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STATE OF THE ART?  
ADVANCES IN EXPLAINING WOMEN'S  
EMPLOYMENT PATTERNS

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**EUROPEAN UNIVERSITY INSTITUTE, FLORENCE**  
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*Advances in Explaining Women's Employment Patterns*

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## **Abstract**

This paper provides a multidisciplinary review of research aimed at explaining the substantial differences in women's employment trajectories that still exist within and across countries. It covers research that emphasises economic and/or normative rationalities in women's employment decisions and work that focuses more on the structural constraints to women's employment. It discusses recent research developments – conceptual and methodological advances – and based on the identification of central research gaps and methodological challenges, it indicates avenues for future research. Finally, the paper casts a critical view on the 'explanatory power' of contemporary research on women's employment and discusses appropriate research designs for the evaluation of policy effects on women's employment.

## **Keywords**

Women's employment, family policy, gender culture, literature review.

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## Introduction

The inclusion of men and women in the labour market is indispensable for safeguarding family welfare, the functioning of the economy and the sustainability of social security systems – and obviously is also central to women’s quest for gender equality. Against this backdrop, it is important for social science research to be able to understand how women – with their partners and families – make decisions regarding their family planning<sup>1</sup>, involvement in paid work and choice of care arrangements.

Since men’s employment behaviour still remains rather stable across the life course and shows much less cross-country variation than that of women (e.g. Franco & Winqvist 2002; Aliaga 2005; Anxo et al. 2007) much of the available research on the topic has focused on women’s work and care behaviour. Women’s life course trajectories are much more heterogeneous than men’s. Their labour supply has been found to be more elastic, not only with regard to family events such as marriage or childbirth, but also regarding changes in the wage rate and non-labour income<sup>2</sup> (Blundell & MaCurdy 1999; Evers et al. 2008). Women’s work and care behaviour is therefore particularly interesting to study.

This paper provides a multidisciplinary review of applied research<sup>3</sup> aimed at explaining the substantial differences in women’s employment trajectories that we observe both within and across countries. It covers research that emphasises economic and/or normative rationalities in women’s employment decisions as well as work that focuses more on the structural constraints that women face in their aim to combine employment with motherhood. The paper identifies some of the important gaps in research and the methodological challenges that researchers face in the attempt to study genuine ‘causal effects’ of the arrival of children and of family policies on female labour supply. The paper concludes by indicating some avenues for future research and, in the light of recent methodological advances, evaluates different research designs with regard to their power to foster our understanding of the mechanisms that drive female labour supply.

## Theoretical Approaches: Economic and Normative Rationalities

### *The micro-economic model*

Most attempts at explaining women’s employment patterns have an explicit or implicit micro-economic foundation. That is to say, most researchers, be it in economics or in other social science disciplines, incorporate some ideas of the micro-economic model of female labour supply into their explanatory framework and conceptualise women’s employment behaviour (at least in part) as a ‘utility maximising’ response to the costs and benefits of wage labour relative to unpaid care-giving and other pursuits (Mincer 1962). The most frequent assumptions about women’s employment behaviour and childcare choices deriving from this explanatory logic can be summarised as follows.

First, Becker’s (1991) neo-classical model of specialisation predicts that in societies in which men tend to have higher incomes than women, the arrival of children will typically lead to a reduction in women’s paid work, as they take over the bulk of unpaid care work (Nakamura & Nakamura 1992). Second, human capital theory holds that more highly educated women are more likely to remain in paid work when they become mothers than their equivalents with less marketable skills, because they face higher opportunity costs of leaving the labour force (Becker 1991). Third, the (arguable)

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<sup>1</sup> It is equally important to understand couples’ *fertility decisions*. Yet, this aspect of work-family integration is not the focus of this contribution (for review of the state-of-the-art in research on fertility decisions, see Vos 2009).

<sup>2</sup> Non-labour income normally refers to the partner’s earnings, but can also refer to alternative income sources.

<sup>3</sup> The present paper focuses on quantitative research on women’s employment. Qualitative research, which can enhance our understanding of women’s agency, is not part of the undertaken review and evaluation.

assumption underlying labour supply theory, i.e. that women (and men) are willing to work only when this is necessary for economic reasons – given that work is generally seen as a disutility – implies that women’s incentives to join and remain in the labour force decrease as the income provided by their partner rises. Economic theory has proven very useful for understanding women’s labour supply decisions. It provides a coherent framework of explanation as to why factors such as women’s family situation, their educational attainment, work experience and their spouse’s income can affect their employment decisions (e.g. Killingsworth & Heckman 1986; Mroz 1987; Blundell and MaCurdy 1999). Moreover, the logic of opportunity costs underlying micro-economic theory of time allocation has been applied also to develop hypotheses about the impact of family and care policies on women’s employment. First, based on the assumption that mothers’ reservation wages increase with the cost of childcare, their probability of employment is expected to decrease as the costs of non-maternal care rise, and vice versa (Connelly 1992). Indeed, the available evidence from a large body of applied work suggests that access to public childcare<sup>4</sup> significantly increases women’s probability of paid work<sup>5</sup>. Second, the logic of opportunity costs holds that a higher rate of wage replacement associated with parental leave benefits should make mothers less likely to work during the period in which they are eligible for paid leave (Gustafsson et al. 1996). However, the legal entitlement to parental leave can also have a positive impact on female labour market participation. It makes it easier for women to keep a formal attachment to the labour market and often allows women to return to their former employer. Applied work tends to suggest positive effects of statutory leave on women’s return to the labour market after childbirth. Yet, such effects are only observed for leaves of limited duration, while longer leaves have negative implications for women’s post-natal employability and career chances (Rønsen & Sundström 2002; Jaumotte 2004; Galtry & Callister 2005; Del Boca et al. 2009). On all accounts, generous child benefits that are paid irrespective of parents’ employment status and choice of childcare tend to have a negative impact on women’s labour market participation (Jaumotte 2004). Finally, economic reasoning suggests that systems of married couples’ joint taxation, which reduce the marginal utility of women’s work via high taxes on second incomes, have negative effects on women’s incentives to join the labour force (e.g. Dingeldey 2001; Jaumotte 2004; Dearing et al. 2007).

### ***The social-psychological model***

Research aimed at explaining women’s employment behaviour has long concentrated on the factors that affect women’s cost-benefit situation and in turn their work/care decisions. Starting in the 1970s, however, researchers began to include attitudes as potential determinants of women’s choices. In the field of social psychology, the Fishbein-Ajzen model is the dominant conceptualization of the mechanisms that link individual attitudes with subsequent behaviours (Fishbein & Ajzen 1975). Granrose (1984), for example, uses this model of *reasoned action* to investigate the impact of women’s attitudes on their intentions to return to work after childbirth (see also Werbel 1988; Granrose & Kaplan 2006). Based on a similar model, Vincent and colleagues (2006) investigate the predictive power of young women’s gender attitudes for their career intentions and ultimately, 14 years later, their actual career. Social-psychological factors soon entered sociological debates on the topic and the first longitudinal analyses of the impact of women’s attitudes on their labour force participation were carried out (e.g. Smith-Lovin & Tickamyer 1978; Greenstein 1986). Yet, it was only more recently that the question of attitude-behaviour relations attained a central place on the sociological research agenda, i.e. when Hakim put forward her ‘Preference Theory’ (Hakim 1991; 2000). Her claim that women’s work-care decisions are largely the result of their own ‘free choices’ based on their personal preferences, has been met with fierce criticism and continues to be the subject of intense debate

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<sup>4</sup> The availability of public childcare is a good proxy for childcare costs, given that public childcare places tend to be subsidised and therefore are typically of lower cost than care that is bought from the private market.

<sup>5</sup> This is confirmed both by cross-country comparative research (e.g. Uunk et al. 2005; Pettit & Hook 2005; Steiber & Haas 2009) as well as by a number of studies that look at regional variations in the supply of public childcare (e.g. van Ham & Mulder 2005; Simonsen 2005; Van Ham & Büchel 2006; Del Boca et al. 2009). For a discussion of methodological challenges in the aim to establish genuine causal effects of policies, see below.



and empirical testing (e.g. Ginn et al. 1996; Crompton & Harris 1998; Procter & Padfield 1999; McRae 2003). Finally, in recent years also some economists have started to take account of ‘cultural factors’ such as values or attitudes as variables that may be helpful in explaining diverse economic behaviours (e.g. Fernández et al. 2004; Himmelweit & Sigala 2004; Algan & Cahuc 2005; Fortin 2005)<sup>6</sup>.

Available work suggests that there are significant statistical associations between women’s attitudes to gender roles and their employment behaviour (e.g. Molm 1978; Crompton & Lyonette 2005; Kangas & Rostgaard 2007; Steiber & Haas 2009). Studies using longitudinal data to establish the direction of causality, however, suggest that this attitude-behaviour relationship is in fact *reciprocal* (Himmelweit 2002; Kan 2007; Himmelweit & Sigala 2004; Corrigan & Konrad 2007; Berrington et al. 2008). That is, there is evidence of a causal effect of women’s attitudes, i.e. women with more traditional gender attitudes are less likely to join the labour force, more likely to leave it upon motherhood and to take longer to return to work after childbirth. At the same time, we observe reverse causality with working women tending to develop more favourable attitudes to employment and non-maternal childcare over time (adaptive adjustments of attitudes to match behaviour). In fact, extant research suggests that such processes of attitude adaptation tend to be more common than the attitude-based selection of behaviours (Smith-Lovin & Tickamyer 1978; Molm 1978; Himmelweit 2002; Berrington et al. 2008).

Moreover, there is evidence that often neither of these two mechanisms is at work. As suggested by the rather weak associations between women’s attitudes and their employment status established in cross-sectional analyses (e.g. Crompton & Lyonette 2005), there are in fact many cases in which women continue to act in ways that are at odds with their attitudes. A substantial share of women hold traditional views on gender roles or childcare, but are nevertheless strongly involved in paid work – or vice versa, we also find substantial shares of women with attitudes in favour of gender equality in the labour market and in the home, who nevertheless leave the labour market upon childbirth for extended periods of time. Such persisting attitude-behaviour inconsistencies are likely to result from situations in which women continue to be constrained in their work/care options and therefore have little room for changing their behaviour in the desired direction (e.g. when mothers of small children face the economic necessity to work full-time or when women who would like to be employed face a lack of affordable external childcare, see e.g. Crompton & Harris 1998; McRae 2003; Irwin 2004; Crompton & Lyonette 2005)<sup>7</sup>.

In sum, whether individual dispositions such as attitudes or value orientations have the ability to predict women’s employment behaviour continues to be a major focus of research. The available evidence suggests that women’s gender attitudes and work values have some impact on their employment behaviour and childcare choices (see also Pungello & Kurtz-Costes 2000). Moreover, egalitarian gender attitudes have also been shown to lead to a more equal gender distribution of domestic labour (see e.g. Coltrane 2000; Fuwa 2004; Geist 2005; Prince Cooke 2006; Cunningham 2007). Yet, while there is some evidence for causal effects of attitudes on work/care arrangements, longitudinal research has left little doubt that very often the causality is reverse and that for this reason statistical relations between attitudes and behaviour established in cross-sectional research need to be interpreted very carefully.

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<sup>6</sup> Himmelweit and Sigala (2004), for example, use longitudinal micro-data to model the dynamic relation between mothers’ views regarding the effects of maternal employment on child well-being and their actual work behaviour. Algan and Cahuc (2005) and Fortin (2005) use pooled time series data (country panel data) to test the power of gender culture for explaining the variation in female employment rates across countries.

<sup>7</sup> Hakim, in contrast, argues that the reason for why attitudes and behaviours are often found to conflict in survey research is merely a measurement problem (difficulty of measuring personal attitudes, cf. Hakim 2003; 2004).

## Explaining Differences across Countries

### *The theoretical approaches*

We observe substantial differences across countries regarding female employment trajectories across the life-course (e.g. Stier et al. 2001; Aliaga 2005; Vlasblom & Schippers 2006; Anxo et al. 2007). The dominant framework of explanation for such national variations is founded on the aforementioned theoretical approaches, pertaining to micro-level theories of action. While some scholars focus more strongly on economic rationalities – following an ‘institutionalist approach’ – other scholars emphasise normative rationalities in women’s choices – supporting a ‘culturalist approach’. The former link national differences in women’s employment mainly to the different degrees of state support for continuous female employment (Lewis 1992; Ostner & Lewis 1995; O’Connor et al. 1999; Sainsbury 1999; Daly & Lewis 2000; Siim 2000), while the latter claim that national differences in work/care arrangements can be explained by differences in the prevailing gender culture (for overview, see Kremer 2007). Pfau-Effinger (2004), for instance, emphasises the importance of cultural values and ideals of the ‘correct’ division of labour between the sexes for understanding gendered work/care practices. Yet, she advocates an ‘integrative approach’ that accounts for both institutional as well as for cultural factors, emphasising that the ‘gender arrangement’ is not necessarily coherent: social change can lead to the development of cultural values that are not in line with the ideologies underpinning the current institutional setup. The baseline of this argument is that, given the potential for asynchronies and discrepancies in institutional and cultural development, we need to look at the impact of both, institutional and gender cultural factors in order to understand gendered practices of work and care.

### *The empirical evidence*

There are many studies that model female labour supply based on micro-data in single countries, and a large body of work that investigates cross-country differences in women’s employment using aggregate data (e.g. Jaumotte 2004; Algan & Cahuc 2005; Fortin 2005). However, efforts to combine these two approaches in a *micro-macro design* are rather scarce. Among the first attempts to model women’s employment behaviour based on pooled micro-data for a number of countries that assess both the effects of individual characteristics and the effects of macro-conditions by incorporating such information directly into their models, are the studies by Stier, Lewin-Epstein and Braun (2001) and by Van der Lippe (2001). Both studies present evidence for the impact of state policies supportive of female employment on women’s probability of paid work. Yet, these results are to be treated with some caution given the method of analysis, i.e. single-level regression models, which are inapt for handling data sampled from clustered populations (e.g. women nested in countries) and may for this reason overstate the true impact of any macro-level effects (e.g. of state policy). Studies that apply multi-level analysis (e.g. Uunk et al. 2005; Pettit & Hook 2005; Steiber & Haas 2009) to the comparative study of women’s employment are held to arrive at more accurate (and conservative) estimates of institutional effects than those derived from single level regression models (cf. Ward & Dale 1992).

The latter studies uniformly confirm the importance of institutional factors and in particular of childcare policy for explaining the variation of women’s employment behaviour across countries, while evidence for cultural effects is more inconsistent. Uunk, Kalmijn and Muffels (2005) for example use data from the European Community Household Panel for 13 countries to model the effect of institutional and cultural factors on the magnitude of *longitudinal child effects* among first mothers<sup>8</sup>. Their findings suggest that a higher level of public childcare provision has a positive impact on mothers’ employment (i.e. the greater the availability of public childcare in a country, the less likely first mothers are to reduce their paid work involvement after childbirth when compared to their situation before the birth). Moreover, they consider gender role values that prevail in a society as an

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<sup>8</sup> Uunk et al. use longitudinal data to create a measure of the child effect (comparing women’s employment situation before birth and two years after birth in terms of working hours). The change in working hours between the two time points is the measure of the magnitude of the ‘child effect’ used as the dependent variable.

alternative explanation for the varying degrees of female employment continuity across countries, arguing that in Western Europe state efforts to facilitate maternal employment tend to co-vary with more modern conceptions of women's role in society. Yet, their findings suggest that gender culture (i.e. mean support for egalitarian gender values at the country-level) does not exert an effect independent of public childcare provision. The authors thus conclude that institutions appear to be more important than culture in shaping mothers' labour supply.

Pettit and Hook (2005) also attempt to find explanations for cross-country differences in the magnitude of 'child effects'. In contrast to Uunk et al., they draw on cross-sectional data, arriving at a *measure of child effects* by comparing the employment behaviour of childless women with the one of mothers. Their findings suggest that small children affect women's employment significantly less in countries that provide public childcare and parental leave (the latter effect declining at greater leave duration), while national gender cultures (measured as the share of parliamentary seats occupied by women) lack explanatory power regarding cross-national differences in women's employment.

Steiber and Haas (2009) also use cross-sectional data, but in contrast to Pettit and Hook (2005), who measure *cross-sectional child effects* as the difference in work behaviour between mothers and non-mothers, they focus on the employment status of mothers of children below school age. This research design is selected as it is during the early childrearing phases when the most substantial cross-national differences in women's labour market behaviour are observed (Gornick et al. 1998). Testing a multi-level model of maternal employment in 26 countries, Steiber and Haas find significant positive effects of public childcare provision on mothers' paid work involvement, while again there appears to be no straightforward relationship at country-level between mothers' employment patterns and cultural variations (measure: prevalence of the attitudes at country-level that '*A man's job is to earn money; a woman's job is to look after the home*' and '*A pre-school child is likely to suffer if his or her mother works*').

Overall, available studies that use a *micro-macro approach* to modelling country-differences in women's employment tend to suggest that the provision of public childcare and of parental leave (up to a certain length) tend to mitigate the effect of the arrival of children on women's paid work involvement, while there is no evidence for cultural effects. Yet, it is to be noted that the aforementioned studies face restrictions in terms of sample size (i.e. the number of countries as cases for comparative analysis); thus, evidence for cultural effects on top of institutional effects is obviously hard to come by. Fortin (2005) by contrast uses data for 25 countries measured at two time points (World Values Study), arriving at a sample of 50 country-level units. Her study follows a *macro-macro design*, testing the impact of country-level factors on women's national employment rates. Her findings suggest that national gender culture (measure: prevalence of the attitude that scarce jobs should go to men first) does exert an independent effect on women's rate of employment, and that the impact of care policy (measured in terms of the public expenditure on childcare) is overestimated when cultural factors are not controlled for. In a similar vein, Algan and Cahuc (2005), use three waves of data from the World Values Study for 19 countries (yielding a total sample of 49 at country-level) to test the impact of family policy and of national gender culture on women's employment rates. And as Fortin did, they also find evidence for significant effects of both factors<sup>9</sup>.

### ***The lack of fit***

As outlined in the previous section, there is mounting empirical evidence for the impact of policy and of gender culture on women's, and in particular on mothers', employment behaviour. Yet, when we look at the association between childcare policy indicators and measures of gender culture on the one side, and female employment rates on the other, it becomes clear that these two factors lack explanatory power for many of the country-differences in women's employment (Graphs 1 & 2). For instance, the view that varying degrees of support for mothers' employment can predict national

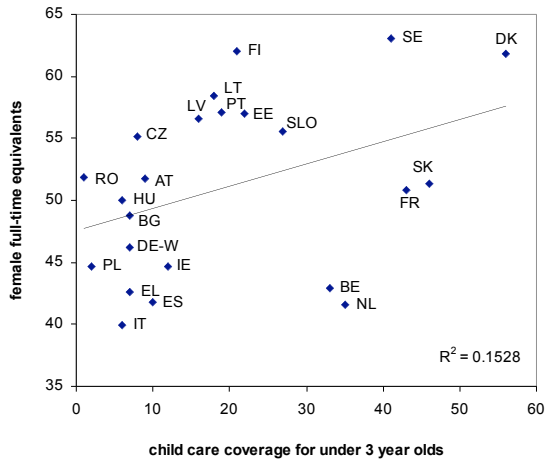
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<sup>9</sup> Time-series data (i.e. country panel data) typically contain greater variation in country-level variables; affording the researcher with greater opportunities to disentangle different institutional/cultural effects. For a discussion of the limitations of the macro-macro design, see Conclusions.

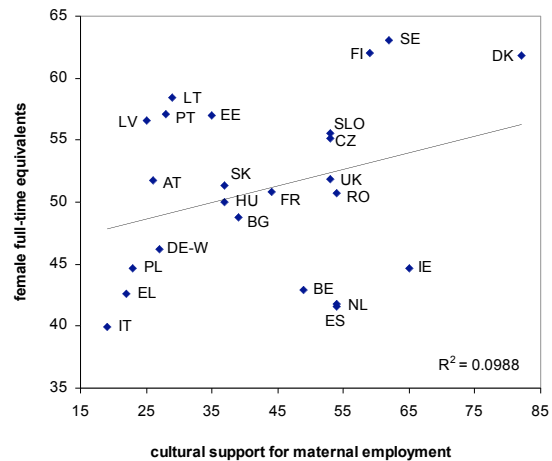
differences in prevailing work/care arrangements fails to explain women’s strong involvement with the labour market in countries such as in Portugal or in the Baltic states, where the childcare infrastructure is rather poorly developed and where gender culture is not supportive of mothers’ participation in the labour market (cf. Steiber 2007).

Overall, neither the ‘institutionalist’ nor the ‘culturalist’ approach can sufficiently explain the diversity in women’s employment behaviour across Europe (see also Daly & Rake 2003; Crompton & Lyonette 2006; Haas et al. 2006; O’Reilly 2006; Kremer 2007). There is no straightforward relationship between women’s patterns of labour market participation and institutional arrangements, or with prevailing gender role values (for a differentiated multi-level analysis of the impact of gender attitudes, on the one hand, and of ideals of childcare to safeguard child well-being, on the other, see Steiber & Haas 2009). As becomes evident, additional explanatory factors are necessary for a better understanding of cross-national differences in women’s employment behaviour – especially when the geographical scope of analysis is enlarged to include Southern, Central and Eastern Europe. The common theoretical framework – focusing on institutional and cultural explanations – that has been developed with a view mainly to Western and Northern Europe and the US, is clearly less applicable to these countries. The reasons for this are discussed in more detail in the following section.

**Graph 1: Childcare coverage and female employment rates (full-time equivalents)**



**Graph 2: Gender culture\* and female employment rates (full-time equivalents)**



Source: Steiber (2007): The Linkages between Work and Family: State of Knowledge and Policy Implications. EqualSoc Policy Paper.

\* Share of respondents (strongly) disagreeing that pre-school child suffers when the mother works (calculated based on data from the ISSP 2002).

**Alternative explanations**

First, some scholars have argued that in less well-off countries women tend to be strongly involved in the labour market even if this is neither institutionally supported nor culturally approved, because they simply face the economic necessity of having to work (e.g. Braun et al. 1994; Haller & Hoellinger 1994; Uunk et al. 2005; Haas et al. 2006). From this perspective, the expectation would be that women engage more strongly in paid work in less affluent countries, all else being equal. Uunk, Kalmijn and Muffels (2005) test this hypothesis on a sample that includes the less prosperous Southern European countries. Their findings suggest that, at equal levels of childcare, a higher level of

affluence (in terms of GDP/capita) increases the odds that women reduce their work hours or leave the labour force upon first birth. While the authors interpret this as supporting evidence for the presence of an ‘economic affluence effect’, some caution is warranted. This study uses a longitudinal difference measure that compares women’s level of work involvement prior to first birth with their behaviour two years after the birth – thus reflecting changes in women’s working hours over time, irrespective of the *level* of pre-birth involvement. This is problematic, as the same outcome, i.e. *small longitudinal child effects*, is observed both in countries where most women have continuous employment careers (in the Nordic countries, France or Portugal) as well as in countries where many women are already excluded from the labour market prior to first birth (e.g. in Spain)<sup>10</sup>. Moreover, the fact that the more affluent countries in the sample (Austria, Germany, the Netherlands and the UK, see Uunk et al. 2005: Table 2) are at the same time the countries where mothers frequently switch to part-time work, creates the suspicion that the observed negative effect of economic affluence on women’s change in working hours around first birth may in fact be driven by another correlated factor, such as the availability/spread of part-time work (cf. Steiber & Haas 2009).

Second, it has been argued that in addition to the opportunity structures that shape women’s incentives to enter the labour market, account needs to be taken of the (often constrained) opportunities to find employment among those who want to work (e.g. Van Ham & Büchel 2006; Haas et al. 2006). Unsurprisingly, there is evidence for negative effects of high unemployment on women’s likelihood of being employed (e.g. Pettit & Hook 2005; Van Ham & Büchel 2006). However, we need to be aware that the mechanisms underlying the impact of unemployment on women’s labour market behaviour are not trivial. While high female unemployment tends to discourage female participation, high rates of male unemployment may also have the opposite effect (e.g. Jaumotte 2004), when women aim to compensate for their partner’s unemployment (‘added worker effect’). Moreover, as shown by McGinnity (2004) such ‘added worker effects’ are observable in some (e.g. Germany) but not in other countries (e.g. the United Kingdom where unemployment benefits are means-tested against family income).

Third, it is commonly argued that a lack of part-time opportunities constrains women’s employment, i.e. that more mothers would join the labour market in the event that such opportunities were more readily available (e.g. Del Boca 2002; Gutiérrez-Domènech 2005). The theoretical impact is two-fold. On the one hand, the availability of part-time work allows women to combine employment with childcare and may encourage some mothers to stay in or join the labour market who would otherwise not be employed (hypothesised positive effect on participation rate). On the other hand, part-time work may also have the opposite effect on women’s labour supply, i.e. when mothers tend to work shorter hours, if they have the option (hypothesised negative effect on working hours). The available evidence suggests that the impact of the availability of part-time work varies significantly across countries. Del Boca et al. (2005) for instance show that the regional availability of part-time opportunities has a positive effect on women’s employment in Italy but not in France or the United Kingdom, where this type of employment tends to be of lower quality (see also Del Boca et al. 2009).

Findings that point to cross-country variations regarding the role played by institutional factors in shaping women’s labour supply can be explained by the fact that seemingly similar institutional conditions such as comparable levels of childcare availability or part-time employment opportunities, in reality, reflect very different social realities (e.g. when available care services or part-time jobs differ in terms of quality). Clearly, a central problem in this context is the issue of measurement, i.e. the comparability of indicators across societal contexts – regarding indicators both of women’s employment and of institutional and labour market conditions (cf. Jonung & Persson 1993; Plantenga & Hansen 1999; O’Reilly 2006; 732; Plantenga et al. 2009). The commonly available indicators often lack comparability across societal contexts and time. On a more basic level, there may simply be measurement problems with the result that indicators are not able to reflect the country-specific

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<sup>10</sup> The advantage of this approach over studies which infer child effects from cross-sectional data is the possibility of controlling for unobserved differences between mothers and non-mothers.

features of certain policies or outcomes – or chances therein over time (e.g. the commonly used childcare indicators which do not allow for a comprehensive understanding of the specificities and historical evolution of countries' care policy). On top of this, comparative research typically fails to acknowledge that single institutional dimensions cannot be analysed in isolation from each other – in order to understand their impact, they need to be contextualised (see also Conclusions).

## Gaps in Knowledge and Avenues for Future Research

Having outlined the theoretical approaches used and empirical findings deriving from comparative research on women's employment, in this section we highlight some gaps in knowledge and propose avenues for future research. First, we outline two recent (and to date rather underdeveloped) strands of research which emphasise, on the one hand, variations across societal contexts in the ways in which women's employment is shaped by their individual characteristics and, on the other hand, variations across different groups of women in the way that contextual factors shape their labour supply<sup>11</sup>. Second, we review some recent research which improves over prior work in methodological terms and which sheds doubt on earlier findings that suggest causal effects of children and of care policies on mothers' employment.

### *Variation of individual-level effects across countries*

Apart from cross-country variations with regard to the impact of children on female employment, national variations in other individual-level effects have not yet been the object of much research. This research is warranted, however, given the available evidence on effect heterogeneity across countries. For example, extant research has revealed interesting variations across countries with regard to the size of education-based gaps in female labour market participation (Gustafsson et al. 1996; Rubery et al. 1999; Gutiérrez-Domènech 2005; Vlasblom & Schippers 2006). Furthermore, a recent meta-analysis of applied research suggests significant cross-country differences in the degree to which women respond to changes in the wage rate by changing their labour supply (i.e. in terms of wage elasticities, Evers et al. 2008). Moreover, extant research shows that there are substantial cross-country variations with regard to how women's labour supply is affected by their partners' income (e.g. McGinnity 2004; Matysiak & Steinmetz 2008). Finally, there is also evidence suggesting that women's attitudes have a stronger impact on their employment and the gender division of domestic labour in some than in other countries (Fuwa 2004; Geist 2005; Steiber & Haas 2009). Yet, attempts to identify possible reasons for such cross-country differences in the predictive power of attitudes are scarce. An important avenue for future research is the investigation of how attitude-behaviour relations differ across situational contexts – of the conditions under which attitudes have a greater potential for predicting behaviour, and conversely, of the factors that catalyse processes of attitude adaptation. Moreover, given the evidence on persisting incongruences between attitudes and work/care behaviours (see above), social science research is called upon to investigate situations in which behaviours remain in contradiction with attitudes over time.

In sum, available research shows non-negligible variations across countries (and over historical time<sup>12</sup>) with regard to how women's employment is shaped by factors such as by the arrival

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<sup>11</sup> Although not explicitly recognised in available studies, these two strands of research are heavily interlinked in the sense that their findings point to the statistical significance of *cross-level interaction effects* between macro-level factors (such as care policies) and individual level characteristics (such as women's education). Technically such interaction effects can be interpreted in two ways – either arguing that policies have stronger or weaker effects on different groups of women, depending on their level of education, or arguing that policy environments affect education-based inequalities in women's employment. Societal factors that tend to narrow skill-based gaps in women's labour market participation appear to increase mainly the employment level of lower educated women, thereby reducing the overall gap. Such factors may include public childcare provision or lower female unemployment.

<sup>12</sup> For example, there is evidence showing that, over recent decades, women's labour supply became less elastic, i.e. less responsive to their own wages and those of their husbands (Blau & Kahn 2007).

of children, by their own education and income potential and the income of their partners, or by their own gender attitudes and work values. However, to date there is little knowledge about the determinants of such variations.

### ***Group-specific effects of institutional factors***

Research on women's employment has also started to account for the heterogeneity of women within countries, looking at potential variations between different groups of women with regard to how they respond to different policy environments. Connelly and Kimmel (2003), for instance, study the effect of childcare costs on women's employment, differentiating between single and married mothers. They find significantly stronger effects on single mothers. Del Boca et al. (2009) investigate the impact of diverse policies on women with varying levels of education. Their findings show that the employment decisions of less educated women are more strongly affected by parental leave provisions and family allowances, the availability of public childcare and part-time work than is the employment of more highly educated women. In a similar vein, Stadelmann-Steffen (2007) investigates the heterogeneous effects of regional care policy in Switzerland. Distinguishing three groups of women, she finds the employment behaviour of medium-level educated women to be most strongly affected by the availability of childcare when compared to both their more or less highly educated counterparts. Sánchez-Mangas and Sánchez-Marcos (2008) test education-based variations in women's responsiveness to a policy change introduced in Spain in 2003 when employed mothers of children aged under three were provided with a monthly cash benefit. Their findings suggest that only medium-level educated women responded to the policy change by increasing their labour market participation.

Overall, the recent literature suggests non-negligible heterogeneity in the effects of care policies on the employment and fertility behaviour<sup>13</sup> of different groups of women. Such novel insights from applied work in different countries highlight that the estimation of 'mean effects' for the general population may conceal important policy effects on certain sub-groups of women. While the establishment of effect heterogeneity is clearly an important step forward, more in-depth research is needed to enhance our understanding of the individual-level mechanisms that result in observed group-specific effects. One could plausibly expect women who already have a strong work orientation and labour market attachment to be less responsive to the work incentives created by state policy than those who have less need or desire to engage in paid work. How researchers tend to define or proxy women's propensity to work tends to vary across disciplines, however. Economists traditionally focus on women's opportunity costs of work and therefore typically assume more highly educated women to be more strongly work-oriented. In the sociological literature the notion of women's work-orientation has come to be strongly associated with the work of Hakim. In her 'Preference Theory' (Hakim 2000) she emphasises women's heterogeneity in terms of their work-lifestyle preferences and distinguishes between three types of women: the *home-centred*, who prioritise family life and children and prefer not to work, the *work-centred*, who prioritise their own careers and are strongly committed to work, and the *adaptive*, who want to combine family and work and are not totally committed to their careers. The latter are held to be the ones, who are most responsive to state policies. Notably, the allocation of women to these three types does not follow educational divides, according to Hakim. In stark contrast to human capital theory, she claims that women's decisions to obtain higher education cannot be used as indications of their preferences in favour of a labour market career – allegedly women invest in education as cultural capital which is valuable both in the labour market but also in the marriage market.

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<sup>13</sup> Haan and Wrohlich (2009) show that the provision of public childcare for all children aged below 3 would significantly increase the employment level of German mothers. Moreover, while the study furthermore suggests a non-significant 'mean effect' of universal childcare provision on fertility (i.e. for the average woman), the more in-depth investigation of the impact on different subgroups reveals larger positive fertility effects for more highly educated women.

### ***Methodological advances***

Research on women's employment has had a new impetus through research which has applied advanced econometric techniques. These studies address the problem of causality, casting doubt on earlier findings with regard to the 'effects' of children or of family policy on women's labour supply. First, applied research confirms that women's likelihood of labour market participation decreases with the arrival of children as the costs of childcare lower women's effective market wage. It has emerged, though, that couples treat their labour supply and family formation as simultaneous aspects of a joint decision, shedding doubt on the assumption of unidirectional causality. In other words, fertility has been found to be *endogenous* to women's labour supply<sup>14</sup>. In addition to the causal effects of the arrival of children on parental labour supply, there is *reverse causation* with changes in parents' labour market involvement affecting their fertility decisions (Xie 1997; Angrist & Evans 1998). Recently, a number of studies have emerged, which estimate child-bearing and employment in a simultaneous equations framework (e.g. Del Boca et al. 2009; Haan & Wrohlich 2009; Michaud & Tatsiramos 2009) to account for the potential *endogeneity* of fertility when modelling women's labour supply. Overall, this type of research highlights the great importance of choosing appropriate methodological techniques in order to avoid drawing the wrong conclusions (e.g. about policy effects on fertility and/or women's employment) from studies that fail to account for the fact that employment and fertility decisions are the result of a dynamic process.

Second, some researchers have expressed doubt about the genuine causality of the effect of childcare availability on women's employment behaviour. An important source of bias in estimating such effects are the *indicators* that are commonly used in comparative analyses such as childcare coverage (i.e. share of children in different age-groups cared for in formal institutions). Clearly, mothers' actual use of childcare and their employment behaviour are mutually endogenous (i.e. they affect one another), which makes it hard to judge whether or not the associations between the two reflect a causal 'policy effect'. For this reason, analyses using aggregate-indicators of childcare can only draw very tentative links between care infrastructures and women's observed employment behaviour. To gauge the true impact of childcare, we need longitudinal data on women's employment at the individual-level, combined with indicators of childcare availability that show some variation across individuals (e.g. differential access to, or price of, care services depending on number/age of children, household income, place of living). In this context, it has also been argued that much of the available research on the impact of childcare availability on women's labour supply fails to account for the fact that informal care can be an important substitute for formal childcare services. Under the assumption that informal care covers the demand surplus that cannot be covered by the available formal childcare, an expansion of public childcare would largely crowd out informal care. As a consequence, both total childcare use and maternal labour supply would stay at the same level. Indeed, accounting for both the potential endogeneity of care availability to women's employment and for dynamics of substitution between informal and formal care by applying state-of-the-art evaluation techniques<sup>15</sup>, a number of recent studies do indeed find hardly any causal effects of the expansion of public childcare (or the lowering of its price) on maternal employment (for overview, see Blau & Currie 2006; Havnes & Mogstad 2009). Findings of this kind cast serious doubt on the validity of earlier research that has used (typically time-invariant) aggregate indicators of public childcare. In particular, it questions the general wisdom that the differential availability of

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<sup>14</sup> For example, women with a stronger 'taste' for children may have lower unobserved ability to successfully participate in the labour market. In this case, this selection effect would drive the observed association between fertility and lower labour market participation rather than a causal child effect.

<sup>15</sup> Research can deal with the fundamental problem that childcare access and prices are endogenous to the employment decision of women, by exploiting policy changes that create temporal and/or regional variation in care access/price. The methodological state-of-the-art for estimating the causal effects of the introduction or change of a policy is the difference-in-differences estimation approach. The crux in quasi-experimental approaches is to identify changes in childcare access/prices that are exogenous to mothers' employment decisions.



affordable childcare services across societal contexts and time is the driving force behind the observed cross-country differences in maternal employment and of its rapid growth over the last decades<sup>16</sup>.

## Conclusions

Research on women's employment would benefit from adopting a multidisciplinary approach, i.e. from building on insights from research strands that focus more on rationalities of choice but also from more traditionally sociological research that puts the constraints to genuine choice to the fore. Most available comparative research, however, focuses on a limited set of explanatory factors, in the main focusing on national care and family policy as the main explanatory factor for cross-country differences in women's employment. This explanatory logic in the tradition of feminist welfare state analysis is, however, clearly too simplistic. First of all, it is inapt to explain the pattern of cross-national variations in women's employment. And secondly, it is built on the questionable assumption that the impact of state policies is universal, exerting similar effects on all women, in all countries and at all times.

It has been shown that similar policies (or other contextual factors) may have rather different impacts across countries. We thus need to be aware that very different constellations of factors may in fact produce apparently similar outcomes, i.e. national patterns of women's employment (Crompton & Lyonette 2006; Haas et al. 2006; O'Reilly 2006). To shed light on the *country-specific mechanisms* underlying aggregate outcomes (e.g. female employment rates), we need to understand how different institutional dimensions interact. As emphasised by the advocates of holistic approaches to comparative analyses who view societies as distinctive social units, analyses need to be based on a comprehensive understanding of the historical development of different institutional set-ups and their embeddedness in wider social, economic and cultural contexts. Clearly, this standard of in-depth analysis cannot easily be upheld in multi-country comparisons that demand a certain degree of standardisation with regard to how different institutional factors are measured.

On top of the heterogeneous effects of institutional factors across countries, available research also questions the common assumption that, at least within countries, institutional factors impact on all women in a similar manner. Yet, as outlined above, there is mounting evidence for differential effects on different types of women. Neither incentive/support structures for continuous female employment (e.g. availability of affordable care services and of part-time work opportunities), nor sets of constraints to female employment (e.g. lack of employment opportunities, normative constraints), work in the same way for all women.

What we can conclude from these insights into the presence of heterogeneous effects is that analyses taking a *macro-macro approach*, i.e. investigating associations between macro-level indicators of institutional conditions and some aggregate indicator of women's employment (e.g. participation rates), have very limited explanatory power. Using aggregate data the researcher has no means to pay attention to within-country heterogeneity and cannot investigate whether contextual factors (e.g. family policies, labour market conditions) have the same or different effects on different groups of women. To enhance our understanding of the *individual-level mechanisms* that underlie associations between aggregate-level observations – between certain institutional configurations and women's average level of involvement in the labour market – more research is needed that leaves *the surface of aggregate-level associations* to study group-specific effects.

Studies that take a *micro-macro approach*, i.e. investigate the association between macro-level indicators (at regional or country-level) and women's employment at the micro-level, are in principle

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<sup>16</sup> The feminist welfare state literature typically assumes that women-friendly welfare states have actively supported the integration of women into the labour market by providing universal childcare, with the result that today we find comparatively high rates of both female employment and fertility in the Scandinavian countries (e.g. Siim 2000). One could argue, however, that causality has been reverse, with high numbers of (already) gainfully employed women having created political pressure for expanding subsidised public childcare (Huber & Stephens 2000; Pfau-Effinger 2000; Lundin et al. 2008; Havnes & Mogstad 2009). Hence, the expansion of public childcare provision in the Nordic countries can be seen as a reaction to, rather than a facilitator of, women's strong involvement with the labour market.

able to test potential group-specific effects by estimating cross-level interaction effects. Yet, in practice, such analyses tend to be severely restricted in terms of sample size, in particular regarding the level of variation in macro-level conditions (i.e. limited numbers of countries/regions often measured at only one point in time). Generally, studies that exploit *regional* variations in institutional conditions are better able to enhance our knowledge of the impact of contextual factors on women's employment behaviour than are cross-country comparative analyses. This is because studies that exploit within-country variations in contextual conditions (e.g. in terms of care provision or unemployment rates) are better able to hold other potentially confounding macro-level explanatory factors such as national policy configurations, business cycles or cultural factors, constant. In cross-country comparative analyses, by contrast, it is much more difficult to isolate the unique effect of certain institutional factors.

As highlighted by the growing number of studies using advanced econometric techniques to test the effect of policies on women's employment and fertility behaviour, however, an appropriate research design that is really able to address the *causal* impact of any macro-level factors, uses longitudinal micro-data and studies the impact of *changes in contextual factors* on *changes in women's behaviour* applying quasi-experimental research designs. Generally, it can be concluded that the impact of any macro-level factors, be it policies, other institutional settings or economic conditions, can only be properly assessed when its impact is studied in view of individual behaviour. Such a research design requires that macro-level factors (i.e. contextual conditions) are measured in such a way that there is variation across individuals (e.g. in how they are exposed to these conditions/policies, depending on their individual characteristics or place of living).

Last but not least, we want to emphasise that the available research has a strong focus on women's labour market behaviour, while a crucial aspect with regard to gender equality in the labour market tends to be neglected, namely the differences between women and men with regard to the reward structure of their employment. Cross-national research on women's employment patterns tends to stress the importance of developed work-family reconciliation policies for women's continuous labour market integration. Yet, higher participation rates of women do not necessarily reflect greater levels of gender equality, when women tend to be concentrated in lower quality employment. An important avenue for future research is the investigation of the 'causal effects' of family policies not only on female participation patterns across the family life-cycle but also on the quality of women's and men's work and their capacities to balance their work and family responsibilities.

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*State of the Art?*

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