.4	100.0
Column %	88.2	14.0	25.7	6.6	46.4
Part-time					
Row %	16.0	70.2	1.2	12.7	100.0
Column %	7.0	69.1	11.5	8.3	20.2
Unemployed					
Row %	19.6	14.8	23.3	42.3	100.0
Column %	1.0	1.7	25.1	3.2	2.3
Inactive					
Row %	5.9	10.1	2.6	81.5	100.0
Column %	3.9	15.2	37.7	81.9	31.1
Total %	46.5	20.5	2.1	30.9	100.0

Individual base weights used.

Source: ECHP 1994-2001.

Table A 4-24 Labour market transition patterns among women in Austria

	Year t+1				Total %
	Those who gave birth in Year t				
Year t	**Full-time**	**Part-time**	**Unemployed**	**Inactive**	
Full-time					
Row %	61.5	13.0	3.7	21.8	100.0
Column %	85.8	43.2	57.6	35.1	58.7
Part-time					
Row %	14.2	57.3	1.8	26.7	100.0
Column %	5.1	48.6	7.2	11.0	15.1
Unemployed					
Row %	13.5	0.0	86.5	0.0	100.0
Column %	0.1	0.0	7.3	0.0	0.3
Inactive					
Row %	14.7	5.6	4.0	75.6	100.0
Column %	9.0	8.2	27.9	53.8	25.9
Total %	42.1	17.7	3.8	36.4	100.0
	Those who did not give birth in Year t				
Full-time					
Row %	90.8	3.9	2.7	2.5	100.0
Column %	89.1	12.2	39.1	4.4	50.6
Part-time					
Row %	17.7	75.7	1.7	4.9	100.0
Column %	5.5	73.9	7.7	2.7	15.9
Unemployed					
Row %	23.5	11.5	39.2	25.8	100.0
Column %	1.6	2.6	39.9	3.3	3.6
Inactive					
Row %	6.6	6.2	1.6	85.6	100.0
Column %	3.9	11.4	13.3	89.6	30.0
Total %	51.6	16.3	3.5	28.6	100.0

Individual base weights used.

Source: ECHP 1995-2001.

Table A 4-25 Labour market transition patterns among women in Finland

	Year t+1				Total %
	Those who gave birth in Year t				
Year t	**Full-time**	**Part-time**	**Unemployed**	**Inactive**	
Full-time					
Row %	78.7	3.9	3.8	13.7	100.0
Column %	74.4	38.4	37.7	17.2	48.7
Part-time					
Row %	58.1	29.9	0.0	12.1	100.0
Column %	4.3	23.3	0.0	1.2	3.8
Unemployed					
Row %	47.8	2.2	8.2	41.9	100.0
Column %	3.8	1.8	6.7	4.4	4.0
Inactive					
Row %	20.8	4.1	6.3	68.9	100.0
Column %	17.5	36.5	55.6	77.3	43.5
Total %	51.5	4.9	4.9	38.7	100.0
	Those who did not give birth in Year t				
Full-time					
Row %	91.2	2.6	3.6	2.6	100.0
Column %	89.1	35.0	26.4	15.7	71.3
Part-time					
Row %	44.9	39.7	7.4	8.0	100.0
Column %	3.2	38.9	4.0	3.5	5.2
Unemployed					
Row %	29.9	6.9	50.8	12.4	100.0
Column %	4.5	14.3	57.6	11.4	11.0
Inactive					
Row %	18.5	5.0	9.4	67.1	100.0
Column %	3.2	11.7	12.0	69.5	12.4
Total %	72.9	5.3	9.7	12.0	100.0

Individual base weights used.
Source: ECHP 1996-2001.

Table A 4-26 Multinomial logit estimates of exiting full-time employment (DK)

	Part-time	Unemployed	Inactive	Part-time	Unemployed	Inactive
Number of years in current job (ref: 9-24)	Model 1			Model 2		
1-3	1.82***	4.04***	1.76**	1.55*	3.08***	0.88
	(0.38)	(0.93)	(0.49)	(0.39)	(0.93)	(0.28)
4-8	1.54*	1.92**	1.51	1.03	2.39***	1.19
	(0.38)	(0.55)	(0.50)	(0.35)	(0.78)	(0.43)
New birth	1.29	1.27	0.97	1.57	1.62	0.64
	(0.46)	(0.47)	(0.40)	(0.64)	(0.76)	(0.33)
Age of the youngest child (ref: 11-17 or none)						
0-4	1.52	0.84	1.17	1.36	0.72	1.66
	(0.57)	(0.33)	(0.54)	(0.62)	(0.36)	(0.79)
5-10	1.27	0.90	1.53	1.13	0.85	1.55
	(0.42)	(0.30)	(0.64)	(0.45)	(0.33)	(0.68)
Age	1.44***	1.02	0.74**	1.33**	1.07	0.89
	(0.16)	(0.11)	(0.09)	(0.18)	(0.14)	(0.12)
Age squared	1.00***	1.00	1.00**	1.00*	1.00	1.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married	1.52**	0.96	0.85	1.19	0.88	0.77
	(0.31)	(0.19)	(0.20)	(0.28)	(0.20)	(0.18)
Public sector	0.84	0.74	1.53	0.74	0.63*	0.94
	(0.17)	(0.15)	(0.45)	(0.17)	(0.16)	(0.25)
Highest level of education (ref: ISCED 0-2)						
ISCED 5-7	1.75*	0.36***	0.63	1.54	0.53*	0.56
	(0.57)	(0.11)	(0.20)	(0.59)	(0.19)	(0.21)
ISCED 3	1.24	0.47***	0.74	1.12	0.58*	0.60*
	(0.35)	(0.12)	(0.20)	(0.36)	(0.17)	(0.18)
Number of children under 17 in the household (ref: none)						
One	0.60	1.02	1.01	0.60	1.16	1.02
	(0.19)	(0.28)	(0.37)	(0.23)	(0.38)	(0.41)
Two	0.70	0.76	0.69	0.78	0.79	0.71
	(0.25)	(0.26)	(0.31)	(0.32)	(0.31)	(0.34)
Three or more	0.86	0.41*	0.26*	0.87	0.53	0.26*
	(0.36)	(0.21)	(0.20)	(0.41)	(0.29)	(0.20)
Occupation (ref: operatives/elementary)						
Legislators/managers	0.37	0.61	1.48	0.48	0.16**	2.42
	(0.25)	(0.35)	(0.83)	(0.42)	(0.14)	(1.44)
Professionals	0.44**	0.62	0.63	0.81	0.56	1.07
	(0.17)	(0.28)	(0.30)	(0.40)	(0.28)	(0.54)
Assc. professionals	0.53*	0.49**	0.61	0.82	0.48*	0.70
	(0.20)	(0.17)	(0.22)	(0.40)	(0.19)	(0.29)
Clerks	0.73	1.04	0.60	0.98	0.89	0.90
	(0.25)	(0.33)	(0.25)	(0.45)	(0.34)	(0.42)
Service/sales	1.88*	1.13	1.54	2.97**	1.18	1.98*
	(0.63)	(0.34)	(0.53)	(1.29)	(0.41)	(0.76)
Skilled agr./craft	1.99	0.65	2.83	2.05	0.95	1.33
	(0.99)	(0.42)	(2.02)	(1.29)	(0.64)	(1.08)
Activity last wave (ref: full-time)						
Part-time				2.26	2.10	2.46
				(2.45)	(1.48)	(1.40)
Unemployed/inactive				0.71	3.90**	6.69***
				(0.77)	(2.59)	(3.84)
Pseudo R-square	0.7748			0.7937		
Log pseudolikelihood	-1957.8283			-1448.9336		
N	6,271			5,067		

Source: ECHP 1994-2001 (women aged 25-55).
Robust standard errors in parentheses.
Other controls: seven dummies for years in full-time work.
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.

Table A 4-27 Multinomial logit estimates of exiting full-time employment (NL)

	Part-time	Unemployed	Inactive	Part-time	Unemployed	Inactive
Number of years in current job (ref: 9-24)	Model 1			Model 2		
1-3	0.95	3.87***	1.45	0.66**	3.77***	1.45
	(0.14)	(1.35)	(0.38)	(0.12)	(1.55)	(0.46)
4-8	1.09	1.59	0.76	1.04	1.36	0.79
	(0.15)	(0.53)	(0.20)	(0.15)	(0.56)	(0.24)
New birth	2.63***	1.49	2.40*	4.16***	1.14	3.05*
	(0.74)	(0.94)	(1.23)	(1.42)	(0.91)	(1.78)
Age of the youngest child (ref: 11-17 or none)						
0-4	2.36***	3.43**	4.16**	1.63	3.68*	3.41*
	(0.73)	(1.99)	(2.31)	(0.56)	(2.54)	(2.27)
5-10	1.61*	1.92	3.36**	1.25	1.98	2.64
	(0.44)	(0.95)	(1.78)	(0.39)	(1.08)	(1.68)
Age	1.16**	1.39*	0.81*	0.96	1.25	0.81
	(0.08)	(0.24)	(0.10)	(0.09)	(0.25)	(0.13)
Age squared	1.00**	1.00*	1.00	1.00	1.00	1.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married	2.73***	1.53	3.41***	2.50***	1.29	2.86***
	(0.34)	(0.45)	(0.82)	(0.34)	(0.47)	(0.80)
Public sector	1.30**	0.78	0.44***	1.40**	1.04	0.49**
	(0.15)	(0.23)	(0.12)	(0.18)	(0.34)	(0.15)
Highest level of education (ref: ISCED 0-2)						
ISCED 5-7	1.48**	1.20	1.39	1.92***	1.16	1.55
	(0.23)	(0.54)	(0.46)	(0.36)	(0.67)	(0.59)
ISCED 3	1.43***	2.10***	1.63*	2.10***	2.03**	1.54
	(0.19)	(0.54)	(0.42)	(0.33)	(0.67)	(0.47)
Number of children under 17 in the household (ref: none)						
One	1.14	0.99	0.75	1.05	1.21	0.97
	(0.27)	(0.45)	(0.31)	(0.29)	(0.58)	(0.45)
Two	0.73	0.43*	0.80	0.64	0.40*	0.80
	(0.20)	(0.21)	(0.46)	(0.19)	(0.22)	(0.54)
Three or more	0.84	0.62	0.85	0.97	0.89	1.00
	(0.32)	(0.46)	(0.57)	(0.44)	(0.68)	(0.77)
Occupation (ref: operatives/elementary)						
Legislators/managers	0.50**	0.29**	0.73	0.51**	0.24**	1.13
	(0.14)	(0.15)	(0.33)	(0.15)	(0.16)	(0.63)
Professionals	0.76	0.39*	0.59	0.61*	0.31*	0.75
	(0.19)	(0.22)	(0.26)	(0.17)	(0.21)	(0.42)
Assc. professionals	1.13	0.43*	0.46*	1.05	0.36*	0.89
	(0.25)	(0.20)	(0.19)	(0.25)	(0.20)	(0.45)
Clerks	0.66*	0.66	0.59	0.65	0.61	1.06
	(0.16)	(0.31)	(0.24)	(0.17)	(0.34)	(0.55)
Service/sales	1.04	0.74	1.24	1.03	0.78	2.06
	(0.26)	(0.37)	(0.50)	(0.27)	(0.44)	(1.08)
Skilled agr./craft	1.33	2.32	2.85**	1.21	2.42	4.77***
	(0.54)	(1.35)	(1.45)	(0.58)	(1.59)	(2.79)
Activity last wave (ref: full-time)						
Part-time				20.57***	0.82	17.81***
				(10.37)	(0.83)	(11.47)
Unemployed/inactive				12.56***	0.96	29.26***
				(7.04)	(0.95)	(21.55)
Pseudo R-square	0.7126			0.7335		
Log pseudolikelihood	-2537.909			-1847.5255		
N	6,369			5,001		

Source: ECHP 1994-2001 (women aged 25-55).
Robust standard errors in parentheses.
Other controls: seven dummies for years in full-time work.
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.

Table A 4-28 Multinomial logit estimates of exiting full-time employment (BE)

	Part-time	Unemployed	Inactive	Part-time	Unemployed	Inactive
Number of years in current job (ref: 9-24)	Model 1			Model 2		
1-3	1.38	4.05***	2.44***	0.85	5.08***	2.20**
	(0.36)	(1.21)	(0.71)	(0.25)	(1.98)	(0.76)
4-8	1.43	2.74***	0.92	1.27	2.56**	1.05
	(0.35)	(0.81)	(0.35)	(0.33)	(0.98)	(0.45)
New birth	1.92**	1.12	1.90	1.60	1.18	1.14
	(0.60)	(0.70)	(1.15)	(0.64)	(1.11)	(0.99)
Age of the youngest child (ref: 11-17 or none)						
0-4	1.14	1.51	0.99	1.17	1.79	0.96
	(0.36)	(0.80)	(0.66)	(0.43)	(1.23)	(0.77)
5-10	1.15	2.15	1.53	1.34	2.52*	1.78
	(0.31)	(1.00)	(0.85)	(0.39)	(1.38)	(1.09)
Age	1.03	1.01	0.98	0.87	1.07	0.81
	(0.12)	(0.17)	(0.16)	(0.13)	(0.24)	(0.16)
Age squared	1.00	1.00	1.00	1.00	1.00	1.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married	1.43*	0.93	1.81*	1.19	0.67	1.48
	(0.29)	(0.22)	(0.58)	(0.25)	(0.19)	(0.51)
Public sector	0.97	0.85	0.49**	0.93	0.73	0.46**
	(0.17)	(0.25)	(0.14)	(0.18)	(0.27)	(0.15)
Highest level of education (ref: ISCED 0-2)						
ISCED 5-7	0.87	0.57	0.58	0.79	0.45	0.50
	(0.32)	(0.23)	(0.27)	(0.32)	(0.22)	(0.26)
ISCED 3	1.07	1.03	1.07	1.03	1.00	0.81
	(0.31)	(0.30)	(0.38)	(0.33)	(0.35)	(0.30)
Number of children under 17 in the household (ref: none)						
One	1.07	0.92	0.42*	1.10	0.64	0.43*
	(0.31)	(0.42)	(0.19)	(0.35)	(0.35)	(0.22)
Two	1.55	1.18	0.69	1.32	0.63	0.66
	(0.50)	(0.62)	(0.41)	(0.47)	(0.39)	(0.42)
Three or more	1.83	0.85	0.74	1.47	0.71	0.70
	(0.73)	(0.53)	(0.56)	(0.65)	(0.53)	(0.58)
Occupation (ref: operatives/elementary)						
Legislators/managers	0.24	0.33*	0.89	0.40	0.66	0.85
	(0.27)	(0.21)	(0.56)	(0.46)	(0.55)	(0.64)
Professionals	1.92	0.13***	0.73	1.82	0.14**	0.68
	(0.79)	(0.08)	(0.39)	(0.81)	(0.14)	(0.41)
Assc. professionals	1.22	0.45*	0.22***	1.16	0.75	0.21**
	(0.49)	(0.20)	(0.13)	(0.51)	(0.42)	(0.13)
Clerks	0.92	0.25***	0.38**	0.98	0.46	0.30**
	(0.34)	(0.10)	(0.17)	(0.38)	(0.22)	(0.15)
Service/sales	1.78	0.43**	0.84	1.39	0.78	0.70
	(0.63)	(0.15)	(0.35)	(0.57)	(0.35)	(0.31)
Skilled agr./craft	0.81	0.88	1.38	0.95	1.53	1.28
	(0.46)	(0.44)	(0.75)	(0.57)	(0.89)	(0.69)
Activity last wave (ref: full-time)						
Part-time				6.57***	3.12	3.21
				(2.27)	(2.32)	(2.67)
Unemployed/inactive				2.43*	0.87	1.55
				(1.19)	(0.70)	(1.27)
Pseudo R-square	0.7481			0.7613		
Log pseudolikelihood	-1543.2128			-1145.147		
N	4,420			3,460		

Source: ECHP 1994-2001 (women aged 25-55).
Robust standard errors in parentheses.
Other controls: seven dummies for years in full-time work.
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.

Table A 4-29 Multinomial logit estimates of exiting full-time employment (FR)

	Part-time	Unemployed	Inactive	Part-time	Unemployed	Inactive
	Model 1			Model 2		
Number of years in current job (ref: 9-24)						
1-3	1.36*	6.19***	2.19***	1.01	3.51***	1.45*
	(0.22)	(1.06)	(0.35)	(0.19)	(0.70)	(0.30)
4-8	1.47***	1.83***	1.28	1.43**	1.66**	1.34*
	(0.22)	(0.38)	(0.21)	(0.22)	(0.35)	(0.23)
New birth	1.22	1.01	2.64***	1.27	1.06	2.94***
	(0.28)	(0.36)	(0.55)	(0.35)	(0.40)	(0.65)
Age of the youngest child (ref: 11-17 or none)						
0-4	1.76**	0.99	1.84**	1.78**	0.99	1.99**
	(0.39)	(0.29)	(0.50)	(0.43)	(0.30)	(0.58)
5-10	1.20	0.81	1.23	1.09	0.79	1.28
	(0.24)	(0.20)	(0.31)	(0.23)	(0.21)	(0.35)
Age	1.00	1.04	0.78***	1.00	0.91	0.78**
	(0.08)	(0.10)	(0.07)	(0.09)	(0.10)	(0.08)
Age squared	1.00	1.00	1.00***	1.00	1.00	1.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married	1.53***	1.27	1.19	1.58***	1.23	1.25
	(0.20)	(0.20)	(0.17)	(0.21)	(0.20)	(0.19)
Public sector	1.02	0.18***	0.57***	1.00	0.18***	0.57***
	(0.12)	(0.05)	(0.08)	(0.12)	(0.05)	(0.09)
Highest level of education (ref: ISCED 0-2)						
ISCED 5-7	0.98	0.70	1.03	0.96	0.67	0.97
	(0.18)	(0.17)	(0.21)	(0.19)	(0.17)	(0.21)
ISCED 3	0.90	0.92	1.07	0.96	0.92	1.22
	(0.14)	(0.17)	(0.18)	(0.16)	(0.18)	(0.22)
Number of children under 17 in the household (ref: none)						
One	0.98	0.97	0.81	1.05	0.97	0.80
	(0.19)	(0.21)	(0.21)	(0.20)	(0.22)	(0.22)
Two	1.08	1.14	0.93	1.18	1.18	0.86
	(0.25)	(0.31)	(0.26)	(0.28)	(0.35)	(0.27)
Three or more	1.34	0.96	2.05**	1.35	1.13	1.93*
	(0.39)	(0.38)	(0.68)	(0.42)	(0.48)	(0.70)
Occupation (ref: operatives/elementary)						
Legislators/managers	0.32***	0.74	1.14	0.41*	0.79	1.36
	(0.14)	(0.29)	(0.36)	(0.21)	(0.35)	(0.45)
Professionals	2.01***	1.11	1.19	2.22***	1.31	1.18
	(0.51)	(0.43)	(0.36)	(0.61)	(0.53)	(0.37)
Assc. professionals	0.99	0.37***	0.79	1.19	0.45**	0.84
	(0.22)	(0.12)	(0.19)	(0.28)	(0.15)	(0.21)
Clerks	0.86	1.06	0.82	1.06	1.27	0.81
	(0.18)	(0.23)	(0.18)	(0.23)	(0.29)	(0.19)
Service/sales	1.23	0.97	1.43*	1.47*	1.11	1.31
	(0.25)	(0.21)	(0.29)	(0.31)	(0.25)	(0.30)
Skilled agr./craft	0.75	1.22	0.86	0.80	1.21	1.00
	(0.26)	(0.40)	(0.30)	(0.32)	(0.46)	(0.38)
Activity last wave (ref: full-time)						
Part-time				3.10**	1.30	1.16
				(1.70)	(0.78)	(0.67)
Unemployed/inactive				1.54	1.55	1.11
				(0.90)	(0.90)	(0.65)
Pseudo R-square	0.7626			0.7623		
Log pseudolikelihood	-4017.4919			-3321.7239		
N	12,208			10,081		

Source: ECHP 1994-2001 (women aged 25-55).
Robust standard errors in parentheses.
Other controls: seven dummies for years in full-time work.
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.

Table A 4-30 Multinomial logit estimates of exiting full-time employment (IE)

	Part-time	Unemployed	Inactive	Part-time	Unemployed	Inactive
Number of years in current job (ref: 9-24)	Model 1			Model 2		
1-3	1.09	2.26**	2.38***	0.70	1.76	2.03**
	(0.22)	(0.92)	(0.66)	(0.18)	(0.80)	(0.72)
4-8	1.43*	1.05	1.69*	1.41	0.65	1.44
	(0.31)	(0.49)	(0.50)	(0.34)	(0.35)	(0.54)
New birth	1.29	3.67*	1.83	1.34	6.82*	1.90
	(0.32)	(2.88)	(0.76)	(0.39)	(7.01)	(0.97)
Age of the youngest child (ref: 11-17 or none)						
0-4	1.47	1.26	1.47	1.48	0.96	1.54
	(0.44)	(0.90)	(0.59)	(0.48)	(0.82)	(0.70)
5-10	0.97	0.95	2.03**	0.85	0.88	2.36**
	(0.27)	(0.56)	(0.64)	(0.26)	(0.60)	(0.84)
Age	1.06	2.58***	1.03	0.98	2.67***	0.88
	(0.12)	(0.72)	(0.15)	(0.13)	(1.00)	(0.16)
Age squared	1.00	0.99***	1.00	1.00	0.99***	1.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)
Married	1.47	1.32	3.02***	1.51	1.18	3.16***
	(0.38)	(0.55)	(0.84)	(0.41)	(0.59)	(1.06)
Public sector	0.79	0.17***	0.40***	0.84	0.13***	0.44**
	(0.14)	(0.09)	(0.12)	(0.17)	(0.08)	(0.15)
Highest level of education (ref: ISCED 0-2)						
ISCED 5-7	0.59*	0.64	0.96	0.51**	0.45	0.99
	(0.16)	(0.33)	(0.32)	(0.16)	(0.30)	(0.39)
ISCED 3	0.89	1.66	0.71	0.86	1.80	0.89
	(0.20)	(0.73)	(0.17)	(0.21)	(0.86)	(0.24)
Number of children under 17 in the household (ref: none)						
One	2.24***	0.18**	1.09	2.01**	0.21**	0.87
	(0.67)	(0.13)	(0.39)	(0.64)	(0.17)	(0.37)
Two	2.72***	0.31**	1.51	2.33**	0.27*	1.31
	(0.86)	(0.19)	(0.55)	(0.77)	(0.18)	(0.55)
Three or more	2.80***	0.30	0.87	2.65***	0.36	0.75
	(0.97)	(0.22)	(0.39)	(0.99)	(0.30)	(0.38)
Occupation (ref: operatives/elementary)						
Legislators/managers	0.40*	0.27*	0.44**	0.30**	0.52	0.50
	(0.20)	(0.19)	(0.17)	(0.15)	(0.39)	(0.22)
Professionals	0.77	0.41	0.28***	0.83	0.71	0.31**
	(0.25)	(0.28)	(0.12)	(0.31)	(0.49)	(0.15)
Assc. professionals	0.89	0.50	0.44**	0.90	0.56	0.47
	(0.29)	(0.42)	(0.17)	(0.33)	(0.60)	(0.22)
Clerks	0.76	0.40**	0.30***	0.68	0.45	0.25***
	(0.22)	(0.16)	(0.11)	(0.22)	(0.22)	(0.12)
Service/sales	0.98	0.93	0.82	0.95	0.90	0.74
	(0.28)	(0.53)	(0.22)	(0.29)	(0.47)	(0.24)
Skilled agr./craft	0.47	0.16**	0.61	0.42	0.18*	0.79
	(0.24)	(0.13)	(0.30)	(0.24)	(0.16)	(0.42)
Activity last wave (ref: full-time)						
Part-time				7.46***	18.95**	2.71
				(5.35)	(26.89)	(2.12)
Unemployed/inactive				9.77***	5.19	4.76*
				(7.66)	(6.73)	(4.02)
Pseudo R-square	0.7257			0.7257		
Log pseudolikelihood	-1625.7445			-1241.8505		
N	4,275			3,266		

Source: ECHP 1994-2001 (women aged 25-55).
Robust standard errors in parentheses.
Other controls: seven dummies for years in full-time work.
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.

Table A 4-31 Multinomial logit estimates of exiting full-time employment (IT)

	Part-time	Unemployed	Inactive	Part-time	Unemployed	Inactive
Number of years in current job (ref: 9-24)	Model 1			Model 2		
1-3	1.05	8.14***	2.27***	0.94	10.06***	1.81***
	(0.19)	(2.10)	(0.34)	(0.19)	(3.43)	(0.35)
4-8	1.40**	2.81***	1.18	1.38*	3.46***	1.17
	(0.24)	(0.87)	(0.20)	(0.25)	(1.41)	(0.23)
New birth	1.98**	3.24**	1.84*	2.28**	3.90**	1.97*
	(0.65)	(1.57)	(0.65)	(0.88)	(2.20)	(0.76)
Age of the youngest child (ref: 11-17 or none)						
0-4	1.24	0.95	1.03	1.01	0.83	1.20
	(0.33)	(0.42)	(0.32)	(0.29)	(0.45)	(0.42)
5-10	1.39	1.38	1.19	1.36	1.55	1.25
	(0.31)	(0.49)	(0.28)	(0.30)	(0.62)	(0.33)
Age	1.12	0.99	0.87**	1.09	1.00	0.86*
	(0.09)	(0.13)	(0.06)	(0.09)	(0.16)	(0.08)
Age squared	1.00	1.00	1.00**	1.00	1.00	1.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married	1.34*	0.86	2.39***	1.32*	0.73	2.15***
	(0.21)	(0.18)	(0.40)	(0.22)	(0.18)	(0.41)
Public sector	0.88	0.71	0.52***	0.84	0.83	0.54***
	(0.13)	(0.18)	(0.09)	(0.14)	(0.22)	(0.10)
Highest level of education (ref: ISCED 0-2)						
ISCED 5-7	1.80**	0.73	0.76	1.65*	0.59	0.71
	(0.46)	(0.25)	(0.22)	(0.43)	(0.24)	(0.23)
ISCED 3	1.32	0.72	1.02	1.31	0.72	1.11
	(0.25)	(0.17)	(0.16)	(0.26)	(0.19)	(0.19)
Number of children under 17 in the household (ref: none)						
One	0.97	0.60	0.74	1.01	0.67	0.70*
	(0.17)	(0.19)	(0.14)	(0.19)	(0.24)	(0.15)
Two	0.82	0.94	0.74	0.88	0.92	0.71
	(0.21)	(0.39)	(0.20)	(0.23)	(0.44)	(0.21)
Three or more	1.09	1.55	0.71	1.06	1.19	0.67
	(0.39)	(0.80)	(0.33)	(0.38)	(0.75)	(0.36)
Occupation (ref: operatives/elementary)						
Legislators/managers	0.15***	0.00***	0.93	0.17**	0.00***	0.83
	(0.11)	(0.00)	(0.37)	(0.14)	(0.00)	(0.39)
Professionals	1.18	0.29***	0.58*	0.97	0.29***	0.58*
	(0.31)	(0.12)	(0.17)	(0.27)	(0.13)	(0.19)
Assc. professionals	0.79	0.50**	0.31***	0.88	0.45**	0.22***
	(0.18)	(0.16)	(0.09)	(0.23)	(0.17)	(0.07)
Clerks	0.50***	0.60*	0.52***	0.62*	0.62	0.49***
	(0.12)	(0.17)	(0.11)	(0.16)	(0.20)	(0.12)
Service/sales	0.82	0.60*	0.90	0.89	0.63	0.88
	(0.18)	(0.16)	(0.17)	(0.22)	(0.19)	(0.19)
Skilled agr./craft	0.69	0.49**	0.71*	0.86	0.48**	0.74
	(0.17)	(0.15)	(0.13)	(0.23)	(0.17)	(0.16)
Activity last wave (ref: full-time)						
Part-time				3.59*	1.16	-
				(2.73)	(1.31)	
Unemployed/inactive				1.03	2.61	-
				(0.81)	(2.65)	
Pseudo R-square	0.7656			0.7794		
Log pseudolikelihood	-3822.331			-3021.2176		
N	11,764			9,879		

Source: ECHP 1994-2001 (women aged 25-55).
Robust standard errors in parentheses.
Other controls: seven dummies for years in full-time work.
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.

Table A 4-32 Multinomial logit estimates of exiting full-time employment (GR)

	Part-time	Unemployed	Inactive	Part-time	Unemployed	Inactive
Number of years in current job (ref: 9-24)	Model 1			Model 2		
1-3	0.81	2.21***	1.28	0.73	3.05***	1.13
	(0.22)	(0.48)	(0.23)	(0.21)	(0.84)	(0.27)
4-8	1.25	1.39	1.00	1.21	1.46	1.09
	(0.31)	(0.36)	(0.19)	(0.34)	(0.48)	(0.24)
New birth	1.01	0.99	1.97*	0.93	0.30	1.21
	(0.59)	(0.57)	(0.77)	(0.67)	(0.31)	(0.62)
Age of the youngest child (ref: 11-17 or none)						
0-4	1.19	0.95	0.99	0.82	1.02	0.94
	(0.47)	(0.36)	(0.31)	(0.34)	(0.43)	(0.34)
5-10	1.62	1.06	1.15	1.50	0.81	0.89
	(0.50)	(0.30)	(0.27)	(0.47)	(0.28)	(0.30)
Age	1.20	1.10	1.07	1.14	1.08	1.06
	(0.16)	(0.12)	(0.09)	(0.18)	(0.16)	(0.11)
Age squared	1.00	1.00	1.00	1.00	1.00	1.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married	1.24	1.14	2.30***	1.32	0.89	2.14***
	(0.36)	(0.24)	(0.51)	(0.44)	(0.22)	(0.55)
Public sector	1.40	0.23***	0.32***	1.29	0.22***	0.40***
	(0.32)	(0.08)	(0.08)	(0.35)	(0.09)	(0.11)
Highest level of education (ref: ISCED 0-2)						
ISCED 5-7	1.29	0.51**	0.75	1.54	0.47**	0.64
	(0.56)	(0.14)	(0.19)	(0.68)	(0.17)	(0.20)
ISCED 3	1.04	0.72*	0.88	1.02	0.69	0.86
	(0.30)	(0.14)	(0.17)	(0.34)	(0.16)	(0.19)
Number of children under 17 in the household (ref: none)						
One	0.85	0.78	1.11	1.03	0.94	1.08
	(0.29)	(0.21)	(0.23)	(0.39)	(0.30)	(0.26)
Two	1.03	0.86	0.78	1.32	0.92	0.78
	(0.35)	(0.25)	(0.19)	(0.45)	(0.33)	(0.23)
Three or more	0.56	0.92	1.54	0.96	1.33	2.11*
	(0.41)	(0.40)	(0.54)	(0.70)	(0.71)	(0.86)
Occupation (ref: operatives/elementary)						
Legislators/managers	0.31**	0.20***	1.80**	0.23**	0.26***	1.44
	(0.17)	(0.07)	(0.48)	(0.15)	(0.11)	(0.48)
Professionals	1.92	0.29***	0.93	1.28	0.25**	1.11
	(0.96)	(0.14)	(0.38)	(0.68)	(0.15)	(0.53)
Assc. professionals	0.41	0.29**	1.74	0.48	0.22*	2.10*
	(0.28)	(0.15)	(0.63)	(0.34)	(0.17)	(0.89)
Clerks	0.58	0.50**	1.04	0.50	0.63	1.38
	(0.26)	(0.15)	(0.33)	(0.26)	(0.22)	(0.51)
Service/sales	1.31	0.71	1.48	1.21	0.63	1.66
	(0.53)	(0.18)	(0.43)	(0.52)	(0.20)	(0.53)
Skilled agr./craft	1.84*	1.08	2.33***	1.76	1.08	1.87**
	(0.66)	(0.27)	(0.57)	(0.68)	(0.31)	(0.55)
Activity last wave (ref: full-time)						
Part-time				1.46	0.63	0.06***
				(1.37)	(0.47)	(0.04)
Unemployed/inactive				0.66	0.43	0.28**
				(0.65)	(0.26)	(0.16)
Pseudo R-square	0.7640			0.7898		
Log pseudolikelihood	-2317.3725			-1696.0493		
N	7,083			5,819		

Source: ECHP 1994-2001 (women aged 25-55).
Robust standard errors in parentheses.
Other controls: seven dummies for years in full-time work.
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.

Table A 4-33 Multinomial logit estimates of exiting full-time employment (ES)

	Part-time	Unemployed	Inactive	Part-time	Unemployed	Inactive
Number of years in current job (ref: 9-24)		Model 1			Model 2	
1-3	1.51*	5.76***	2.45***	1.16	4.80***	1.40
	(0.34)	(1.38)	(0.45)	(0.28)	(1.45)	(0.34)
4-8	1.99***	3.07***	0.95	2.08***	2.63***	0.89
	(0.50)	(0.80)	(0.22)	(0.58)	(0.85)	(0.24)
New birth	1.63	1.63	0.71	1.81	1.46	0.73
	(0.57)	(0.57)	(0.30)	(0.77)	(0.63)	(0.36)
Age of the youngest child (ref: 11-17 or none)						
0-4	1.38	0.92	0.79	1.05	0.91	0.82
	(0.56)	(0.27)	(0.21)	(0.50)	(0.32)	(0.26)
5-10	1.18	0.97	0.97	1.18	0.94	1.03
	(0.43)	(0.25)	(0.23)	(0.45)	(0.27)	(0.26)
Age	1.04	1.08	0.89	1.05	1.11	0.91
	(0.10)	(0.10)	(0.07)	(0.13)	(0.13)	(0.09)
Age squared	1.00	1.00	1.00	1.00	1.00	1.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married	0.84	0.98	2.49***	0.76	1.20	2.23***
	(0.22)	(0.16)	(0.47)	(0.22)	(0.24)	(0.47)
Public sector	0.44***	1.02	0.80	0.47**	1.07	0.79
	(0.12)	(0.19)	(0.19)	(0.15)	(0.24)	(0.22)
Highest level of education (ref: ISCED 0-2)						
ISCED 5-7	0.69	0.54**	0.66	0.69	0.67	0.62
	(0.17)	(0.13)	(0.17)	(0.18)	(0.19)	(0.18)
ISCED 3	0.79	0.85	0.62**	0.76	0.95	0.59**
	(0.22)	(0.16)	(0.13)	(0.22)	(0.21)	(0.13)
Number of children under 17 in the household (ref: none)						
One	1.93	1.11	1.19	2.47*	0.99	1.14
	(0.89)	(0.24)	(0.22)	(1.29)	(0.25)	(0.24)
Two	1.24	0.81	1.04	1.38	0.67	1.02
	(0.58)	(0.23)	(0.27)	(0.71)	(0.22)	(0.30)
Three or more	1.34	0.94	0.54	1.67	0.60	0.47
	(0.80)	(0.38)	(0.23)	(1.13)	(0.31)	(0.23)
Occupation (ref: operatives/elementary)						
Legislators/managers	0.50**	0.18***	1.30	0.53	0.14***	1.59*
	(0.17)	(0.08)	(0.32)	(0.21)	(0.08)	(0.44)
Professionals	1.80	0.50*	0.49*	1.80	0.34**	0.60
	(0.67)	(0.18)	(0.21)	(0.77)	(0.15)	(0.29)
Assc. professionals	0.40**	0.66	0.31***	0.37**	0.65	0.32**
	(0.15)	(0.20)	(0.12)	(0.15)	(0.23)	(0.15)
Clerks	0.55*	0.88	0.46**	0.68	0.79	0.66
	(0.17)	(0.22)	(0.14)	(0.23)	(0.24)	(0.22)
Service/sales	0.81	0.77	0.88	0.70	0.74	1.03
	(0.20)	(0.15)	(0.16)	(0.20)	(0.17)	(0.21)
Skilled agr./craft	0.54*	0.83	1.25	0.67	0.77	1.44
	(0.18)	(0.21)	(0.27)	(0.24)	(0.23)	(0.36)
Activity last wave (ref: full-time)						
Part-time				1.19	0.25	0.36
				(0.93)	(0.24)	(0.36)
Unemployed/inactive				0.39	0.55	0.82
				(0.32)	(0.49)	(0.79)
Pseudo R-square	0.7279			0.7488		
Log pseudolikelihood	-3507.684			-2611.2267		
N	9,298			7,499		

Source: ECHP 1994-2001 (women aged 25-55).
Robust standard errors in parentheses.
Other controls: seven dummies for years in full-time work.
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.

Table A 4-34 Multinomial logit estimates of exiting full-time employment (PT)

	Part-time	Unemployed	Inactive	Part-time	Unemployed	Inactive
Number of years in current job (ref: 9-24)	Model 1			Model 2		
1-3	1.47	4.68***	1.17	1.47	3.66***	0.91
	(0.42)	(1.28)	(0.23)	(0.49)	(1.17)	(0.26)
4-8	0.88	1.73*	0.54***	0.82	1.71*	0.63*
	(0.31)	(0.50)	(0.12)	(0.31)	(0.54)	(0.16)
New birth	1.51	1.18	0.24***	1.60	1.13	0.23**
	(0.91)	(0.51)	(0.12)	(1.10)	(0.54)	(0.14)
Age of the youngest child (ref: 11-17 or none)						
0-4	1.54	1.71	1.84*	1.72	2.05*	2.18*
	(0.79)	(0.59)	(0.59)	(0.97)	(0.78)	(0.92)
5-10	0.72	0.79	0.86	0.58	0.95	1.03
	(0.26)	(0.24)	(0.25)	(0.25)	(0.31)	(0.35)
Age	1.37**	1.17	1.14	1.58***	1.26*	1.34**
	(0.19)	(0.13)	(0.14)	(0.24)	(0.16)	(0.16)
Age squared	1.00**	1.00	1.00	0.99***	1.00*	1.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married	1.39	0.63**	1.83***	1.19	0.58**	2.10***
	(0.37)	(0.14)	(0.43)	(0.34)	(0.14)	(0.53)
Public sector	0.98	0.70	0.47***	0.98	0.70	0.61*
	(0.35)	(0.21)	(0.12)	(0.48)	(0.20)	(0.17)
Highest level of education (ref: ISCED 0-2)						
ISCED 5-7	1.19	0.45**	1.04	1.89	0.50	1.52
	(0.83)	(0.18)	(0.81)	(1.91)	(0.26)	(1.04)
ISCED 3	1.39	0.68	1.09	1.42	0.83	1.13
	(0.61)	(0.20)	(0.35)	(0.63)	(0.29)	(0.40)
Number of children under 17 in the household (ref: none)						
One	0.86	0.86	0.73	0.90	0.72	0.52***
	(0.26)	(0.27)	(0.15)	(0.31)	(0.23)	(0.13)
Two	0.78	0.96	0.79	0.73	0.81	0.67
	(0.34)	(0.31)	(0.26)	(0.36)	(0.28)	(0.24)
Three or more	0.62	1.29	1.49	0.54	1.19	0.39
	(0.34)	(0.52)	(0.77)	(0.35)	(0.52)	(0.25)
Occupation (ref: operatives/elementary)						
Legislators/managers	0.18**	0.36	1.66	0.29*	0.41	1.20
	(0.12)	(0.23)	(0.51)	(0.20)	(0.26)	(0.42)
Professionals	1.85	0.62	0.62	0.81	0.13**	0.23
	(1.40)	(0.36)	(0.61)	(0.92)	(0.13)	(0.21)
Assc. professionals	0.87	1.15	1.19	0.27	0.88	0.97
	(0.55)	(0.43)	(0.62)	(0.25)	(0.39)	(0.58)
Clerks	0.25*	0.75	1.07	0.40	0.60	1.33
	(0.19)	(0.28)	(0.39)	(0.31)	(0.29)	(0.50)
Service/sales	0.76	0.84	1.82**	0.93	0.82	1.79**
	(0.27)	(0.21)	(0.46)	(0.35)	(0.22)	(0.46)
Skilled agr./craft	1.16	1.29	1.76**	1.65	1.40	1.63*
	(0.36)	(0.33)	(0.40)	(0.53)	(0.39)	(0.41)
Activity last wave (ref: full-time)						
Part-time				8.06**	-	0.64
				(8.49)		(0.43)
Unemployed/inactive				1.41	-	1.32
				(1.52)		(0.80)
Pseudo R-square	0.7930			0.8110		
Log pseudolikelihood	-3101.7178			-2361.9865		
N	10,807			9,013		

Source: ECHP 1994-2001 (women aged 25-55).
Robust standard errors in parentheses.
Other controls: seven dummies for years in full-time work.
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.

Table A 4-35 Multinomial logit estimates of exiting full-time employment (DE)

	Part-time	Unemployed	Inactive	Part-time	Unemployed	Inactive
Number of years in current job (ref: 9-24)	Model 1			Model 2		
1-3	0.97	5.73***	3.35***	0.84	5.13***	4.55***
	(0.21)	(1.14)	(1.09)	(0.20)	(1.33)	(1.68)
4-8	1.08	2.02***	1.22	0.97	1.64*	1.45
	(0.27)	(0.47)	(0.44)	(0.23)	(0.45)	(0.61)
New birth	0.46	0.18	2.70***	0.47	0.32	2.88***
	(0.28)	(0.19)	(0.84)	(0.33)	(0.36)	(1.11)
Age of the youngest child (ref: 11-17 or none)						
0-4	1.71*	2.44**	10.82***	1.78	1.85	10.67***
	(0.53)	(1.05)	(3.84)	(0.64)	(1.01)	(4.50)
5-10	1.23	2.32***	2.49**	1.07	2.30***	2.41**
	(0.29)	(0.60)	(0.91)	(0.31)	(0.73)	(1.04)
Age	1.22**	1.00	0.96	1.27*	0.84	0.97
	(0.12)	(0.10)	(0.11)	(0.15)	(0.10)	(0.14)
Age squared	1.00*	1.00	1.00	1.00*	1.00	1.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married	1.73***	1.04	1.15	1.95***	1.18	1.51
	(0.33)	(0.17)	(0.27)	(0.41)	(0.22)	(0.42)
Public sector	0.88	1.03	1.17	1.20	1.05	1.16
	(0.15)	(0.19)	(0.24)	(0.22)	(0.21)	(0.27)
Highest level of education (ref: ISCED 0-2)						
ISCED 5-7	1.05	0.68	0.93	1.03	0.74	0.99
	(0.37)	(0.20)	(0.27)	(0.36)	(0.25)	(0.32)
ISCED 3	1.16	0.99	1.10	1.18	1.14	0.99
	(0.34)	(0.21)	(0.26)	(0.31)	(0.29)	(0.28)
Number of children under 17 in the household (ref: none)						
One	1.63*	1.12	0.99	1.37	1.17	0.92
	(0.41)	(0.23)	(0.27)	(0.33)	(0.28)	(0.28)
Two	1.28	0.87	0.75	1.05	0.80	0.69
	(0.38)	(0.26)	(0.28)	(0.34)	(0.29)	(0.29)
Three or more	1.13	0.79	0.64	1.09	0.45	0.58
	(0.58)	(0.36)	(0.32)	(0.58)	(0.23)	(0.34)
Occupation (ref: operatives/elementary)						
Legislators/managers	1.53	0.28***	0.80	1.08	0.35**	0.83
	(0.74)	(0.11)	(0.35)	(0.55)	(0.16)	(0.42)
Professionals	2.08*	0.46**	0.85	1.55	0.58	0.86
	(0.81)	(0.16)	(0.34)	(0.63)	(0.21)	(0.39)
Assc. professionals	1.63	0.42***	0.86	1.37	0.44***	0.93
	(0.55)	(0.09)	(0.27)	(0.46)	(0.11)	(0.33)
Clerks	1.50	0.58**	0.65	1.40	0.53**	0.69
	(0.61)	(0.15)	(0.21)	(0.53)	(0.16)	(0.26)
Service/sales	2.73***	0.57**	0.74	2.17**	0.66	0.65
	(0.88)	(0.15)	(0.23)	(0.71)	(0.20)	(0.23)
Skilled agr./craft	1.01	0.79	0.74	0.88	0.79	0.47*
	(0.41)	(0.22)	(0.30)	(0.39)	(0.26)	(0.20)
Activity last wave (ref: full-time)						
Part-time				4.81***	0.25**	0.74
				(2.05)	(0.15)	(0.39)
Unemployed/inactive				1.05	1.83	2.83**
				(0.54)	(0.81)	(1.32)
Pseudo R-square	0.7388			0.7614		
Log pseudolikelihood	-4080.8528			-3100.1943		
N	11,269			9,372		

Source: ECHP 1994-2001 (women aged 25-55).
Robust standard errors in parentheses.
Other controls: seven dummies for years in full-time work.
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.

Table A 4-36 Multinomial logit estimates of exiting full-time employment (UK)

	Part-time	Unemployed	Inactive	Part-time	Unemployed	Inactive
Number of years in current job (ref: 9-24)	Model 1			Model 2		
1-3	0.95	1.19	0.78	0.86	1.01	0.65**
	(0.16)	(0.44)	(0.14)	(0.16)	(0.41)	(0.13)
4-8	0.91	0.85	0.55***	0.92	0.59	0.52***
	(0.15)	(0.34)	(0.11)	(0.18)	(0.28)	(0.12)
New birth	2.02***	6.39**	1.85**	1.67*	4.27	2.49**
	(0.50)	(5.64)	(0.57)	(0.50)	(4.13)	(0.92)
Age of the youngest child (ref: 11-17 or none)						
0-4	2.16***	0.63	3.34***	2.15***	0.63	3.12***
	(0.50)	(0.48)	(1.06)	(0.55)	(0.47)	(1.18)
5-10	1.24	1.62	1.64	1.16	1.25	2.00*
	(0.25)	(0.73)	(0.58)	(0.25)	(0.61)	(0.80)
Age	1.12*	1.00	0.81**	1.03	0.86	0.90
	(0.08)	(0.14)	(0.07)	(0.08)	(0.15)	(0.09)
Age squared	1.00	1.00	1.00***	1.00	1.00	1.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married	1.58***	0.51**	1.53***	1.64***	0.36***	1.43**
	(0.22)	(0.13)	(0.24)	(0.25)	(0.12)	(0.25)
Public sector	0.74**	0.49**	0.56***	0.79	0.44**	0.53***
	(0.10)	(0.15)	(0.08)	(0.12)	(0.15)	(0.09)
Highest level of education (ref: ISCED 0-2)						
ISCED 5-7	0.95	1.11	1.33*	0.85	1.06	1.15
	(0.13)	(0.31)	(0.22)	(0.12)	(0.33)	(0.21)
ISCED 3	0.92	0.95	1.29	0.98	1.37	1.17
	(0.17)	(0.39)	(0.26)	(0.20)	(0.57)	(0.28)
Number of children under 17 in the household (ref: none)						
One	1.50**	0.81	0.74	1.29	0.99	0.65*
	(0.26)	(0.36)	(0.18)	(0.24)	(0.47)	(0.17)
Two	1.48**	1.17	0.78	1.18	1.37	0.58
	(0.30)	(0.53)	(0.24)	(0.26)	(0.72)	(0.21)
Three or more	1.35	0.52	0.99	1.06	1.00	0.64
	(0.40)	(0.43)	(0.41)	(0.34)	(0.83)	(0.31)
Occupation (ref: operatives/elementary)						
Legislators/managers	0.52**	0.53	0.68	0.87	0.41*	0.88
	(0.14)	(0.23)	(0.18)	(0.25)	(0.21)	(0.27)
Professionals	0.57**	0.49	0.72	0.85	0.47	1.12
	(0.16)	(0.23)	(0.21)	(0.25)	(0.23)	(0.36)
Assc. professionals	0.95	0.36*	0.54**	1.42	0.39	0.72
	(0.23)	(0.20)	(0.16)	(0.37)	(0.23)	(0.25)
Clerks	0.94	0.79	0.47***	1.31	0.66	0.69
	(0.20)	(0.29)	(0.12)	(0.31)	(0.28)	(0.20)
Service/sales	1.24	0.98	0.93	1.57*	0.85	1.41
	(0.28)	(0.40)	(0.25)	(0.40)	(0.41)	(0.42)
Skilled agr./craft	0.41*	1.08	0.53	0.38	1.59	0.73
	(0.22)	(0.64)	(0.26)	(0.30)	(1.00)	(0.44)
Activity last wave (ref: full-time)						
Part-time				1.37	-	-
				(0.92)		
Unemployed/inactive				0.70	-	-
				(0.44)		
Pseudo R-square	0.7272			0.7471		
Log pseudolikelihood	-2879.255			-2196.8351		
N	7,613			6,265		

Source: ECHP 1994-2001 (women aged 25-55).
Robust standard errors in parentheses.
Other controls: seven dummies for years in full-time work.
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.

Table A 4-37 Multinomial logit estimates of exiting full-time employment (AT)

	Part-time	Unemployed	Inactive	Part-time	Unemployed	Inactive
Number of years in current job (ref: 9-24)	Model 1			Model 2		
1-3	2.06***	3.64***	1.71*	2.00**	2.49***	1.98
	(0.47)	(1.02)	(0.55)	(0.60)	(0.79)	(0.87)
4-8	2.04***	1.50	1.02	1.92**	0.82	1.11
	(0.45)	(0.45)	(0.27)	(0.51)	(0.33)	(0.37)
New birth	2.29**	0.90	4.03***	3.30***	0.65	4.11***
	(0.80)	(0.54)	(1.66)	(1.41)	(0.43)	(2.10)
Age of the youngest child (ref: 11-17 or none)						
0-4	2.73***	3.04*	10.72***	1.85	7.25***	8.72***
	(1.01)	(1.75)	(5.10)	(0.81)	(4.73)	(5.17)
5-10	1.68*	0.82	0.86	1.88*	1.57	0.46
	(0.50)	(0.41)	(0.44)	(0.64)	(0.81)	(0.35)
Age	1.11	0.94	0.83	1.01	0.96	0.65***
	(0.12)	(0.13)	(0.10)	(0.14)	(0.17)	(0.10)
Age squared	1.00	1.00	1.00**	1.00	1.00	1.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married	1.52*	0.77	1.60*	1.58*	0.81	2.17**
	(0.34)	(0.21)	(0.45)	(0.39)	(0.26)	(0.72)
Public sector	0.67*	0.27***	1.07	0.81	0.22***	1.02
	(0.16)	(0.11)	(0.30)	(0.22)	(0.11)	(0.35)
Highest level of education (ref: ISCED 0-2)						
ISCED 5-7	1.35	1.21	0.41	0.93	1.38	0.61
	(0.47)	(0.94)	(0.27)	(0.39)	(1.14)	(0.41)
ISCED 3	0.81	0.75	0.92	0.76	0.80	0.78
	(0.20)	(0.24)	(0.25)	(0.20)	(0.31)	(0.28)
Number of children under 17 in the household (ref: none)						
One	1.50	0.79	1.29	1.43	0.70	1.36
	(0.46)	(0.33)	(0.50)	(0.51)	(0.36)	(0.73)
Two	2.11**	1.98	1.63	2.46**	1.41	2.44
	(0.69)	(1.18)	(0.75)	(0.91)	(0.99)	(1.45)
Three or more	1.44	3.62*	0.97	2.12	2.94	1.23
	(0.73)	(2.45)	(0.54)	(1.06)	(2.27)	(0.88)
Occupation (ref: operatives/elementary)						
Legislators/managers	0.09**	0.44	0.66	0.15**	0.61	1.49
	(0.09)	(0.32)	(0.61)	(0.14)	(0.48)	(1.60)
Professionals	0.64	0.05**	0.76	0.75	0.00***	0.02***
	(0.29)	(0.06)	(0.65)	(0.41)	(0.00)	(0.03)
Assc. professionals	0.70	0.29**	1.12	0.70	0.18**	1.37
	(0.24)	(0.16)	(0.48)	(0.27)	(0.12)	(0.84)
Clerks	0.57*	0.77	1.28	0.61	0.92	1.59
	(0.18)	(0.29)	(0.49)	(0.21)	(0.37)	(0.91)
Service/sales	0.69	0.55	1.70	0.70	0.48	2.39
	(0.21)	(0.21)	(0.64)	(0.23)	(0.22)	(1.29)
Skilled agr./craft	0.36***	0.20***	2.17**	0.38**	0.19***	1.86
	(0.14)	(0.10)	(0.82)	(0.17)	(0.11)	(1.06)
Activity last wave (ref: full-time)						
Part-time				2.41	-	-
				(2.90)		
Unemployed/inactive				0.99	-	-
				(1.21)		
Pseudo R-square	0.7821			0.8133		
Log pseudolikelihood	-1585.0173			-1062.8067		
N	5,248			4,107		

Source: ECHP 1995-2001 (women aged 25-55).
Robust standard errors in parentheses.
Other controls: seven dummies for years in full-time work.
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.

Table A 4-38 Multinomial logit estimates of exiting full-time employment (FI)

	Part-time	Unemployed	Inactive	Part-time	Unemployed	Inactive
Number of years in current job (ref: 9-24)	Model 1			Model 2		
1-3	1.08	14.78***	2.22***	0.95	7.76***	1.17
	(0.29)	(4.60)	(0.56)	(0.36)	(2.84)	(0.43)
4-8	1.31	2.14**	2.27**	1.33	2.54**	2.14*
	(0.33)	(0.82)	(0.79)	(0.43)	(1.11)	(0.96)
New birth	1.19	3.42**	3.37***	1.30	7.67***	3.50***
	(0.46)	(1.75)	(1.01)	(0.65)	(4.71)	(1.27)
Age of the youngest child (ref: 11-17 or none)						
0-4	1.46	0.97	1.32	1.61	0.42	1.09
	(0.56)	(0.46)	(0.87)	(0.73)	(0.24)	(0.80)
5-10	1.16	1.14	0.90	1.33	1.30	0.70
	(0.40)	(0.40)	(0.66)	(0.56)	(0.51)	(0.58)
Age	0.83	1.24	0.80*	0.76	1.24	0.69**
	(0.12)	(0.18)	(0.10)	(0.13)	(0.20)	(0.11)
Age squared	1.00	1.00	1.00	1.00*	1.00	1.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married	1.32	0.64*	1.41	1.07	0.84	1.51
	(0.35)	(0.16)	(0.31)	(0.33)	(0.21)	(0.42)
Public sector	1.23	1.79**	1.62**	1.07	1.65*	1.58*
	(0.29)	(0.45)	(0.32)	(0.28)	(0.44)	(0.39)
Highest level of education (ref: ISCED 0-2)						
ISCED 5-7	1.91**	0.74	0.55*	1.82	0.58*	0.59
	(0.62)	(0.22)	(0.18)	(0.73)	(0.19)	(0.22)
ISCED 3	1.41	1.34	0.85	1.49	0.92	0.99
	(0.44)	(0.35)	(0.29)	(0.57)	(0.25)	(0.39)
Number of children under 17 in the household (ref: none)						
One	0.71	1.09	0.57	0.84	1.11	0.71
	(0.25)	(0.33)	(0.29)	(0.37)	(0.40)	(0.38)
Two	1.21	1.08	1.22	1.06	0.73	1.75
	(0.43)	(0.37)	(0.95)	(0.49)	(0.27)	(1.52)
Three or more	1.18	0.89	1.00	1.70	0.83	1.30
	(0.58)	(0.39)	(0.76)	(1.01)	(0.43)	(1.11)
Occupation (ref: operatives/elementary)						
Legislators/managers	0.35	0.52	0.25**	0.20*	0.65	0.23**
	(0.25)	(0.28)	(0.16)	(0.18)	(0.47)	(0.17)
Professionals	1.02	0.32***	0.80	0.81	0.48	0.47
	(0.53)	(0.13)	(0.32)	(0.45)	(0.23)	(0.22)
Assc. professionals	0.90	0.56*	1.02	0.82	0.56	0.85
	(0.47)	(0.19)	(0.41)	(0.45)	(0.22)	(0.38)
Clerks	0.75	0.79	0.89	0.51	0.68	0.52
	(0.41)	(0.29)	(0.36)	(0.30)	(0.31)	(0.25)
Service/sales	1.48	0.68	0.68	0.96	0.86	0.47*
	(0.76)	(0.24)	(0.25)	(0.52)	(0.34)	(0.20)
Skilled agr./craft	0.93	0.80	0.85	0.39	0.59	0.65
	(0.52)	(0.33)	(0.39)	(0.25)	(0.32)	(0.35)
Activity last wave (ref: full-time)						
Part-time				1.38	0.67	1.05
				(1.30)	(0.51)	(1.16)
Unemployed/inactive				0.82	1.91	1.95
				(0.77)	(1.02)	(2.06)
Pseudo R-square	0.7967			0.8227		
Log pseudolikelihood	-2280.4975			-1521.5366		
N	8,093			6,192		

Source: ECHP 1996-2001 (women aged 25-55).
Robust standard errors in parentheses.
Other controls: seven dummies for years in full-time work.
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.

Table A 4-39 Multinomial logit estimates of occupational transitions (DK)

	by skill		by occupational wage	
	Move up	**Move down**	**Move up**	**Move down**
Number of years in current job (ref: 9-24)				
1-3	1.38	2.02*	1.54	1.70*
	(0.48)	(0.610	(0.55)	(0.51)
4-8	1.13	2.19*	0.97	2.21***
	(0.38)	(0.68)	(0.34)	(0.65)
Switching hours (ref: stays full-time)				
Stays part-time	0.50	0.27*	0.16***	0.68
	(0.27)	(0.15)	(0.09)	(0.31)
Full-time to part-time	0.66	0.71	0.63	0.85
	(0.22)	(0.22)	(0.22)	(0.24)
Part-time to full-time	0.97	0.48*	0.94	0.49**
	(0.30)	(0.17)	(0.29)	(0.17)
Changes employer	59.38***	108.55***	56.63***	124.22***
	(20.52)	(34.44)	(19.99)	(39.51)
Age	1.00	0.93	0.85	0.99
	(0.14)	(0.15)	(0.12)	(0.15)
Age squared	1.00	1.00	1.00	1.00
	(0.00)	(0.00)	(0.00)	(0.00)
Married	1.04	0.86	1.03	0.82
	(0.21)	(0.17)	(0.20)	(0.16)
Public sector	0.65*	0.53**	0.66**	0.45***
	(0.13)	(0.11)	(0.13)	(0.09)
Highest level of education (ref: ISCED 0-2)				
ISCED 5-7	1.12	1.17	0.89	0.96
	(0.32)	(0.40)	(0.28)	(0.29)
ISCED 3	1.35	1.51	1.17	1.33
	(0.38)	(0.52)	(0.36)	(0.39)
Number of children under 17 in the household (ref: none)				
One	0.91	1.67	0.67	1.80*
	(0.26)	(0.61)	(0.20)	(0.62)
Two or more	1.01	1.58	0.87	1.80
	(0.36)	(0.69)	(0.33)	(0.73)
Age of the youngest child (ref: 11-17 or none)				
0-4	0.86	0.90	1.15	0.79
	(0.34)	(0.36)	(0.47)	(0.30)
5-10	1.42	1.11	1.74	1.06
	(0.53)	(0.47)	(0.67)	(0.43)
New birth	1.46	1.02	1.21	1.41
	(0.45)	(0.33)	(0.38)	(0.46)
Pseudo R-square	0.3697		0.3779	
Log pseudolikelihood	-1563.3014		-1549.6988	
N	7,353		7,353	

Reference category: remaining in the occupation of the same ranking.
Robust standard errors in parentheses.
Other controls: four dummies for years in the risk set (one, two, three, four or more waves).
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.
Source: ECHP 1994-2001 (women aged 25-55).

Table A 4-40 Multinomial logit estimates of occupational transitions (NL)

	by skill		by occupational wage	
	Move up	**Move down**	**Move up**	**Move down**
Number of years in current job (ref: 9-24)				
1-3	0.83*	0.74***	0.77**	0.64***
	(0.09)	(0.08)	(0.09)	(0.07)
4-8	0.95	0.93	0.95	0.80*
	(0.10)	(0.10)	(0.10)	(0.09)
Switching hours (ref: stays full-time)				
Stays part-time	0.73***	0.67***	0.82*	0.77**
	(0.08)	(0.07)	(0.09)	(0.09)
Full-time to part-time	1.27	1.46**	1.11	1.68***
	(0.19)	(0.22)	(0.19)	(0.26)
Part-time to full-time	1.55***	1.07	1.66***	1.00
	(0.23)	(0.16)	(0.25)	(0.17)
Changes employer	4.71***	5.39***	4.46***	5.38***
	(0.47)	(0.53)	(0.47)	(0.54)
Age	1.15**	1.21***	1.16**	1.24***
	(0.07)	(0.07)	(0.08)	(0.08)
Age squared	1.00**	1.00***	1.00**	1.00***
	(0.00)	(0.00)	(0.00)	(0.00)
Married	0.97	0.97	0.95	1.01
	(0.09)	(0.09)	(0.10)	(0.10)
Public sector	0.89	0.99	0.82**	0.92
	(0.08)	(0.09)	(0.08)	(0.09)
Highest level of education (ref: ISCED 0-2)				
ISCED 5-7	0.85	0.85	0.69***	0.76**
	(0.10)	(0.10)	(0.09)	(0.10)
ISCED 3	1.14	0.75***	1.20**	0.74***
	(0.10)	(0.07)	(0.11)	(0.08)
Number of children under 17 in the household (ref: none)				
One	1.26	0.97	1.34*	1.01
	(0.20)	(0.16)	(0.24)	(0.17)
Two or more	0.98	0.80	0.99	0.84
	(0.16)	(0.14)	(0.18)	(0.15)
Age of the youngest child (ref: 11-17 or none)				
0-4	0.91	1.27	0.82	0.95
	(0.17)	(0.24)	(0.16)	(0.20)
5-10	1.03	0.94	0.98	0.93
	(0.17)	(0.17)	(0.17)	(0.18)
New birth	0.87	0.92	0.82	1.10
	(0.17)	(0.17)	(0.17)	(0.23)
Pseudo R-square	0.0683		0.0691	
Log pseudolikelihood	-6787.0504		-6064.9112	
N	11,463		11,463	

Reference category: remaining in the occupation of the same ranking.
Robust standard errors in parentheses.
Other controls: four dummies for years in the risk set (one, two, three, four or more waves).
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.
Source: ECHP 1994-2001 (women aged 25-55).

Table A 4-41 Multinomial logit estimates of occupational transitions (BE)

	by skill		by occupational wage	
	Move up	**Move down**	**Move up**	**Move down**
Number of years in current job (ref: 9-24)				
1-3	0.63***	0.68**	0.69**	0.68**
	(0.11)	(0.11)	(0.12)	(0.11)
4-8	0.88	1.08	0.96	1.00
	(0.14)	(0.16)	(0.15)	(0.15)
Switching hours (ref: stays full-time)				
Stays part-time	0.90	0.83	0.87	0.83
	(0.14)	(0.12)	(0.14)	(0.12)
Full-time to part-time	1.25	1.08	1.36	1.20
	(0.30)	(0.28)	(0.33)	(0.29)
Part-time to full-time	1.15	1.26	1.25	1.03
	(0.28)	(0.28)	(0.30)	(0.24)
Changes employer	6.39***	4.91***	5.84***	4.87***
	(1.11)	(0.78)	(1.04)	(0.77)
Age	1.14	1.08	1.15*	1.09
	(0.09)	(0.09)	(0.09)	(0.09)
Age squared	1.00	1.00	1.00*	1.00
	(0.00)	(0.00)	(0.00)	(0.00)
Married	0.78*	0.85	0.83	0.88
	(0.11)	(0.12)	(0.12)	(0.12)
Public sector	0.93	1.18	0.98	1.19
	(0.12)	(0.15)	(0.13)	(0.15)
Highest level of education (ref: ISCED 0-2)				
ISCED 5-7	1.30	0.98	1.10	0.85
	(0.22)	(0.15)	(0.19)	(0.13)
ISCED 3	1.10	0.87	1.03	0.80
	(0.20)	(0.14)	(0.18)	(0.12)
Number of children under 17 in the household (ref: none)				
One	0.94	1.12	0.96	1.19
	(0.18)	(0.20)	(0.18)	(0.22)
Two or more	0.97	0.96	0.82	0.95
	(0.23)	(0.21)	(0.20)	(0.22)
Age of the youngest child (ref: 11-17 or none)				
0-4	0.87	0.84	0.92	0.86
	(0.21)	(0.18)	(0.23)	(0.19)
5-10	0.96	0.85	0.98	0.84
	(0.20)	(0.16)	(0.21)	(0.16)
New birth	0.83	0.84	0.85	0.68
	(0.22)	(0.21)	(0.22)	(0.18)
Pseudo R-square	0.0550		0.0519	
Log pseudolikelihood	-3265.3427		-3247.6833	
N	5,835		5,835	

Reference category: remaining in the occupation of the same ranking.
Robust standard errors in parentheses.
Other controls: four dummies for years in the risk set (one, two, three, four or more waves).
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.
Source: ECHP 1994-2001 (women aged 25-55).

Table A 4-42 Multinomial logit estimates of occupational transitions (FR)

	by skill		by occupational wage	
	Move up	**Move down**	**Move up**	**Move down**
Number of years in current job (ref: 9-24)				
1-3	1.53**	0.88	1.48**	0.79
	(0.30)	(0.17)	(0.29)	(0.15)
4-8	1.33	0.95	1.23	0.87
	(0.26)	(0.20)	(0.24)	(0.18)
Switching hours (ref: stays full-time)				
Stays part-time	0.29***	0.51**	0.35***	0.44***
	(0.09)	(0.14)	(0.10)	(0.13)
Full-time to part-time	0.87	0.72	0.72	0.92
	(0.23)	(0.20)	(0.20)	(0.24)
Part-time to full-time	1.05	0.96	1.16	0.90
	(0.30)	(0.24)	(0.32)	(0.24)
Changes employer	16.40***	22.03***	16.88***	22.41***
	(2.73)	(3.61)	(2.77)	(3.79)
Age	1.12	1.02	1.06	0.95
	(0.12)	(0.12)	(0.11)	(0.10)
Age squared	1.00	1.00	1.00	1.00
	(0.00)	(0.00)	(0.00)	(0.00)
Married	1.04	1.11	1.13	0.99
	(0.19)	(0.21)	(0.20)	(0.18)
Public sector	0.83	0.94	0.79	0.88
	(0.16)	(0.18)	(0.16)	(0.17)
Highest level of education (ref: ISCED 0-2)				
ISCED 5-7	1.07	1.20	1.01	0.91
	(0.22)	(0.25)	(0.21)	(0.19)
ISCED 3	1.34	0.91	1.55**	0.77
	(0.25)	(0.18)	(0.27)	(0.15)
Number of children under 17 in the household (ref: none)				
One	1.22	0.92	1.15	0.99
	(0.31)	(0.23)	(0.29)	(0.24)
Two or more	0.65	0.73	0.70	0.77
	(0.21)	(0.23)	(0.22)	(0.24)
Age of the youngest child (ref: 11-17 or none)				
0-4	0.86	1.27	0.63	1.28
	(0.28)	(0.41)	(0.21)	(0.39)
5-10	1.13	1.24	1.02	1.22
	(0.30)	(0.32)	(0.27)	(0.31)
New birth	1.35	0.70	1.88**	0.57*
	(0.41)	(0.23)	(0.59)	(0.19)
Pseudo R-square	0.1881		0.1914	
Log pseudolikelihood	-2522.4559		-2509.4901	
N	14,585		14,585	

Reference category: remaining in the occupation of the same ranking.
Robust standard errors in parentheses.
Other controls: four dummies for years in the risk set (one, two, three, four or more waves).
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.
Source: ECHP 1994-2001 (women aged 25-55).

Table A 4-43 Multinomial logit estimates of occupational transitions (IE)

	by skill		by occupational wage	
	Move up	**Move down**	**Move up**	**Move down**
Number of years in current job (ref: 9-24)				
1-3	0.67**	0.64**	0.67*	0.67**
	(0.13)	(0.11)	(0.14)	(0.13)
4-8	0.88	0.86	0.86	0.93
	(0.16)	(0.17)	(0.17)	(0.19)
Switching hours (ref: stays full-time)				
Stays part-time	0.60***	0.66**	0.60**	0.64**
	(0.11)	(0.12)	(0.12)	(0.12)
Full-time to part-time	1.32	1.03	1.26	0.93
	(0.34)	(0.29)	(0.34)	(0.29)
Part-time to full-time	1.22	1.57*	1.17	1.35
	(0.30)	(0.42)	(0.30)	(0.38)
Changes employer	6.62***	7.26***	5.34***	6.35***
	(1.27)	(1.29)	(1.06)	(1.25)
Age	0.99	1.33***	1.02	1.34***
	(0.09)	(0.13)	(0.10)	(0.14)
Age squared	1.00	1.00***	1.00	1.00***
	(0.00)	(0.00)	(0.00)	(0.00)
Married	0.74	0.78	0.70*	0.85
	(0.14)	(0.13)	(0.14)	(0.16)
Public sector	0.79	0.63***	0.72*	0.59***
	(0.13)	(0.11)	(0.12)	(0.10)
Highest level of education (ref: ISCED 0-2)				
ISCED 5-7	1.22	1.67**	1.37	1.90***
	(0.27)	(0.38)	(0.30)	(0.44)
ISCED 3	1.13	1.13	1.22	1.22
	(0.21)	(0.24)	(0.22)	(0.27)
Number of children under 17 in the household (ref: none)				
One	1.60**	1.01	1.44	0.84
	(0.37)	(0.22)	(0.34)	(0.21)
Two or more	1.98**	0.88	1.81**	0.70
	(0.52)	(0.24)	(0.50)	(0.22)
Age of the youngest child (ref: 11-17 or none)				
0-4	0.48***	0.81	0.58**	1.09
	(0.13)	(0.22)	(0.16)	(0.30)
5-10	0.67*	0.87	0.64*	1.02
	(0.15)	(0.21)	(0.15)	(0.26)
New birth	1.41	1.50	1.22	1.22
	(0.36)	(0.41)	(0.32)	(0.34)
Pseudo R-square	0.0930		0.0812	
Log pseudolikelihood	-3023.3591		-2906.7245	
N	5.955		5,955	

Reference category: remaining in the occupation of the same ranking.
Robust standard errors in parentheses.
Other controls: four dummies for years in the risk set (one, two, three, four or more waves).
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.
Source: ECHP 1994-2001 (women aged 25-55).

Table A 4-44 Multinomial logit estimates of occupational transitions (IT)

	by skill		by occupational wage	
	Move up	**Move down**	**Move up**	**Move down**
Number of years in current job (ref: 9-24)				
1-3	0.81	0.68***	0.97	0.79
	(0.12)	(0.09)	(0.17)	(0.12)
4-8	1.25*	1.19	1.67***	1.60***
	(0.16)	(0.15)	(0.25)	(0.25)
Switching hours (ref: stays full-time)				
Stays part-time	0.57**	0.62**	0.45***	0.59**
	(0.13)	(0.13)	(0.12)	(0.15)
Full-time to part-time	1.18	1.98***	1.16	2.11***
	(0.22)	(0.30)	(0.24)	(0.34)
Part-time to full-time	2.12***	1.61***	1.91***	1.51**
	(0.34)	(0.28)	(0.34)	(0.29)
Changes employer	4.58***	5.51***	4.02***	4.64***
	(0.58)	(0.68)	(0.60)	(0.63)
Age	1.12*	1.15**	1.07	1.21**
	(0.07)	(0.07)	(0.08)	(0.09)
Age squared	1.00	1.00**	1.00	1.00**
	(0.00)	(0.00)	(0.00)	(0.00)
Married	0.84	0.89	0.76*	0.76*
	(0.11)	(0.12)	(0.12)	(0.12)
Public sector	1.19	1.06	1.75***	1.44***
	(0.14)	(0.13)	(0.25)	(0.20)
Highest level of education (ref: ISCED 0-2)				
ISCED 5-7	0.96	1.18	2.45***	3.34***
	(0.15)	(0.19)	(0.50)	(0.69)
ISCED 3	0.88	0.95	2.12***	2.56***
	(0.10)	(0.11)	(0.33)	(0.43)
Number of children under 17 in the household (ref: none)				
One	0.89	1.09	0.92	1.10
	(0.13)	(0.15)	(0.15)	(0.18)
Two or more	0.82	1.04	0.89	1.01
	(0.16)	(0.21)	(0.20)	(0.23)
Age of the youngest child (ref: 11-17 or none)				
0-4	1.34	1.18	1.67**	1.28
	(0.27)	(0.25)	(0.39)	(0.30)
5-10	1.14	1.06	1.24	1.29
	(0.19)	(0.18)	(0.23)	(0.25)
New birth	1.33	0.90	1.09	1.03
	(0.30)	(0.23)	(0.29)	(0.29)
Pseudo R-square	0.0500		0.0745	
Log pseudolikelihood	-6538.0869		-4864.0077	
N	13,486		13,486	

Reference category: remaining in the occupation of the same ranking.
Robust standard errors in parentheses.
Other controls: four dummies for years in the risk set (one, two, three, four or more waves).
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.
Source: ECHP 1994-2001 (women aged 25-55).

Table A 4-45 Multinomial logit estimates of occupational transitions (GR)

	by skill		by occupational wage	
	Move up	**Move down**	**Move up**	**Move down**
Number of years in current job (ref: 9-24)				
1-3	0.40***	0.56***	0.47***	0.55***
	(0.08)	(0.11)	(0.10)	(0.12)
4-8	0.65**	0.83	0.72*	0.89
	(0.13)	(0.18)	(0.14)	(0.20)
Switching hours (ref: stays full-time)				
Stays part-time	0.24**	0.26**	0.21**	0.15**
	(0.15)	(0.14)	(0.15)	(0.11)
Full-time to part-time	0.66	0.66	0.61	0.88
	(0.29)	(0.23)	(0.30)	(0.30)
Part-time to full-time	0.95	0.83	1.02	0.70
	(0.30)	(0.30)	(0.32)	(0.29)
Changes employer	12.06***	9.76***	12.86***	11.06***
	(2.49)	(1.84)	(2.70)	(2.16)
Age	0.94	1.03	1.05	1.18
	(0.09)	(0.12)	(0.11)	(0.15)
Age squared	1.00	1.00	1.00	1.00
	(0.00)	(0.00)	(0.00)	(0.00)
Married	0.71*	0.72*	0.78	0.79
	(0.15)	(0.14)	(0.17)	(0.17)
Public sector	1.20	1.53**	1.25	1.45**
	(0.21)	(0.27)	(0.22)	(0.26)
Highest level of education (ref: ISCED 0-2)				
ISCED 5-7	1.15	1.14	1.32	1.46
	(0.26)	(0.24)	(0.33)	(0.35)
ISCED 3	1.56**	1.13	1.99***	1.66**
	(0.34)	(0.24)	(0.47)	(0.40)
Number of children under 17 in the household (ref: none)				
One	1.17	1.29	1.09	1.11
	(0.26)	(0.28)	(0.25)	(0.27)
Two or more	1.35	1.41	1.19	1.26
	(0.37)	(0.40)	(0.34)	(0.39)
Age of the youngest child (ref: 11-17 or none)				
0-4	0.94	1.01	0.95	1.05
	(0.31)	(0.37)	(0.33)	(0.39)
5-10	1.09	1.05	1.05	1.03
	(0.28)	(0.29)	(0.28)	(0.31)
New birth	1.62	1.31	1.57	1.13
	(0.53)	(0.51)	(0.53)	(0.45)
Pseudo R-square	0.0920		0.1071	
Log pseudolikelihood	-2601.1577		-2425.6	
N	7,661		7,661	

Reference category: remaining in the occupation of the same ranking.
Robust standard errors in parentheses.
Other controls: four dummies for years in the risk set (one, two, three, four or more waves).
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.
Source: ECHP 1994-2001 (women aged 25-55).

Table A 4-46 Multinomial logit estimates of occupational transitions (ES)

	by skill		by occupational wage	
	Move up	**Move down**	**Move up**	**Move down**
Number of years in current job (ref: 9-24)				
1-3	0.72**	0.62***	0.60***	0.65***
	(0.10)	(0.08)	(0.08)	(0.08)
4-8	1.35**	1.04	1.10	1.11
	(0.19)	(0.15)	(0.16)	(0.17)
Switching hours (ref: stays full-time)				
Stays part-time	0.52***	0.45***	0.50***	0.44***
	(0.11)	(0.10)	(0.11)	(0.09)
Full-time to part-time	0.88	1.72**	0.83	1.07
	(0.22)	(0.40)	(0.20)	(0.24)
Part-time to full-time	1.55**	2.18**	1.18	1.80
	(0.32)	(0.79)	(0.26)	(0.70)
Changes employer	4.96***	4.31***	4.72***	3.92***
	(0.59)	(0.55)	(0.58)	(0.52)
Age	0.99	1.19**	0.94	1.12
	(0.06)	(0.08)	(0.06)	(0.08)
Age squared	1.00	1.00**	1.00	1.00
	(0.00)	(0.00)	(0.00)	(0.00)
Married	1.01	1.03	1.01	1.06
	(0.12)	(0.12)	(0.12)	(0.13)
Public sector	0.72**	0.78*	0.66***	0.70**
	(0.10)	(0.11)	(0.09)	(0.10)
Highest level of education (ref: ISCED 0-2)				
ISCED 5-7	1.76***	1.72***	1.69***	1.70***
	(0.23)	(0.22)	(0.21)	(0.23)
ISCED 3	1.98***	1.45***	1.76***	1.50***
	(0.26)	(0.20)	(0.22)	(0.21)
Number of children under 17 in the household (ref: none)				
One	0.97	0.84	1.07	0.95
	(0.16)	(0.16)	(0.17)	(0.20)
Two or more	0.91	0.83	1.15	0.96
	(0.18)	(0.17)	(0.22)	(0.20)
Age of the youngest child (ref: 11-17 or none)				
0-4	0.98	0.90	0.93	0.83
	(0.22)	(0.21)	(0.20)	(0.19)
5-10	1.11	0.90	1.01	0.83
	(0.21)	(0.17)	(0.18)	(0.16)
New birth	0.78	1.03	0.81	1.10
	(0.20)	(0.27)	(0.21)	(0.29)
Pseudo R-square	0.0656		0.0568	
Log pseudolikelihood	-5591.1449		-5449.1555	
N	10,648		10,648	

Reference category: remaining in the occupation of the same ranking.
Robust standard errors in parentheses.
Other controls: four dummies for years in the risk set (one, two, three, four or more waves).
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.
Source: ECHP 1994-2001 (women aged 25-55).

Table A 4-47 Multinomial logit estimates of occupational transitions (PT)

	by skill		by occupational wage	
	Move up	**Move down**	**Move up**	**Move down**
Number of years in current job (ref: 9-24)				
1-3	0.66**	1.06	0.52***	0.88
	(0.12)	(0.17)	(0.13)	(0.18)
4-8	0.93	1.13	0.82	1.10
	(0.16)	(0.20)	(0.17)	(0.23)
Switching hours (ref: stays full-time)				
Stays part-time	0.73	1.05	0.52***	0.88
	(0.22)	(0.31)	(0.13)	(0.18)
Full-time to part-time	1.62	1.49	0.82	1.10
	(0.56)	(0.53)	(0.17)	(0.23)
Part-time to full-time	1.66	1.98**	0.23**	0.37
	(0.53)	(0.67)	(0.16)	(0.30)
Changes employer	6.27***	5.68***	0.55	0.74
	(1.02)	(0.90)	(0.29)	(0.40)
Age	1.17**	1.23***	0.71	0.79
	(0.09)	(0.09)	(0.36)	(0.44)
Age squared	1.00**	1.00***	5.32***	4.48***
	(0.00)	(0.00)	(1.03)	(0.91)
Married	1.05	0.99	1.19*	1.15
	(0.18)	(0.16)	(0.12)	(0.10)
Public sector	1.70***	1.77***	1.00*	1.00
	(0.30)	(0.28)	(0.00)	(0.00)
Highest level of education (ref: ISCED 0-2)				
ISCED 5-7	1.03	0.98	1.86**	1.94***
	(0.24)	(0.20)	(0.49)	(0.42)
ISCED 3	1.54**	1.31	2.39***	2.23***
	(0.29)	(0.24)	(0.51)	(0.45)
Number of children under 17 in the household (ref: none)				
One	1.07	0.94	1.17	0.96
	(0.21)	(0.15)	(0.30)	(0.20)
Two or more	0.89	0.95	1.01	0.95
	(0.20)	(0.19)	(0.28)	(0.26)
Age of the youngest child (ref: 11-17 or none)				
0-4	0.61*	0.79	0.58*	1.01
	(0.15)	(0.18)	(0.18)	(0.30)
5-10	0.80	0.82	0.75	0.89
	(0.17)	(0.17)	(0.20)	(0.27)
New birth	1.43	1.34	1.53	1.05
	(0.45)	(0.32)	(0.53)	(0.31)
Pseudo R-square	0.0645		0.0659	
Log pseudolikelihood	-5999.9273		-4625.1972	
N	11,679		11,679	

Reference category: remaining in the occupation of the same ranking.
Robust standard errors in parentheses.
Other controls: four dummies for years in the risk set (one, two, three, four or more waves).
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.
Source: ECHP 1994-2001 (women aged 25-55).

Table A 4-48 Multinomial logit estimates of occupational transitions (DE)

	by skill		by occupational wage	
	Move up	**Move down**	**Move up**	**Move down**
Number of years in current job (ref: 9-24)				
1-3	0.77*	0.73*	0.81	0.71**
	(0.12)	(0.12)	(0.12)	(0.11)
4-8	0.93	0.80	1.02	0.81
	(0.15)	(0.13)	(0.16)	(0.12)
Switching hours (ref: stays full-time)				
Stays part-time	0.87	0.84	0.89	0.80
	(0.15)	(0.18)	(0.15)	(0.17)
Full-time to part-time	1.03	2.01***	0.76	1.88***
	(0.24)	(0.39)	(0.17)	(0.35)
Part-time to full-time	1.31	1.34	1.47**	1.23
	(0.25)	(0.35)	(0.28)	(0.34)
Changes employer	5.23***	4.29***	5.08***	4.69***
	(0.60)	(0.56)	(0.59)	(0.61)
Age	1.18**	1.11	1.18**	1.09
	(0.10)	(0.11)	(0.09)	(0.11)
Age squared	1.00*	1.00	1.00*	1.00
	(0.00)	(0.00)	(0.00)	(0.00)
Married	0.98	0.91	1.14	1.09
	(0.14)	(0.13)	(0.17)	(0.15)
Public sector	0.78	0.77*	0.78	0.72**
	(0.12)	(0.12)	(0.12)	(0.11)
Highest level of education (ref: ISCED 0-2)				
ISCED 5-7	1.28	1.15	0.78	0.82
	(0.25)	(0.23)	(0.15)	(0.16)
ISCED 3	1.11	0.95	1.01	0.88
	(0.19)	(0.18)	(0.16)	(0.15)
Number of children under 17 in the household (ref: none)				
One	1.06	1.12	1.14	1.26
	(0.17)	(0.19)	(0.18)	(0.20)
Two or more	0.94	0.96	1.01	1.18
	(0.19)	(0.20)	(0.20)	(0.24)
Age of the youngest child (ref: 11-17 or none)				
0-4	0.95	0.53**	0.90	0.48**
	(0.23)	(0.16)	(0.22)	(0.14)
5-10	0.88	0.79	0.79	0.69*
	(0.16)	(0.18)	(0.15)	(0.14)
New birth	0.38	0.57	0.63	0.09***
	(0.24)	(0.51)	(0.40)	(0.08)
Pseudo R-square	0.0660		0.0706	
Log pseudolikelihood	-6271.5081		-6128.1623	
N	14,207		14,207	

Reference category: remaining in the occupation of the same ranking.
Robust standard errors in parentheses.
Other controls: four dummies for years in the risk set (one, two, three, four or more waves).
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.
Source: ECHP 1994-2001 (women aged 25-55).

Table A 4-49 Multinomial logit estimates of occupational transitions (UK)

	by skill		by occupational wage	
	Move up	**Move down**	**Move up**	**Move down**
Number of years in current job (ref: 9-24)				
1-3	1.04	1.12	1.17	1.00
	(0.14)	(0.15)	(0.17)	(0.14)
4-8	1.14	1.14	1.31*	0.97
	(0.16)	(0.16)	(0.20)	(0.15)
Switching hours (ref: stays full-time)				
Stays part-time	0.71***	0.90	0.62***	0.72**
	(0.08)	(0.10)	(0.08)	(0.09)
Full-time to part-time	1.18	1.27*	0.67**	1.66***
	(0.17)	(0.18)	(0.12)	(0.23)
Part-time to full-time	1.49***	1.69***	1.59***	0.93
	(0.21)	(0.26)	(0.23)	(0.17)
Changes employer	6.45***	5.84***	5.82***	5.09***
	(0.56)	(0.51)	(0.56)	(0.48)
Age	1.02	1.13**	0.98	1.04
	(0.06)	(0.06)	(0.06)	(0.07)
Age squared	1.00	1.00**	1.00	1.00
	(0.00)	(0.00)	(0.00)	(0.00)
Married	0.97	0.96	0.99	0.96
	(0.10)	(0.09)	(0.11)	(0.10)
Public sector	0.86	0.97	0.84	0.86
	(0.08)	(0.09)	(0.09)	(0.09)
Highest level of education (ref: ISCED 0-2)				
ISCED 5-7	0.75***	0.88	0.64***	0.79**
	(0.07)	(0.08)	(0.07)	(0.08)
ISCED 3	0.82	0.87	0.90	0.74**
	(0.10)	(0.11)	(0.11)	(0.10)
Number of children under 17 in the household (ref: none)				
One	1.11	1.01	0.99	0.94
	(0.14)	(0.13)	(0.14)	(0.13)
Two or more	1.00	0.81	1.12	0.98
	(0.16)	(0.13)	(0.17)	(0.17)
Age of the youngest child (ref: 11-17 or none)				
0-4	0.96	0.95	1.05	0.92
	(0.17)	(0.16)	(0.19)	(0.18)
5-10	0.97	0.86	1.01	1.01
	(0.14)	(0.13)	(0.15)	(0.17)
New birth	1.10	1.06	0.99	1.00
	(0.21)	(0.22)	(0.23)	(0.24)
Pseudo R-square	0.1098		0.1021	
Log pseudolikelihood	-6341.1833		-5503.8429	
N	10,951		10,951	

Reference category: remaining in the occupation of the same ranking.
Robust standard errors in parentheses.
Other controls: four dummies for years in the risk set (one, two, three, four or more waves).
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.
Source: ECHP 1994-2001 (women aged 25-55).

Table A 4-50 Multinomial logit estimates of occupational transitions (AT)

	by skill		by occupational wage	
	Move up	**Move down**	**Move up**	**Move down**
Number of years in current job (ref: 9-24)				
1-3	0.81	0.79	0.96	0.86
	(0.16)	(0.14)	(0.19)	(0.16)
4-8	0.94	0.85	0.85	0.91
	(0.15)	(0.14)	(0.14)	(0.16)
Switching hours (ref: stays full-time)				
Stays part-time	0.77	0.59***	0.63**	0.41***
	(0.14)	(0.11)	(0.12)	(0.09)
Full-time to part-time	1.54*	1.66**	0.95	1.62*
	(0.36)	(0.41)	(0.26)	(0.41)
Part-time to full-time	1.20	0.77	1.15	0.64
	(0.28)	(0.21)	(0.28)	(0.18)
Changes employer	4.19***	4.56***	3.84***	3.58***
	(0.77)	(0.83)	(0.80)	(0.71)
Age	1.12	1.13	1.08	1.20*
	(0.10)	(0.10)	(0.10)	(0.12)
Age squared	1.00	1.00	1.00	1.00*
	(0.00)	(0.00)	(0.00)	(0.00)
Married	1.08	0.95	1.12	0.91
	(0.16)	(0.13)	(0.17)	(0.13)
Public sector	1.39**	1.54***	1.48***	1.47***
	(0.20)	(0.21)	(0.22)	(0.21)
Highest level of education (ref: ISCED 0-2)				
ISCED 5-7	1.10	1.08	1.07	1.07
	(0.26)	(0.24)	(0.25)	(0.24)
ISCED 3	1.04	0.86	0.88	0.73
	(0.19)	(0.16)	(0.15)	(0.14)
Number of children under 17 in the household (ref: none)				
One	0.96	1.27	1.04	1.20
	(0.20)	(0.28)	(0.22)	(0.29)
Two or more	0.69	1.09	0.77	1.01
	(0.17)	(0.25)	(0.19)	(0.25)
Age of the youngest child (ref: 11-17 or none)				
0-4	1.02	1.29	0.82	1.39
	(0.30)	(0.38)	(0.24)	(0.44)
5-10	0.89	0.86	0.77	0.80
	(0.20)	(0.20)	(0.18)	(0.21)
New birth	0.98	0.48*	1.20	0.40**
	(0.37)	(0.18)	(0.47)	(0.18)
Pseudo R-square	0.0449		0.0457	
Log pseudolikelihood	-3644.8657		-3323.9595	
N	6,897		6,897	

Reference category: remaining in the occupation of the same ranking.
Robust standard errors in parentheses.
Other controls: four dummies for years in the risk set (one, two, three, four or more waves).
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.
Source: ECHP 1995-2001 (women aged 25-55).

Table A 4-51 Multinomial logit estimates of occupational transitions (FI)

	by skill		by occupational wage	
	Move up	**Move down**	**Move up**	**Move down**
Number of years in current job (ref: 9-24)				
1-3	1.25	1.12	1.38	1.11
	(0.24)	(0.19)	(0.28)	(0.19)
4-8	1.25	1.18	1.21	1.35
	(0.25)	(0.25)	(0.24)	(0.30)
Switching hours (ref: stays full-time)				
Stays part-time	0.52	0.16***	0.49	0.10***
	(0.22)	(0.09)	(0.23)	(0.07)
Full-time to part-time	0.93	3.73***	0.63	3.52***
	(0.33)	(1.24)	(0.28)	(1.26)
Part-time to full-time	1.84**	1.38	2.45***	0.85
	(0.55)	(0.52)	(0.75)	(0.40)
Changes employer	5.61***	4.91***	4.69***	5.26***
	(0.99)	(0.89)	(0.90)	(0.95)
Age	1.22*	1.36***	1.32***	1.36***
	(0.12)	(0.14)	(0.14)	(0.15)
Age squared	1.00**	1.00***	1.00**	1.00***
	(0.00)	(0.00)	(0.00)	(0.00)
Married	0.90	0.95	0.82	0.94
	(0.15)	(0.17)	(0.15)	(0.17)
Public sector	0.66***	0.71**	0.68***	0.65***
	(0.10)	(0.11)	(0.10)	(0.11)
Highest level of education (ref: ISCED 0-2)				
ISCED 5-7	0.98	0.92	1.08	1.07
	(0.22)	(0.21)	(0.26)	(0.25)
ISCED 3	0.72	0.76	0.89	1.04
	(0.16)	(0.17)	(0.21)	(0.24)
Number of children under 17 in the household (ref: none)				
One	0.87	0.77	1.04	0.80
	(0.18)	(0.19)	(0.24)	(0.18)
Two or more	0.71	0.73	0.83	0.82
	(0.18)	(0.19)	(0.22)	(0.21)
Age of the youngest child (ref: 11-17 or none)				
0-4	0.83	1.14	0.77	1.12
	(0.24)	(0.30)	(0.23)	(0.31)
5-10	1.06	0.91	1.06	0.85
	(0.25)	(0.21)	(0.26)	(0.20)
New birth	1.76*	1.25	1.92*	0.95
	(0.56)	(0.42)	(0.66)	(0.36)
Pseudo R-square	0.0809		0.0793	
Log pseudolikelihood	-3159.1303		-2957.394	
N	8,659		8,659	

Reference category: remaining in the occupation of the same ranking.
Robust standard errors in parentheses.
Other controls: four dummies for years in the risk set (one, two, three, four or more waves).
Statistical significance: *=p<0.10, **=p<0.05, ***=p<0.01.
Source: ECHP 1996-2001 (women aged 25-55).

Annex 5 Annex for Chapter 5

Table A 5-1 Mean and median gender log wage gaps for full-time employees

Country	Mean gender log wage gap	Median gender log wage gap
PL	0.03	0.04
GR	0.03	0.05
PT	0.03	0.08
SI	0.04	0.03
IT	0.04	0.03
IE	0.06	0.06
FR	0.07	0.08
HU	0.08	0.07
ES	0.08	0.09
BE	0.08	0.08
NL	0.12	0.09
LU	0.12	0.16
DE	0.15	0.10
DK	0.16	0.13
IS	0.17	0.17
AT	0.17	0.16
UK	0.17	0.18
FI	0.18	0.15
SK	0.21	0.23
LT	0.21	0.25
LV	0.21	0.25
SE	0.22	0.15
CZ	0.23	0.21
NO	0.25	0.17
CY	0.33	0.32
EE	0.34	0.40

Individual cross-sectional weights used.

Table A 5-2 Descriptive statistics for each quintile of full-time employees' earnings distributions in Britain (column %)

	Men					Women				
quintile	1st	2nd	3rd	4th	5th	1st	2nd	3rd	4th	5th
Hourly wage	6.10	8.63	11.00	14.45	24.74	5.30	7.38	9.44	12.52	21.57
Work experience, years	12.07	13.30	13.27	13.16	13.29	11.01	11.98	11.62	11.23	12.13
Non-labour income (1000s)	15.59	15.64	16.23	18.14	17.41	22.25	21.97	24.18	21.78	25.09
Highest level of education										
Degree	8.56	8.08	15.24	26.00	51.10	6.62	8.50	20.47	39.15	65.48
Other higher	36.96	45.09	48.95	43.65	35.08	33.63	37.59	46.27	38.30	24.23
A-levels	11.82	11.60	8.48	10.72	8.75	12.48	16.84	8.82	8.07	4.42
O-levels	20.99	19.61	19.39	13.02	3.88	23.08	23.82	16.53	8.26	5.75
Other secondary	9.68	6.29	5.59	3.85	0.76	10.82	4.95	7.72	4.36	0.12
No formal secondary or higher qualification	12.00	9.33	2.36	2.77	0.42	13.36	8.30	0.19	1.85	0.00
Married (or de facto married)	47.63	60.58	61.89	65.57	73.18	58.37	51.09	52.52	44.40	54.67
Managerial duties	25.23	30.10	39.76	52.38	77.87	26.36	32.12	44.42	50.91	68.95
Size of firm										
Under 25	37.33	35.75	22.38	24.61	17.33	50.13	31.73	31.38	20.62	16.93
25-199	35.70	39.75	39.83	35.79	36.67	29.90	40.43	43.01	41.06	47.50
200 or over	26.97	24.50	37.79	39.59	46.00	19.96	27.83	25.60	38.31	35.57
Private sector	83.90	83.66	79.36	71.52	74.93	71.57	55.27	52.81	45.91	32.50
Child(ren) present										
Occupational category										
Managers	6.41	10.21	11.49	27.88	43.63	9.77	9.09	16.22	18.32	18.82
Professionals	3.66	5.23	8.89	20.42	28.59	0.00	2.18	10.12	20.05	52.76
Technicians and Associate Professionals	6.51	7.25	22.24	22.25	17.90	6.93	11.94	17.13	34.19	20.61
Admin/Secretarial	5.74	7.44	5.86	3.87	3.07	18.20	36.39	31.28	22.57	5.45
Skilled Trades	21.36	26.58	25.26	15.52	2.74	7.22	5.09	1.03	0.00	0.00
Personal Services	2.43	2.33	1.83	0.48	0.15	17.40	18.79	13.52	2.23	1.26
Sales and Customer Services	4.98	2.47	2.64	0.03	0.80	17.09	9.24	6.09	0.71	0.74
Operatives	23.38	23.02	14.41	8.24	2.85	7.78	5.17	1.85	1.06	0.35
Elementary	25.53	15.48	7.37	1.31	0.26	15.61	2.11	2.76	0.87	0.00
Age of youngest child in household										
No children under 16	66.57	59.31	55.02	51.86	43.98	32.36	37.28	34.11	25.59	33.91
5 years or younger	15.17	17.28	22.29	24.67	33.81	8.94	9.51	13.14	8.44	10.82
6-11 years	12.88	14.29	14.25	13.83	14.55	10.79	12.27	13.05	8.10	16.02
12-15 years	5.37	9.12	8.45	9.65	7.66	12.64	15.49	7.91	9.06	7.07
Disagree that family suffers if mother works full-time	41.33	43.45	39.44	38.14	38.01	47.80	51.53	52.43	58.07	58.55
No. observations	350	350	350	348	349	257	257	257	256	256

Source: British Household Panel Survey, Wave 15.
Individual cross-sectional weights used.

Table A 5-3 Descriptive statistics for each quintile of full-time employees' earnings distribution in Italy (column %)

	Men					Women				
quintile	1st	2nd	3rd	4th	5th	1st	2nd	3rd	4th	5th
Hourly wage	6.52	8.64	10.06	11.93	18.89	5.99	7.98	9.62	11.86	18.69
Work experience, years	13.75	17.23	17.59	18.86	19.35	12.82	13.99	15.96	16.46	16.56
Log non-labour income	9.44	9.33	9.30	9.42	9.63	9.88	9.89	10.02	9.95	10.13
Highest level of education										
Lower secondary or below	57.47	55.94	47.40	38.16	17.51	49.20	38.29	27.06	12.38	3.21
Secondary/further	34.80	37.96	42.72	47.62	44.86	42.08	49.52	53.84	57.27	40.49
University	7.72	6.10	9.88	14.23	37.63	8.72	12.19	19.09	30.35	56.30
Born outside EU-25	13.58	10.99	7.11	4.69	1.65	13.44	10.06	4.60	1.88	1.80
Married	50.86	60.87	68.32	69.85	78.38	50.91	55.89	59.83	65.62	69.38
Managerial duties	15.90	19.47	23.18	32.28	56.39	10.41	15.41	18.86	23.78	25.55
Size of firm										
10 or fewer	44.59	31.76	24.55	17.95	16.19	48.50	36.32	29.45	17.53	12.53
11-149	37.39	36.28	37.85	34.96	27.12	32.61	34.80	32.54	36.76	37.02
50 or over	18.03	31.95	37.60	47.09	56.70	18.89	28.88	38.01	45.71	50.45
On permanent contract	75.87	91.53	92.33	94.14	94.87	75.93	84.08	88.86	93.61	87.76
Occupational category										
Legislators, senior officials and managers	2.50	0.77	0.76	1.13	5.84	0.60	0.75	1.28	0.81	2.48
Professionals	4.38	3.23	4.86	7.41	25.18	3.06	3.80	8.01	11.04	40.19
Technicians and associate professionals	9.36	12.41	19.68	26.09	31.67	14.39	22.86	33.82	52.00	43.93
Clerks	8.27	10.85	15.21	16.29	11.49	13.26	23.67	25.81	21.84	8.82
Service workers and shop and market sales workers	10.85	8.16	6.32	8.29	4.96	22.70	18.76	9.74	5.30	1.42
Skilled agricultural and fishery workers / Craft and related trades	35.26	33.43	23.56	17.47	8.76	15.17	6.55	4.73	2.71	1.28
Plant and machine operatives and assemblers	16.30	19.57	19.84	16.78	8.99	10.79	11.20	7.77	3.15	0.74
Elementary	13.08	11.59	9.77	6.53	3.12	20.02	12.40	8.83	3.15	1.14
Age of youngest child in household										
No children under 16	61.32	58.87	53.41	55.83	47.55	70.25	69.47	62.99	61.43	53.85
One child aged 0-4	9.38	8.18	7.26	8.00	8.79	7.51	9.64	8.80	6.64	7.75
One child aged 5-10	6.81	6.84	8.38	6.85	7.77	6.26	4.99	5.07	3.59	7.35
One child aged 11-15	7.06	8.31	9.34	11.07	12.25	6.01	7.44	10.31	11.17	11.09
2 or more children, youngest aged 0-4	8.08	9.14	12.29	8.25	9.01	4.02	4.63	6.17	8.27	6.62
2 or more children, youngest aged 5-10	5.65	7.49	7.86	7.92	12.35	4.86	2.97	5.71	7.36	10.92
2 or more children, youngest aged 11-15	1.70	1.17	1.47	2.06	2.28	1.10	0.87	0.96	1.54	2.41
No. observations	1224	1381	1054	1218	1216	833	838	771	768	802

Source: EU-SILC 2007.
Individual cross-sectional weights used.

Table A 5-4 Descriptive statistics for each quintile of full-time employees' earnings distribution in Spain (column %)

	Men					Women				
quintile	1st	2nd	3rd	4th	5th	1st	2nd	3rd	4th	5th
Hourly wage	5.38	7.32	9.08	11.69	19.42	4.95	6.57	8.30	11.13	18.67
Work experience, years	16.12	16.93	18.35	19.64	20.01	13.08	13.84	14.71	15.82	18.13
Log non-labour income	9.28	9.15	9.23	9.23	9.34	9.71	9.73	9.85	9.90	9.92
Highest level of education										
Lower secondary or below	61.08	52.74	37.61	33.96	11.29	45.85	37.60	23.09	10.82	2.35
Secondary/further	23.05	23.99	30.43	26.20	19.54	31.20	30.04	30.27	22.63	9.54
University	15.87	23.27	31.97	39.84	69.17	22.95	32.36	46.64	66.55	88.11
Born outside EU-25	10.95	8.28	6.25	4.67	2.61	14.13	14.35	3.06	1.92	0.98
Married	48.10	54.37	62.62	71.20	82.12	49.44	53.69	59.18	64.24	75.50
Managerial duties	16.44	20.78	28.96	36.67	57.60	9.93	16.06	22.10	28.85	38.67
Size of firm										
10 or fewer	44.90	32.49	27.92	20.93	15.56	49.49	44.14	25.60	22.16	17.45
11-149	36.78	41.67	33.76	29.00	25.25	30.03	32.27	31.21	27.58	36.21
50 or over	18.32	25.84	38.32	50.07	59.19	20.48	23.59	43.19	50.25	46.34
On permanent contract	61.35	69.96	83.04	85.67	93.58	65.10	74.82	73.71	85.79	90.48
Occupational category										
Legislators, senior officials and managers	0.38	0.83	0.38	2.92	11.05	0.02	0.47	0.87	1.83	4.42
Professionals	1.57	4.56	7.59	14.33	37.95	2.61	3.51	10.59	25.77	60.98
Technicians and associate professionals	6.02	10.21	14.01	15.91	17.04	5.86	8.25	17.91	22.35	14.02
Clerks	5.26	6.60	11.88	12.23	10.19	19.15	27.29	36.42	32.04	15.62
Service workers and shop and market sales workers	13.21	11.24	10.85	9.67	6.55	34.82	31.76	16.42	10.89	2.73
Skilled agricultural and fishery workers / Craft and related trades	31.14	38.60	29.63	22.32	8.36	8.78	6.40	4.84	2.66	0.48
Plant and machine operatives and assemblers	12.58	14.16	15.53	16.62	5.68	3.03	2.41	1.15	0.66	0.86
Elementary	29.85	13.80	10.12	6.00	3.19	25.73	19.89	11.81	3.81	0.90
Age of youngest child in household										
No children under 16	62.66	62.64	61.18	56.67	46.75	63.38	69.45	64.81	63.59	48.31
One child aged 0-4	8.41	10.01	9.35	9.37	8.98	8.17	9.71	8.81	5.53	9.21
One child aged 5-10	7.60	5.80	7.18	7.35	5.99	6.40	6.34	6.49	6.28	7.14
One child aged 11-15	8.91	8.40	6.93	9.37	8.71	9.91	4.86	6.79	8.42	9.61
2 or more children, youngest aged 0-4	6.29	6.39	6.96	9.51	14.00	5.39	3.58	5.74	8.17	11.93
2 or more children, youngest aged 5-10	5.27	5.31	7.24	6.36	13.02	4.86	4.99	5.41	6.40	11.74
2 or more children, youngest aged 11-15	0.87	1.46	1.17	1.36	2.55	1.90	1.06	1.96	1.61	2.07
No. observations	774	773	791	757	772	553	535	544	544	543

Source: EU-SILC 2007

Individual cross-sectional weights used

Table A 5-5 Descriptive statistics for each quintile of full-time employees' earnings distribution in Poland (column %)

	Men					Women				
quintile	1st	2nd	3rd	4th	5th	1st	2nd	3rd	4th	5th
Hourly wage	1.65	2.20	2.72	3.59	6.32	1.59	2.04	2.62	3.62	6.43
Work experience, years	15.33	15.64	18.25	17.76	17.48	14.49	15.70	16.49	17.73	17.78
Log non-labour income	8.45	8.46	8.47	8.51	8.71	8.79	8.77	8.88	8.88	8.98
Highest level of education										
Lower secondary or below	9.71	8.37	5.37	3.47	1.76	7.04	5.97	2.21	1.21	0.11
Secondary/further	85.82	79.77	80.21	71.82	48.45	82.59	73.92	65.56	46.62	19.01
University	4.47	11.87	14.42	24.71	49.79	10.37	20.11	32.23	52.17	80.87
Born outside EU-25	0.35	0.17	0.39	0.00	0.14	0.00	0.00	0.12	0.16	0.00
Married	67.05	71.03	75.76	82.25	86.07	73.22	71.17	76.18	78.60	80.00
Managerial duties	7.09	14.06	19.40	30.06	46.14	7.14	13.51	19.70	27.84	30.96
Size of firm										
10 or fewer	41.76	42.27	33.28	28.62	28.74	46.07	37.55	35.08	31.12	28.29
11-149	36.89	25.27	23.32	17.71	17.90	27.29	24.30	23.87	25.94	29.22
50 or over	21.35	32.45	43.40	53.67	53.36	26.63	38.15	41.05	42.95	42.49
On permanent contract	62.77	72.81	77.25	86.07	91.36	63.70	77.99	85.72	89.73	94.56
Occupational category										
Legislators, senior officials and managers	0.65	2.27	2.78	4.84	15.96	1.24	1.09	3.56	5.81	11.62
Professionals	1.99	4.91	6.84	16.26	32.27	5.44	9.66	29.15	44.43	64.32
Technicians and associate professionals	4.93	9.59	10.98	16.65	17.45	6.72	20.61	20.08	26.50	16.13
Clerks	5.11	6.33	7.70	6.28	2.93	11.84	16.65	20.72	13.37	5.43
Service workers and shop and market sales workers	10.71	7.92	6.58	4.18	1.63	29.93	17.63	7.81	3.07	0.69
Skilled agricultural and fishery workers / Craft and related trades	41.38	38.68	32.69	30.40	15.91	12.99	9.01	7.17	1.58	0.32
Plant and machine operatives and assemblers	18.55	23.02	26.86	19.79	12.49	5.57	6.52	4.03	4.16	1.28
Elementary	16.68	7.28	5.56	1.60	1.36	26.27	18.83	7.48	1.08	0.20
Age of youngest child in household										
No children under 16	50.48	49.39	50.69	46.77	45.43	49.68	55.27	57.46	53.94	56.42
One child aged 0-4	10.19	11.34	8.32	10.78	10.30	7.49	8.60	6.64	7.75	9.06
One child aged 5-10	8.99	8.64	9.98	9.31	11.07	9.84	9.62	9.85	8.97	8.25
One child aged 11-15	9.29	9.55	10.18	10.22	12.55	13.81	10.71	11.29	13.30	10.86
2 or more children, youngest aged 0-4	9.75	9.84	9.92	10.16	9.43	4.37	5.71	5.11	6.63	5.60
2 or more children, youngest aged 5-10	7.46	8.39	8.16	8.93	9.56	9.18	6.85	7.43	6.19	8.61
2 or more children, youngest aged 11-15	3.84	2.85	2.76	3.82	1.66	5.63	3.24	2.21	3.22	1.20
No. observations	869	753	775	802	796	774	606	706	657	681

Source: EU-SILC 2007.

Individual cross-sectional weights used.

Table A 5-6 Descriptive statistics for each quintile of full-time employees' earnings distribution in France (column %)

	Men					Women				
quintile	1st	2nd	3rd	4th	5th	1st	2nd	3rd	4th	5th
Hourly wage	9.27	11.12	13.26	16.37	24.79	8.93	10.39	12.08	14.63	21.85
Work experience, years	15.77	17.75	19.36	19.53	20.67	14.63	16.03	17.58	18.70	20.01
Log non-labour income	9.14	9.13	9.14	9.24	9.43	9.39	9.49	9.37	9.54	9.43
Highest level of education										
Lower secondary or below	27.06	23.48	21.83	14.04	5.90	22.52	16.92	15.11	7.21	5.75
Secondary/further	54.31	57.05	55.68	41.49	34.66	51.93	52.43	48.39	37.55	16.46
University	18.63	19.46	22.49	44.47	59.43	25.55	30.65	36.49	55.23	77.78
Born outside EU-25	5.16	7.53	5.29	6.23	6.47	3.96	3.28	3.41	2.48	5.67
Married	38.00	51.41	53.71	59.59	68.89	43.84	44.41	42.95	51.02	54.59
Managerial duties	22.10	28.17	34.35	48.34	58.95	20.05	22.27	29.22	33.18	48.01
Size of firm										
10 or fewer	24.33	18.39	12.25	10.70	7.93	24.98	22.17	22.20	13.21	11.31
11-149	34.90	30.27	27.34	22.89	18.45	32.34	26.95	26.31	28.17	19.46
50 or over	40.76	51.34	60.41	66.41	73.62	42.68	50.88	51.49	58.63	69.22
On permanent contract	89.55	91.33	97.69	97.06	98.14	86.99	90.58	94.70	96.62	98.28
Occupational category										
Legislators, senior officials and managers	1.14	2.62	2.80	11.92	24.78	0.32	1.65	3.72	7.37	23.16
Professionals	3.31	2.96	9.15	23.23	35.35	4.81	6.78	7.66	19.47	36.84
Technicians and associate professionals	17.90	20.42	23.03	28.44	21.56	14.82	19.07	27.89	40.60	29.68
Clerks	7.76	10.50	7.70	4.47	3.27	30.67	30.32	31.57	20.38	4.53
Service workers and shop and market sales workers	7.42	8.79	8.77	5.12	1.39	22.57	20.31	17.61	8.93	3.83
Skilled agricultural and fishery workers / Craft and related trades	29.96	29.40	23.26	12.77	7.06	2.38	1.85	1.24	0.77	0.21
Plant and machine operatives and assemblers	20.88	19.68	20.02	11.87	5.79	6.48	8.57	3.21	0.83	0.61
Elementary	11.62	5.64	5.27	2.20	0.80	17.95	11.44	7.10	1.64	1.15
Age of youngest child in household										
No children under 16	60.73	49.23	54.00	50.73	45.69	60.31	61.31	61.15	59.90	61.82
One child aged 0-4	10.05	9.08	6.27	9.88	6.57	9.27	10.97	8.33	9.64	7.14
One child aged 5-10	5.52	7.49	3.41	5.74	4.68	7.32	5.70	4.23	4.47	5.45
One child aged 11-15	4.24	7.95	8.20	9.43	13.13	7.40	9.25	10.77	8.66	10.11
2 or more children, youngest aged 0-4	12.08	13.83	14.14	12.82	12.14	5.41	6.41	6.86	5.78	
2 or more children, youngest aged 5-10	6.56	10.96	12.10	9.38	15.44	8.05	4.84	6.10	8.66	9.75
2 or more children, youngest aged 11-15	0.82	1.47	1.89	2.01	2.34	2.24	1.52	2.56	2.90	0.48
No. observations	555	555	554	555	554	376	376	376	376	376

Source: EU-SILC 2007

Individual cross-sectional weights used

Table A 5-7 Descriptive statistics for each quintile of full-time employees' earnings distribution in Czech Republic (column %)

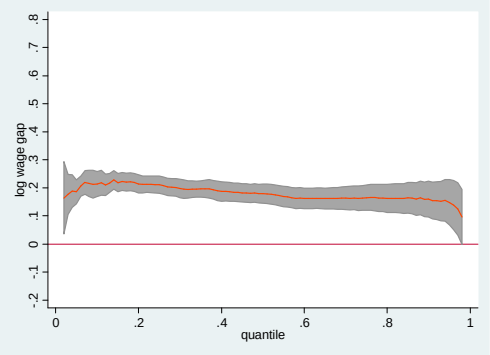
	Men					Women				
quintile	1st	2nd	3rd	4th	5th	1st	2nd	3rd	4th	5th
Hourly wage	2.27	3.07	3.73	4.55	7.45	1.85	2.37	2.95	3.66	5.33
Work experience, years	18.04	18.79	17.68	17.45	18.41	20.69	19.11	18.59	18.43	17.94
Age	8.66	8.70	8.62	8.68	8.69	9.00	8.92	9.04	8.97	9.20
Highest level of education										
Lower secondary or below	9.56	5.24	1.97	2.27	0.75	14.47	9.07	4.77	1.42	0.16
Secondary/further	86.78	88.99	84.16	76.75	54.63	82.89	87.88	85.74	78.60	58.75
University	3.65	5.77	13.87	20.98	44.61	2.64	3.06	9.50	19.98	41.09
Born outside EU-25	0.85	0.35	0.57	1.39	0.31	0.64	0.58	0.83	0.53	0.58
Married	51.10	62.67	64.28	69.84	75.65	75.16	65.96	67.48	67.81	65.71
Managerial duties	8.76	12.89	20.45	31.13	51.74	5.34	9.09	12.16	15.39	29.76
Size of firm										
10 or fewer	26.48	16.51	11.99	9.41	8.41	32.49	24.89	19.74	16.39	12.18
11-149	40.02	43.21	41.87	40.76	31.01	37.26	34.73	37.05	39.82	39.62
50 or over	33.50	40.29	46.14	49.83	60.57	30.25	40.38	43.21	43.78	48.20
On permanent contract	85.65	91.60	93.57	96.49	93.23	86.61	88.87	93.44	93.78	94.88
Occupational category										
Legislators, senior officials and managers	2.08	2.02	3.27	6.72	15.99	0.74	0.24	2.20	3.29	5.57
Professionals	3.36	2.93	7.89	11.09	23.48	1.26	2.96	7.07	12.99	28.40
Technicians and associate professionals	6.78	13.32	22.30	27.42	30.40	9.64	19.40	37.22	47.99	44.73
Clerks	4.17	5.01	5.42	3.13	3.68	9.04	14.81	21.32	18.88	15.27
Service workers and shop and market sales workers	10.52	7.41	5.12	8.64	5.74	35.63	23.58	10.98	6.01	3.12
Skilled agricultural and fishery workers / Craft and related trades	40.42	41.63	34.70	28.49	13.79	15.76	15.26	9.52	5.30	1.08
Plant and machine operatives and assemblers	24.17	24.20	18.32	13.92	6.77	8.70	12.20	6.19	4.40	1.45
Elementary	8.50	3.47	2.99	0.60	0.15	19.22	11.55	5.50	1.14	0.38
Age of youngest child in household										
No children under 16	67.40	62.75	56.38	54.45	53.68	65.88	66.13	65.67	67.21	73.47
One child aged 0-4	4.62	8.69	6.60	10.26	9.16	1.13	3.10	2.11	1.07	2.43
One child aged 5-10	6.18	5.97	7.66	5.79	6.69	6.91	8.98	8.03	9.08	6.59
One child aged 11-15	6.18	8.39	10.40	10.42	9.23	13.50	9.52	11.48	13.94	9.21
2 or more children, youngest aged 0-4	6.24	7.02	6.31	8.40	11.13	1.02	1.20	1.16	0.93	1.91
2 or more children, youngest aged 5-10	6.18	4.89	10.81	8.26	7.69	8.41	7.22	9.71	5.30	4.02
2 or more children, youngest aged 11-15	3.19	2.29	1.84	2.41	2.41	3.14	3.84	1.84	2.48	2.38
No. observations	626	626	653	599	626	534	533	540	529	530

Source: EU-SILC 2007

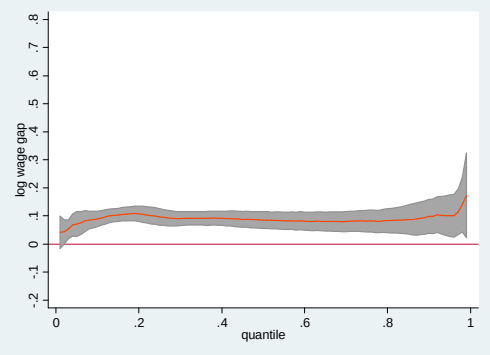
Individual cross-sectional weights used

Figure A 5-1 Unadjusted gender log wage gaps in 25 countries

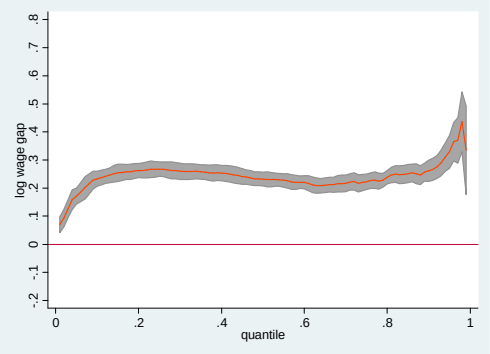
Austria



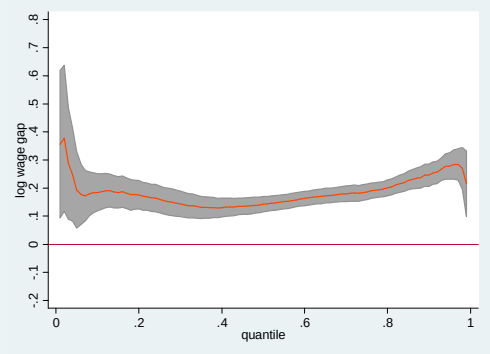
Belgium



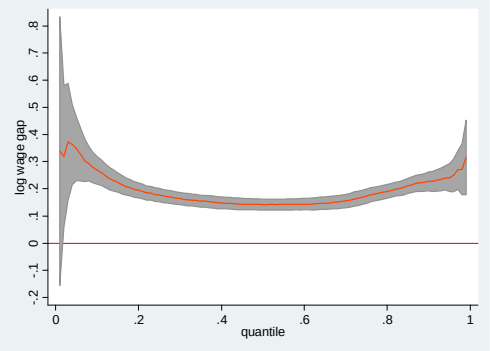
Czech Republic



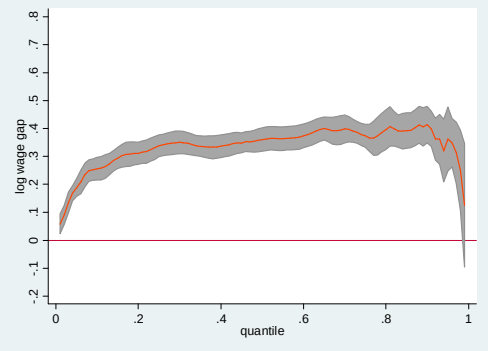
Germany



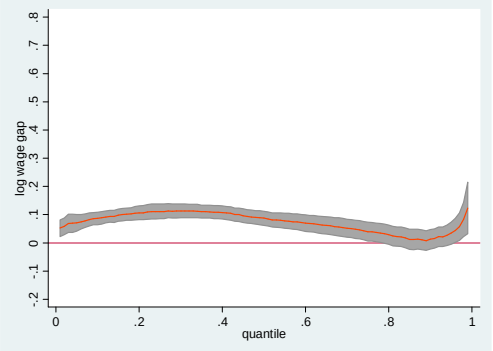
Denmark



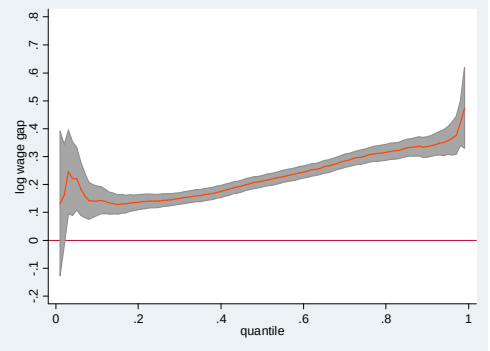
Estonia



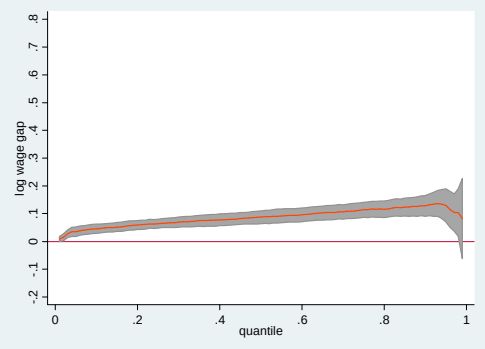
Spain



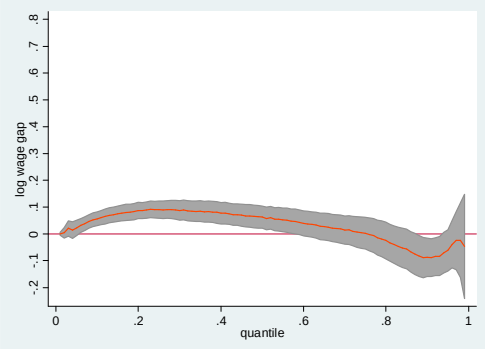
Finland



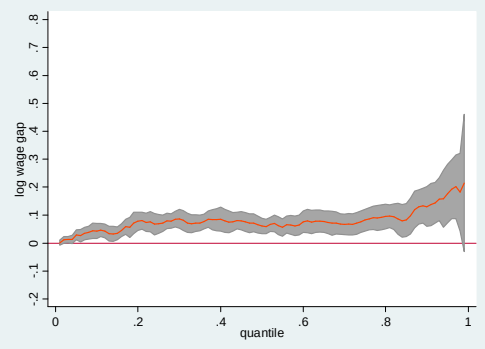
France



Greece



Hungary



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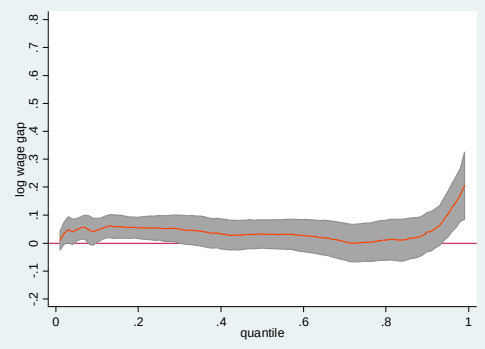
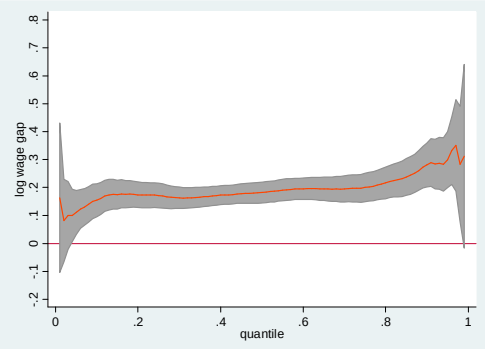
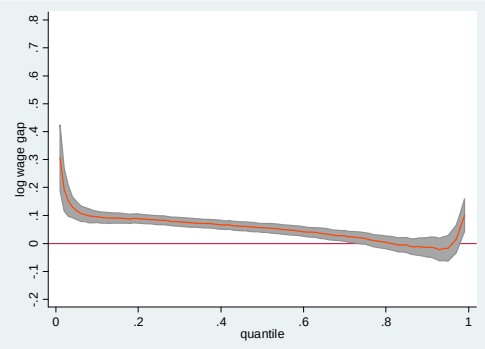


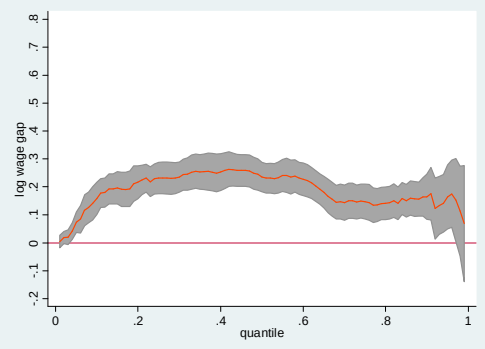
Iceland



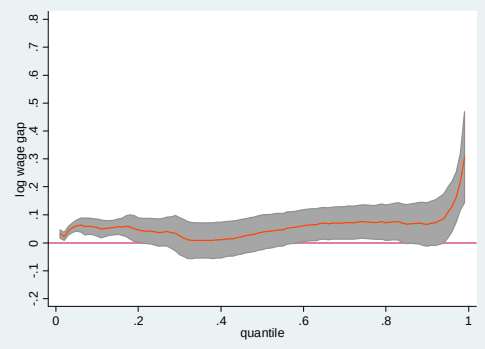
Italy



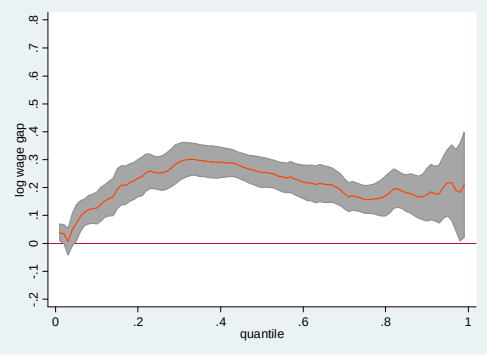
Lithuania



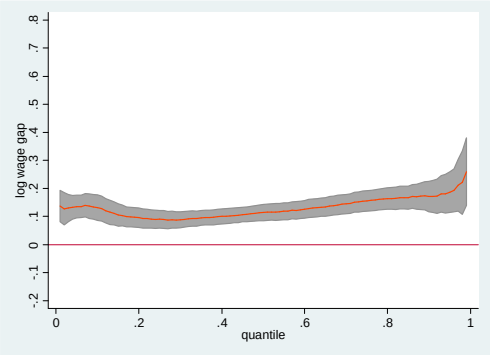
Luxembourg



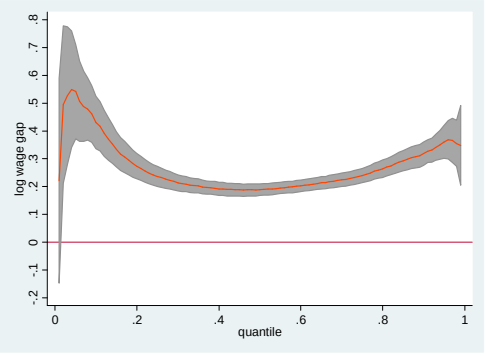
Latvia



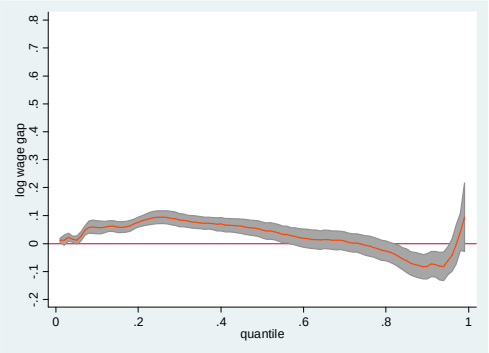
The Netherlands



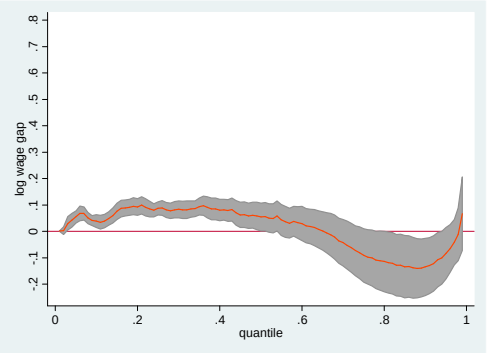
Norway



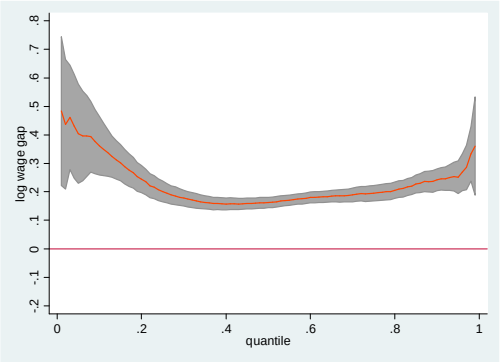
Poland



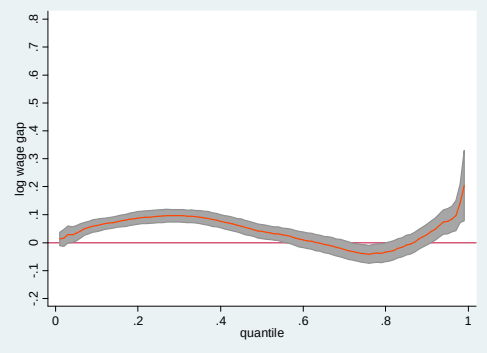
Portugal



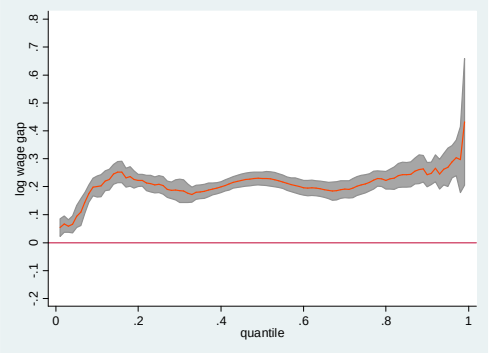
Sweden



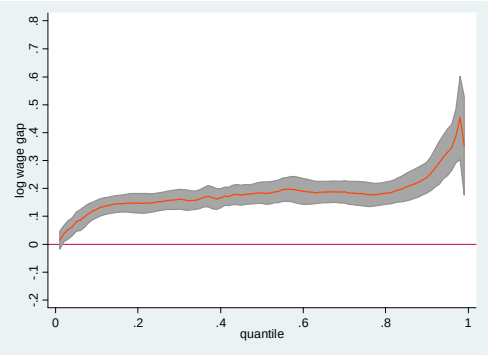
Slovenia



Slovakia



The UK



Annex 6 Annex for Chapter 6

Table A 6-1 Occupational distributions of male and female employees in 25 countries (combined full-time and part-time employees)

	Legislators, senior officials and managers		Professionals		Technicians and associate professionals		Clerks		Service workers and shop and market sales workers		Skilled agricultural and fishery workers; craft and related trades		Plant and machine operators and assemblers		Elementary occupations	
	M	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**
AT	0.05	0.01	0.07	0.10	0.21	0.12	0.13	0.28	0.12	0.27	0.23	0.05	0.09	0.01	0.11	0.16
BE	0.10	0.04	0.19	0.22	0.12	0.15	0.16	0.30	0.08	0.11	0.17	0.03	0.11	0.01	0.07	0.14
CZ	0.06	0.02	0.10	0.10	0.20	0.30	0.04	0.15	0.07	0.17	0.31	0.10	0.17	0.06	0.04	0.09
DE	0.06	0.02	0.15	0.11	0.21	0.35	0.10	0.22	0.06	0.17	0.24	0.03	0.12	0.01	0.06	0.09
DK	0.07	0.03	0.18	0.17	0.19	0.30	0.05	0.17	0.06	0.21	0.22	0.03	0.11	0.04	0.11	0.05
EE	0.15	0.09	0.11	0.21	0.08	0.18	0.02	0.08	0.04	0.17	0.33	0.05	0.21	0.11	0.06	0.10
ES	0.03	0.01	0.13	0.17	0.12	0.12	0.09	0.25	0.10	0.21	0.26	0.04	0.13	0.02	0.15	0.18
FI	0.11	0.05	0.21	0.22	0.12	0.21	0.03	0.12	0.07	0.25	0.24	0.03	0.14	0.03	0.07	0.07
FR	0.08	0.05	0.13	0.12	0.21	0.22	0.07	0.22	0.07	0.19	0.21	0.02	0.16	0.04	0.07	0.15
GR	0.02	0.01	0.15	0.24	0.07	0.12	0.12	0.25	0.16	0.20	0.27	0.04	0.14	0.01	0.07	0.14
HU	0.05	0.04	0.10	0.16	0.09	0.20	0.05	0.15	0.11	0.17	0.34	0.09	0.18	0.08	0.07	0.10
IE	0.16	0.12	0.19	0.24	0.07	0.05	0.08	0.24	0.09	0.22	0.18	0.01	0.08	0.03	0.15	0.08
IS	0.17	0.13	0.21	0.30	0.14	0.21	0.02	0.11	0.11	0.15	0.21	0.03	0.07	0.00	0.06	0.06
IT	0.02	0.01	0.09	0.11	0.19	0.30	0.12	0.19	0.08	0.14	0.24	0.06	0.16	0.06	0.10	0.12
LT	0.09	0.08	0.13	0.28	0.06	0.13	0.03	0.09	0.06	0.15	0.31	0.12	0.23	0.03	0.09	0.12
LU	0.07	0.05	0.17	0.15	0.23	0.27	0.09	0.17	0.08	0.13	0.20	0.01	0.10	0.01	0.07	0.21
LV	0.07	0.05	0.09	0.18	0.12	0.21	0.01	0.08	0.06	0.22	0.29	0.09	0.23	0.04	0.13	0.14
NL	0.12	0.05	0.21	0.22	0.19	0.26	0.09	0.21	0.06	0.17	0.17	0.01	0.11	0.01	0.05	0.05
NO	0.14	0.08	0.16	0.17	0.21	0.30	0.05	0.09	0.10	0.28	0.20	0.02	0.12	0.02	0.03	0.04
PL	0.05	0.04	0.12	0.27	0.11	0.16	0.05	0.12	0.07	0.17	0.32	0.08	0.19	0.04	0.08	0.13
PT	0.03	0.02	0.09	0.13	0.11	0.11	0.08	0.14	0.08	0.22	0.37	0.13	0.16	0.05	0.09	0.20
SE	0.05	0.03	0.22	0.24	0.20	0.24	0.06	0.13	0.09	0.26	0.19	0.02	0.17	0.03	0.03	0.05
SI	0.05	0.03	0.11	0.18	0.18	0.23	0.06	0.15	0.09	0.16	0.23	0.04	0.20	0.09	0.08	0.11
SK	0.06	0.04	0.10	0.18	0.16	0.29	0.05	0.13	0.09	0.17	0.27	0.06	0.21	0.06	0.06	0.08
UK	0.20	0.12	0.18	0.16	0.13	0.16	0.06	0.23	0.08	0.22	0.14	0.01	0.10	0.02	0.11	0.08

Source: EU-SILC 2007
Individual cross-sectional weights used

Table A 6-2 Occupational distributions of full-time male and female employees in 25 countries

	Legislators, senior officials and managers		Professionals		Technicians and associate professionals		Clerks		Service workers and shop and market sales workers		Skilled agricultural and fishery workers; craft and related trades		Plant and machine operators and assemblers		Elementary occupations	
	M	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**
AT	0.05	0.02	0.07	0.12	0.21	0.13	0.13	0.32	0.12	0.23	0.23	0.06	0.09	0.01	0.10	0.12
BE	0.10	0.05	0.19	0.27	0.12	0.14	0.17	0.32	0.07	0.08	0.17	0.03	0.12	0.02	0.07	0.09
CZ	0.06	0.02	0.10	0.10	0.20	0.31	0.04	0.15	0.07	0.17	0.31	0.10	0.18	0.07	0.04	0.08
DE	0.06	0.04	0.15	0.16	0.21	0.41	0.10	0.21	0.06	0.10	0.25	0.03	0.12	0.02	0.06	0.04
DK	0.08	0.04	0.18	0.19	0.19	0.29	0.05	0.16	0.06	0.19	0.22	0.03	0.12	0.05	0.11	0.05
EE	0.16	0.09	0.10	0.21	0.08	0.18	0.02	0.08	0.04	0.17	0.33	0.06	0.22	0.12	0.05	0.09
ES	0.03	0.01	0.12	0.20	0.12	0.13	0.09	0.26	0.10	0.20	0.26	0.05	0.13	0.02	0.14	0.14
FI	0.12	0.06	0.22	0.24	0.13	0.22	0.03	0.12	0.06	0.23	0.24	0.03	0.14	0.04	0.06	0.06
FR	0.08	0.06	0.13	0.13	0.21	0.23	0.07	0.23	0.07	0.17	0.22	0.02	0.16	0.05	0.07	0.10
GR	0.02	0.01	0.15	0.24	0.07	0.13	0.12	0.26	0.16	0.21	0.27	0.04	0.14	0.01	0.06	0.11
HU	0.05	0.05	0.11	0.17	0.09	0.20	0.05	0.15	0.11	0.16	0.34	0.09	0.18	0.08	0.07	0.10
IE	0.16	0.16	0.20	0.29	0.07	0.06	0.09	0.24	0.09	0.15	0.18	0.00	0.08	0.04	0.13	0.06
IS	0.18	0.15	0.21	0.31	0.14	0.21	0.02	0.11	0.11	0.12	0.22	0.03	0.07	0.00	0.06	0.06
IT	0.02	0.01	0.09	0.13	0.19	0.33	0.12	0.18	0.08	0.12	0.24	0.06	0.16	0.07	0.09	0.10
LT	0.09	0.08	0.13	0.29	0.06	0.13	0.03	0.08	0.06	0.15	0.30	0.12	0.23	0.03	0.09	0.12
LU	0.07	0.06	0.17	0.19	0.23	0.26	0.09	0.17	0.07	0.13	0.20	0.01	0.10	0.02	0.07	0.16
LV	0.07	0.05	0.09	0.18	0.12	0.21	0.01	0.08	0.06	0.22	0.29	0.09	0.22	0.04	0.13	0.13
NL	0.13	0.08	0.20	0.30	0.19	0.25	0.09	0.21	0.06	0.10	0.18	0.01	0.11	0.02	0.05	0.03
NO	0.14	0.09	0.16	0.19	0.21	0.31	0.05	0.10	0.10	0.24	0.20	0.02	0.12	0.02	0.03	0.03
PL	0.05	0.04	0.12	0.28	0.11	0.16	0.05	0.12	0.07	0.16	0.33	0.08	0.19	0.04	0.08	0.12
PT	0.03	0.02	0.08	0.13	0.11	0.12	0.08	0.15	0.08	0.22	0.37	0.13	0.17	0.05	0.09	0.17
SE	0.05	0.04	0.23	0.29	0.20	0.25	0.05	0.13	0.08	0.20	0.20	0.02	0.17	0.04	0.02	0.03
SI	0.05	0.03	0.11	0.18	0.18	0.23	0.06	0.16	0.09	0.16	0.23	0.04	0.20	0.09	0.08	0.11
SK	0.06	0.04	0.10	0.18	0.16	0.29	0.05	0.13	0.09	0.16	0.27	0.06	0.21	0.06	0.06	0.07
UK	0.21	0.16	0.18	0.19	0.13	0.17	0.06	0.23	0.07	0.17	0.14	0.01	0.10	0.02	0.11	0.05

Source: EU-SILC 2007.
Individual cross-sectional weights used.

Table A 6-3 Female share of 8 occupational groups in 25 countries (full-time and part-time employees combined)

	Legislators, senior officials and managers	Professionals	Technicians and associate professionals	Clerks	Service workers and shop and market sales workers	Skilled agricultural and fishery workers; craft and related trades	Plant and machine operators and assemblers	Elementary occupations	Labour force
AT	0.17	0.56	0.32	0.65	0.66	0.14	0.07	0.56	0.46
BE	0.25	0.51	0.53	0.62	0.56	0.12	0.10	0.63	0.47
CZ	0.26	0.48	0.58	0.76	0.68	0.22	0.25	0.69	0.48
DE	0.25	0.40	0.60	0.65	0.70	0.09	0.09	0.55	0.47
DK	0.30	0.48	0.61	0.76	0.77	0.11	0.25	0.32	0.49
EE	0.39	0.68	0.71	0.84	0.81	0.15	0.36	0.65	0.52
ES	0.24	0.51	0.44	0.67	0.60	0.12	0.09	0.49	0.43
FI	0.31	0.51	0.63	0.81	0.78	0.11	0.19	0.51	0.50
FR	0.38	0.47	0.50	0.75	0.73	0.09	0.19	0.66	0.49
GR	0.21	0.53	0.55	0.62	0.48	0.10	0.04	0.61	0.43
HU	0.45	0.61	0.68	0.73	0.61	0.20	0.31	0.59	0.50
IE	0.44	0.57	0.45	0.75	0.72	0.05	0.28	0.37	0.51
IS	0.43	0.59	0.59	0.83	0.57	0.13	0.03	0.51	0.50
IT	0.29	0.49	0.55	0.54	0.58	0.16	0.23	0.48	0.43
LT	0.48	0.70	0.68	0.74	0.72	0.29	0.13	0.58	0.51
LU	0.33	0.40	0.46	0.58	0.56	0.03	0.10	0.71	0.43
LV	0.45	0.67	0.64	0.87	0.79	0.24	0.15	0.52	0.51
NL	0.25	0.48	0.55	0.67	0.70	0.07	0.07	0.49	0.47
NO	0.34	0.51	0.57	0.64	0.72	0.07	0.14	0.59	0.48
PL	0.43	0.66	0.55	0.67	0.68	0.17	0.15	0.58	0.47
PT	0.46	0.59	0.50	0.64	0.72	0.25	0.23	0.68	0.49
SE	0.40	0.52	0.56	0.70	0.74	0.08	0.16	0.63	0.50
SI	0.34	0.61	0.56	0.70	0.65	0.14	0.30	0.56	0.49
SK	0.37	0.66	0.65	0.75	0.67	0.19	0.23	0.58	0.51
UK	0.38	0.48	0.57	0.80	0.74	0.07	0.16	0.42	0.51

Source: EU-SILC 2007.
Individual cross-sectional weights used.

Table A 6-4 Occupational distributions of employees in 25 countries (combined full-time and part-time employees)

	Legislators, senior officials and managers	Professionals	Technicians and associate professionals	Clerks	Service workers and shop and market sales workers	Skilled agricultural and fishery workers; craft and related trades	Plant and machine operators and assemblers	Elementary occupations	Unweighted N
AT	3.06	8.29	16.75	19.95	18.98	14.7	5.35	12.93	4,830
BE	6.76	20.18	13.75	22.79	9.14	10.17	6.75	10.46	4,394
CZ	4	10.12	24.87	9.33	12.17	20.86	12.22	6.43	6,757
DE	4.08	13.45	27.59	15.3	11.07	14.08	6.86	7.58	8,921
DK	5.4	17.35	24.08	11.15	13.54	12.43	7.69	8.37	4,842
EE	12.21	16.07	13.03	5.26	10.87	18.63	15.97	7.96	4,342
ES	2.05	14.7	12.02	15.87	14.89	16.46	7.95	16.06	8,663
FI	8.42	21.96	16.91	7.48	15.84	13.6	8.81	6.98	6,821
FR	6.22	12.47	21.21	14.38	12.99	11.87	9.81	11.05	7,593
GR	1.51	18.98	9.47	17.17	17.87	17.11	8.14	9.76	2,889
HU	4.85	13.41	14.43	10.1	13.69	21.72	13.05	8.75	6,078
IE	13.81	21.74	5.79	16.21	15.78	9.24	5.76	11.66	2,849
IS	15.41	25.47	17.73	6.74	13.35	12.23	3.38	5.69	2,519
IT	1.74	9.93	23.81	15.17	10.57	16.35	11.67	10.75	12,216
LT	8.31	20.79	9.69	6.05	10.75	20.82	12.65	10.94	3,633
LU	5.87	16.25	24.49	12.51	9.96	11.65	6.33	12.95	3,518
LV	5.79	13.46	16.72	4.65	14.49	18.48	12.98	13.42	3,064
NL	8.75	21.5	22.32	14.89	11.56	9.61	6.13	5.23	8,542
NO	10.84	16.38	25.43	7.1	18.69	11.18	7.12	3.26	4,813
PL	4.41	18.76	13.39	8.46	11.6	20.84	12.16	10.37	9,550
PT	2.4	10.74	11.03	10.97	14.94	24.96	10.88	14.08	2,863
SE	3.87	23.38	21.96	9.25	17.47	10.45	9.87	3.75	5,544
SI	3.85	14.42	20.39	10.85	12.4	13.61	14.67	9.81	9,498
SK	4.88	14.09	22.78	8.91	12.84	15.96	13.19	7.35	4,973
UK	16.01	17.15	14.82	14.79	15.37	7.05	5.53	9.28	5,432

Source: EU-SILC 2007.
Individual cross-sectional weights used.

Table A 6-5 Square root-index separately by part-time and full-time status

	S (part-time employees)	S (full-time employees)
AT	0.148	0.157
BE	0.162	0.126
CZ	0.260	0.203
DE	0.136	0.155
DK	0.161	0.173
EE	0.310	0.253
ES	0.196	0.175
FI	0.173	0.209
FR	0.146	0.166
GR	0.344	0.203
HU	0.316	0.175
IE	0.247	0.175
IS	0.356	0.175
IT	0.097	0.142
LT	0.537	0.253
LU	0.291	0.226
LV	0.598	0.232
NL	0.150	0.160
NO	0.219	0.157
PL	0.225	0.214
PT	0.510	0.216
SE	0.109	0.163
SI	0.269	0.175
SK	0.304	0.222
UK	0.112	0.162

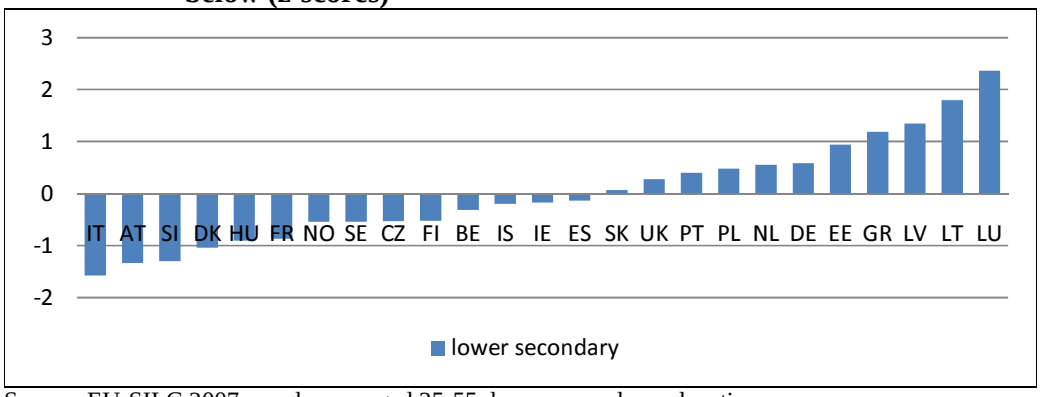
Source: EU-SILC 2007.
Individual cross-sectional weights used.

Table A 6-6 Occupational distributions of full-time male and female employees with lower secondary education or below, in 25 countries

	Legislators, senior officials and managers		Professionals		Technicians and associate professionals		Clerks		Service workers and shop and market sales workers		Skilled agricultural and fishery workers; craft and related trades		Plant and machine operators and assemblers		Elementary occupations	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
AT	0.00	0.00	0.00	0.00	0.02	0.02	0.06	0.09	0.08	0.30	0.23	0.09	0.16	0.02	0.47	0.48
BE	0.03	0.01	0.02	0.01	0.07	0.04	0.12	0.20	0.10	0.19	0.27	0.08	0.22	0.03	0.17	0.43
CZ	0.00	0.00	0.02	0.01	0.02	0.03	0.03	0.06	0.03	0.18	0.37	0.16	0.24	0.14	0.30	0.41
DE	0.01	0.01	0.02	0.01	0.04	0.17	0.07	0.21	0.09	0.24	0.30	0.03	0.26	0.02	0.20	0.30
DK	0.05	0.02	0.03	0.03	0.09	0.14	0.06	0.20	0.06	0.25	0.19	0.05	0.27	0.14	0.24	0.17
EE	0.04	0.09	0.00	0.01	0.01	0.01	0.02	0.02	0.04	0.33	0.41	0.11	0.31	0.17	0.17	0.27
ES	0.01	0.00	0.00	0.00	0.04	0.03	0.04	0.10	0.12	0.33	0.37	0.09	0.19	0.03	0.25	0.42
FI	0.02	0.01	0.03	0.04	0.05	0.09	0.06	0.16	0.09	0.33	0.35	0.07	0.28	0.10	0.13	0.20
FR	0.03	0.02	0.03	0.01	0.06	0.04	0.07	0.14	0.09	0.26	0.28	0.04	0.26	0.07	0.16	0.42
GR	0.01	0.00	0.00	0.01	0.02	0.01	0.06	0.07	0.14	0.28	0.44	0.13	0.21	0.02	0.13	0.48
HU	0.01	0.00	0.00	0.00	0.01	0.02	0.02	0.06	0.06	0.10	0.32	0.17	0.30	0.24	0.27	0.41
IE	0.11	0.07	0.02	0.01	0.03	0.02	0.08	0.17	0.09	0.45	0.27	0.03	0.16	0.08	0.24	0.18
IS	0.13	0.09	0.05	0.03	0.08	0.16	0.04	0.14	0.13	0.34	0.26	0.09	0.17	0.01	0.15	0.15
IT	0.01	0.01	0.01	0.01	0.05	0.08	0.08	0.12	0.08	0.23	0.37	0.13	0.24	0.15	0.15	0.27
LT	0.03	0.00	0.01	0.00	0.03	0.00	0.00	0.04	0.02	0.15	0.41	0.29	0.16	0.04	0.33	0.47
LU	0.04	0.01	0.01	0.00	0.15	0.11	0.07	0.14	0.11	0.13	0.31	0.01	0.19	0.03	0.12	0.57
LV	0.01	0.01	0.00	0.03	0.02	0.08	0.01	0.02	0.02	0.31	0.37	0.11	0.28	0.09	0.30	0.36
NL	0.07	0.03	0.03	0.02	0.07	0.10	0.11	0.33	0.05	0.29	0.28	0.03	0.25	0.02	0.14	0.19
NO	0.10	0.03	0.05	0.05	0.11	0.13	0.08	0.13	0.14	0.48	0.24	0.02	0.20	0.06	0.08	0.09
PL	0.00	0.00	0.00	0.00	0.02	0.01	0.03	0.03	0.04	0.18	0.43	0.13	0.23	0.10	0.25	0.55
PT	0.01	0.01	0.00	0.00	0.06	0.03	0.05	0.10	0.07	0.29	0.48	0.21	0.22	0.07	0.10	0.29
SE	0.04	0.00	0.03	0.04	0.09	0.06	0.06	0.14	0.10	0.35	0.31	0.04	0.29	0.11	0.07	0.25
SI	0.00	0.00	0.00	0.00	0.02	0.02	0.04	0.06	0.04	0.09	0.25	0.09	0.35	0.30	0.30	0.44
SK	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.03	0.07	0.18	0.23	0.15	0.30	0.19	0.39	0.44
UK	0.09	0.06	0.01	0.01	0.04	0.04	0.03	0.10	0.07	0.40	0.17	0.02	0.33	0.07	0.25	0.30

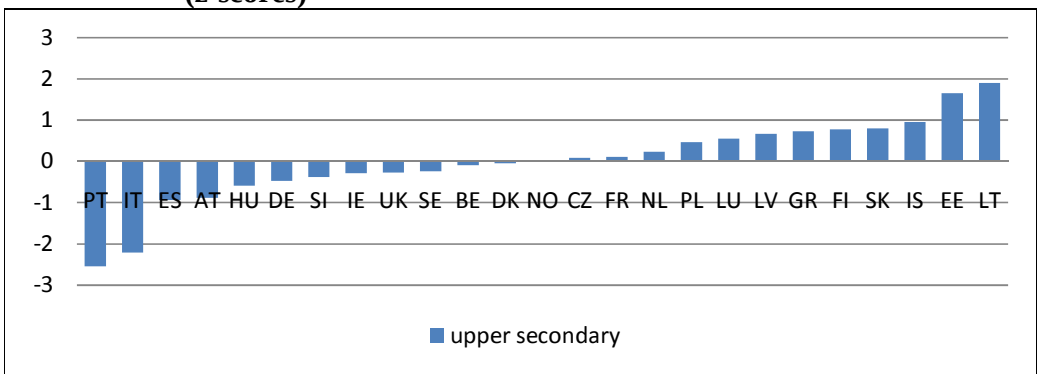
Source: EU-SILC 2007.
Individual cross-sectional weights used.

Figure A 6-1 Square root index S, employees with lower secondary education or below (z-scores)



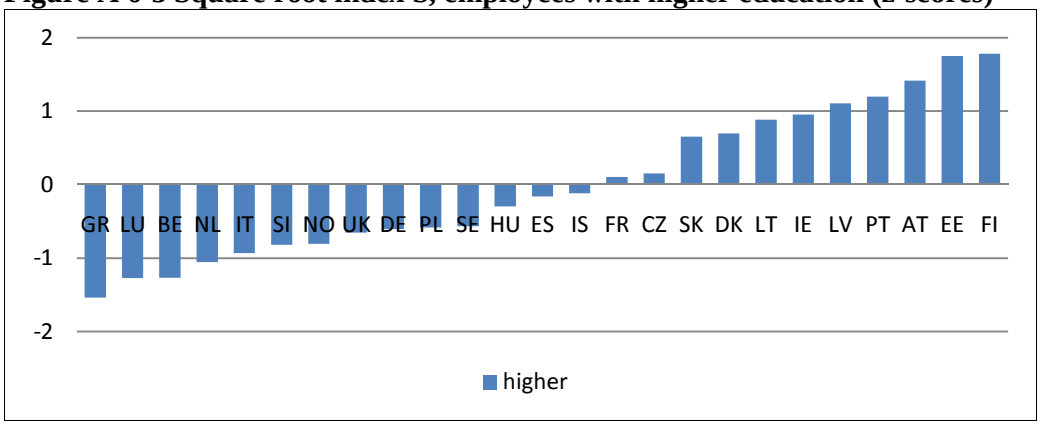
Source: EU-SILC 2007, employees aged 25-55, lower secondary education.

Figure A 6-2 Square root index S, employees with upper secondary education (z-scores)



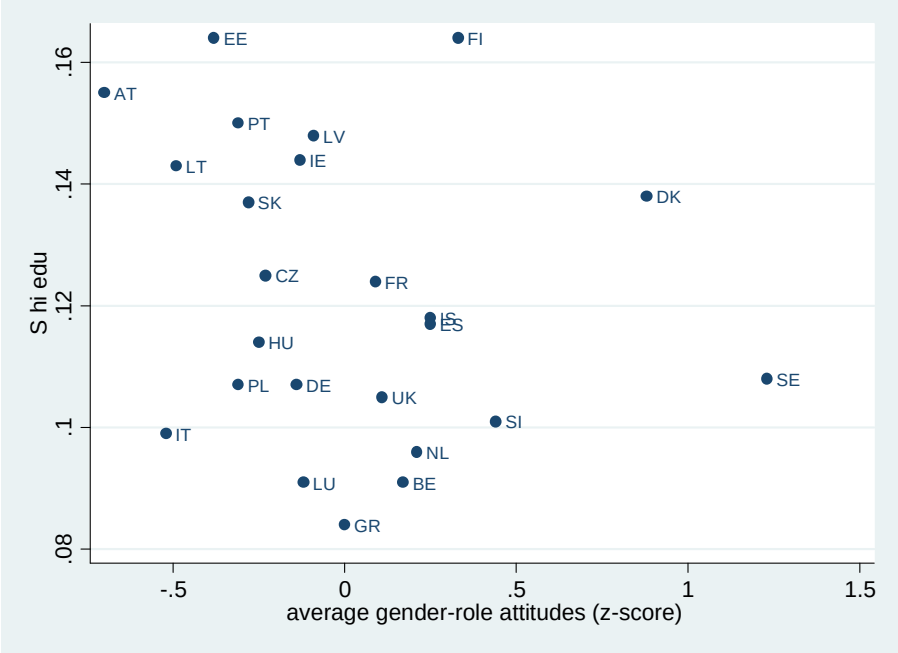
Source: EU-SILC 2007, employees aged 25-55, upper secondary education.

Figure A 6-3 Square root index S, employees with higher education (z-scores)



Source: EU-SILC 2007, employees aged 25-55, higher education.

Figure A 6-4 Square root index S, employees with higher education and average gender role attitudes



Source: EU-SILC 2007, employees aged 25-55, higher education; EVS 1999 adults aged 25-55. R=-0.23.