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The educational gradient and the gender differential of parental employment in Norway, France, Belgium, Austria, West-Germany, Estonia, Romania, Bulgaria, Hungary and Georgia.

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Abstract

Maternal employment is the outcome of a cost-benefit calculation involving a variety of factors. In line with Coale's preconditions for behavioural innovation, we group these factors under the heading 'readiness' (maternal employment is economically advantageous), 'willingness' (maternal employment is acceptable at both the societal and individual level) and 'ability' (welfare state provisions that support maternal employment are available and accessible). Using data from the Generations and Gender Surveys, this paper documents the educational gradient and the gender differential of parental employment in Norway, France, Belgium, Austria, West-Germany, Estonia, Bulgaria, Hungary, Romania and Georgia. The results indicate that the level of maternal employment is elevated in Norway, with a limited educational gradient. In Belgium and France and even more so in Estonia, Bulgaria, Hungary and Romania, the educational gradient of labour force participation is very pronounced, particularly among mothers. Austria and West-Germany show low levels of maternal employment, regardless of education. The between-country differences in maternal employment are subsequently set off against differential attitudes concerning parental employment and differential uptake of family policies in the countries considered.

1 Introduction

Since the end of the 1960s the increase of female educational attainment entailed an increase in the female earning potential, leading an increasing share of women making their entry on the labour market (Becker 1981). This evolution was further supported by a rising demand for female employees in the public sector (Buchholz, Hofäcker et al. 2009). Structural changes in the position of women in education and the labour market, were accompanied by changes in value orientation where emancipation and autonomy became increasingly accentuated, especially by young people (Lesthaeghe and Van de Kaa 1986; Surkyn and Lesthaeghe 2004). As a result, the rising female employment not only reflects the increasing female earning potential, but also the expression of people's growing urge towards autonomy and self-realisation. Today a job is more and more evaluated on the basis of intrinsic job qualities, such as responsibility, achievement, recognition, etc. (van de Kaa 2004; Lesthaeghe 2010).

The increase of female labour force participation has both affected the timing of parenthood and the opportunity costs associated with family formation (Becker 1981). Here we need to make a distinction between postponement of parenthood at young ages and recuperation of fertility at older ages. Women address the work-family conflict by adopting long term reconciliation strategies. Especially highly educated women are expected to postpone parenthood at young age. After graduation this group is more likely to enter long term career tracks, where earnings increase

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according to age and experience. Recuperation takes place at older ages, when these highly educated women are sufficiently established in the labour market. As job opportunities are determined by economic conditions – in particular for young people entering the labour market – periods of adverse economic conditions are assumed to produce even more pronounced delays in parenthood (Vikat 2004; Neels and De Wachter 2010)

The postponement of fertility contributed substantially to the decline of the period total fertility rate under the replacement level and the low fertility levels observed in many countries in North-western European countries in the 1970s, followed by Southern European countries followed and also Central and Eastern European countries after 1990. The countries exhibiting high female labour force participation were the first to be affected by a declining total fertility rate.

The shift towards greater gender equity in individual-oriented institutions such as education and the labour market was not counterbalanced, however, by a similar trend in family-oriented institutions, (McDonald 2000). While the evolution of gender equity progressed rapidly in education and the labour market, the progression was much slower in family-oriented institutions, leading to an increasing incompatibility for women between their roles as employee and mother and contributing to the negative correlation between female labour force participation and fertility rates (Brewster and Rindfuss 2000). However, the negative correlation initially noted between women's employment rate and fertility, weakened and even turned positive in the 2000s (Thévenon 2008). Family-friendly policies, introduced in several European countries, have played a central role in this shift. The intensity of the work-family conflict, but also the size of the opportunity costs, are strongly connected to the institutional context, namely the extent to which the combination of work and family are supported by family-policies (Oppenheimer 1994; Liefbroer and Corijn 1999).

Although governments in Europe have to some extent revised or extended their family policies as a reaction to the population trends that have emerged since the 1970s, large differences in family policy persist across countries. Fux attributes these differences to divergent historical trajectories which preceded the growth of the European welfare states and remain tangible today (Fux 2008; Thévenon 2008). Also Esping-Andersen's typology illustrates how the growth of the welfare states in the post-war period cannot be seen as a uniform response to the structural inequalities and the risks appearing to individuals. Rather they have to be understood as very different solutions to fundamental societal developments (Fux 2008). The Central and Eastern European (CEE) countries are exceptional, since they experienced a fundamental transition after the fall of state communism in 1990. Nonetheless, also in these countries past influences play an important role in today's state organisation and cultural climate.

The Scandinavian countries, but France and Belgium as well, have from the 1970s onwards invested strongly in the defamilialisation of care (e.g. investments in the provision of child care) and the combination of work and family (e.g. investing in paid and job-protected parental leave and flexible workplace practices)(Esping-Andersen 1999). In the continental countries the male breadwinner model dominated, with a focus on keeping women at home to take care of the children by providing long maternity leave, but little full time day care (Hank and Kreyenfeld 2000). The liberal countries (Great-Britain, Ireland, the Netherlands) have placed great confidence in market mechanisms, as a result their labour market is flexible, but child care is scarce and expensive (Fux 2008). The CEE were –during communism –characterized by extensive state support for combining work and family. After the transition to market economies, however, serious cuts were made in family policy. Today there exist, except extensive maternity leave systems, little support for working parents (Tang and Cousins 2005; HCSO 2010).

Macro-level studies – frequently reflecting aggregated indicators regarding expenditures or availability of arrangements – have frequently ignored the temporal and spatial context of family policies and the differential uptake of these policies (Petit and Hook 2005; Neyer and Andersson 2008). The availability of provisions does not necessarily imply that everybody is covered by or effectively makes use of them. Therefore different authors have stressed the importance of studying the uptake of policy measures when evaluating the impact of policies on fertility outcomes (Gauthier 2008; Neyer and Andersson 2008). Evidence for Flanders suggests that there is an important socio-

economic gradient in the way work and family are combined and that this gradient is associated with the differential use and/or access to childcare provisions and parental leave systems (Ghysels and Van Lancker 2009; Cantillon, Ghysels et al. 2010; De Wachter and Neels 2011). Lower educated women more frequently end up in inactivity or unemployment after the transition to parenthood than higher educated women (Neels and Theunynck 2011). The retreat of lower educated women from the labour market coincides with low take-up of pre-school childcare arrangements and parental leave. The strong educational homogamy within partnerships and marriages furthermore results in the accumulation of poverty risks within families at the weak end of the income distribution (Joshi, Macran et al. 1996; Ghysels and Van Lancker 2009).

In this paper we address the labour force participation of men and women after parenthood from an international comparative perspective, using data from the Generations and Gender Surveys (GGS), conducted between 2004 and 2010 in Norway, France, Belgium, Austria, West-Germany, Estonia, Bulgaria, Hungary, Romania and Georgia (Simard and Franklin 2005). Unlike previous research, the GGS offers the possibility to differentiate between labour market positions in greater detail, that is distinguishing between fulltime employment, part time employment, uptake of parental leave and inactivity (Vikat, Speder et al. 2007). As a result the GGS allows us to monitor gender differentials as well as educational differentials of employment after parenthood in a large set of European countries. A further unique trait of the GGS is that the socio-economic gradient in labour force participation after parenthood can be linked to socio-economic differences in use of (in)formal childcare arrangements and differential attitudes towards work and family.

The paper is structured as follows. Section 2 discusses the theoretical perspectives on (fe)male labour force participation before and after parenthood and research hypotheses are summarized in section 3. Section 4 provides additional information on the Generations and Gender Surveys and the methods used in the analysis. The results are discussed in section 5 and section 6 concludes with an overview of the main findings.

2 Ready, willing and able:

Theoretical perspectives on labour force participation after parenthood

The large-scale entry of women in the labour market is one of the most remarkable post-war achievements. In the 1950s and 1960s the male bread winner model reaches the top of its popularity. In this period married women were scarce on the labour market, which was new from a historical perspective (Van Dongen 1998; Rindfuss, Guzzo et al. 2003). After 1970 this changed: a growing share of (married) women no longer retreated from the labour market after parenthood or increasingly re-entered the labour market after a short period of parental leave (OECD 2011). However, labour force participation after parenthood is the outcome of several factors which we summarize under Coale's three preconditions for behavioural innovation: i) 'readiness' (it has to be economically advantageous to stay active on the labour market after the transitions to parenthood), ii) 'willingness' (the combination of work and family has to be socially acceptable and in line with personal attitudes and values), and iii) 'ability' (services or provisions that allow reconciling work and family have to be sufficiently available and accessible) (Coale 1973). Following the three conditions, we highlight first the micro-economic models of family formation, then the cultural explanations – the changing value patterns and the meaning of parenthood – and the role of family policies in several welfare states.

2.1 Readiness: the (opportunity)costs of parenthood

Research on the effects of educational attainment and labour force participation on fertility has been dominated by Becker's New Home Economics. Becker makes use of two mechanisms that link educational attainment to family formation: the 'income effect' and 'price effect'. The point of departure is that family formation is a highly valuable, but very costly good. The income effect implies that highly educated – as they generally have a higher earning potential – are sooner financially capable of supporting a family. The income effect of education is thus positively related to family formation. The price effect of education, however, implies that family formation brings

opportunity costs and is negatively related to fertility. Opportunity costs correspond with the time spent on the care of children, which can no longer be spent on paid labour. For highly educated parents opportunity costs are higher due to their greater economic return of labour force participation. Hence the relative cost of a labour market withdrawal to take care of a child, is greater for this group. Even a temporary and/or partial break from the labour market can entail long-term opportunity costs because of the depreciation of human capital and missed career opportunities (Willis 1973; Becker 1981; Joshi, Macran et al. 1996; Liefbroer and Corijn 1999; Vikat 2004). Assuming a *sex-specific division of labour* within the family, family formation is expected to have little or no impact on the labour force participation of men. For men, opportunity cost are small, or non-existent and the income effect outweighs the opportunity costs. Among women, assuming *incompatibility between parenthood and family formation*, the price effect (i.e. opportunity costs) is expected, however, to dominate the income effect, particularly when educational attainment rises (Becker 1981; Liefbroer and Corijn 1999).

Based on Becker's two assumptions we expect both a strong gender differential and a strong educational gradient among women in employment after parenthood. Since highly educated women are confronted with high opportunity costs, we anticipate a higher frequency of childless women in this group (Vikat 2004; Petit and Hook 2005; Andersson, Kreyenfeld et al. 2009). Highly educated women who do make the transition to parenthood, are expected to have strong incentives to stay on the labour market because a (partial) retreat from the labour market is associated with high opportunity costs. For lower educated women, the cost-benefit analysis of maternal employment looks differently: having less favourable labour market perspectives, the opportunity cost associated with an exit from the labour market is much lower. Especially after parenthood lower educated women face diminishing incentives for paid labour, as costs of labour force participation increase (e.g. costs related to child care). Moreover these women often occupy jobs where the depreciation of human capital is less important (Becker 1981; Brewster and Rindfuss 2000). Re-entry after a period of absence constitutes for these women less an obstacle. As family formation limits the practical and financial feasibility of working, an inactivity or unemployment trap becomes increasingly likely for lower educated women.

Although Becker's model has contributed strongly to the research on the impact of socio-economic characteristics on family formation, his research has not remained uncontested. Much of the criticisms have focused on the rigidity of his assumptions, making that the effects of gender and education on female labour force participation cannot be generalized (Liefbroer and Corijn 1999). The degree to which family formation entails opportunity costs is associated with possibilities to continue labour force participation after parenthood as well as the division of household tasks within families (Liefbroer and Corijn 1999). With respect to the latter, research suggests that Becker's initial assumption still holds. In most countries – even the more egalitarian Scandinavian countries – there still exists a strong sex-specific division of household tasks (Pott-Buter 1998; McDonald 2000; Buchholz, Hofäcker et al. 2009; Miettinen, Basen et al. 2011). Also the societal context influences the degree of incompatibility of labour force participation and family formation and thus mediates the effect of education on family formation and labour force participation. The societal context contains both the institutional context (i.e. structural provisions and family policy) and the dominant cultural values. When the incompatibility between work and family is small, the opportunity costs of parenthood diminish, particularly for highly educated women. As the income effect outweighs the opportunity costs, the effect of education on family formation becomes positive. In societies where the incompatibility of work and family is alleviated, highly educated women record the highest fertility (Rindfuss, Guzzo et al. 2003). For the lower educated, labour force participation of women who are still childless is subject to substantial variations between countries, reflecting differential opportunities and benefits of labour force participation of lower educated women. Whether these women stay in the labour market after the transition to parenthood is strongly correlated to their position or 'value' on the labour market before parenthood (Cantillon, Ghysels et al. 2000).

Empirical evidence illustrates that female labour force participation is still strongly affected by family formation – i.c the presence of a partner and children in the household – and this leads to

strong gender differences on the labour market (Joshi, Macran et al. 1996). According to OECD data 70 per cent of the 15-54 year old women are in employment, compared to 85 per cent among men in the same age group, resulting in a gender gap of 15 per cent (OECD 2011). Also the type of employment differs between men and women. Female careers are much more characterised by frequent transitions between positions (full time, part time, inactive) than the careers of men. Dynamic careers are a typical female phenomenon (Storms 1995; Cloin and Boelens 2004; Ghysels and Van Lancker 2009; OECD 2011). Similarly, part time employment is a predominantly female matter. Among women in OECD-countries 22 per cent occupies a part time job, opposed to only 4,4 per cent among men (OECD 2011). Part time employment offers women on the one hand the possibility to combine work and family: women maintain a labour market attachment instead of leaving the labour market once a child is born (Joshi, Macran et al. 1996). On the other hand, Hinde and Wright (1991) stress that the differences between a part time and full time position cannot be reduced to differences in working hours. The 'part time employment penalty' is described by OECD as follows: lower hourly earnings, limited training and career opportunities, less job security and less access to unemployment insurance. In this regard the evolution towards part time work is not a qualitative neutral (OECD 2011).

2.2 Willingness: autonomy versus uncertainty reduction

Employment after entry into parenthood does not only depend on the benefits of continuing employment after parenthood, but also on whether the combination of work and family is socially acceptable and in line with personal attitudes and values. In line with the second demographic transition theory, highly educated women are expected to stress post-materialist values such as autonomy and thus favour the combination of work and family after parenthood. Lower educated women on the other hand may be more likely to stress their role as a parent at the expense of labour force participation, in line with Freedman's argument of uncertainty reduction.

The theory of the second demographic transition (SDT) associates recent demographic changes with the emergence of new values orientations. Recent demographic trends are the result of a changing cost-benefit analysis, as well as changing values (Lesthaeghe and Van de Kaa 1986; Lesthaeghe and Neels 2002). Lesthaeghe and van de Kaa suggests - in line with Maslow - that the growing economic well-being went hand in hand with a shift from material to post-material needs (participation, emancipation, individual autonomy) (Lesthaeghe and Van de Kaa 1986). The changes in demographic behaviour that emerged since the end of the 1970s - delaying marriage, decreasing marriage rates, postponing parenthood, structural sub-replacement fertility and increasing educational and labour force participation - are thus not only the result of changing costs and benefits but also of new socio-cultural evolutions. In their 'cohort education' model Lesthaeghe and Surkyn (1988) link changing values orientations to the increasing educational levels of more recent birth cohorts: education has a pivotal role in transmitting cultural codes and maintaining social stratification through building ideational systems and patterning preferences. Increasing education has fostered the accentuation of post-materialist values and the general retreat of long-term commitments such as family formation (Surkyn and Lesthaeghe 2004; Manlove, Ryan et al. 2010; Perelli-Harris, Sigle-Rushton et al. 2010).

According to van de Kaa, the recent demographic trends, emerging since the 1970s, are linked to a new 'leitmotiv'. Where the first demographic transition was built on rationality, the second demographic transition is rooted in the individualisation movement. This evolution is also reflected in the role of parents. During the first demographic transition, the decline of fertility was linked to the growing motivation of parents to invest emotionally as well as financially in their children. Within the framework of the second demographic transition, the decline in fertility was marked by the development of the adult individual (van de Kaa 2004; Lesthaeghe 2010). Individuals asks themselves: "Will our lives be enriched by having a child now?" (van de Kaa 2004). Parenthood is still a highly valued role, but being a parent cannot go at the expense of other highly valued roles, such as labour force participation (Buchholz, Hofäcker et al. 2009). Employment, especially for the higher educated, is not merely evaluated on the basis of material advantages, but also on the basis of work

intrinsic characteristics (responsibility, achievement, interesting work...). The increase in female labour force participation is forged both by a desire for gender equity and individual autonomy, as by increased economic advantages. Among the highly educated the conflict between labour force participation and family formation is besides an economic conflict, also a reflection of the new values orientations of this group (Buchholz, Hofäcker et al. 2009).

Also Friedman's view on the value of parenthood transcends micro-economic models (Friedman, Hechter et al. 1994). As lower educated women have less favourable perspectives on the labour market, Friedman expects them to focus more on the appreciated role of motherhood to gain self-realization (Friedman, Hechter et al. 1994). According to Friedman everyone seeks to reduce uncertainty, albeit in very divergent ways. Traditionally there exist three strategies to realise a certain future: a stable career, marriage or parenthood. Friedman argues that "the impetus for parenthood is greatest among those whose alternative pathways for reducing uncertainty are limited or blocked". Particularly lower educated women use parenthood as a strategy to reduce uncertainty, because other strategies are often not available to them. Marriage is no longer a stable institution. Moreover the high unemployment rate among lower educated men has urged a lot of couples to postpone marriage (Oppenheimer 1994). The quest for a stable job is more difficult today, especially for lower educated people. They often find themselves in the least attractive jobs, making their attachment to the labour force market far less strong than that of highly educated people. Over the last few decades a changing labour market and high youth employment ratios have urged young people to invest in education. In turn lower educated people experience even more difficulties to find stable employment, as their market competitiveness shrinks now the majority of young people are increasingly higher educated. In short, lower educated people are confronted with high levels of insecurity, both on the labour as the marriage market (Manlove, Ryan et al. 2010). Consequently, parenthood has become more attractive as an alternative to reduce insecurity. Becoming a parent is an irreversible commitment that offers a clear and relatively certain future (Friedman, Hechter et al. 1994).

From the perspective of cultural oriented theories there thus appears an equally strong educational gradient in the attitudes of women regarding paid work and a family. The SDT-theory interprets the changing demographic behaviour after 1960 as a demonstration of changing value orientations, in which autonomy, gender equity and self-actualisation are increasingly accentuated. In labour force participation job intrinsic characteristics are of greater importance today. Also parenthood can contribute to self-realisation, without going at the expense of other highly valued roles. Among lower educated women the labour and marriage market offer fewer perspectives on a secure and stable future, therefore the irreversible commitment of parenthood becomes an important source of identity and meaning for them. From the perspective of values orientations too can be expected that highly educated women will accentuate more strongly their labour force participation after parenthood than will be the case for lower educated women.

2.3 Ability: availability and uptake of family policies

Continued labour force participation after entry into parenthood requires that necessary provisions are available to support the combination of work and family formation. The notion of (welfare state) contexts providing agency to individual actors is closely associated with Coale's condition of ability. The comparison of labour force participation after parenthood between women in Germany and Denmark indicates how divergent societal contexts yield strong differences in female employment after parenthood (Andersson, Kreyenfeld et al. 2009). According to Liefbroer and Corijn (1999) labour force participation and family formation are only compatible in a societal context where the availability of structural provisions supports the combination of paid work and a family and where gender equity is accepted as the dominant cultural orientation. The availability of provisions through family policies, however, is largely path dependent and reflects the cultural climate towards the combination of work and family. In the following sections we briefly consider the historical

development of European welfare states and the social acceptance of trajectories combining labour force participation and family formation.

From the 1970s onwards, the Scandinavian countries, but also France and Belgium, have invested substantially in the defamilialisation of care burdens and reconciling work and having young children (Esping-Andersen 1999). There exist short, but paid and job protected maternity leave systems, complemented by strong investments in child care provisions for mothers with pre-school children. As a result parents (mothers) of young children are encouraged to re-enter the labour market, after a short break. Today, these countries combine high period fertility levels with high levels of female labour force participation (Petit and Hook 2005; Rindfuss, Guilkey et al. 2010). The male breadwinner model dominated German and Austrian policy until the 1990s, which resulted in policy encouraging women to stay home and take care of the children by providing long maternity leave and high child benefits. Although there was provision of childcare, the childcare system was predominantly aimed at educating small children and not at reconciling work and family for women, therefore there existed little full-day care (Hank and Kreyenfeld 2000). Steering their family policy towards the dual-earner model is a slow process and as a result childcare enrolment in Austria and West-Germany still lags compared to other European countries such as Belgium, France and the Netherlands. Also period fertility levels in Austria and West-Germany are currently low by European standards (Gustafsson, Wetzels et al. 1996). The impact of the societal/institutional context is also strongly illustrated by the post-war development of the CEE countries. Under communism these countries experienced high female employment, going hand in hand with heavy state support for, reconciling work and family and high fertility rates. After the transition to market economies in the early 1990s, however, most CEE countries were confronted with very high levels of unemployment and substantial cuts were made in family policies. While they maintained long maternal leaves, as a way of handling unemployment level by decreasing labour force supply, investments in childcare were severely cut. The CEE countries are today characterised by rigid working arrangements, and few supportive measures for working parents, while the poor economic context at the same time provides a strong financial need for maternal employment. As a result, fertility rates in the CEE countries are among the lowest in Europe (Billari and Kohler 2004; Tang and Cousins 2005; HCSO 2010).

Next to structural measures, the cultural climate equally plays a central role. Historical traditions and values orientations strongly influenced the development of post-war welfare states (Fux 2008). Scandinavian countries were characterised by political centres that were strong and largely independent from the Roman Catholic Church. Moreover, in the Nordic countries, the contribution of social democratic movements to the decision making led to a broad redistributive systems, adapted to the strong position of the individual in these countries. The evolution of the Scandinavian welfare states fit with the demographic trends emerging from 1960s onwards. Contrary to the Scandinavian countries, the development of the Continental and Southern European countries, sharing a Roman Catholic tradition, was based on the subsidiarity-principle, emphasising the role of family in care. An exception here is West-Germany that does not share this Roman Catholic history, however the role of the family was central in the development of the German welfare state. This male-breadwinner model did not fit with the new demographic changes in behaviour occurring from the 1960s onwards, making the transition towards a dual earner model much less evident than was the case for the Nordic countries. Today this cultural influence is still very tangible in the Southern European countries, such Italy and Greece, and in Austria and West-Germany , while being less influential in Belgium and France (Fux 2008; Salles, Rossier et al. 2010). The CEE countries developed into broadly redistributive welfare states during the period of state socialism. Female employment was very high, resulting from forced industrialization and collectivisation in the 1950s, but even more from low wages in the 1960s which pushed women into the labour market. In contrast to the continental countries, dual-earnship became the dominant model in Eastern Europe. Today, however, the gender-culture in post-socialist countries is marked both by the belief that women have to contribute to a household's income – an attitude developed under state socialism, and by very traditional norms regarding the division of domestic tasks, leading to a double burden for women. In contrast to Scandinavian countries, the evolution towards gender equity in individual institutions is in many CEE

countries not counterbalanced by a similar level of gender equity in family institutions (Medgyesi 2002; Tang and Cousins 2005; Matysiak 2011).

The correlation between the institutional context, cultural climate, labour force participation and fertility is supported by empirical evidence for a broad set of European countries (OECD 2011). In Scandinavian countries female employment ratios are high and the gender gap is low. In Iceland the female employment rate amounts to 82,5 per cent for women aged 25 to 64, closely followed by Norway, Sweden, the Netherlands and Estonia with percentages around 70 per cent. The continental countries (Belgium, Germany, France and Austria) as well as the CEE countries (Bulgaria, Romania, Poland, Czech Republic) occupy a middle position with female employment rates around 60 per cent. In these countries, the gender gap in employment rates ranges between 10 and 15 per cent. In Southern European countries female employment rates are only around 50 per cent, with the rate being close to 30 per cent in Greece.

Restricting the scope to maternal employment provides additional information on the combination of labour force participation and family formation in European countries. In general motherhood negatively affects female employment, with lower participation immediately after motherhood, often called the 'M' curve. The impact of motherhood is not equally strong, however, in all countries (OECD 2010). In the Scandinavian countries, as well as the Netherlands, Belgium and France, maternal employment is high, even when children are very young (under 3). In these countries a large share of the mothers with children under 3 years are employed. In contrast, in Austria, Germany, Finland and a number of CEE countries, such as Bulgaria, Estonia, Slovakia, and Hungary, female employment rates are substantially lower among women with young children. These differences can be attributed to differences in childcare availability, and more importantly, differences in maternal leave systems (OECD 2008; OECD 2010). Countries with low employment rates among women with young children are characterized by policies granting prolonged parental. While countries with high maternal employment (the Scandinavian countries, Belgium, France, Netherlands) are characterised by elevated uptake of formal childcare. Denmark scores highest with up to 65 % of the under threes in formal childcare, followed by the Netherlands, Iceland and Norway with percentages of respectively 56, 55 and 51. Also Belgium and France score relatively high with respectively 48 and 42 per cent of the under threes in formal childcare. Germany (18%) and Austria (12%), as well as the CEE countries Estonia (18%), Bulgaria (15%), Romania (14%) and Hungary (9%) find themselves among the worst performing OECD-countries regarding formal child care enrolment for under 3s (OECD 2007/ 2008; Matysiak 2011).

Female employment and childcare uptake figures, however, are strongly differentiated by educational attainment. Across all countries the majority of the higher educated women are in employment, regardless of the type of welfare state. The institutional context does not seem to have any impact on the employment rates of these women (Cantillon, Ghysels et al. 2000; OECD 2008). Employment rates of lower educated women on the contrary show another reality. In all European countries employment rates of lower educated women are lower than those of highly educated women (Rönsen and Sundström 1996; Ghysels and Van Lancker 2009). However, female employment rates by educational level, among women aged 25 to 64 show that the size of the educational gradient is subject to variation between countries. In the Scandinavian countries the educational gradient in maternal employment is generally limited: Iceland performs best with an employment rate of lower educated women amounting to 78,3 per cent. Norway follows with 60,8 per cent. Denmark and Sweden, however, score with 57, 9 and 55, 9 per cent of lower educated women in employment less high by Scandinavian standards. The continental countries (France, Germany, Austria) follow close with percentages around 50 per cent. Belgium performs poorly and cannot join the other continental countries with only 34,8 per cent among the lower educated women in employment, leading here to a very large educational gap in female employment. Other poor performing countries, where the educational gradient is high, are the East European countries. Bulgaria, Hungary, Poland and the Czech Republic are situated at the very end of the ranking, with rates around 30 per cent (OECD 2008; Ghysels and Van Lancker 2009).

OECD figures show that the differences in labour force participation are correlated with a strong socio-economic gradient in the uptake of childcare. Low-income families make far less use of childcare arrangements (OECD 2011). Moreover Belgian research shows that higher educated women are overrepresented in the population of women taking up maternal or parental leave (Ghysels and Van Lancker 2009; Cantillon, Ghysels et al. 2010; Neels and Theunynck 2011). Although the lower uptake of childcare is in line with the micro-economic and cultural explanations, research shows that families with a weak socio-economic position are most often confronted with an unmet demand for child care arrangements. These results suggest that the lower enrolment is partly due to an unequal or socially selective access to child care provisions (Fuller, Kagan et al. 2002; Malcolm, Wilson et al. 2002; Sonenstein, Gates et al. 2002; MAS 2007; Vandenbroeck and Geens 2011).

3 Hypotheses

Considering differences in labour market perspectives, in attitudes towards combining labour force participation and family formation and in uptake of childcare arrangements, we derive following hypotheses regarding the socio-economic gradient and the gender differential in parental employment:

Hypothesis 1: Given the persistence of the gendered division of work within households, men are not to the same extent as women confronted with opportunity costs of family formation. As a result, we expect their labour force participation to remain high after entry into parenthood, being positively correlated with the presence of a partner and children in the household.

Hypothesis 2: Women are confronted with the (opportunity) cost of family formation, particularly in the case of pre-school children. The incompatibility between labour force participation and childrearing decreases as children enter education and, eventually, leave the parental home. We expect the labour-force position of women to reflect these changing (opportunity) costs by transitions between fulltime employment, part-time work, inactivity or unemployment and uptake of parental leave arrangements. We also expect the number of children to constitute an important determinant of female labour force participation: having an additional child may prolong the period where women partially retreat from the labour market for childrearing and the benefits of withdrawing from the labour market are likely to increase as the number of children increases (e.g. costs for formal childcare).

Hypothesis 3: In line with previous research, we expect a strong educational gradient in maternal employment, with lower educated women more frequently being inactive and taking up part-time positions. The educational gradient in maternal employment is associated with opportunity costs of withdrawing from the labour market being lower for lower-educated women; lower educated women focusing more strongly on their role as mother as a strategy to reduce uncertainty and the educational gradient in access to childcare and parental leave. The factors are considered in the following hypotheses.

Hypothesis 4: Highly educated women make more often use of childcare provisions and leave systems, as compared to lower educated women. We expect the educational gradient of childcare use to be stronger where labour market positions of childless women are already strongly differentiated in terms of education, thus signalling limited labour market opportunities for the lower educated.

Hypothesis 5: Given the broadly different policy contexts in the different European countries, we expect strong differences in both the general level of labour market participation and the educational gradient of employment across countries. Norway, as well as France and Belgium are characterised by family policies alleviating the conflicts between parenthood, and employment, especially for parents of pre-school children. Norway moreover is known for its cultural climate aimed at gender equity. Austria and West-Germany are characterised on the one hand by a structural lag in their welfare provisions making work and family possible and on the other hand by a more profound normative resistance towards female employment among women with young children (Salles, Rossier et al. 2010). Finally the CEE countries are today characterised little support for parents of pre-school children. But there exist a strong dual-earnership culture and financial need for

maternal employment, pushing women into the labour market when children enter school (Matysiak 2011). Hence, we expect employment for mothers with children under 3 years to be highest in Norway, Belgium and France, while being low in Austria, West-Germany, and the CEE countries. When children reach the age of 3 years, we expect maternal employment to be highest Norway, followed by CEE countries, then France and Belgium and finally Austria and West-Germany. Moreover we expect Scandinavian countries (i.e. Norway) to rank first in terms of use of childcare provisions and attitude regarding work, family and care, followed by France and Belgium, then Austria and West-Germany and finally the CEE countries (Liefbroer and Corijn 1999; Rindfuss, Guzzo et al. 2003).

Hypothesis 6: A gendered division of labour in households has a positive effect on employment of men, but adversely affects the labour market position of women. Among higher educated women we expect gender equity and post materialistic values to be accentuated more strongly as they have a less traditional attitude towards work, family and care. Among lower educated women we expect that a role as a parent is more accentuated as labour market prospects are dim for this group.

Hypothesis 7: In line with second demographic transition theory we expect a strong fragmentation of values orientations in terms of household positions, with married being more traditionally oriented and having lower employment rates than women without a partner or women living in a cohabiting union.

4 Data and Methods

The analyses use data from the *Generations and Gender Program* (GGP) established by UNECE in 2000 to improve understanding in the causes and consequences of demographic changes in Europe. GGP consists of two pillars: i) a contextual database containing aggregated indicators (regarding social policy, etc), and ii) a system of national representative surveys carried out by the participating countries among the residential population aged 18 to 79 (Spielauer 2004; Vikat, Speder et al. 2007). Although the data are currently available for 14 countries in Europe and OECD, the analysis is limited to Norway, France, Belgium, Austria, West-Germany, Estonia, Bulgaria, Hungary and Romania, as the databases of these countries were the most complete ones regarding the variables needed for our analyses. Since we aim at illustrating the impact of family formation on labour force participation, we limit the analysis to respondents aged 18 to 45: this group shows strong variation in terms of household composition, while employment rates are not biased by 'end of career issues', i.e. early retirement. Respondents that are still in education are also excluded from the research population, as they introduce a strong downward bias in the labour force participation of childless women. The analysis of the labour market positions is based on information by self-assessment of the respondents and distinguishes following positions: i) full-time employment (either employed, self-employed or helping family member in a family business), ii) part-time employment, iii) uptake of parental leave (e.g. maternity leave, parental leave, childcare leave, etc) and iv) unemployment or inactivity. Although these four positions are distinguished in the descriptive analysis, the multivariate analysis contrasts full-time employment against all other labour market positions. This distinction draws much sharper contrasts in the labour force participation of men and women after the transition to parenthood compared to analyses of employment rates where no distinction is made between full and part-time employment, all the more because the literature suggests that there exists an important qualitative difference between full and part time positions. The multivariate analysis uses a logit-model to map the effects of covariates on full-time employment. The exponentiated coefficients are reported to allow an interpretation in terms of odds (constant or reference category) and odds-ratios (covariate effects).

Educational attainment is based on the international ISCED-classification and distinguishes three categories: i) no education, primary school and lower secondary school (ISCED-levels 1 & 2, reference category), ii) higher secondary school (ISCED-levels 3 & 4) and iii) tertiary education (ISCED-levels 5 & 6). The age of the youngest child refers to the age of the youngest child in the household of the respondent, regardless whether this child is a biological child of the respondent, an adoptive

child or a stepchild. The number of children was grouped into four categories: i) no children, ii) one child, iii) two children, iv) three or more children. For the multivariate analysis, the number of children was combined with the age of the youngest child, resulting in a typology consisting of eight categories: i) no children, ii) one child, aged 0-2, iii) one child, aged 3-11, iv) one child, aged 12-18, v) two children with the youngest aged 0-2, vi) two children, with the youngest aged 3-11, vii) two children: with the youngest aged 12-18 and viii) three children or more. Type of relationship distinguishes between i) respondents without a cohabiting partner (reference category), ii) married respondents, and iii) respondents living in a cohabiting union.

The item regarding *gender attitudes* is based on three items questioning the gender attitudes in relation to work, family and care: 'the care for pre-school children is mainly a task for the family', 'looking after the home/family is just as fulfilling as working for pay' and 'a pre-school child is likely to suffer when his/her mother works'. Respondents that express a traditional view on all three items are considered to have a traditional preference. Conversely, respondents demonstrating a progressive stand on each item, are considered 'progressive'. Mixed answer patterns are regarded as 'neutral'. The Inglehart *materialism-post-materialism scale* reflects the policy goals that respondents give priority to. Respondents choosing 'fight against crime' and 'stable economy' are regarded as 'materialist', while respondents opting for 'progress towards a less impersonal and more human society' and 'progress towards a society where ideas count for more than money' are considered 'post-materialist'. Respondents combining materialist and post-materialist goals are considered 'mixed'. Based on the items referring to job characteristics, a dichotomous indicator was created to gauge whether respondents consider work as a means to self-realisation. Respondents that choose each time for an job-intrinsic quality ('a job respected by people in general', 'an opportunity to use initiative', 'a job in which you feel you can achieve something', 'a responsible job', 'a job that is interesting', 'a job that meets ones abilities') were coded one, whereas respondents choosing for a combination of intrinsic and extrinsic job qualities ('good pay', 'not too much pressure', 'good job security', 'good working hours', and 'generous holidays') were coded as zero. Finally, the results regarding the socio-economic gradient in labour force participation are compared to differential use of childcare provisions and differences in attitudes towards the combination of work, family and care. With regard to the use of formal childcare we make a distinction between formal/paid childcare (such as kindergartens) and informal childcare (family and friends).

5 Results

In section 5.1 we first show the results of our descriptive analyses regarding female employment before and after parenthood. Sections 5.2 and 5.3 further show the determinants of full time employment for women and men, resulting from our multivariate logistic regression. Finally, in sections 5.4 and 5.5 we describe the use of formal and informal childcare arrangements and attitudes towards reconciling work and family.

5.1 The labour force participation of women before and after parenthood

Table 1 sketches the labour market position of women aged 18-45 in the countries considered, controlling for parity and the age of the youngest child in the household. A first general remark is that, in line with hypothesis 2, the career of women between 18 and 45 is indeed characterised by frequent transitions between full time work, part time work, maternity leave and inactivity or unemployment. Further results point to a gap between highly educated women (tertiary degree) and lower educated women (at most a degree of lower secondary school). Although labour market positions are already strongly differentiated before parenthood, the educational differential in most cases widens after the entry into parenthood as higher educated women succeed better in staying on the labour market. Among lower educated women, a sizeable share moves into part-time employment of parental leave – similar to the higher educated -, but also a substantial number of lower educated women withdraw from the labour market after becoming a parent. The labour market position of women with children aged 3 to 11 years, shows that re-entering the labour market from unemployment or inactivity appears to be difficult as a substantial part of the women in

inactivity fail to re-enter the labour market when their children grow older. In Belgium and Austria around 30 per cent of the lower educated women, with children aged 3 to 11 years, are in unemployment or inactivity. These numbers go up to 50 per cent in France and Romania and in West-Germany and Bulgaria the number of lower educated women with children aged 3 to 11 years even amount to 70 per cent. In these countries, the withdrawal of lower educated women from the labour market is not a temporary phenomenon. Although the labour market position of lower educated women is most severely affected by the transitions to parenthood, the position of highly educated women is equally affected as the number of women working full-time decreases substantially after motherhood. Initially highly educated women flow into maternity leave, but when these possibilities are exhausted, they frequently move into part-time employment, rather than taking up full-time positions again.

Apart from the general patterns emerging across countries, there are also marked differences between the countries considered, clearly illustrating the impact of societal context on maternal employment. Among mothers with a 0 to 2 year old child, high (full time) employment rates are found in Norway, France, Belgium and Romania. In Austria, West-Germany, and the CEE countries, however, the majority of women take up maternity leave, both highly and lower educated women. This is in line with our hypothesis, since family policy in the former group is focused on relatively short maternity leave in combination with high provision of child care, while in the latter group the focus is more on longer maternity leave and less on re-entry into the labour market. Among mothers with a youngest child aged 3 to 11, again strong shifts in female employment take place, as maternity leave entitlements are exhausted in most (except for Hungary and Belgium) countries. In the continental countries the exit out of leave systems is rarely accompanied by a re-entry in full time employment. A lot of women flow into part-time work, a settlement often installed and supported by the governments in these countries to alleviate the work-family conflict. In Norway and certainly in the CEE countries the exit out of maternity leave is accompanied by a strong increase in the percentage of women in full time employment, when the youngest child reaches the age of 3 to 11 years. While full time employment in the CEE countries is due to rigid working arrangements (part time positions are almost non-existent) and a financial need of two full incomes, the situation is completely different in Norway, where full time employment is strong because of small work-family incompatibility in tandem with a positive cultural climate for working mothers. The Norwegian results contrast further with those of the CEE countries regarding the gap between lower and higher educated women with a youngest child aged 3-11 years. In Norway female participation for both higher as lower educated women recovers to its original high level, while in the CEE countries this is only the case for higher educated women. Consequently the gap between high and lower educated women is very small in Norway and on the contrary very large in the CEE countries, being no less than 54 per cent in Romania and 61 per cent in Bulgaria. In Germany, both lower and higher educated women show high percentages ending up in inactivity.

Table 1 Female employment by education and age of youngest child in the household, women, 18-45 years.

Country & Educational level		Full time	Part time	Maternity Leave	Inactive/Unemployed	N
<i>- No children in the household -</i>						
Norway	Low	47,8	29,8	0,0	22,4	255
	High	85,4	10,4	0,5	3,7	383
France	Low	33,7	21,3	0,0	44,9	89
	High	76,8	8,0	1,1	14,0	349
Belgium	Low	40,7	18,5	5,6	35,2	54
	High	75,9	10,9	4,1	9,1	220
Austria	Low	54,4	24,7	0,0	20,8	77
	High	75,4	16,6	0,5	7,5	187
W-Germany	Low	31,6	18,4	2,6	47,4	114
	High	68,8	15,6	0,6	14,9	154
Estonia	Low	33,3	3,7	0,0	63,0	27
	High	82,3	9,1	1,8	6,7	164
Romania	Low	38,9	11,6	0,0	49,5	95
	High	91,5	0,8	0,0	7,6	118
Bulgaria	Low	22,0	3,3	1,1	20,8	91
	High	81,7	4,9	1,3	12,1	224
Hungary	Low	36,5	10,6	0,0	52,9	85
	High	88,2	5,7	0,0	6,1	280
Georgia	Low	6,2	4,7	0,0	89,1	64
	High	42,0	14,9	0,0	59,7	670
<i>- Youngest child in the household aged 0-2 years -</i>						
Norway	Low	25,0	30,2	14,6	30,2	96
	High	38,4	23,1	25,6	12,8	281
France	Low	13,8	9,2	16,9	60,0	65
	High	51,8	24,7	14,1	9,4	170
Belgium	Low	11,3	13,2	17,0	58,5	53
	High	45,0	15,4	35,6	4,0	149
Austria	Low	4,3	15,2	58,7	21,7	46
	High	6,0	50,0	40,0	4,0	50
W-Germany	Low	2,5	2,5	42,5	52,5	40
	High	17,1	21,4	34,3	27,1	70
Estonia	Low	3,2	0,0	77,4	19,4	31
	High	25,3	6,6	61,5	6,6	91
Romania	Low	10,1	10,1	7,6	72,2	79
	High	45,2	0,0	54,8	0,0	31
Bulgaria	Low	5,6	1,1	44,9	48,3	89
	High	24,4	3,5	62,8	9,3	86
Hungary	Low	1,4	1,4	97,2	0,0	71
	High	18,6	2,0	78,4	1,0	102
Georgia	Low	0,0	0,0	0,0	100,0	31
	High	13,8	9,4	9,4	67,4	138
<i>- Youngest child in household aged 3-11 years -</i>						
Norway	Low	51,8	32,6	0,0	15,6	218
	High	66,3	28,8	0,2	4,7	427
France	Low	25,0	25,0	0,0	50,0	164
	High	53,8	29,1	0,4	16,7	234
Belgium	Low	24,1	36,8	3,9	32,2	87
	High	41,9	29,5	20,3	8,3	217
Austria	Low	25,0	41,0	3,0	31,0	100
	High	34,6	53,8	2,6	9,0	78
W-Germany	Low	10,7	17,9	0,9	70,5	112
	High	26,9	45,2	0,0	27,9	104
Estonia	Low	45,6	5,9	11,8	36,8	68
	High	76,2	10,4	3,4	10,4	164
Romania	Low	36,7	15,5	0,0	47,8	245
	High	91,0	0,0	0,2	9,0	67
Bulgaria	Low	25,0	4,2	1,6	69,3	192
	High	86,1	2,9	0,4	10,7	280
Hungary	Low	25,6	6,8	30,7	36,9	176
	High	81,1	7,3	6,1	5,5	164
Georgia	Low	13,2	7,9	0,0	78,9	76
	High	33,3	13,8	0,2	64,9	808

5.2 Determinants of full time employment among women

The results of our descriptive analysis show how family formation often goes hand in hand with strong adjustment in female labour force participation. While childless women occupy predominantly full time positions, mothers flow first into systems of maternity leave, and later into part time jobs – save for CEE women who re-enter into their full time positions. For women aged 18 to 45 who are no longer in education, this section contrasts women who stay in full-time employment after entering parenthood against women moving into part-time employment or withdrawing from the labour market. The net-effect of individual and household characteristics on staying in full-time employment after parenthood are collected in table 2. As the impact of family formation on the labour force participation differs strongly between countries, the multivariate analyses are conducted separately for each of the countries considered. Lower educated, single women without children women aged 42 to 45 have been used as the reference category throughout.

An *educational gradient* in full time employment of women appears in all countries (hypothesis 3), with highly educated women working full time more frequently than lower educated women. Even after controlling for the presence of children, relationship type and indicators regarding gender attitudes, post-materialism and job attitudes, the educational effect stays strongly significant in each country. The gap is small in Austria and Norway (were the odds of full time employment are respectively 70 per cent and 112 per cent higher for higher educated compared to lower educated women), but considerably larger in Belgium, France and the CEE countries. Especially in Bulgaria, Hungary and Romania the educational gradient is large, as the odds of full time employment for higher educated women are 9 to 12 times higher compared to lower educated women.

The *number of children* and *the age of the youngest child* in the household have a strong significant effect in all of the countries considered. For all types of households and across all countries, apart from Bulgaria and Estonia, the odds of full-time employment are lower for women with children than for women without children. This corresponds with the results of previous research (Storms 1995; Ghysels and Van Lancker 2009). The decrease in full-time employment is particularly strong among women with *one child* aged 0-2 years. Especially in Austria, West-Germany, Bulgaria and Hungary there is a pronounced fall in full time employment. As the youngest child grows older, the odds of full time employment rise again, which is in line with results from previous research (Joshi, Macran et al. 1996). In Bulgaria and Estonia this recovery is remarkable: the odds of full time employment among women with a child aged 12-18 years, are no longer significant and they even exceeds those of childless women. In Norway, France, Romania and Georgia we also see this recovery trend – albeit more modest than in Bulgaria and Estonia. Meanwhile in Austria and West-Germany, the odds of full time employment stay significantly lower, even when the child grows older. In these countries the transition to parenthood still has far reaching and long term effects on the labour force participation of women. Among women with *two children* we find a comparable pattern: the odds of full time employment are very small when the age of the youngest child is 0-2 years, but here the recovery of the labour market position is less pronounced compared to women with one child. Again the difference between childless women and women with two children is more pronounced in Austria, West-Germany, and Belgium. Motherhood has in these countries a very strong impact on full time employment, which confirms our hypothesis (5). Finally, among women with *three children* or more the odds of full time employment are in all countries rather to very small.

In an additional set of analyses (not displayed) we explored whether the effect of family formation on full time employment differs significantly by educational level. Ghysels and Van Lancker (2009) show how the gap between highly and lower educated mothers regarding labour force participation increases strongly after the transition to parenthood: in a number of European countries lower educated women would reduce their labour force participation after parenthood more than higher educated women. However, in this research – where we clearly distinguish between women in maternity leave and employed mothers – we find no significant interaction in Belgium, West-Germany, Bulgaria, Hungary and Romania between education, the number of children and age of youngest child on the odds of full time employment. The gap between higher and lower educated women does not, at least not regarding full time employment, become larger after the

transition to parenthood. In Norway, France and Austria we did find a significant interaction between education and the number of children/age of the youngest child on full time employment, however not confirming our hypothesis and previous research stating that the gap grows larger. In Norway and Austria the gap between lower and higher educated women generally becomes smaller in terms of full time employment. In France, the gap first becomes bigger – with one child aged 0- 2 – but as the number of children and the age of the youngest child grow, the employment gap between higher and lower educated women decreases.

The effect for *relationship type* shows that married women in Norway, Georgia and particularly West-Germany and Austria – controlling for age, presence of children and values – have a significantly lower chance of being in full time employment. This is in line with the hypothesis (7) that married women are more traditionally oriented. These results moreover suggest that the male breadwinner model is still particularly strong in Austria and West-Germany, which in turns indicates that the differences between countries are indeed related to the ‘historical traject’ of countries (Fux 2008). These results, however, differ from previous research where a positive influence of having a partner and being married on employment was found. Further, our results show that in all countries the odds for cohabiting women do not differ significantly from those of single women, except for France and West-Germany.

Finally, the indicators for *gender attitudes* shows a significant effect in Norway, France and Belgium, with a neutral or progressive gender attitude having a positive effect on full time employment. In Austria, Germany and the CEE countries, except for Hungary and Estonia, there is no significant difference between a neutral or progressive gender attitude and a conservative attitude. Inglehart’s materialism-postmaterialism scale does not lead to a significant effect after controlling for age and education, save for Norway and West-Germany. In both countries the effect of a post-materialist stand on full time work is negative, which does not confirm our hypothesis (Surkyn and Lesthaeghe 2004). Additional analyses (not shown) indicate that women holding a post-materialist view have higher odds of part-time employment.

5.3 Determinants of full time employment among men

In all countries the odds of full time employment for lower educated, single men aged 42 to 45 years, are higher compared to women with the same profile. Our results show – similar to the analysis for women – a marked *educational gradient* among men, with the odds of full time employment being significant higher among medium or higher educated men compared to lower educated men. The gap between lower educated and highly educated men is particularly large in Austria and Bulgaria (odds of full time employment for higher educated men are 7 times higher compared to lower educated men) and, to a lesser extent, in Belgium, Estonia, Romania and Hungary.

Both the effects of the *presence of young children* and *the presence of a partner* in the household on full time employment diverge strongly from the effects among women. While the presence of children in the household has a marked negative effect on fulltime employment among women, there is barely a significant effect of the presence of children on the full time employment of men. Regardless of the number of children and the age of the youngest child in the household, the odds of full time employment lie in the majority of household compositions higher among men with children than men without children, except for Estonia, Bulgaria and Georgia. Our results therefore confirm the hypotheses that male employment is positively affected by having a child and that male and female employment diverge after parenthood. Moreover, the effect of the presence of a partner on full time employment is opposite of that of women. The odds of full time employment among married men are in all countries higher than those of single men and in most countries this effect is significant – even after controlling for age, education and presence of children. In West-Germany, the CEE countries and surprisingly also in France, this effect is large and strongly significant. These results, combined with the results for women indicate that the male breadwinner model is still strongly present in West-Germany and Austria. Secondly, employment of single (younger) men in the CEE countries and France is weak compared to men cohabiting with a partner or being married.

The direction of the effect of gender attitudes on full time employment is strongly divergent for the different countries and it is in the majority of the cases not significant. The results of Inglehart's post-materialism scale – parallel with the analysis for women – has a different effect in Western countries compared to CEE countries. In Norway, Belgium, Austria and West-Germany, the effect of a post-materialist view is negative, and even strongly significant for Norway, Austria and West-Germany, while the effect does not significantly differs from a materialist attitude in the CEE countries.

Table 2 Results of the logit model of full time employment by age, education, number of children and age youngest child in the household, relationship type and value patterns, women, 18-45 years.

Independent Variables	Norway		France		Belgium		Austria		West -Germany		East -Germany		Estonia		Bulgaria		Hungary		Hungary		Georgia	
	Ex(b)	Sig.	Ex(b)	Sig.	Ex(b)	Sig.	Ex(b)	Sig.	Ex(b)	Sig.	Ex(b)	Sig.	Exp(b)	Sig.	Ex(b)	Sig.	Ex(b)	Sig.	Ex(b)	Sig.	Ex(b)	Sig.
Constant	5,462	***	1,368		1,605		1,912	*	1,754	*	0,205	*	0,886		0,526	***	0,478	***	0,661	*	0,364	***
Age groups		**		***				***		***				**		***		***		***		***
. 17-21 years	0,308	***	0,312	***	0,505		0,369	***	0,486	**	0,837		0,911		0,547	**	2,879	***	0,814		0,534	**
. 22-26 years	0,704		0,676		0,676		1,564		0,467	***	1,066		2,699	**	0,937		2,32	***	2,005	**	0,858	
. 27-31 years	0,767		1,099		1,054		1,337		0,989		2,593		2,186	*	1,190		3,379	***	2,112	***	1,219	
. 32-36 years	0,841		0,997		0,989		1,059		1,207		1,356		1,839		1,283		1,87	***	1,412		1,231	
. 37-41 years	0,930		1,299		0,831		0,945		1,241		1,515		1,024		0,900		1,561	**	1,673	**	1,171	
. 42-45 years	1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000	
Education		***		***		***		***		***		***		***		***		***		***		***
. Low	1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000	
. Mid	1,714	***	1,78	***	2,893		3,451	***	1,901	***	6,619	**	3,085	***	3,999	***	3,380	***	2,464	***	1,823	**
. High	2,499	***	2,041	***	3,189	***	7,724	***	3,641	***	16,102	***	4,542	***	7,893	***	4,922	***	5,384	***	2,57	***
Number/Age child				*				*		*							*		***		***	
. no children	1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000	
. 1 child, 0-2y	1,488		0,938		0,858		1,428		1,637		3,178		0,506		0,687		0,726		0,508	*	1,045	
. 1 child, 3-11y	1,757		1,048		2,130		2,668	*	0,701		1,951		0,952		0,873		2,834	**	0,892		0,866	
. 1 child, 12-18y	0,658		1,748		1,582		-		1,776		2,034		1,698		0,907		1,189		1,220		0,901	
. 2 kids, 0-2 y	1,145		2,608	*	1,365		0,919		0,697		2,407		0,894		0,491	*	1,348		1,564		0,761	
. 2 kids, 3-11y	1,588		1,638		1,213		2,554	*	1,214		0,996		1,04		0,805		0,789		0,725		0,724	
. 2 kids, 12-18y	1,722		1,673		1,653		1,830		1,636		1,431		0,746		0,721		1,162		1,147		0,891	
. 3+ kids	1,234		0,822		1,023		0,943		0,464	**	0,683		0,427		0,410		0,563	**	0,514	**	1,045	
Relationship		*		***		**		*		***			***		***		***		***		***	
. no partner	1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000	
. married	1,374		2,601	***	1,759	*	1,860	*	3,375	***	2,232		5,212	***	2,477	***	2,628	***	2,817	***	2,558	***
. cohabiting	1,599	**	2,109	***	2,082	**	1,661	*	1,190		2,195		2,666		1,236		1,576	**	1,072		1,481	*
Genderattitude				**				**		**		*	**		**		**		**		**	
. conservative	1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000	
. neutral	1,196		1,208		1,442	**	0,966		0,820	***	0,470	*	0,446	***	0,922		0,853		1,029		0,949	
. progressive	1,283		1,415		1,257		1,116		0,785		0,755		0,667		0,925		1,123		0,993		0,909	
Materialism		***				***		***		***												
. materialistic	1,000		-		1,000		1,000		1,000		1,000		1,000		1,000		-		1,000		1,000	
. mixed	0,779		-		0,821		0,736		0,754	*	1,154		1,315		0,835		-		1,058		0,716	
. postmaterial.	0,458	***	-		0,635		0,404	***	0,416	***	0,607		1,238		1,306		-		1,114		1,216	
Job realisation	0,639	**	-		1,299		0,805		0,886		1,274		0,866		1,174		0,478	***	0,932		3,083	*
Model Parameters																						
Model Chi ²	224,41***		252,428 ***		137,970 ***		182,713***		285,729 ***		63,666 ***		112,780***		472,585 ***		271,94 ***		441,446 ***		176,089***	
Deviance	2113,125		1961,368		1143,523		1416,076		1816,622		408,348		807,402		3185,764		2630,097		2310,683		2790,364	
N	3135		1818		1351		1646		1612		287		851		2885		2722		2346		2142	

Source: United Nations Economic Commission for Europe (UNECE), Generations & Gender Survey, Wave 1 Harmonized Data Files (www.ggp-i.org). Legende: * p<0,050, ** p<0,010, *** p<0,001.

Table 3 Results of the logit model of full time employment by age, education, number of children and age of the youngest child, relation type and value patterns, men, aged 18 to 45.

Independent Variables	Norway		France		Belgium		Austria		West -Germany		East -Germany		Estonia		Bulgaria		Hungary		Hungary		Georgia	
	Ex(b)	Sig.	Ex(b)	Sig.	Ex(b)	Sig.	Ex(b)	Sig.	Ex(b)	Sig.	Ex(b)	Sig.	Exp(b)	Sig.	Ex(b)	Sig.	Ex(b)	Sig.	Ex(b)	Sig.	Ex(b)	Sig.
Constant	5,462	***	1,368		1,605		1,912	*	1,754	*	0,205	*	0,886		0,526	***	0.478	***	0,661	*	0,364	***
Age groups		**		***				***						**		***				***		***
. 17-21 years	0,308	***	0,312	***	0,505		0,369	***	0,486	**	0,837		0,911		0,547	**	2,879	***	0,814		0,534	**
. 22-26 years	0,704		0,676		0,676		1,564		0,467	***	1,066		2,699	**	0,937		2,32	***	2,005	**	0,858	
. 27-31 years	0,767		1,099		1,054		1,337		0,989		2,593		2,186	*	1,190		3,379	***	2,112	***	1,219	
. 32-36 years	0,841		0,997		0,989		1,059		1,207		1,356		1,839		1,283		1,87	***	1,412		1,231	
. 37-41 years	0,930		1,299		0,831		0,945		1,241		1,515		1,024		0,900		1,561	**	1,673	**	1,171	
. 42-45 years	1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000	
Education		***		***		***		***		***		***		***		***		***		***		***
. Low	1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000	
. Mid	1,714	***	1,78	***	2,893		3,451	***	1,901	***	6,619	**	3,085	***	3,999	***	3,380	***	2,464	***	1,823	**
. High	2,499	***	2,041	***	3,189	***	7,724	***	3,641	***	16,102	***	4,542	***	7,893	***	4,922	***	5,384	***	2,570	***
Number/Age child				*				*		*							*		***		***	
. no children	1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000	
. 1 child, 0-2y	1,488		0,938		0,858		1,428		1,637		3,178		0,506		0,687		0,726		0,508	*	1,045	
. 1 child, 3-11y	1,757		1,048		2,130		2,668	*	0,701		1,951		0,952		0,873		2,834	**	0,892		0,866	
. 1 child, 12-18y	0,658		1,748		1,582		-		1,776		2,034		1,698		0,907		1,189		1,220		0,901	
. 2 kids, 0-2 y	1,145		2,608	*	1,365		0,919		0,697		2,407		0,894		0,491	*	1,348		1,564		0,761	
. 2 kids, 3-11y	1,588		1,638		1,213		2,554	*	1,214		0,996		1,04		0,805		0,789		0,725		0,724	
. 2 kids, 12-18y	1,722		1,673		1,653		1,830		1,636		1,431		0,746		0,721		1,162		1,147		0,891	
. 3+ kids	1,234		0,822		1,023		0,943		0,464	**	0,683		0,427		0,410		0,563		0,514	**	1,045	
Relationship		*		***		**		*		***			***		***		***		***		***	***
. no partner	1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000	
. married	1,374		2,601	***	1,759	*	1,860	*	3,375	***	2,232		5,212	***	2,477	***	2,628	***	2,817	***	2,558	***
. cohabiting	1,599	**	2,109	***	2,082	**	1,661	*	1,190		2,195		2,666		1,236		1,576	**	1,072		1,481	*
Genderattitude						**			**		*		**		**		**		**		**	
. conservative	1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000		1,000	
. neutral	1,196		1,208		1,442	**	0,966		0,820	***	0,470	*	0,446	***	0,922		0,853		1,029		0,949	
. progressive	1,283		1,415		1,257		1,116		0,785		0,755		0,667		0,925		1,123		0,993		0,909	
Materialism		***						***		***												
. materialistic	1,000		-		1,000		1,000		1,000		1,000		1,000		1,000		-		1,000		1,000	
. mixed	0,779		-		0,821		0,736		0,754	*	1,154		1,315		0,835		-		1,058		0,716	
. postmaterial.	0,458	***	-		0,635		0,404	***	0,416	***	0,607		1,238		1,306		-		1,114		1,216	
Job realisation	0,639	**	-		1,299		0,805		0,886		1,274		0,866		1,174		0.478	***	0,932		3,083	*
Model Parameters																						
Model Chi ²	224,41***		252,428 ***		137,970 ***		182,713***		285,729 ***		63,666 ***		112,780***		472,585 ***		271,94 ***		252,977***		176,089***	
Deviance	2113,125		1961,368		1143,523		1416,076		1816,622		408,348		807,402		3185,764		2630,097		2231,569		2790,364	
N	3135		1818		1351		1646		1612		287		851		2885		2722		2346		2142	

Source: United Nations Economic Commission for Europe (UNECE), Generations & Gender Survey, Wave 1 Harmonized Data Files (www.ggp-i.org). Legende: * p<0,050, ** p<0,010, *** p<0,001.

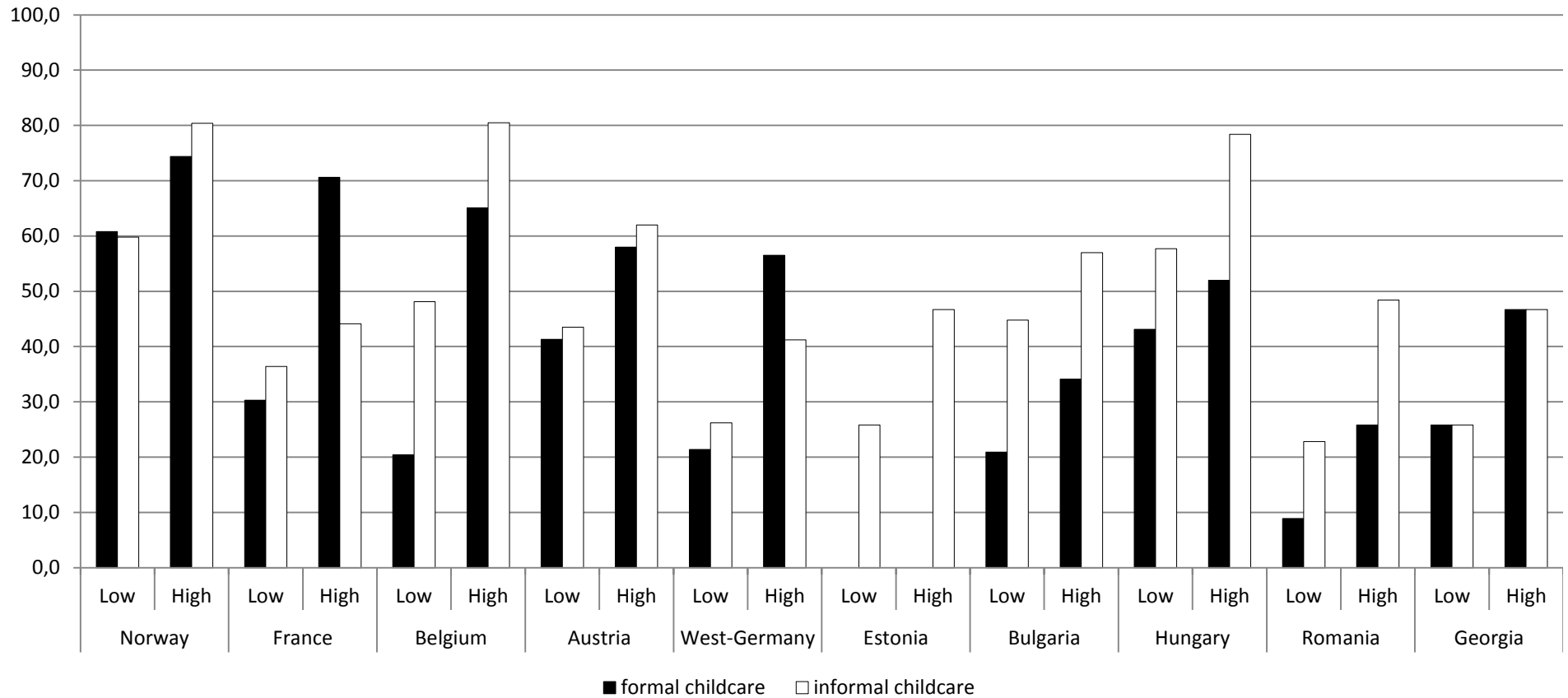
5.4 Use of formal and informal childcare arrangements

The GGS allows to set off differences in full time employment by education and household composition (partner, children) against the differences in the use of (in)formal childcare arrangements (figure 1). In line with hypothesis (4) an educational gradient of childcare use appears in every country, with higher educated women making use of childcare arrangements more frequently. However, substantial between-country variation emerges in this respect, broadly conforming to our earlier hypothesis. In Norway uptake of both formal and informal childcare arrangements is high, with the educational gradient for both types of care being remarkably limited compared to the other countries. Especially France, Belgium and the CEE countries show a large gap in the use of childcare between higher and lower educated women. In Belgium and France the use of formal child care is relatively high for higher educated women, but the percentages are substantially lower for lower educated women, in accordance with their lower labour force participation. While in France the gap is particularly apparent concerning formal care, the disadvantage among lower educated women in Belgium is marked for both formal as informal care. In Austria and Germany, the use of childcare is lower compared to France and Belgium, but the gap between higher and lower educated women is also more limited. Finally, the CEE countries record both the smallest percentages of childcare use and a large educational gradient. Here the gap especially holds for the use of informal childcare.

5.5 Attitudes by education towards reconciling work and family

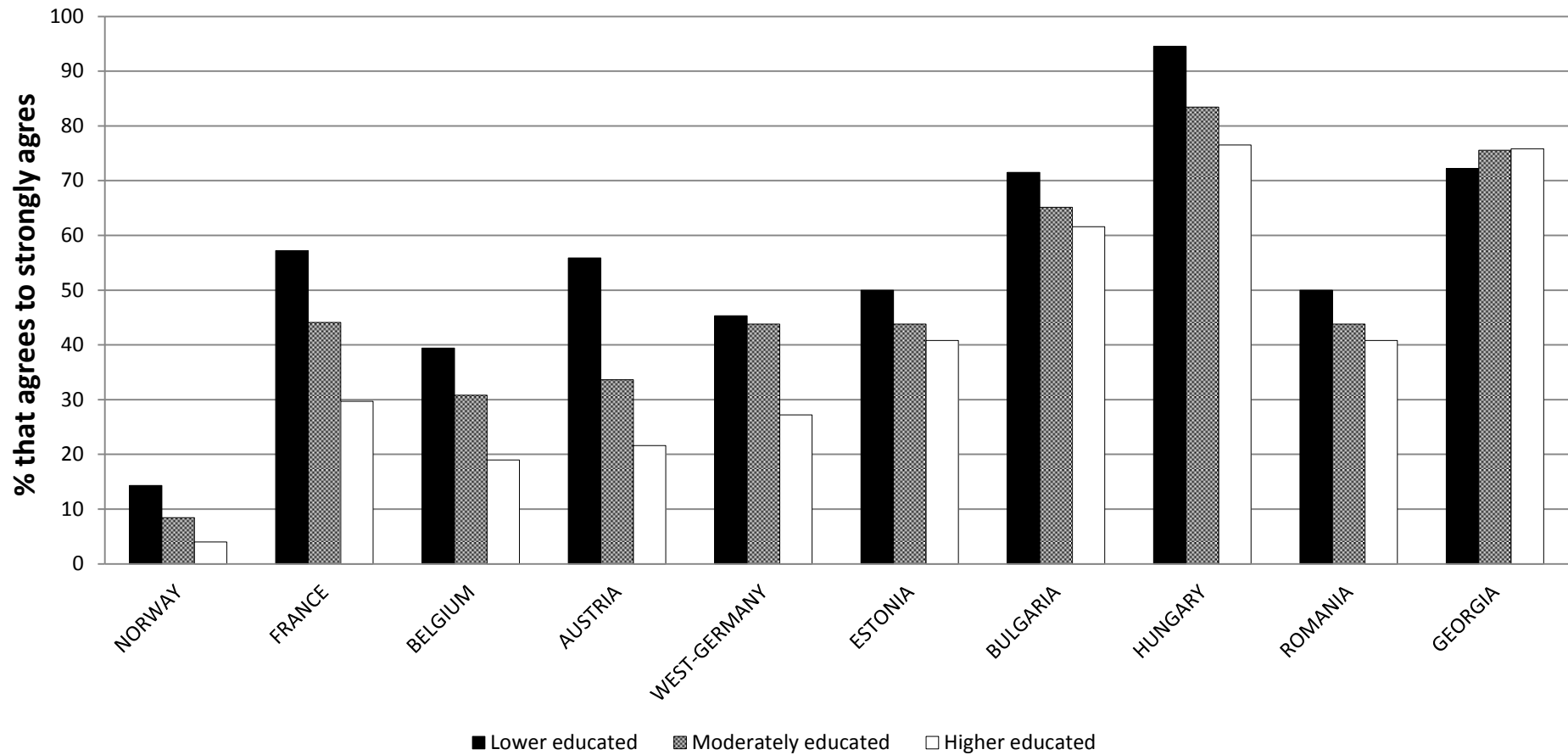
GGS also makes it possible to link the strong variation between countries in terms of female labour force participation to attitudes regarding work, family and care (figure 2). The position of Norway is again remarkable: a very small, almost negligible percentage of Norwegian women agrees (to strongly agrees) with the statement 'a pre-school child is likely to suffer if his/her mother works', suggesting a positive cultural climate towards maternal employment. In line with Liefbroer and Corijn, this normative component is an important part of the societal context (Liefbroer and Corijn 1999). After Norway, Belgium has the lowest number of women agreeing with the statement a pre-school child is likely to suffer if his/her mother works', however the difference with France, Austria, West-Germany, Romania and Estonia is less pronounced. If we compare the different continental countries, we see that in Austria and Germany, a larger percentage – especially of lower educated women – agrees that a pre-school child suffers when his/her mother works. This indicates that the combination of work and family – despite recent reforms in family policy – still is less accepted by the population in these countries than is the case in Belgium and France. Finally the results for the CEE draw attention. Notwithstanding a relatively high rate of full-time employment among mothers with young children, Bulgaria and Hungary, record very high percentages of women agreeing with the statement. This suggests that the dual earner model in practice goes hand in hand with very traditional gender attitudes, leading to a double burden for women in these countries (Matysiak 2011).

Figure 1 Use of formal and informal childcare arrangements by education, women aged 18-45 years with a child 0 to 2 years old in Norway, France, Belgium, Austria, West-Germany, Romania, Estonia, Bulgaria, Hungary, Georgia.



Source: United Nations Economic Commission for Europe (UNECE), Generations & Gender Survey, Wave 1 Harmonized Data Files (www.ggp-i.org).

Figure 2 Percentage of women, aged 18 to 45 years, that agrees with the statement ‘a preschool child is likely to suffer if his/her mother works’, in Norway, France, Belgium, Austria, West-Germany, Estonia, Romania, Bulgaria, Hungary and Georgia.



Source: United Nations Economic Commission for Europe (UNECE), Generations & Gender Survey, Wave 1 Harmonized Data Files (www.ggp-i.org)

6 Conclusion

Family formation still has a strongly different impact on the career and type of employment of men and women (hypothesis 1). Although, women have increasingly made their entry into the labour market since the 1960, the gender gap continues to persist. The way in which men and women reconcile work and family differs: women still take on the care of the children and adjust their labour market position, while the share of men in household tasks and childrearing remains limited. Moreover, the impact of family formation is not limited to a short period. Family formation has long-term consequences for both lower and higher educated women. Once the step towards part time work or inactivity is taken, a re-entry into a full time position is not evident.

Apart from the gender gap, the results reveal substantial differences between the countries considered. In Austria, Germany and the CEE countries women with young children move into maternal leave on a large scale, which is much less the case in Norway, Belgium and France. When the youngest child reaches the age category of 3 to 11 years, women in the CEE countries frequently return to full-time employment, which is less frequent in most of the continental countries, where women with children in this age bracket category or older frequently opt for part-time employment, on in the case of Germany, inactivity. In Norway, the majority of women return to their full time positions, although part-time employment is also popular. Particularly remarkable for Norway are the high maternal employment rates for both lower and highly educated women.

Our results show a strong educational gradient in the way women combine work and family. In this respect the GGS allows a detailed distinction between full time employment, part time employment, maternity leave systems and inactivity, making it possible to construct a complete overview of all the different work-family trajectories by educational level. Even before motherhood, the labour market position of lower educated women is characterised by lower activity rates and a lower percentage in full time employment compared to higher educated women. After parenthood they move into part time employment, take up parental leave or withdraw from the labour market. Particularly the latter strategy is frequent among lower educated women. Among higher educated women a withdrawal from the labour market is almost non-existent. However, also among higher educated women, the impact of family formation is tangible. Among higher educated we observe a strong shift towards part time employment. Although the gap in labour force participation between higher and lower educated women increases, this does not hold for the percentage of women working full time. The shift towards part time employment, among both higher and lower educated women, shows how the labour force participation of women still is strongly influenced by the presence of children in the household (Blossfeld and Hakim 1991; Wright and Hinde 1991).

In sum, the results indicate that there still exist strong differences in the way work and family are combined between different countries and between higher and lower educated women. The educational gradient is particularly large in Belgium, France, Germany and the CEE countries. In France and Belgium, the gap is especially large when the child is 0 to 2 years old in the household. The presence of young children among lower educated women goes hand in hand with a withdrawal from the labour market. Moreover, our results show that a substantial part of the women in inactivity do not re-enters the labour market when their children grow older. As a result, the shift towards inactivity has long term consequence for the welfare position of lower educated women, putting them in a vulnerable position. Moreover, the strong educational homogamy within partnerships, a higher separation risk among lower educated and the weak labour market perspectives lead to an accumulation of poverty risks within families at the weak end of the income distribution (Ghysels and Van Lancker 2009; Perelli-Harris, Sigle-Rushton et al. 2010). In the CEE countries and Germany the gap between lower and higher educated women only appears when the child reaches the age of 3 years, as both lower and higher educated women with a very young children make extensive use of the maternity leave system. However, when these entitlements are exhausted, lower educated women in both CEE countries and West-Germany massively flow into inactivity, while higher educated women in the CEE countries re-enter into full time employment. Higher educated women in West-Germany however do not all flow into full-time employment, they

are rather evenly dispersed over the different categories, full time employment, part time employment and inactivity.

Diverse explanatory models account for the duality between higher and lower educated women. Economically oriented models point to the lower earning potential of women with a lower educational level compared to higher educated women. Consequently for lower educated women the (opportunity) costs of an exit out of the labour market to take up the care of a family are lower, especially when labour force participation brings along extra costs, such as costs for childcare provisions etc. In a period of economic recession and poor labour market prospects this can lead to a large withdrawal from the labour market among lower educated women (Vikat 2004). In addition to the economic models, more sociologically oriented explanations point towards parenthood as an alternative career (Friedman, Hechter et al. 1994). The transitions towards parenthood gives access to socially valued roles, as it is less evident for lower educated women to find self-realisation in jobs that are available for them in the labour market. In both explanations the more limited use of childcare by lower educated women is a reflection of their weaker labour market position. An alternative third explanation focusses on the unequal access and use of welfare state provisions. In this view, the employment gap between lower and higher educated women is – at least partly – due to unequal access to childcare provisions among lower educated women (Ghysels and Van Lancker 2009). Both the phenomenon of lower educated women withdrawing from the labour market after parenthood and the large cross country differences in female labour participation after parenthood are probably an interplay between economic considerations (readiness), elements of giving meaning to life and the attitude towards combining work and family (willingness) and an unequal access to family policy (ability).

The low female labour force participation after parenthood, especially of lower educated women, will become increasingly relevant already in the next few years. In the period 2010-2020, a strong fall in the working age population can be expected. The retreat from the labour market of the age category 55-64 can only partly be alleviated by the entry of younger generations in the age category 15-24. As a result, the demographic trends affecting labour supply may create opportunities for groups currently characterized by low employment rates. The limited educational gradient of maternal employment in Norway, both in terms of labour force participation as in full time employment, indicates that many of the countries considered have considerable margin for improvement in this respect (Grant 2001; Van Imhoff and Van Wissen 2001; Europese Commissie 2005).

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