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Gender-Specific Effects of Unemployment on Family Formation: A Cross-National Perspective

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Gender-Specific Effects of Unemployment on Family Formation: A Cross-National Perspective

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Abstract

This paper investigates the impact of unemployment on the propensity to start a family. Unemployment is accompanied by bad occupational prospects and impending economic deprivation, placing the well-being of a future family at risk. I analyze unemployment at the intersection of state-dependence and the reduced opportunity costs of parenthood, distinguishing between men and women across a set of welfare states. Using micro-data from the European Community Household Panel (ECHP), I apply event history methods to analyze longitudinal samples of first-birth transitions in France, Finland, Germany, and the UK (1994-2001). The results highlight spurious negative effects of unemployment on family formation among men, which can be attributed to the lack of breadwinner capabilities in the inability to financially support a family. Women, in contrast, show positive effects of unemployment on the propensity to have a first child in all countries except France. These effects prevail even after controlling for labour market and income-related factors. The findings are pronounced in Germany and the UK where work-family conflicts are the cause of high opportunity costs of motherhood, and the gender-specific division of labour is still highly traditional. Particularly among women with a moderate and low level of education, unemployment clearly increases the likelihood to have a first child.

Keywords: family formation, fertility, unemployment, cross-national comparison.

1) Introduction

The aim of this paper is to analyse the impact of unemployment on fertility behaviour at the individual level. This issue is rooted on the one hand in conflicts over the limited time available for parenthood (both time in everyday life, and time within the lifetime), and on the other, in the economic requirements for supporting a family and thus fulfilling breadwinner responsibilities. Unemployment is one manifestation of precarious employment patterns (see Kreyenfeld 2000; Kurz, Steinhage & Golsch 2001; Tölke & Diewald 2003). Moreover, it exacerbates economic deprivation, particularly in young families (see Beaujot & Liu 2002; D´Ambrosio & Grandin 2003, Finch & Bradshaw 2003, Jenkins, Schluter & Wagner 2003).

The *individual* experience of an unemployment episode bears a series of consequences, some of which hamper family formation, while some foster the transition to parenthood. Unemployment reduces the opportunity costs of a fertility transition by providing time for childrearing, an otherwise scarce commodity when trying to combine work and family. Moreover, family formation might compensate for the loss in social status, particularly in social contexts where having children is highly valued (see generally Leibenstein 1975). In contrast, unemployment undermines the economic foundations for a future family. Long-term commitments like parenthood are at risk when the individual's future ability to financially support a family is in question. Longer spells of unemployment or absence from the labour market may furthermore devalue human capital investments and may seriously hamper the chance of returning to the labour force, thus consolidating economic dependence. Hence, a return to the labour market might – under certain conditions – be the first choice over family formation.

Theoretical considerations as well as previous empirical research dealing with the impact of precarious employment situations on fertility suggest that such factors are unlikely to affect both genders in similar ways (see Oppenheimer 1994; Kurz et al. 2001; Tölke & Diewald 2003; Golsch 2004; Kreyenfeld 2005; Tölke 2005). Hence, these rational choice based considerations and previous research findings will be addressed in detail in the following sections. In investigating a possible connection between unemployment and family formation, the focus of analysis remains on two major research questions:

- First, do unemployed persons have a significantly different likelihood of entering parenthood than persons with continuous employment careers?

- Second, is there a gender-specific difference in the effect of unemployment on the transition to parenthood?

Institutional regulations play central mediating roles in the gender-specific rationales for family formation during times of unemployment. The economic endowments of families, the ability to combine work and family, and predominant gender role ascriptions are closely related to welfare state regulations (see DiPrete, Morgan, Engelhardt & Pacalova 2003; Neyer 2003). An investigation of the unemployment-related effects on the family formation process must therefore consider the role of such institutional arrangements. The methodological approach of this paper includes a cross-national comparison of four countries: Finland, France, Germany, and the United Kingdom, each representing a specific welfare state orientation. The empirical models are based on longitudinal analysis of micro-data from the European Community Household Panel (ECHP), facilitating event history methods.

2) Unemployment and the Transition to Parenthood – Previous Findings

Individual Unemployment

There are several studies that focus on the relation between labour market performance and family formation at the micro level. Most of these do not explicitly focus on unemployment but consider it an indicator of occupational performance. Moreover, most studies refer to specific populations on a national or sub-national level. Liefbroer and Corjin, e.g. (1999) find in an analysis of Dutch and Flemish young adults that unemployment hampers family formation among men but significantly promotes the rate of entry into parenthood for women. With a focus on the relation between education, occupational hardships, and the transition to first motherhood in Sweden between 1986 to 1997, Hoem (2000) identifies particularly low birth rates among students, but no distinct effects in cases of unemployment. Andersson (2000), however, points to findings suggesting a positive effect of unemployment on first-birth risk, at least among Swedish women between 20 and 30. In a study examining the fertility consequences of unemployment, Kravdal (2002) utilises Norwegian register data for both men and

women. According to this study, the transition rate to second and higher-order births is diminished by unemployment episodes, while in contrast a weak positive effect exists for the transition to first motherhood. Among men, his findings point to a dominant negative effect of unemployment with respect to all birth parities. The set of covariates in this study is very limited, however, and also excludes wages. In line with the above results, Vikat provides findings for Finland (2004) that display a weak correlation between unemployment and individual fertility, particularly among women younger than 30.

In the case of Germany, Kurz, Steinhage, and Golsch (2001) find the aforementioned gender-specific opposite effects, with a higher likelihood for unemployed women to start a family and a slightly lower likelihood for unemployed men. Tölke and Diewald (2003), who focus on the transition to fatherhood in the context of precarious employment, also recognize a negative impact of unemployment. Witte and Wagner (1995) also investigate the effect of employment status on the transition to fatherhood, distinguishing between transitions in East and West in post-unification Germany. Although theoretically arguing that occupational insecurities should hamper breadwinner qualities, they do not find any clear evidence in that direction. Kreyenfeld also distinguishes between East and West Germany in her analysis (2000), and among different durations of unemployment. She cites a pronounced increase of entry into motherhood beyond short-term unemployment, as well as for all women with lower levels of academic education. In another approach, which focuses on labour market related insecurities, Huinink and Kreyenfeld (2004) examine the first-birth risks of two East German cohorts. The authors point out that an immediate effect of unemployment on family formation is evident, but note that “employment uncertainties do not generally contribute to a postponement of fertility” (Huinink & Kreyenfeld 2004: 28).

The majority of the presented studies focuses on female fertility transitions from unemployment (except for Tölke & Diewald 2003, e.g.), while only the studies by Kreyenfeld for Germany (2001) and by Kravdal for Norway (2002) control for any effects of unemployment duration. Moreover, all of the studies mentioned focus on a country specific context. The only investigation that makes use of cross-national comparative data for the analysis of first-birth transitions for both men and women is provided by Golsch (2004). Using ECHP data from Germany, the UK and Spain for her analysis, she identifies significant effects of unemployment only among Spanish men, for whom the impact is distinctively negative. The current

project aims to expand this view to explore the effects of unemployment on the transition to parenthood among both men and women in a cross-national comparison of France, Finland, Germany, and the UK. By doing so, I will also control for the impact of several partner characteristics and for the impact of unemployment duration.

Aggregate Unemployment

An additional group of studies focuses on the impact of unemployment rate on individual fertility decisions. Generally, high unemployment is assumed to exert a pronounced negative effect on fertility. Adsera (2005) stresses this finding for a set of European countries based on ECHP data, and Klein and colleagues (1996) provide similar findings for East Germany[1]. Kravdal (2002), for Norway also stresses the depressive effect of high unemployment rates on fertility (considering only aggregate fertility, however). The assumed mechanism at work is that high unemployment signals bleak labour market prospects and the resulting occupational insecurities offer an unpromising outlook for starting a family. Thus, couples tend to focus on occupational attainment in order to contain these risks, which fosters a deferral of childbearing decisions (see Kohler, Billari & Ortega 2002: 659; Vikat 2002: 174; Aaberge, Colombino, Del Boca, Ermisch, Francesconi, Pasqua & Strøm 2005: 132). This reasoning is in line with a research tradition initiated by Easterlin (1962; 1966) and Butz and Ward (1979), which assumes that fertility behaviour is oriented on anticipation of (macro-) economic conditions.

However, it has already been pointed out that such macro-level correlates are no reliable indicators when attempting to unravel the underlying mechanisms at work. Two topics are of special relevance in this context: 1) It remains unclear through which mechanisms such objective indicators as unpromising economic prospects translate into individual perceptions, and 2) Once these perceptions are established, it is unclear how individual perceptions of economic uncertainty affect fertility behaviour. The following investigation will focus primarily on micro-level effects of individual unemployment and thus address the second of these questions with respect to tangible experiences of economic insecurity and their impact on fertility behaviour. Through a cross-national comparison, this section will attempt to clarify the im-

[1] The study presents some evidence that individual unemployment interacts with a high unemployment rate. In this context, the authors stress that a high unemployment rate tended to foster the transition to motherhood in East Germany shortly after German reunification (see Klein et al. 1996: 75).

pact of different welfare systems and labour market conditions on *individual* fertility decisions.

3) Fertility Decisions under Unemployment – Theoretical Considerations

This section will outline theoretical key issues and apply them to an investigation of how individual experience of unemployment alters family formation rationales. In this context, the negative consequences that attend job loss – the loss of earnings, a decline in social status, a depreciation of human capital investments and insecure future prospects – are all likely to exert a specific (not necessarily univocal) impact on the choice to start a family.

Work and Family as Competing Domains in the Life Course – Initial Considerations

This section begins with the assumption that the desire to have children is a common and widespread life-goal in modern societies (see Huinink 2001: 3). Family formation, like participation in gainful employment and investment in a career, provides social approval and physical well-being, through acquiring comfort and stimulation (through the joy of watching a child grow up, for example, or by earning the monetary resources for consumption). From the perspective of social production functions, family formation and gainful employment both represent competing options for attaining these universal life-goals (see Lindenberg 1986; 1991). Still, the desire to have a child is often based on immanent values, so pursuing alternative goals can only provide a limited substitute for the satisfaction of these desires (see Schoen, Kim, Nathanson, Fields & Astone 1997: 335). In any case, starting a family requires financial resources and economic security (see Oppenheimer 1994).

The above picture addresses two central points: First, becoming a parent and investing in a career are choices that compete for a limited time budget. Second, starting a family generally relies on a sound and stable economic basis, which is provided by gainful employment. A widespread response to these constraints is to either combine work and parenthood by reducing individual expenditure in both domains (and by activating social support networks where possible). The alternate is to arrange labour market engagement and parenthood sequentially

within the course of an individual biography, that is, to postpone the first-birth transition (see Dornseiff & Sackmann 2003).

When unemployment enters into the situation as an unexpected labour market event,[2] it fundamentally alters the context outlined above. The economic support of a future family is placed on uncertain ground; the opportunity costs of parenthood are drastically diminished, while human capital investment tends to deteriorate with duration of labour market absence. At the same time, having a child presents an alternative means of gaining social approval. The question, which of these mechanisms eventually dominate, and lead either to a hastening or a postponement of parenthood under unemployment, must be answered with a close focus on the societal context of social structures and institutional arrangements (see DiPrete & McManus 2000). Most of the factors that effect the relation between family formation and unemployment differ in their impact on men and women as well as across countries. The family formation rationales related to these contexts will be discussed theoretically in the following section.

A Gender Perspective on Unemployment and Family Formation

Interpreting the wages of female workers as an indicator of the value of women's time, unemployment or bleak labour market prospects reduce the price of time, thus reducing the opportunity costs of parenthood (see Leibenstein 1975). A specialisation on household production of commodities in this context would be a reasonable response to unemployment (see Becker 1993). However, this is highly dependent on predominant models of gender division of labour in a society, which range from egalitarian to traditional roles. **Neoclassical models,** which commonly assume *traditional gender roles*, envisage a complementary division of occupational and domestic tasks, divided along gender lines. From this perspective, **female unemployment should speed up family formation, while male unemployment should delay family formation** (see Zimmermann & DeNew 1990). Friedman, Hechter, and Kanazawa (1994) similarly argue that – assuming traditional gender roles – women in a discouraging

[2] In fact, some actors may deliberately plan their labour market exit prior to family formation. However, the nature of most welfare state transfers, in particular, reinstatement rights after parental leave and the fact that unemployment support only partially replaces former income renders this an unlikely choice under most welfare state arrangements.

employment situation are more likely to opt for motherhood, taking into account not only their current situation, but also the unpromising labour market prospects.

From a theoretical perspective that also takes into account *egalitarian gender* roles, female unemployment would still reduce the opportunity costs of parenthood in contexts where *both* partners are integrated into the labour market. Even in societies that tend towards high levels of gender egalitarianism, female engagement in childcare exceeds male contributions. If the time-intensive transition to parenthood is placed within a period of unemployment, forgone earnings are still minimized and time conflicts are cushioned for couples with egalitarian gender roles. However, it should be noted that where parental burdens are more equally distributed between men and woman, female opportunity costs are lower, and hence the incentive to further reduce these costs by placing the transition to parenthood within an unemployment episode should be less pronounced.

In the case of **male unemployment**, there is a limit to how much family formation can be combined with the father taking over the bulk of parental responsibilities, since some of the maternal burdens associated with having a child like childbearing, giving birth and nursing, are unalienable. Indeed, the transition to parenthood always requires that the mother take at least a temporary absence from the labour market. Welfare state income replacements and reinstatement rights after a maternal leave offer *limited* compensation for this absence (see pp. 26ff.). However, in cases where the man is unemployed and the woman is the sole income earner, *her* temporary exit from the labour market most likely conflicts with the need to maintain the economic stability and autonomy of the couple. Evidence, particularly from the US, indicates that childbirth-related absences from the labour market can be fairly short[3] and a quick return of the female to her job can be compensated for if the man adopts a larger share of the parental obligations (those that are distributable). This reversal of traditional roles, however, involves wide deviations from common gender norms and is perhaps most likely in institutional contexts where maternity protection is underdeveloped anyway, as in the liberal welfare state. Summarizing the above, **starting a family with a female wage earner and a male carer poses an unlikely constellation**.

[3] However, it can be argued that the prevalent quick job return postpartum is rather due to an underdeveloped maternity protection and economic needs in liberal welfare states than to close labour market attachment.

The conclusion of this initial frame of reference suggests that there are **gender-specific effects of unemployment**. Thus, unemployment can be seen as an exogenous effect that, in the context of a pending transition to parenthood, has different implications for family formation decisions when either the man or the woman becomes unemployed. For both partners, individual unemployment directly reduces available household income. Moreover, for both men and women unemployment indirectly reduces the obtainable market income by diminishing human capital with the increasing duration of the unemployment spell. What applies particularly in case of ***female unemployment*** **is a reduction in the cost of time** required for childcare (whereas the original cost of parenthood depends on the availability of public childcare). If a couple displays more egalitarian gender role attitudes, resulting in male engagement in childcare, the reduced price of time would also apply to male unemployment. As shown above, however, parenthood in case of *male unemployment* would require that the female temporarily reduces her activity in the labour market, and so this appears an unlikely case where the male earner is already without a job. Furthermore, judging from the limited paternal engagement with childrearing in virtually all Western societies (see Fuwa 2004), women can anticipate that they would still have to expend significant effort in childcare, making family formation during male unemployment an even more unlikely scenario. In this sense, **male unemployment** is more likely to function primarily as a signal of **reduced breadwinner capabilities**, thus decreasing the likelihood of family formation (see Oppenheimer 1994: 322).

Unemployment and Biographical Uncertainties

With respect to family formation, unemployment directly hampers the creation of a solid economic basis, but it also increases future risks by depreciating human capital, entailing permanent losses in earnings (see Gangl 2006) and by nourishing doubts about the future capability to support a family. Unless unemployment is willingly entered into with a new occupational perspective up one's sleeve, becoming **unemployed signals uncertain future prospects**, putting family formation on a precarious basis. Issues that contribute to this uncertainty about the future include: the possibility of having to move to take a new job, uncertainty about whether the new occupation will have adequate or the same occupational status as the previous position, whether wage expectations will be met or whether some loss in income must be accepted. All these issues and, last but not least, not knowing *when* an appropriate job will become available, increase uncertainty about the future. Such uncertainties are likely to hamper

family formation plans, where they undermine the stability and economic foundation of a future family. Importantly, most of these contexts and prospects associated with **unemployment related uncertainties tend to worsen with unemployment duration.**[4] Moreover, these uncertainties are also mediated by educational attainment; higher education is associated with better chances to regain a job quickly, but also a higher threat of depreciated skill endowments.

Furthermore, the **institutional setting** also **mediates the perception of risks during unemployment**. On one hand, different welfare states might provide different levels of protection from unemployment. On the other, this same social protection might affect attitudes toward risk, whereby a higher level of protection perhaps induces a more rigid assessment of which contexts are deemed sufficiently reliable for family formation. Employer-firm relations in coordinated market economies, characterized by high levels of trust, indicate reliability and long-term relations, what might further nurture the avoidance of uncertainty. That is, in societies that provide a high level of protection from unemployment by minimizing risk incidence,[5] the actual experience of unemployment might present a much more severe experience of insecurity than is the case in societies where labour market entries and exits are common events, as in liberal market economies. In a society that relies on a high level of social protection and that aims to minimize risk, an internalised uncertainty avoidance might make family formation in a precarious occupational context an unpromising biographical option. Yet, it should be noted that a strong economic position or the thorough labour market integration of the other partner could contain the negative impact of unemployment related uncertainty.

Unemployment and the Depreciation of Human Capital

Becoming unemployed represents a more pronounced change in status for people with higher levels of education, for whom individual aspirations and comparison with reference groups will likely render unemployment a more drastic experience than for low skilled professionals. A higher level of education and vocational skills translate into a higher earning capacity and increased career options. Moreover, **human capital endowments tend to deteriorate with**

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[4] This is an even greater issue where institutional unemployment support is reduced after a certain time in most welfare states (see pp. 26ff.).

[5] For instance, by enacting legal protection of employees, and by encouraging long-term employee-firm relations (see Hall & Soskice 2001; DiPrete 2002).

duration of labour market absence (see Mincer & Polachek 1974; Mincer & Ofek 1982). "The longer a woman would be out of the labour force, the greater a loss she would incur in terms of skill degradation and lost opportunities (for promoting and training)..." (Gauthier & Hatzius 1997: 296). In the case of highly skilled unemployed *women*, reintegration into the labour market is also favourable in order to avoid the consolidation of the homemaker role and the associated risk of economic dependence (see Ott 1995). Thus, for persons who have made extensive skill investments, and for higher educated women in particular, it is rational to postpone family formation and instead promote a labour market reintegration (see Brewster & Rindfuss 2000: 281; Tölke 2004: 25).

However, the costs of deteriorating human capital when facing unemployment (and thus the expected decline in both future earnings and career options) are opposed to significantly decreased opportunity costs of starting a family. Among women with a higher income capacity, this decline in opportunity costs is particularly pronounced (see Lundberg & Pollak 2007: 18). An important question in this context is whether the decreased opportunity costs of childbirth during unemployment outmatch the urge to avoid a depreciation of human capital and thus to re-enter the labour market. Two issues are critical in this context:

1) The actors' assessment of the costs of remaining unemployed and the costs of parenthood are mediated by institutional contexts (see DiPrete & McManus 2000: 344f.). This is the case, for example, where transfers partially compensate for income loss in case of unemployment or where the infrastructure for childcare permits the time required for childcare to be reduced, thus lowering the opportunity costs of parenthood.

2) The duration of the unemployment episode is likely to influence whether the individuals favour family formation or labour market re-entry. While actors will try to avoid an ongoing deterioration of skill endowments, the confidence that one can quickly regain a job is likely to decrease over time.

An analytic consideration of how ***unemployment duration*** effects the likelihood to opt for having a child is provided by Happel, Hill and Low (1984). According to their theoretical model, decisions in favour of birth are made in cases where the negative impact of the duration of the woman's unemployment offsets the amount of her accumulated human capital. However, the anticipated depreciation of the human capital is further mediated by the assessment of the current labour market situation, the perceived chances of regaining a job quickly,

and how current job options compare to those expected after a childbirth-related leave. While unemployment rates are an indication of occupational prospects (see Aaberge et al. 2005: 132), more generally the type of market coordination affects the permeability of labour markets, thus influencing the chances to re-enter the labour market (see Hall & Soskice 2001). The perception of bleak job prospects can speed up the transition to motherhood. This might be the case if attempts to regain a job remain unsuccessful over a long period of time, leading to a sense of resignation, or if a labour market crisis and recession indicate that ew employment opportunities are rare. For men, however, one would expect the likelihood of starting a family to be generally reduced from the perspective of depreciating human capital endowments, which tends to signal a decline in potential income, and thus in breadwinner capabilities.

In summary, the **depreciation of human capital exerts a negative impact on the transition to parenthood for both men and women**. However, the high opportunity costs of parenthood may outmatch the depreciation, particularly among women with a lower skill set. Among men, on the other hand, with their generally lower engagement in childcare, skill loss primarily signals a decline in the ability to provide a sustaining source of income. Among women with a higher level of education, the institutionally mediated opportunity costs of parenthood and the duration of unemployment (associated with potential discouragement and decreased chances of quickly regaining a job) are likely to be weighed against each other.

Family Formation from Unemployment and Bargaining Position

Unemployment – particularly if it is of longer duration – does not only depreciate human capital investments. It also shifts the bargaining power within couples to the detriment of the one who is unemployed, since bargaining power relies on labour market status and educational achievements (see Ott 1995; Beblo 2001: 23). As unemployment tends to weaken the individual's bargaining position, two main conclusions can be established. 1) The partner with the superior income position (usually the one who is still employed, assuming both partners were previously working) can better voice his individual preferences, particularly his childbearing preferences (see generally Bielby & Bielby 1992: 1244). Furthermore, female unemployment in particular will likely result in a more traditional division of labour within the couple, with the woman assuming a higher proportion of household chores. That is, the division of labour already tends towards what is likely going to be the status quo throughout par-

enthood. 2) In order to avoid economic dependence and to improve his bargaining position, the unemployed partner will likely try to regain a job. This dynamic is mediated by the welfare state, where a higher level of unemployment insurance partially protects from dependency. Yet, the extent of this mediation depends on the level and duration of unemployment benefit payments.

When making the decision to step out of the labour market, the increase in household utility (caused by specialisation and by the realisation of childbearing desires) stands in contrast to the depreciation of individual human capital and a reduction of future career opportunities. This becomes especially virulent if the unemployed person considers the possibility of a future separation. Hence, a long-term commitment to the homemaker role that hampers chances of reintegration into the labour market may be risky business, particularly in a societal context where the stability of relationships is becoming ever more fragile (see Ott 1998: 73).

To sum up, when focusing on the role of the homemaker it is evident that the reduction of opportunity costs of parenthood caused by the reduced price of time in case of unemployment stands opposed to the perceived risk of economic dependence and the deterioration of one's own bargaining position in a couple. How these factors are evaluated depends on the individual's human capital investments, on the anticipated employment prospects (which indicate chances of recovering the individual bargaining position), and on the degree of mutual trust (indicating the likelihood that the significant other will exploit his or her superior bargaining position).

Institutional Mediation of Fertility Behaviour under Unemployment

During a period of unemployment, the evaluation of whether to start a family is mediated by the general labour market prospects as well as by the institutional context. **Institutional regulations affect the opportunity costs of parenthood,** the **options for getting back into employment,** and **unemployment benefits**. A high degree of labour market closure, common in coordinated market economies like Germany, tends to increase the threat of long-term unemployment, and, therefore, of economic dependence. In contrast, liberal market economies provide limited protections against unemployment-related hardships, due to the generally low-level of unemployment benefit payments of a short duration. With respect to parenthood, these types of states also provide limited support for child-related costs, due to low child allowances combined with an underdeveloped childcare infrastructure. In several conservative

welfare states, a low supply of childcare facilities is common, particularly in places where norms of maternal care are pronounced. This translates into high opportunity costs of parenthood in such countries, which provide a strong incentive to start a family during periods of unemployment. Additionally, in many welfare states, unemployment benefits tend to increase with the transition to parenthood (see Table 1, p.27) which mitigates some of the adverse effects of unemployment and provides a minor additional incentive to start a family while unemployed. In contrast, unemployment support is significantly decreased after prolonged periods of unemployment. Coordinated market economies provide a lasting support, with unemployment insurance benefits aspiring to near income replacement levels. In contrast, in liberal states, the generally low level of support is quickly reduced to a minimum level (see Table 1). Particularly in a situation where job prospects are bleak, a generous monetary support for parents alleviates the financial setback of unemployment, and may provide an incentive that tips the scales in favour of family formation.

Moreover, where the interplay of culture and institutional arrangements leads to an extended childbirth-related job-absence, the anticipated opportunity costs of parenthood are higher. Parents-to-be in southern European countries and in Germany in particular usually anticipate this extended duration of occupational absence. In places where strict norms of maternal care are combined with an underdeveloped childcare infrastructure, extensive maternity protection and reinstatement rights (the latter applies to Germany only) result in long periods of absence from the labour market. These extensive labour market exits due to motherhood are closely related to the ascription of traditional gender roles, reproduced in institutional settings. This signals extensive incompatibilities of work and family formation, which are related to the high opportunity costs of parenthood (see Aaberge et al. 2005: 137).

Hence, if a couple plans to have a child, placing the labour market exit due to parenthood within the unemployment episode could serve as a strategy to minimize the duration of labour market absence, particularly in countries where the institutional setting induces an extensive childbirth-related leave of absence. Opting for such a strategy depends on whether individuals conclude that a return to the labour market is easier from unemployment or from a child-related labour market absence. Reinstatement rights that are part of leave policies, such as those in place in Germany or in Finland, certainly provide a strong incentive to start a family while still employed, as the depreciation in skill endowments does not interfere with job re-

turn because of the legal protections such a policy provides. This in turn decreases the likelihood to place the transition to parenthood in a period of unemployment, since a quick return to the labour market in this context is ruled out in favour of a longer leave period, and particularly since potential employers are likely to be reluctant to hire during pregnancy, given the extensive maternity protections (see Soskice 2005). Hence, this combination of unemployment and family formation signals adverse prospects for human capital development and occupational opportunities if the woman wants to the return to the labour market in the future.

More generally, where job protection regulations are extensive – which is the case in many coordinated market economies – firms are more reluctant to hire staff, as employment is associated with long-term commitments and legal responsibilities. This increases the divide between labour market insiders and outsiders. Thus, the risk of long-term unemployment in coordinated economies like Germany is higher than in liberal market states like the UK or the US with a higher labour turnover (see Hall & Soskice 2001). In this context, chances of re-entering employment worsen over time in coordinated market economies, providing a strong incentive to quickly regain a job. Longer unemployment episodes are likely to foster discouragement in job search, making family formation a more promising alternative. In contrast, the negative impact of unemployment in liberal market economies appears mainly in the form of financial risks due to limited unemployment support, while the risk of long-term unemployment is generally contained by a higher labour turnover rate. In coordinated economies, the financial risks of unemployment are cushioned by generous levels of support. The conservative welfare state additionally strengthens support for families to cushion them from such life course risks. However, in case of female unemployment, this institutional context commonly fosters economic dependence on a breadwinner. In particular, women with higher levels of education will try to avoid such a constellation, thus aiming to regain a job rather than starting a family, which would consolidate a traditional division of labour.

Gender Roles and Social Norms in the Context of Unemployment and Parenthood

To sum up the above discussion, institutional regulations mediate the relation between unemployment and family formation through direct monetary support and by affecting the assessment of labour market risks and opportunities, as well as the assessment of the prospects for supporting a family. Furthermore, where institutional regulations strengthen families as support networks, encouraging social support in kinship groups (for example with respect to

childcare), these regulations also reinforce norms of a traditional division of labour in the family. Moreover, in societies where traditional gender roles prevail, female unemployment has a higher potential of shifting the division of labour towards more traditional arrangements (see Klein et al. 1996:70 for reference to Germany). In societies where female labour market engagement has becomes increasingly common, the social stigma of joblessness is extended to *female* unemployment (see Hakim 2003: 369). While this stigma presents a strong source of social disapproval in societies, oriented toward the labour market, a focus on parenthood can raise social esteem and self-perception (see Morgan 2003: 592; Tölke & Diewald 2003: 43ff.). Thus, the loss of status due to unemployment might be *compensated* for by shifting the activity to the family domain by having a child (see Murphy 1989: 17). Where such a mechanism of compensation is in effect, it is probably more pronounced among women with low levels of education. On average, these women are younger when having their first child, and extensive birth postponemnent and childlessness most likely signals a stronger deviation from reference groups, whereas starting a family generates social approval through its compliance with group patterns (see generally Leibenstein 1975).[6]

Hypotheses

As outlined above, the way that actors evaluate family formation during period of unemployment – whether it presents a promising option or not – depends on a series of factors that most likely differ in their impact as well as in the direction of effect. Prolonged unemployment, on one hand, may be a signal of bleak prospects for regaining a job. In contrast, longer periods of unemployment may also signal that the economic basis for supporting a family has been seriously undermined. Importantly, the effect of unemployment is mediated by a series of endogenous and exogenous factors that alter the opportunity structure, making family formation either a promising or inadvisable option. These factors include the individual's repertoire of skill endowments and income capacity, characteristics of the partner's labour market prospects and income that might compensate for the unemployment of the significant other (see Drobnic, Blossfeld & Rohwer 1999: 144). Moreover, mutual trust and extensive reciprocity in one's relationship is an indication of reliable backing and support. Additionally, social norms

[6] Alternatively, Friedman, Hechter & Kanazawa (1994: 383) argue that family formation might compensate occupational insecurities by providing clearly predictable paths in the private domain, thus reducing uncertainty.

are key factors in the regulation of occupational and family roles. The extent to which norms reprove economic inactivity with a decline in social esteem, or the extent to which a focus on parental life might compensate for a loss in job status crucially depends on the gender role expectations in a society. Finally, welfare state regulations are essential factors that foster or discourage starting a family during a period of unemployment, not only through the extent of monetary support but also in the general level of protection from risks, and eventually, by the reproduction of either egalitarian or traditional gender roles.

The following hypotheses aim to present a testable basis for the analysis of differential institutional and cultural backgrounds and their impact on family formation rationales in the context of unemployment.

H1: Opportunity cost hypothesis: Unemployment lowers the opportunity costs of family formation. Childless persons therefore show a higher probability of performing the transition to parenthood during periods of unemployment, independent of other factors, especially gender.

H2: Breadwinner / Homemaker hypothesis: Unemployment increases the probability of first birth transitions for women but not for men. This applies in particular to contexts where traditional gender roles are predominant, and where women are disadvantaged in the labour market. As these contexts consolidate traditional divisions of labour, men – taking the role as the breadwinner – seek a quick reintegration into the labour market. For them, adverse occupational prospects and a lack of economic backing represent diminished breadwinner qualities, thus reducing the propensity to start a family.

H3: Compensation Hypothesis: The loss in social status due to unemployment can be compensated for by a focus on the private domain. Starting a family may thus serve as an alternative means of gaining social esteem. This compensation functions for both men and women. However, in egalitarian societies, where male contributions to the private domain are encouraged, the compensation effect for men should be stronger than in countries where traditional gender roles are reproduced. In contrast, for women in traditional societies, the focus on the homemaker role provides a better opportunity to compensate for social disapproval due to economic inactivity than in egalitarian societies.

H4: Human capital investment hypothesis: The effect of unemployment is mediated by levels of *individual* educational and vocational attainment. Higher educated persons pursue a

quick reintegration into the labour market to avoid a depreciation of their human capital investments – regardless of gender. They can be expected to perform the transition to parenthood in a situation of sound economic perspectives, which support their family planning. Persons with lower educational attainment face only a limited depreciation human capital in case of unemployment. For them, the reduction in opportunity costs of parenthood is critical, resulting in an increased affinity for family formation.

H5: Specialization hypothesis: The effect of unemployment is mediated by the relation of educational and vocational attainment between the partners. Given an equal[7] or lower level of educational attainment on behalf of the woman relative to her partner, female unemployment induces a traditional division of labour and a higher tendency to opt for parenthood. The affinity for family formation in the case of male unemployment will be diminished under these educational constellations. Male unemployment will only induce a greater likelihood of a fertility decision if the educational attainment of the woman clearly exceeds that of the man, thus reversing traditional gender roles.

H6: Auxiliary hypothesis of duration effects: In extension to hypotheses 3, 4 & 5, the likelihood of starting a family increases for women with the duration of unemployment. This is founded on the assumption of growing social disapproval due to economic inactivity, and on the assumption that prospects for swift labour market re-entry decline over time, eventually leading to discouragement in job search.

4) Structural and Institutional Backgrounds in Finland, France, Germany, and the United Kingdom

The choice to start a family when facing unemployment is framed by institutional orientations, labour market structure, predominant norms of occupational participation, and parental roles. Moreover, welfare state support mediates the costs of parenthood and provides protection in case of unemployment. That is, in protecting from risks and hardships, the welfare

[7] Even with equal skill endowments, the woman is still at a disadvantage due to persistently lower obtainable market income for female workers compared to males (see Blau & Kahn 2000; Mahy, Plasman & Rycx 2006).

state decisively alters family formation rationales. Policy regulations directly effect the opportunity costs of parenthood, while the general level of security provided by welfare state protections very likely influences rationales to place the transition to parenthood in the precarious context of unemployment. In front of this background, cross-national variation in unemployment support and family related policies are likely produce different outcomes in fostering or hindering birth decisions under unemployment.

By comparing these contextual factors in a cross-national perspective, I aim to establish the generality of possible findings and to highlight the impact of specific institutional and cultural backgrounds. As Melvin L. Kohn puts it: "...cross-national research is valuable, even indispensable [...] In no other way can we be certain that what we believe to be social-structural regularities are not merely particularities, the product of some limited set of historical or cultural or political circumstances" (Kohn 1987: 77).

The set of countries that will be included in the cross-national comparison include Finland, France, Germany, and the UK. The four countries show profound variations in fertility levels and labour market structure. Yet, what makes comparing these countries a particularly promising endeavour is that they display distinct differences in institutional orientation. The underlying assumption is that these orientations have a concrete effect on fertility rationales, particularly in the context of unemployment. The following overview of institutional arrangements in the selected countries will consider the general institutional orientation, labour market structure, and will delineate aspects of the social support systems with regard to employment, unemployment and family benefits, especially parental leave regulations.

Institutional Orientations

The UK is a proponent of the liberal welfare state, whereas Finland serves as an example of the Scandinavian social-democratic welfare state. France and Germany represent the continental conservative welfare state (see Esping-Andersen 1999). Social protection is profound in Finland. This pertains to a wide array of life course risks that are covered, generous transfers, a broad formulation of eligibility rules and pre-emptive support. The UK represents the opposite pole, where risks are largely mediated by the market, and where eligibility for public support is limited, means tested, and tends to cover only the most adverse hardships. In con-

trast, in both France and Germany, levels of support are extensive and cover a broad array of risks. However, in many contexts, eligibility is linked to labour market status (commodification). Moreover, the high level of market coordination tends to widen the chasm between a high level of protection for the working population and a limited protection for jobless persons. Firms are encouraged to invest in employee skills and training as well as in long-term relations, while laying-off staff is made difficult by high legal barriers. As a result, there is a strong division between labour market insiders and outsiders, with long-term unemployment being one of the most severe life course risks. In contrast, in the liberal market economy of the UK, labour market exits and re-entries are much more common. Firms as well as employees focus more on short-term income maximisation than on long term relations (see Hall & Soskice 2001; Diewald & Sill 2004). The important conclusion from this is that in the UK, though unemployment protection is minimal, the threat, emanating from this precarious situation is perhaps much lower than it is in Germany, where unemployment embodies the threat of long-term economic dependence and partial exclusion from social life.

While Germany offers a paradigm of both the conservative welfare state and of a coordinated market economy, France, on the contrary, represents a variation on this pattern in vital aspects (see Soskice 2005: 177; Mayer 2005: 35). While the conservative welfare state fosters family support and thus encourages traditional gender roles, France, in its laicist tradition aims to diminish the influence of families on child socialization by fostering public care, particularly day-care, and a higher coverage of childcare institutions (see Veil 2005). Women are encouraged to participate in employment and are widely relieved from traditional carer duties, which are partially provided by the state. Moreover, many welfare transfers in France are directed towards the family unit, while in Germany several benefits implicitly encourage traditional institutions like marriages and single-earner families. In contrast, most support in Finland and the UK is individual centred, which alleviates economic dependence on a breadwinner and nurtures more egalitarian gender roles than in the conservative states. In many of the outlined contexts, the GDR, that is East Germany before 1990, rather resembled Finland with respect to the encouragement of egalitarian roles and female labour force participation. Parallels can also be found to the French model of childcare support and population policy. In fact, many of these institutional regulations still echo in the different gender relation still prevalent in the East of Germany (see Trappe 1995; Sackmann 2000). The key conclusion

from the outlined picture is that these institutional contexts crucially shape gender role beliefs and thus enact either egalitarian gender roles as in Finland or traditional roles as in Germany.

Shifting the focus to the UK, the elaborate public childcare system in France finds its counterpart in British preschool education and the high prevalence of boarding schools (see Dienel 2003). Nevertheless, family affairs in the UK still show an extensive traditionalism, and this is despite the fact that women are strongly integrated into the labour market of this liberal economy and although individual-centred benefits support egalitarian gender roles. However, key elements that foster traditionally segregated gender roles are the low level of public childcare provision (most extra-familial childcare options are private and thus costly), as well as an underdeveloped maternity protection and support, and restrictive employment reinstatement rights (see Lewis 1992). In consequence, this renders the UK a strong male-breadwinner state, and most likely fosters the transition to motherhood during unemployment, due to reduced opportunity costs.

The aim in Finland is to reduce the pressure on parents by providing an elaborate care system that offers a wider variety of life course options by encouraging the combination of work and parenthood. Germany, in contrast, stands out in the sample by implicitly showing the highest demands on maternal roles. Close individual care and personal sacrifice in relation to motherhood are dominant norms in Germany, whereas norms of *paternal* care are widely absent and are only slowly starting to diffuse. This is also the consequence of the reproduction of traditional familial roles, enacted by ostensibly generous maternal leave regulations that – in combination with a low supply of public childcare – encourage female part-time employment or a general retreat from the labour force after childbirth (Trzcinski & Holst 2003). Additionally, regulations like the so-called “Ehegattensplitting”, a specific taxation system for spouses, encourage a breadwinner / homemaker model (see Wrohlich & Dell 2005). Particularly for highly educated women with a strong labour market attachment, parenthood thus signals a high incompatibility with market roles, though maternal support appears to be generous at a first glance at German social policies.

Given the contexts of institutional orientations presented here, and their demands on parental roles, an unemployment episode that lowers opportunity costs is likely to show a positive effect, particularly in countries with high parental role demands and a high potential for role conflicts in the work-family nexus, as scarcity of time is a major issue. Thus, opposing gen-

der-specific effects of unemployment on family formation for men and women should be expected, especially in Germany, where a traditional division of labour is still widely in place. In contrast, the unemployment effects across gender in Finland and France are probably less pronounced, as norms of maternal care are less strict, while the availability and *acceptance* of public care is much more common than in Germany.

A Glance at National Labour Markets & Unemployment[8]

Labour market structure in the selected countries shows several particularities, which are important to a closer understanding of how the experience of unemployment and the associated uncertainty in occupational prospects affects family formation choices. Key issues in this context will be outlined in the following.

Female labour force participation is high, particularly in Finland (69.8%) and the UK (67.9%). In contrast, female participation rates in Germany (61.5%) and France (60.2%) are slightly lower. However, a high share of women in Germany and the UK – between one-third and two-fifths of employed women – only work *part-time*[9] (for all data refer to OECD Employment and Labour Statistics 2007; see also Figure 6, in the Appendix 0).

Unemployment rates in the observed countries displayed a clear decline between the early 1990s and 2001. The only exception to this rule is Germany, where the low to moderate overall unemployment rate between 1993 and 2001 remained widely stagnant at around 8%, with a peak of about 9% in 1997. Nevertheless, in the wake of labour-market deregulation and increasing global competition, labour market insecurities and precarious employment in Germany increased, particularly during the second half of the 1990s (see DiPrete 2002; Mills & Blossfeld 2003). France, during the 1990s showed an increase in flexible work arrangements as well. This, however, was not an outcome of labour market deregulation, and France's institutional response to macroeconomic global change managed to contain income inequality at an historically low level (see DiPrete, Goux, Maurin & Quesnel-Vallee 2006).

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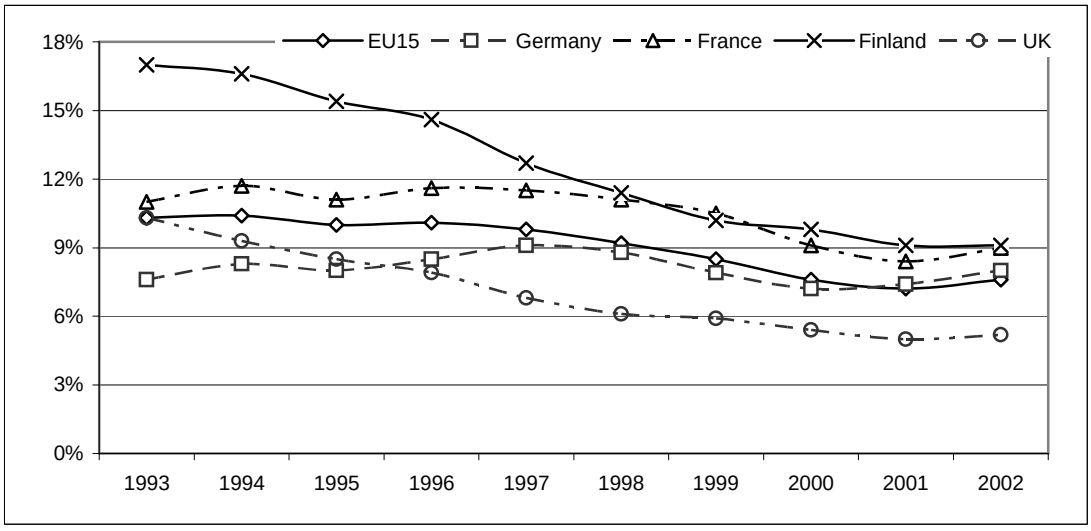
[8] Note that this outline of labour market conditions focuses on the settings that were dominant during the time for which the empirical analysis will be conducted, that is 1994 to 2001.

[9] In 1993, female part-time employment in the UK lay at 44% while female part-time employment in Germany was at 32% (see OECD Employment Outlook 2007).

Finland, in contrast, in the early 1990s faced its deepest recession of the last century, inducing a labour market crisis with exceptionally high unemployment rates. Among other factors, this crisis was triggered by the collapse of the socialist markets, trade cutbacks, and crisis in the financial markets. Unemployment rates rose massively (to a high of about 18% in 1994) with one-third of all unemployed persons being long-term unemployed[10]. In 1993, the youth-unemployment rate (below age 25) lay at 33%. It was among the highest in the EU, and rates recovered only slowly from this all-time high. With the labour market crisis, the majority of newly initiated work contracts were fixed term, while only 28% of all new contracts were unlimited. A high proportion of public employment additionally hampered the ability of state-intervention, and the Finnish labour market recovered only slowly from this shock. With un-employment rates at around 9%, Finland still ranked well above the other three countries in 2001 (see European Parliament 1996; OECD 1996).

Figure 1: Unemployment in Finland, France Germany, and the UK 1993 – 2002



Source: OECD Employment and Labour Statistics 2007. SourceOECD online-database.

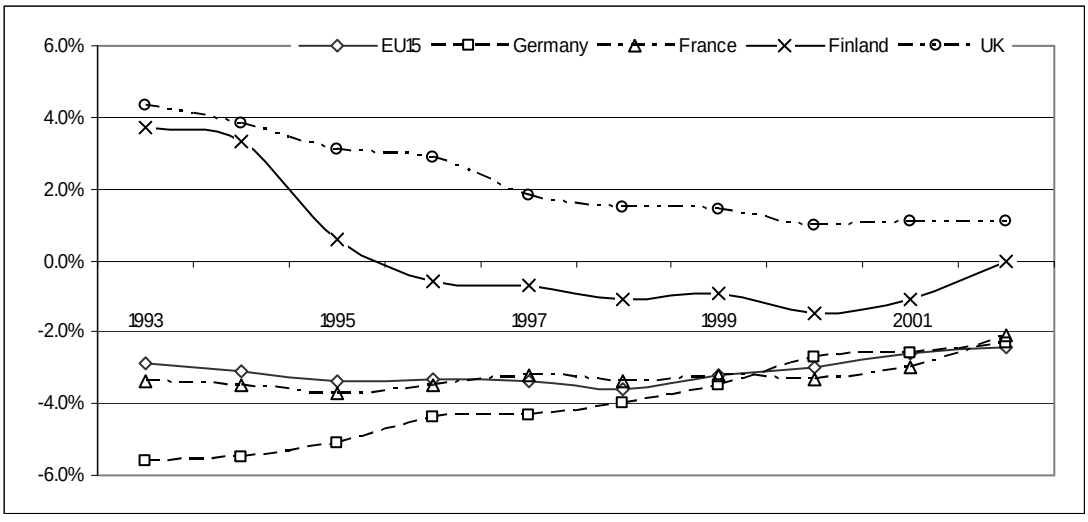
In contrast, Great Britain showed a flourishing economic development during the 1990s with unemployment rates below 5% in 2001. These rates were the lowest in the quartet. This has been related to deregulation and the prevalence of flexible working arrangements in the British labour market (see Wells 2001). Yet, a side effect of this deregulation is a high rate of

[10] Long-term unemployment relates to those who are unemployed for one year or longer according to ILO standards.

flows into and out of employment compared to highly regulated and unionised countries like Germany or Finland (see Rubery, Smith, Fagan & Grimshaw 1998: 112ff.) Despite the high labour market turnover in the UK, the risk of long-term unemployment is much lower than in coordinated market economies like Germany for example, where long-term unemployment presents one of the biggest threats associated with precarious employment (see Hall & Soskice 2001; Mayer 2004). At 28% of all unemployed persons, the incidence of long-term unemployment in the UK in 2000 was lower than the rest of the group (Finland: 29%), particularly in comparison to France (42,5%) and Germany (51,5%; see OECD 2005).

Figure 2 shows the gap between male and female unemployment rates, and thus depicts gender differences in the risk of becoming unemployed, and in the opportunity to re-enter the labour market in case of becoming unemployed. Female unemployment exceeds male unemployment in Germany and France. In the case of Germany, the *gender unemployment gap* was probably emphasized by the fall of the Berlin Wall: In the GDR, female labour force participation was much more common than in the FRG. Thus, Reunification brought an increase of female labour supply. The accommodation of this labour supply in the restructuring of the East German labour market was a lasting process. This is also reflected by the fact that the gap between male and (higher) female unemployment rates narrowed only slowly throughout the 1990s.

Figure 2: Gender Unemployment Gap in Finland, France, Germany, and the UK



Source: *OECD Employment and Labour Statistics 2007. SourceOECD online-database.*

Notes: *Negative values depict female unemployment rates exceeding male rates.*
All values in percentage points (male minus female unemployment rate).

Aside from this issue, the picture of a higher female unemployment in Germany and France resembles that of most other OECD countries and corresponds to the uneven distribution of labour market risks and opportunities between men and women. Women generally show higher flows into and lower flows out of unemployment. The UK and Finland (at least in the early 1990s) stand out as exceptions, seeming to offer better employment opportunities for women. However, these figures indicating lower rates of female unemployment are related to some particularities of the British and Finnish labour market structure.

In Finland, more than two-thirds of the employees in the extensive public sector are women (see ILO Bureau of Statistics 2007). Before the recession of the early 1990s, work in the public sector was commonly based on permanent work contracts, and thus offered good protection against labour market insecurities. Moreover, the industrial sector, with a comparatively low proportion of female employees, was hit particularly hard by the labour market crisis. Nevertheless, it should be noted that even in Finland where egalitarian roles are encouraged, female labour market position is inferior to that of men what is still closely related to higher female burdens in domestic responsibilities (see Ollikainen 2006; see generally Azmat, Güell & Manning 2006). In fact, with the recovery from the labour market crisis in the second half of the 1990s female unemployment again exceeded male unemployment.

In the UK, in contrast, unemployment of women is generally lower than that of men. A distinctively lower share of female long-term unemployment compared to Germany, France, or most other OECD countries supplements this finding. The underlying causes, however, are not substantiated by superior female labour market opportunities, but are rather related to the structure of restrictive unemployment support. When eligibility for unemployment support ceases in the UK[11], there is no incentive to report being unemployment. In contrast to men, however, women commonly turn to domestic duties, particularly in the context of predominantly traditional gender roles in the UK. Hence women frequently try to regain a job from a status of economic inactivity[12]. In fact, flows *from inactivity* to work (*and not from unem-*

[11] This is usually after six months. Unemployment assistance (income-based job seekers allowance) is strongly limited due to means testing on basis of partner / household income, thus limiting the incentive to report the unemployment, particularly in households with a male breadwinner (see also Table 1, p.27).

[12] All unemployment levels specified above are based on the ILO definition (those who are out of work in the reference week, want a job, have actively sought work in the last four weeks, and are available to start work within the next two weeks). Hence, the ILO indicator does not rely on "registered" unemployment. However, search

ployment to work) of British women rank among the highest in Europe. This proportion of inactivity to work flows (47,2% in 1993) clearly exceeds the share in France or in Germany (17,6% and 23,5%). On the contrary, flows *from unemployment* to inactivity are higher in the UK compared to Germany or France (see Rubery et al. 1998: 121, 138).

The context depicted above suggests that female unemployment in the UK is not inevitably lower, but rather underreported.[13] This results from the combined impact of a dynamic labour market and a rudimentary unemployment benefit system that widely relies on individual efforts to regain a job, thus limiting incentives to report individual unemployment. In the other three observed countries, especially in Finland and Germany, the unemployment benefit system is much more elaborate (see Table 1 on p.27). In contrast, in the UK the risk of remaining in unemployment is reduced, while the system of unemployment insurance is limited in its capability to protect from the economic risks of unemployment, thus fostering incentives for a quick labour market re-entry.

Institutional Regulations and Social Policy Settings[14]

Unemployment Benefit Regulations

The following overview will outline benefits and transfers related to unemployment and parenthood. It remains unclear how such transfers directly affect the transition to parenthood. Particularly with respect to the time span that separates the decision to have a child from childbirth, a direct positive impact of unemployment benefits on family formation remains unclear. It is questionable, if actors do indeed *plan* childbirth in anticipation of a supportive impact of unemployment benefits, especially as this would require to remain unemployed from the point of deciding to have a child until after childbirth, which is nine or more months

activities are an integral element of the ILO definition. This "active job search" is probably hampered by not registering with an unemployment office, thus inducing an underreporting of actual unemployment in the UK.

13 This is of special importance for an empirical analysis of how unemployment influences fertility decisions, as it suggests that a clear separation between unemployment and inactivity is a difficult endeavour in countries where benefit systems are rudimentary or eligibility is limited.

14 Note that this outline of institutional and policy regulations focuses on the settings relevant during the relevant time for which the empirical analysis will be conducted, that is 1994 to 2001.

later. However, a generous support of parents through augmented unemployment benefits signals protection from economic risks, thus alleviating some of the hardships of unemployment that tend to hamper the realization of family formation plans. It is likely that an extensive unemployment support provides the actors with a general sense of economic backing and security. Moreover, for women such support helps to maintain a minimum degree of economic independence from a breadwinner.

Table 1: Unemployment Benefit Regulations in 2002[15]

	Benefit reception – duration in months		Entitlement Requirements	Income Replacement: *(2)	Additional parental benefits *(2)
	Insurance(2)	Assistance	Employed months		
UK	6	unlimited(3)	none	50€-83€ per week	-
D	6-32	unlimited	12 within 36	60% of net	7% of last net
France	4-60	unlimited	4 within 8	57,4% of net / 23,88€ per day/min	-
Finland	23	unlimited	10 within 24	20%- 42% of net + 22,75€ per day	4€-8€ per day

(1) Additional regulations apply. Duration and benefit reception were subject to change between 1994 and 2002. For details refer to Pellizari (2004: 39f.)

(2) The duration and amount of benefit reception may vary according to the duration of the employment record (contribution period), the age and the family situation of the beneficiary if ranged value is specified.

(3) Income-based job seeker's allowance. Means tested minimum support (based on family income). Only available if the partner works part-time or less (<24 hours/week).

Source: MISSOC 2002; Carone, Immervoll, Paturot & Salomäki 2004.

Finland combines generous regulations of entitlement combined with comparatively high payments. Moreover, labour market reintegration is fostered by public training centres (OECD 1995: 109). In contrast, unemployment insurance payments in the UK are low and cover only a short duration of six months. Subsequent unemployment assistance is widely unavailable due to means testing based on household income. Hence, if a breadwinner exists in the household, unemployment support usually ceases after six months. Consequently, this establishes a profound economic dependence on a breadwinner and either exerts a strong pressure to re-enter the labour market, or has most likely a traditionalising effect on the partnership if the woman is unemployed. In Finland, France, and Germany the amount of transfers is reduced with unemployment *assistance*, but benefits are available for a longer duration than

in the UK, where the rules for eligibility for unemployment assistanvce are quite restrictive. Furthermore, in Germany and Finland, unemployment payments increase if the beneficiary has dependant children[16].

Parental Support

The following section will provide an overview of child-related benefits and incentives that directly (as in the case of monetary transfers) or indirectly (as in the case of leave regulations) affect fertility decisions. Moreover, such institutional regulations diminish opportunity costs of parenthood, for example, where the coverage of public childcare disburdens parents from care duties, or increases opportunity costs, for example, where policy regulations reinstate traditional gender roles, thus increasing maternal burdens.

Table 2: Leave Regulations and Family Related Subsidies

	Maternity & Paternity Leave		*Net wage replacement* (5)	*Additional Parental Leave*	*Child Allowance*
	Duration	Type	%	Leave & Subsidies	(1st child)
UK	6 weeks	maternity	90 (1)	13 weeks since 1999	105€ flat / month
	12 weeks	maternity	115€ / week (1)		
D	14 weeks	maternity	100	3 years; flat rate for 2 yrs (307€, means tested)	154€ flat / month
F	16 weeks	maternity	100	3 years; flat rate for 2 yrs with 2nd child (496€) APE(3) + 160€ for 3 yrs APJE(4)	none (111€ for 2nd child)
	3 days	paternity	100		
Fin	17,5 wks.	maternity	~70 (2)	26,5 weeks, ~70% net wage replacement (2)	90€ flat / month
	3 weeks	paternity	~70 (2)		

(1) Statutory Maternity Pay. Means tested option of Maternity Allowance (115€/week, for 18 weeks).
(2) Min. 11,45€/day flat or higher wage replacement (depending on labour contracts).
(3) Allocation Parentale d'Education; 1994 extension of parental leave regulations: Eligibility with the 2nd child (previously the 3rd child). Prerequisite 2 years of employment within last 5 years.
(4) Allocation Pour Jeune Enfant, childrearing leave.
(5) No wage replacement for unemployed except in Germany (low flat rate by health insurance); Parental leave payments for unemployed in Germany and France (see (3) & (4)).

Sources: Kamerman 2000, MISSOC 2002.

15 Specified regulations apply to the period of the empirical investigations to be conducted (1994 to 2001).
16 Germany: 7% of previous net income; Finland 4€ to 18€/day (see MISSOC 2002).

In our sample of welfare states, two major pathways can be identified in the field of family policies: On one side, certain countries promote regulations that make it easier to combine work and family. They do so by encouraging flexible working hours and by establishing extensive day- and infant-care systems. This is the case, particularly in Finland[17] and France. On the other side, there are family policy regimes that, through financial policies or regulations, encourage women to retreat from the labour force. This is actively accomplished in Germany, through generous leave regulations in combination with a low coverage of public childcare, resulting in an extensive female labour market absence subsequent to childbirth. In Great Britain, traditional carer roles are encouraged primarily through a neglect of public care supply (see Lewis 1992).

The maternity and parental leave regulations among these four countries underline the impression that German family policy cultivates a traditional division of labour. In all four countries during the period of observation (1994-2001), maternity leave payments take the form of a replacement of previous (net) wages. Only France and Finland also offer a paid paternity leave around birth, thus promoting paternal engagement in childcare. Given the duration and the amount of wage replacement, France, Finland, and Germany roughly offer about the same level and duration of maternity leave payments (see Table 2). In the UK, however, wage replacement lasts for only 6 weeks (a low-level flat rate is available for an additional 12 weeks), which consequently adheres to the logic of a liberal market economy that encourages a swift return of mothers to the labour force. This conclusion is further backed by the fact that parental leave schemes were non-existent before 1999 and currently only last for 13 weeks. Job return guarantees are limited to the duration of maternity protection and parental leave (see MISSOC 2002). In contrast, Germany and France combine lasting parental leave payments with even longer rights of reinstatement as part of their leave policies (3 years with 2 years paid). Although the leave can be shared among the partners, parental leave in practice however is taken almost solely by mothers. Only a marginal proportion of the fathers take up part of their leave, even in Finland (see Aaberge et al. 2005: 137). The long duration of the leave provides a strong incentive for French and German women to retreat from the labour force,

[17] Although it should be noted that Finland is perhaps rather traditional with respect to families policy settings, compared to the other Scandinavian countries, it is nevertheless the most progressive among the analysed countries in encouraging egalitarian gender roles.

and Germany further nourishes this rationale by rationing childcare supply. In contrast, in Finland the parental leave is based on an income replacement, offering significant payments and thus encouraging female labour market integration prior to parenthood. In combination with a limited duration of eligibility (compared to Germany and France), this offers a strong incentive for labour-market reintegration of mothers.

The parental transfer systems in the observed countries show the lowest levels of support in the UK. Considering the financial burdens of rearing a child, we can assume that the transition to parenthood from a position of unemployment requires a sound backing by an income earner. Monetary subsidies of parents take the from of a means tested flat rate in France and Germany. But under the French APE (Allocation Parentale d'Education) they are only paid for higher order births, excluding first children. In terms of first-birth transitions, only Germany offers significant monetary transfers, for which unemployed persons are also eligible ("Erziehungsgeld").

The opportunity costs of parenthood, and thus also the incentives to start a family during (female) unemployment is fundamentally affected by institutional support to combine gainful employment with parenthood in the form of public childcare provision (see Gornic, Meyers & Ross 1996). In our sample, Finland has by far the most elaborate system of external care for infants and young children with a high level of coverage. This complies with the Scandinavian model of subsidizing family services to enable the combination of work and family. With a similar level of coverage, the childcare system in France is also able to disburden parents in this regard (see Neyer 2003). The UK follows the principle of encouraging diversity and dynamics on a widely privatised care system (see Mahon 2002: 354). Although there is some financial support for childcare in the UK, the costs of childcare for working parents remain among the highest in the EU (see Bradshaw & Finch 2002). Just like in the UK, German parents face increased costs of external childcare if (familial) support networks are unavailable, particularly in the West of Germany, where the supply of public childcare is underdeveloped. For the East of Germany, the higher coverage of childcare has been positively associated with fertility (see Hank, Kreyenfeld & Spieß 2004).

Concluding this overview, Finland displays the most generous system of family support with a clear aim of enabling the combination of family and work. This is in part also true for France. Germany, which also spends large amounts on family support, still follows a policy

that favours the male breadwinner-principle (see Pfau-Effinger 1996: 479). The respective package of financial and childcare support tends to detract women from the labour market and establishes strong dependencies from the man. In the case of sequencing parenthood and unemployment, one situation of dependency is followed by another. Higher educated women in particular will probably try to avoid such a consolidation of labour market absence (see Aaberge et al. 2005 141f.).

5) Data and Methods

The following overview will outline the fundaments of the empirical analysis. Initially, I will provide some introductory notes on the design of the European Community Household Panel (ECHP). This is followed by a description of the population of the analysis, which includes birth cohorts from 1955 to 1983, observed between 1994 and 2001. Finally, I will outline the causal design of the multivariate analysis and specify the statistical characteristics of the applied piecewise constant hazard estimates.

The European Community Household Panel

The empirical analysis is based on data of the European Community Household Panel (ECHP). This longitudinal data set provides representative data on the population in the EU member states between 1994 to 2001. Data collection was harmonized ex ante (see Günther 2003), making the ECHP a unique data base for comparative research across the EU. The sample of countries in the empirical analysis consists of the UK, Germany, France and Finland. For Germany and the UK, the ECHP data was cloned from national panels, namely the British Household Panel Study (BHPS) and the German Socio-Economic Panel (SOEP)[18]. Hence, in these cases an ex post data harmonisation was carried out, which however was strictly oriented on the ECHP questionnaire and data-structure, providing comparability in

[18] Data structure and contents of the ECHP questionnaire were initially designed with a close orientation on SOEP and BHPS. Thus, the cloning process provides a high level of data congruency.

most areas. For the selected countries, all eight waves of the ECHP are available except for Finland, which has only been taking part in the ECHP since 1996.

The focus of the ECHP questionnaire rests on income and labour market-related topics. Unfortunately, the availability of subjective indicators, as well as of demographic and family related information is clearly limited. This curtails the set of indicators in the following empirical analysis. Among others, the ECHP provides no data on childbearing preferences or on preferences for alternative (i.e. occupational) goals. Moreover, data on partnership duration is only available for married couples.

Data Description and Population of Analysis

First-Births in the ECHP

In the analysis of gender-specific effects of unemployment on family formation, I focus solely on the transition to *first*-parenthood[19]. As the ECHP lacks biographical information on parenthood, the identification of biological kinship is a difficult endeavour. Parent-child status is assigned on basis of observed household composition. Parents who no longer live with their child in the same household may spuriously appear to be childless. This results in two biasing effects: a) an underestimation of the number of parents (if a parent misleadingly appears to be childless because he or she no longer shares a household with the child), or b) in a misspecification of the timing of first birth (if the parent no longer lives with his/her first child, the oldest co-residing child will be misinterpreted as first-child). This bias however is limited, as even the oldest of the observed cohorts, born in 1955, most likely still lived together with their first child in 1994. The mentioned bias of misspecifying the timing of family formation (or the status of being childless) is perhaps most severe for men, who – after a separation – no longer share a household with their first child.

Set of Covariates & Unemployment Indicators

[19] The life course change, and hence the pondering of becoming a parent is much more complex than the choice to have additional children (see Hobcraft & Kiernan 1995). Moreover, most parents tend to place first and second birth into a rather narrow time frame, what results in the increased probability of childbirth if a couple already has a young child (see Kreyenfeld & Huinink 2003).

The individual-centred variables considered in the estimates include the net *monthly personal income*, as an indicator of the ability to support a family, and the reception of individual-based *transfers*. These monetary indicators have been adjusted for purchasing power parity within the EU to guarantee comparability across countries as well as over time. Educational attainment in the ECHP is provided in the form of the ISCED indicator[20]. This classification aggregates formal and vocational degrees, and is applied in the model as an indicator of human capital investments and labour market options. As outlined above, information regarding childbearing preferences is unavailable, just like detailed indicators of individual biographical plans.

There is a central group of variables that pertain to labour market participation. I will distinguish between different forms of activity, namely, full-time and part-time employment, being in education, economic inactivity, and housework. Special attention will be paid to different measures of unemployment. The individual experience of unemployment is available on a monthly basis in the ECHP calendar of activities. All the information within the calendar of activities is subject to self-ascription. Thus, it is not necessarily congruent with the ILO-concept of unemployment (see footnote 12). A possibly biasing effect might occur with respect to jobless respondents. That is, where the eligibility for unemployment benefits is restricted, this may also affect the respondents' self-perception of activity status, which might result in stating either unemployment or economic inactivity[21]. This is an issue, particularly where benefit eligibility ceases after a relatively short time as in the UK (see p. 25f.). Hence, I will carefully consider the impact of economic inactivity in the empirical investigation as a potentially sequential state, succeeding longer unemployment episodes. As unemployment has been assumed to signal bleak labour market prospects and deteriorating human capital, the *duration* of unemployment will form an integral part of the analysis. In this context, I will distinguish between short-term unemployment (which I define as up to four months of continuous unemployment) and longer unemployment episodes. While longer periods of unemployment reveal difficulties encountered in quickly regaining a new job and hence are likely associated with discouragement, shorter periods of unemployment are frequently related to fric-

[20] "International Standard Classification of Education" (for details see OECD 2001).

tional unemployment in search for a new job, and thus are limited in their impact on family formation rationales. Further distinctions, particularly in consideration of long-term unemployment, would have been promising but are precluded due to limitations in case numbers. However, I will take into account whether a person has had periods of long-term unemployment during the last five years, assuming that this hampers occupational prospects and thus, affects family formation.

Gender-Specific Analysis and Partner Data

I will consider the transitions to first parenthood for women as well as for men. To elaborate gender-specific particularities, especially in the context of unemployment, it is essential to estimate separate models for men and for women. To account for the fact that the situation and resources of the partner still play a vital role, the individual-centred models will be supplemented with according partner data (Model IV)[22]. The partner variables to be considered include net personal income, relative income (one-third or less of partner, about even with partner, one-third or more than partner, reflecting relative bargaining power), transfers reception (signalling economic dependence), and vocational and educational attainment (as an indicator of human capital investments), as well as a possible unemployment of the partner. More generally, these partner indicators provide vital information when family formation is backed by a second earner, and they offer a view on the degree of traditionalism in gender roles in a specific couple.

Design of the Multivariate Analysis

The empirical analysis is organised to account for the effect of different consequences of unemployment on the likelihood to start a family. For each of the selected countries, France, Finland, Germany, and the United Kingdom, a model for men and a model for women will be

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[21] Due to reasons of SOEP data conversion, the German calendar of activities includes only *reported* unemployment. A biasing effect however is limited, as unemployment in Germany is commonly reported in order to become eligible for unemployment insurance and assistance benefits.

[22] Partner-based estimations can be only be carried out for persons with valid information on the partner (i.e. survey participation of the partner). Where couples do not share a joint household, or where a partner refuses to participate in the ECHP (unit non-response), an analytical focus on couples incorporates a bias in the estimates.

estimated separately in order to outline country-specific, as well as gender-specific effects. Model I examines the mere effect of individual unemployment on the likelihood to start a family and differentiates between the impact of short-term (up to 4 months) and longer unemployment (> 4 months). This distinction of unemployment duration is also the basis for all further models (except for Model III). Model II implements a broad set of covariates. Unemployment duration is conceptualised as part of the employment status, aside from full-time and part-time employment, education and inactivity. Model III resembles Model II but relies on the consideration of interaction effects between educational attainment and unemployment (no duration effects considered). As outlined above, Model IV integrates partner data. Again differentiating between men and women, Model V aggregates the data across the four countries, and interaction effects between country and unemployment are calculated.

Dependent Variable in the Event History Model

The dependent variable in the event history model is the occurrence of a first birth. In the ECHP, the time of birth is available on a monthly level[23] I argue from a perspective that perceives the first birth as a consequence of a rational decision, in which this decision is critically influenced by constraining factors at the time of this decision. The point of making this decision is approximated with a point in time *ten months prior to birth*. The key goal is to account for endogeneity problems in the influence of the set of covariates and particularly of unemployment on the fertility decision[24]. This procedure of backdating may at first glance appear to be vague in representing the time of decision. However, Bongaarts (1982: 76f.), with reference to various medical studies, highlights that the probability of a couple that plans to have a child to conceive within one cycle lies at 50% and is even higher among younger parents below 30. This suggests that the proportion of couples for whom the backdating provides a misspecification of more than two to three months is limited. Hence, a biasing effect on

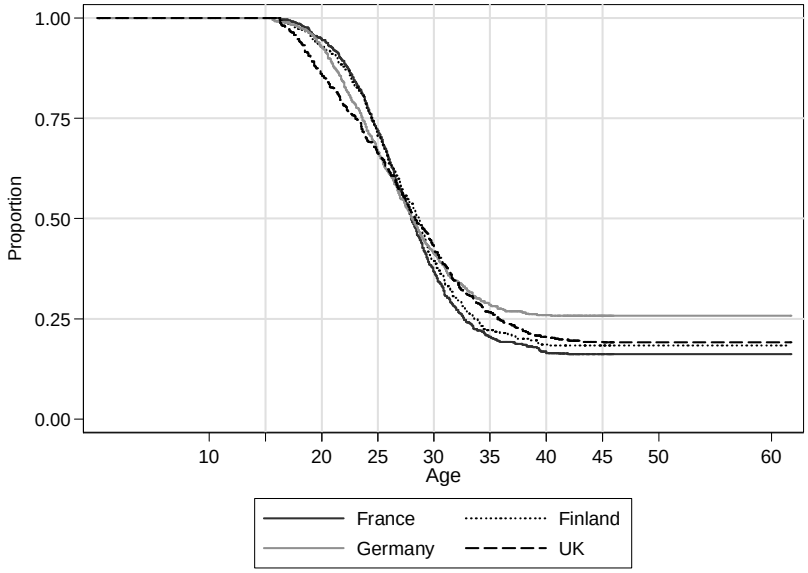
Moreover, 10% – 20% of first-births in the ECHP or not covered in the partner models as some first-births are by single mothers, while some couples do not share a household (at the time of deciding to have a child).

[23] While the month of birth was unavailable for Germany in the original ECHP data, it has been supplemented on basis of SOEP data for the study at hand.

[24] What is most important is that a backdating of ten months guarantees integrity of the measured direction of causality. That is, all covariates are measured *before* the time of conception and hence *before* deciding to have that child. A misspecification of the duration effect of unemployment occurs in cases, where the decision for parenthood was made earlier than the assumed ten months prior to birth. Sensitivity tests that have been carried

model estimates due to inaccurate backdating should be considered but is likely limited in the size of effect. The procedure to backdate by ten months will hence likely provide conservative results.

Figure 3: Kaplan Meier Estimates of First-Birth Transitions of Women (Cohorts 1955-1983)



Source: ECHP 1994-2001 (author's estimates); *n of subjects= 8.093 / n of events = 1.952.*

The focus on the population at risk requires the exclusion of persons who are widely inhibited from childbirth due to age. The time at risk in the empirical model starts with age 16 (which is also the age of eligibility for participation in the ECHP) and lasts until age 45. Although we can find a postponement in the timing of births throughout all Western societies, the transition to first parenthood beyond the age of 45 is rare, which applies for both genders – at the very least – due to biological limits (see also Figure 3). As the delay in the timing of births also includes a catching-up at higher ages – especially among higher educated persons – age has to be an integral part of the model.

Specification of the Statistical Model

In sum, I consider any first births between the parental ages of 16 to 45 during the time of analysis (1994 to 2001). Focusing on the duration until first-birth occurrence, I apply *event history methods* in analysing the impact of unemployment. The time axis of the model is con-

out, however, suggest that backdating the month of birth between ten and twelve month provides similarly robust results.

stituted by the age of the respondent in months. Process time starts with the first month in the 16th year since the respondent's birth (month 193). The time of observation starts with entry into the panel. This is the case if a person is a respondent in the ECHP starting wave in 1994, if a panel member reaches the 16th year of age, or if a person moves into a panel household. The period of observation ends ten months prior to the occurrence of the first birth or at panel exit, in which case the spell is regarded as censored. Finally, I consider respondents of the cohorts 1955 to 1983 who are still childless (i.e. who are still at risk of first birth).

As first-birth risk (taken as proxy for the first-birth decision) is not uniformly distributed across the age range in question a model is required that is capable of incorporating the functional form of the baseline hazard (see Figure 4). An appropriate model in this case is a piecewise-constant exponential hazard model (see Jenkins 2005: 38f.),[25] which is specified in the following form[26]:

$$\theta(t)=\begin{Bmatrix} \overline{\theta_1}\exp\left(\beta' X_1+\gamma' Z_1(t)\right) & t_1\in(\ \ 0;252) \\ \overline{\theta_2}\exp\left(\beta' X_2+\gamma' Z_2(t)\right) & t_2\in(253;312) \\ \overline{\theta_3}\exp\left(\beta' X_3+\gamma' Z_3(t)\right) & t_3\in(313;396) \\ \overline{\theta_4}\exp\left(\beta' X_4+\gamma' Z_4(t)\right) & t_4\in(397;456) \\ \overline{\theta_5}\exp\left(\beta' X_5+\gamma' Z_5(t)\right) & t_5\in(457;540) \end{Bmatrix} \tag{0.1}$$

The regression parameters γ and β refer to the time variant *(Z)* respectively to the time invariant *(X)* set of covariates. The baseline hazard $\overline{\theta}$ remains constant *within* the five intervals t_1 to t_5, where t_1 starts with the 16th year of age (month 193 since respondents birth), and differs *between* the intervals[27]. With the selection of time intervals, specified in (1.1), a normal distribution of the baseline hazard of first-birth risk is approximated, where the highest risk is assumed to rest in the interval between month 313 to 396 (age 26 to 33). Figure 4 graphically displays the separation of time intervals, based on annual age (at 16, 21, 26, 33, 38, and 45).

While the piecewise constant is a semi-parametric continuous time model, the time until birth is based on a discrete measurement with monthly intervals. Yet, the average duration in

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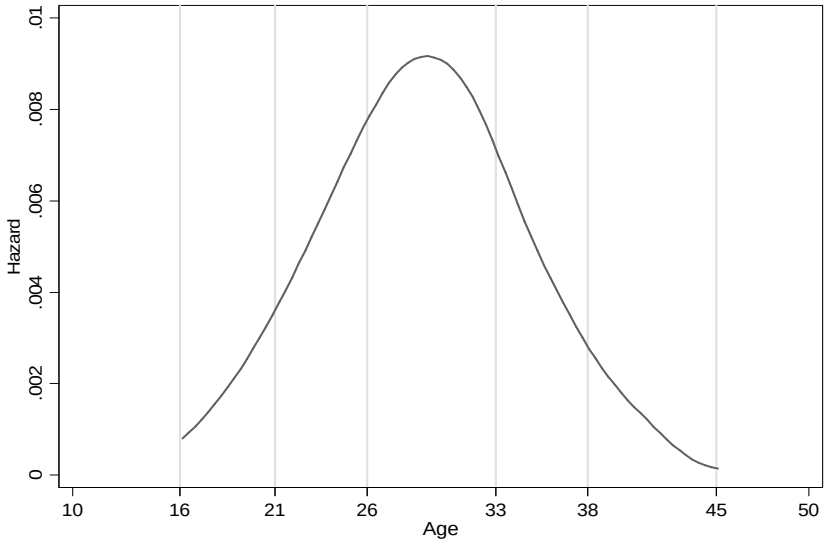
[25] The technical application relies on a piecewise constant script for Stata, elaborated by Sorensen 1999.

[26] Values in parentheses display the age-range in months since respondents' birth.

adult life until first birth is several years. A monthly collection of birth events may therefore be treated as an approximation of continuous data (see Jenkins 2005: 19f.).

Figure 4: Hazard Ratio of Transition to First Birth – Women (Cohorts 1955 – 1983)



Source: ECHP 1994-2001 (author's estimates) *n of subjects= 8.093 / n of events = 1952.*
Note: Hazard rate based on monthly risk.

As specified above, I include time invariant variables (e.g., gender or country of origin) as well as time variant variables (e.g., educational attainment, or benefit reception) Most of the time-varying variables, however, are available on an annual basis only. The month of a status change for a time varying variable will be based on a mean between the interview in t and the previous interview before the change in t-1, in order to minimise any bias incorporated by improper status ascription. Where this approximation interferes with the investigated sequence of events (i.e. constraints in t_0 affect fertility choices in t_1), the information is collected from the last interview prior to the birth decision in order to maintain the focus on the implied causality of events.

[27] The constant hazards within each of these time intervals do in fact each represent an exponential hazard model (which in turn is a specification of the Weibull model with $\alpha = 1$).

6) Results of the Multivariate Analysis

The multivariate analysis focuses on different indicators of unemployment and precarious employment. The way in which these contexts influence family formation choices will be discussed in the following. Indicators, which have been considered, but which are not displayed with the results in Table 4 – Table 8 (p. 57ff) include control dummies for calendar year, for household size[28], as well as for the country of origin[29]. Additional omitted control variables include being in public employment, in self-employment and having a fixed term contract (see p.46 for a brief discussion). A detailed description of the empirical models beyond what was already outlined in the previous section can be found on p.56.

Basic Effects

The multivariate analysis of the effect of unemployment on family formation indicates variations across gender and country level. An initial set of estimates (Model I) only distinguishes the impact of short-term (1-4 months) and longer unemployment (>4 months), ignoring any further covariates[30]. In this context, I find clear evidence for gender-specific opposing effects of unemployment on family formation. The impact is consistently negative among men and positive among women. Only women in France and men in the UK deviate from this picture, and do not show any significant effects. More generally, the impact of unemployment remains insignificant if unemployment duration is rather short. That is, it is predominantly longer unemployment episodes of more than four months of continuous unemployment that show significant effect levels. The impact of *longer* unemployment is negative among men and positive among women. Women in Finland however deviate from this otherwise persistent pattern across those countries, where unemployment affects family formation rationales. Among Finsih women, only shorter unemployment episodes of up to four months show a positive effect on the likelihood to start a family. The latter effect also remains widely constant across all estimated models.

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[28] Household size serves as indicator of potential care networks, presumably reducing opportunity costs.

[29] Furthermore, the categories in the dummy sets on *activity status* on *educational attainment (ISCED)*, on *relative income*, on *marital duration*, on country of origin and on *household size* have been supplemented by a dummy-category for missing data.

[30] A model immanent consideration of the piecewise constant baseline hazards is included in all models.

A Detailed View on Unemployment across Countries

Controlling for a set of covariates reveals key characteristics of gender differences in the role of unemployment in family formation. Aside from occupational discouragement in the case of longer unemployment episodes, the reduction in disposable household income is perhaps the most drastic occurrence related to losing a job. Importantly, the negative impact of unemployment on deciding to become a *father*, previously found in France, Finland, and Germany, vanishes after controlling for net monthly income, transfer reception, and educational attainment[31] in the estimates. This provides an initial hint that the negative unemployment effects among men are closely related to a decline in breadwinner capabilities as a lacking prerequisite for family formation (see also Oppenheimer 1994; Tölke 2005). In contrast, among women in Finland, Germany, and the UK, the pronounced positive impact of unemployment on the propensity to start a family remains fairly robust after controlling for additional characteristics. After considering (among other factors) the impact of partnership-status, income reception and educational attainment (see Models II & IV), the effect of longer unemployment among women (short-term unemployment in the case of Finland) persistently remains about two to three times higher than among full-time working women with a permanent contract (reference category).

In analysing the effects of the duration of unemployment, I have also considered linear effects with a decreasing marginal utility, representing a growing discouragement that reaches a maximum after a specific amount of time. However, estimates not displayed revealed that there are obviously different threshold level effects across countries (most likely related to the duration of eligibility for unemployment insurance benefits and their amount), which affect the relation between unemployment duration and the propensity to start a family. Summarizing these findings, the assumption of a simple linear effect of unemployment duration could not be validated with significant results[32].

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[31] Additional estimates not provided with the multivariate results on p.57ff., could trace the negative effect of unemployment among men primarily to the role of forgone income combined with an impact of educational attainment and the backing of a second earner.

[32] In this context, a distinction between short-, mid-, and long-term unemployment would certainly have been useful, but was rejected in favour of obtaining stable estimates under given case numbers. Moreover, given the fact that the exact measurement of unemployment duration at the time of family formation is opposed by an approximation of the time of fertility decision through backdating, conducted sensitivity tests suggest that a distinction between shorter and longer unemployment provides sufficiently stable results.

An initial summary of the duration effects of unemployment suggests that the perceived increases in insecurity and economic risks are limited in their impact on family formation as long as they are associated with shorter unemployment episodes. Obviously, welfare support tends to cushion the initial negative economic consequences of unemployment. An impact of unemployment that entails discouragement regarding occupational prospects sets in only after a longer duration of labour market absence. Obviously – with the exception of Finland, where brief episodes of job absence already tend to show an impact – short-term unemployment only causes a limited detachment from the labour market, and thus a limited impact on family formation rationales.

Yet, it should be noted that it is not possible to distinguish between persons who have entered unemployment voluntarily, those who are confident they can quickly regain a job, and persons, who have lost their job involuntarily. Among the latter group, some certainly anticipate bleak occupational prospects after only a short duration of unemployment. The distinction between shorter and longer unemployment episodes only serves as an approximation, with the goal of separating the confident job-searcher from the discouraged unemployed, for whom the impact on family formation is likely more pronounced. In this context, the fact that even short-term unemployment among Finnish women increases the likelihood to have a first child (and increases the reluctance to do so among Finnish men, for whom the effect however is rather spurious) could be a consequence of the Finnish labour market crisis during the 1990s. This crisis most likely had a strong negative impact on economic and, in particular, occupational prospects, thus promoting the transition to motherhood even in an institutional context that otherwise offers comparatively good conditions to combine work and family. That is, this takes place in an institutional context that should generate only a limited need to place the transition to motherhood within an unemployment episode.

While longer unemployment among women in Germany and the UK shows particularly robust effects of an increased likelihood to start a family, France is the only example among the observed countries, where unemployment generates a *negative* impact on the decision to become a mother. However, this effect of longer unemployment only shows a low level of significance ($p=0.085$) and should thus be interpreted with caution. Yet, what is interesting is that this indicator is only significant after controlling for partner characteristics (like partner income, partner education, and individual income relative to that of the partner; see Model

IV). This means that even in a context where a partner could compensate the loss in family income caused by the female unemployment, French women still favour labour market reintegration over family formation. Obviously, women in this country place a high value on economic independence, which is also supported by the finding that a higher relative income among French women *reduces* the probability of deciding to have a child. These findings are in line with the perception of an extensive and accurate system of family support in France that enables women to combine occupational and familial responsibilities. These findings are furthermore consistent with a cultural background that does not rely on strict norms of maternal care, as in Germany, e.g., and that has a long tradition of encouraging female labour market attachment (see Veil 2005; see also Section 3.4).

Nevertheless, there are some indications that persistent occupational hardships also tend to distract women from their occupational engagement in France: Only among French women, can I identify a relation between variations in regional unemployment rate and the likelihood of deciding to have a first child. An increase in the unemployment rate by 1 percentage point increases the propensity to start a family by 3%. However, once again, these results should be interpreted with caution: The referred result is based on a low level of significance and France remains the *only* country with any significant relation between regional unemployment rate and first-birth risk. These somewhat "meagre" findings should not be interpreted to suggest that bleak economic prospects do not affect the realization of family formation plans. However, they sheds some doubt on the assumption that unemployment rate is an appropriate indicator of how the actors evaluate occupational prospects. This also nourishes the impression that the mechanism translating perceived aggregate unemployment – or more generally aggregate economic indicators – into fertility behaviour is perhaps more complex than implied by frameworks like the Easterlin Hypothesis (1962, 1966), or the Butz & Ward model (1979, see critically Kramer & Neusser 1984, or Macunovich 1995).

Economic Inactivity

In the above section, I have discussed that, in the UK, the female return to work frequently occurs from a position of economic inactivity (see Section 0). This is important since it highlights that the distinction between unemployment and inactivity is closely related to national models of coping with unemployment – both individually and in terms of institutional unemployment support. In this context, some of the unemployment in the UK – particularly if it is

longer unemployment – appears as economic inactivity. This is the case when job search activities or at least the availability for work is a prerequisite of unemployment support. Unemployment insurance and particularly the duration of eligibility for benefits is extensive in the all of the observed countries. However, in the UK, eligibility for unemployment benefits ceases after a relatively short time. Yet, where search activities are no longer compulsory because the duration of unemployment exceeds the period of benefit eligibility, the link to the labour market becomes more fragile. In such a context, actors are more likely to perceive themselves as being inactively out of the labour force, rather than being unemployed[33]. The same applies, if repeated failure in job-search activities has discouraged the confidence to re-enter the labour market in the near future. Importantly, the monthly activity status in this context is recorded as a self-ascribed status in the ECHP.

Underlying this line of reasoning is that economic inactivity does not only succeed a longer unemployment episode but is also closely related to occupational discouragement. In this context, starting a family from a position of economic inactivity could also be attractive as a means of compensating for the loss in social esteem, which is likely profound after an extended period of inactivity, given strong norms to participate in gainful employment or at least to focus on alternative, socially accepted forms of activity like parenthood. Indeed, the multivariate findings suggest distinct effects of economic inactivity on the propensity to decide for the transition to *motherhood*. The strength of the effects varies from an increased likelihood of 50% in France and Germany, to a likelihood of starting a family during periods of inactivity in the UK that is more than 6 times higher than among full-time employed women. The fact that this impact is extensive in the UK and comparatively weak among German women is most likely indebted to the fact that lasting eligibility for unemployment insurance benefits in Germany maintains a closer link to the labour market, and thus to the status of being in unemployment. In contrast, a higher number of jobless women tend to report their status as inactive in the UK, where job-search activities are no longer compulsory even after a short duration of unemployment, undermining a close attachement to the labour force.

Moreover, economic inactivity primarily shows an impact among women. In contrast, among men, economic inactivity signals a profound inability to support a family. However,

[33] Detailed tests of the association between unemployment and economic inactivity nourish the assumption that

male inactivity is generally rare, and the impact on the likelihood to start a family remains widely insignificant. Exceptions to this rule are men in the UK, who show an increased rate of transition into first-parenthood during inactivity. This relation is only significant in the partner model (Model IV), which means that another income earner and a stable relationship frequently back this inactivity. This finding appears to contradict the UK as being a strong breadwinner country (see Lewis 1992). However, the occupational pressure in this liberal market economy could in fact lead to a reversal of traditional roles. Where men are incapable of regaining a job and thus fulfilling a breadwinner role, the economic support by a female income earner could nourish the tendency to compensate for the occupational status loss by focusing on a male homemaker role[34] (see argumentatively Tölke & Diewald 2003 for Germany). Yet, the reversal of traditional gender roles remains a somewhat speculative assumption. Further investigation in future research might shed more light in this issue and unravel whether this finding indeed represents a reversal of traditional roles under social pressure.

Earlier Long-Term Unemployment

The effect of earlier long-term unemployment (12 months or more) during the last 5 years was considered in the multivariate analysis in order to account for latent factors of economic insecurity and deterioration of one's occupational position. In detail, I assume a twofold impact effect for persons, who have experienced this lasting exclusion from the labour market in their recent occupational biography. 1) Prior long-term unemployment persistently hampers labour market integration and obtainable income prospects by deteriorating skill endowments. While this effect can in part be ruled out by the consideration of personal income in the empirical models, the second issue is perhaps more important. 2) The experience of long-term unemployment increases occupational insecurities, thus undermining occupational prospects and economic reliability. In this context, the experience of long-term unemployment might function as a trigger event that might either signal reduced breadwinner capabilities among men,

inactivity is frequently a sequential state that suceeds a longer unemployment episode.

[34] Initial unemployment insurance payments in the UK cease after 6 months with subsequent social assistance payments. These payments are based on household income *and* family size, which poses an additional incentive to have a child, where occupational prospects are bleak. Perhaps a labour market reintegration is anticipated, as long as unemployment insurance regulations encourage job-search activities, while a longer labour market absence severs a close occupational link, thus boosting the decision for family formation.

or encourage a focus on family formation as an alternative biographical option beyond employment (see DiPrete & McManus 2000; Friedman et al. 1994).

In fact, the impact of previous long-term unemployment appears to be most pronounced in France, where among men, an instable and precarious employment career clearly hampers the ability to support a family. What appears to be a straightforward relation at first glance, however should be interpreted with caution: The effects only show a low level of significance and disappear after controlling for partner characteristics. In Model V, which integrates all country-level effects into one model for men and one for women (both utilize partner data), I cannot find any significant impact of previous long-term unemployment among men.

Among women, two different patterns distinguish France on one side from Germany and the UK on the other side. For French women, the experience of long term unemployment during the last five years – obviously lastingly – *increases* the likelihood to opt for motherhood. Perhaps a focus on motherhood *as alternative* to employment in France only sets in after a close link to the labour market has been harmed, undermining the otherwise pronounced labour market focus, common among French women.

In contrast, for women in Germany and the UK, long-term unemployment during the last five years shows a *negative impact* on the likelihood to decide for a first child. At first glance, this seems to contradict the pronounced positive impact of longer unemployment among women in these countries. However, this apparent contradiction is most likely a selection effect of women with a strong labour market attachment: Given that long-term unemployment in Germany and the UK tends to speed up the transition to motherhood, this excludes the concerned women from the sample, as they are no longer at risk to perform the transition to parenthood. Thus, women that *remain* in the sample in t_1, though having experienced long-term unemployment in t_0 are primarily women that reject starting a family in a context of precarious employment. In contrast, among French women, long-term unemployment probably initiates a detachment from the labour market that results in a latent diffusion process into motherhood, rather than an *immediate* retreat from the labour force.

Additionally, estimates have addressed the role of the number of unemployment episodes a person experienced during the last five years. This indicator however did not show any sig-

nificant impact on the propensity to opt for starting a family[35]. Considering this finding and the comparatively weak impact of the experience of previous long-term unemployment, the estimates suggest that the experience of instability and precariousness in one's work career appears to be limited in causing a sustained impact on family formation rationales. Instead, rather the current experience of occupational insecurity among women tends to support ad hoc considerations of combining joblessness with the transition to parenthood. French women however deviate from this pattern. For them, a detachment from the labour market appears to be a lasting process, while current experiences of occupational insecurity obviously play a smaller role than in the rest of the observed countries. This interpretation is consistent with the fact that French women face few incentives to combine unemployment with the transition to motherhood, as culturally embedded norms of female care are weak, and as social policy support encourages a parallel combination of work and family. Perhaps this institutional context also enables women to *plan* their fertility to a greater extent than in Germany or the UK. Yet, the suggested context of a latent detachment from the labour force due to occupational insecurities among French women requires closer investigation. This issue would be a fruitful subject for future research. Until then, the suggested relation remains somewhat speculative.

Additional factors in the context of precarious employment that have been tested include part-time employment[36], fixed term contracts, as well as self- and public employment[35]. Part-time employment and working under a temporary contract is assumed to signal an incomplete integration into the labour force and insecure career prospects (see Kurz 2002; Kim & Kurz 2003). Yet, the empirical investigations did not provide convincing evidence in this direction. Though both part-time work and fixed term contracts showed clear negative patterns with respect to starting a family for both men and women in all countries, none of these contexts are statistically significant, except for a weak and instable effect of fixed term contracts for German women. Also public employment, which usually should guarantee a higher degree of reliability and regard for parental needs does not provide any stable results. Only self-employment among men in the UK and in France shows clearer signs of being supportive of starting a family. Though this evidence is surprising at first glance, as self-employed persons

[35] Due to the limited explanatory power, the mentioned variables were included in the estimates but have been omitted in the displayed results on p.57ff.

[36] Part-time work in the ECHP is defined as working more than 15 hours and less than 30 hours a week.

are usually expected to have a high workload and require flexible time budgets, self-employment also relates to a sound establishment in a business context, thus offering reliable prospects for financially supporting a family.

Unemployment and Educational Attainment[37]

I have argued that the impact of unemployment should vary with individual educational attainment, thus affecting the cost of labour market absence. Model III, which considers interaction effects between educational/vocational attainment (ISCED) and unemployment, barely shows any signs of an association between unemployment and family formation across educational groups among men. Only Finnish men with a medium level of educational attainment (ISCED 3) have a slightly reduced propensity to opt for becoming a father, the significance level, however, is rather low. In contrast, among women, there is clear evidence of a differential impact of unemployment across educational groups. Generally, higher educated women (ISCED 5-7, tertiary, partially academic education) show *no* increased likelihood to start a family during unemployment. As theoretically argued, women with profound skill endowments obviously focus on a labour market reintegration in order to avoid a depreciation of their human capital investments. This applies across all of the observed countries, and hence regardless of differences in work-family compatibility due to welfare state orientations.

However, women in Finland, Germany, and the UK with mid- to lower educational/vocational attainment show an *increased* probability to place the transition to parenthood within an unemployment episode. In Germany and the UK, this impact is most pronounced among women with lower levels of education. These women combine adverse occupational prospects with a limited threat of human capital depreciation due to their already low level of skill endowments. Moreover, the UK and Germany are also the two countries that combine the highest opportunity costs of parenthood with prevalent traditional gender role ascriptions. Hence, it is obviously women with comparatively bleak labour market prospects in contexts of institutionally and culturally mediated work family incompatibilities that decide for a first child while being unemployed. Yet, it should be noted that Finnish women (signifi-

[37] It should be noted that the ISCED indicator (see OECD 2001), applied in the ECHP in order to achieve cross-national comparability in educational levels, still suffers from a limited comparability of educational certificates across countries (ISCED 0-2 = secondary schooling; ISCED 3 = upper secondary schooling & vocational education; ISCED5-7 = third level, i.e. higher vocational and academic education).

cant impact of unemployment & medium level education) generally can rely on a higher institutional support of combining work and motherhood. However, given the deep recession during the 1990s, the experience of unemployment among mid-level educated women[38] most likely signalled severe difficulties in regaining a job, thus nourishing rationales to start a family.

The Partner Model (IV)

The view on partner characteristics allows for a consideration of the way in which the economic backing of a partner might compensate for the experience of occupational insecurities. Moreover, this consideration also highlights contexts in which one partner might aim at economic independence, particularly by trying to return to the labour market when unemployed, instead of focusing on a homemaker role. Importantly, the pronounced impact of female unemployment and inactivity in Finland, Germany, and the UK remains well in place, after taking into account partner information such as income level and educational attainment. A view of the partner's unemployment provides a picture that corresponds with the results derived from individual unemployment: This context only shows a statistically significant level among men, that is, only the (female) unemployment of wives increases the aptitude to have a child. Again, French women show an exception to this rule. That is, in the partner model (IV) longer unemployment of wives of French men does not show any significant impact. It can be speculated that this is both a reflection of the close labour market attachment of French women, as well as an indicator of an urge to avoid a regress to traditional family roles and economic dependence, particularly in a cultural context where a focus on maternal roles provides fewer chances of acquiring social esteem.

With respect to the duration of a partnership, it was speculated that a longer duration fosters reciprocity and mutual trust, and thus serves to restrict the perceived risk of abandonment and the significant other exploiting his/her economically superior position. While the results should be interpreted with caution as only marital duration could be considered, the evidence across all four countries for both women and men is widely consistent in suggesting that primarily the transition to marriage is crucial in fostering family formation rationales, rather than

[38] *Lower* educated women in Finland show no increased likelihood of family formation during unemployment. However, this educational group is comparatively small in both the Finnish society as well as in the ECHP

the *duration* of the partnership. In fact the likelihood to start a family increases with the transition to marriage but then declines with marital duration.

The Cross-National Model (Model V)

A final set of estimates (Model V) summarizes the analysis of key indicators in two cross-nationally comparative models for men and for women. Interaction effects distinguish different measures of unemployment by country. The results of these unemployment indicators are widely consistent with the country-specific estimates. In this context, male unemployment shows no significant effects on the aptitude to start a family in any of the four countries after controlling for income, education, and partner characteristics. This does not necessarily contradict the often-stressed assumption that labour market related insecurities hamper male breadwinner qualities, and thus nourish the postponement of fertility transitions. However, under male unemployment, the imminent effect of reduced financial backing plays a key role. The deviation from the traditional norm of an economically potent household head certainly still exerts a negative impact on the transition to fatherhood in most societies. There is still a dominant norm that family formation requires men to pass a certain threshold of economic reliability, guaranteeing breadwinner capabilities (see Oppenheimer 1994: 322). Yet, where the decline in income is compensated by welfare state support, by occupational prospects due to high skill investments, and by the backing of a female earner, the negative impact of unemployment is no longer dominant in family formation choices. That is, where personal and institutional arrangements are capable of compensating for the economic setbacks of male unemployment, this occupational hardship does not appear to signal persistently reduced breadwinner qualities.

Moreover, the view of men in the UK supports the view that the status loss due to unemployment might be compensated for by becoming a father (for this line of reasoning see Tölke & Diewald 2003). The occupational status loss due to unemployment is particularly extensive in a liberal market economy, where participation in gainful employment is crucial for social recognition, and thus for self-esteem. Compensating for this status decline with a focus on a family role might be an option among men who have been profoundly discouraged in their attempts to regain a job. For them, the low price of time might encourage a participation in parental responsibilities, thus disburdening the woman and increasing the probability of family

what most likely increases the standard errors in the estimates, thus leading to insignificant results.

formation. However, a *reversal* of traditional gender roles that are still prevalent in the UK is perhaps a daring assumption, particularly given that the outlined effect did not prove to be very stable.

Among women, a positive impact of unemployment and economic inactivity on the likelihood to start a family is salient. The effect is most pronounced among women in the UK, who have been unemployed for a longer period. They show a 2.4 times higher likelihood to opt for having a child. If these women report economic inactivity – which was stressed as an indicator of discouragement in job-search activities – the likelihood is even 4 times as high as among full-time working women. In Germany, a slightly weaker effect of longer unemployment (a 74% increased probability) provides a picture that otherwise widely resembles the situation in the UK. Yet, there is no significant effect of economic inactivity in Germany. This perhaps is a consequence of sustained unemployment support that retains a link to the labour market by encouraging job-search activities, which makes a self-perception of being economically inactive unlikely.

The findings for Finland were unexpected. Even a rather short duration of unemployment increases the likelihood of starting a family by the factor 2.3. This widely resembles the situation in the strong breadwinner countries of Germany and the UK, and clearly distinguishes Finland from the French context, where women show a close labour market attachment and a high reluctance to start a family during unemployment. These results are surprising, as the Finnish welfare state shows the highest performance in encouraging egalitarian gender roles, in protecting from life course risks, and in supporting the reconciliation of work and family roles for women. Hence, the incentive of reducing opportunity costs by combining unemployment and the transition to parenthood should clearly be reduced in Finland. There is strong evidence that this fertility behaviour is closely related to the recession and labour market crisis Finland experienced during the early 1990s. Obviously, the adverse labour market conditions had a lasting impact on the perception of occupational prospects and insecurities, thus fostering family formation as a focus beyond occupational activity. Nevertheless, these results also raise some questions of whether the institutional arrangement in Finland is indeed doing so well in alleviating the burdens on women that result from combining occupational and family roles.

7) Summary & Conclusion

Among men, unemployment hampers family formation. This context, however, is essentially related to the imminent effects of a reduced financial backing, whereas I did not find any consistent evidence that unemployment persistently signals reduced breadwinner qualities beyond the direct economic setbacks. Among women, unemployment encourages the transition to parenthood if occupational prospects are bleak, or if a close link to the labour market has been broken. This is reflected in the finding that particularly longer periods of unemployment and subsequent economic inactivity speed up the transition to parenthood. Moreover, I find a pronounced impact of unemployment among women with a lower educational and vocational attainment. These findings are particularly pronounced in Germany and the UK, two countries that leave the burden of reconciling occupational engagement and parenthood to women. Importantly, these two countries combine contradictory institutional arrangements by nourishing occupational aspirations, particularly among younger women, while traditional gender roles are still culturally embedded and institutionally reproduced – for example by neglect of maternity protection and support (UK), strict maternal carer norms (Germany), and by an underdeveloped supply of public childcare (in both Germany and the UK).

The consequence of these contradictory institutional arrangements in market (i.e. individual) oriented and in family oriented institutions (see McDonald 2000) are high opportunity costs of parenthood. These opportunity costs are further increased by the necessity of establishing an autonomous and independent economic position, last but not least, in order to compensate for limited institutional protection from life course risks and economic hardships. This leads to a strong female labour market attachment. Against this background, only longer unemployment episodes that have already hampered labour market integration show a positive impact on to the likelihood to start a family.

The view on the UK and Germany supports the assumption that family formation in these countries is closely related to two major factors: First, high burdens of combining familial and occupational roles, particularly among women; and second, the implicit norm to first integrate into the labour market in order to transfer educational investments into safe occupational status positions. This context results in family formation during unemployment being a promising option, particularly among lower educated women, who frequently already depend on

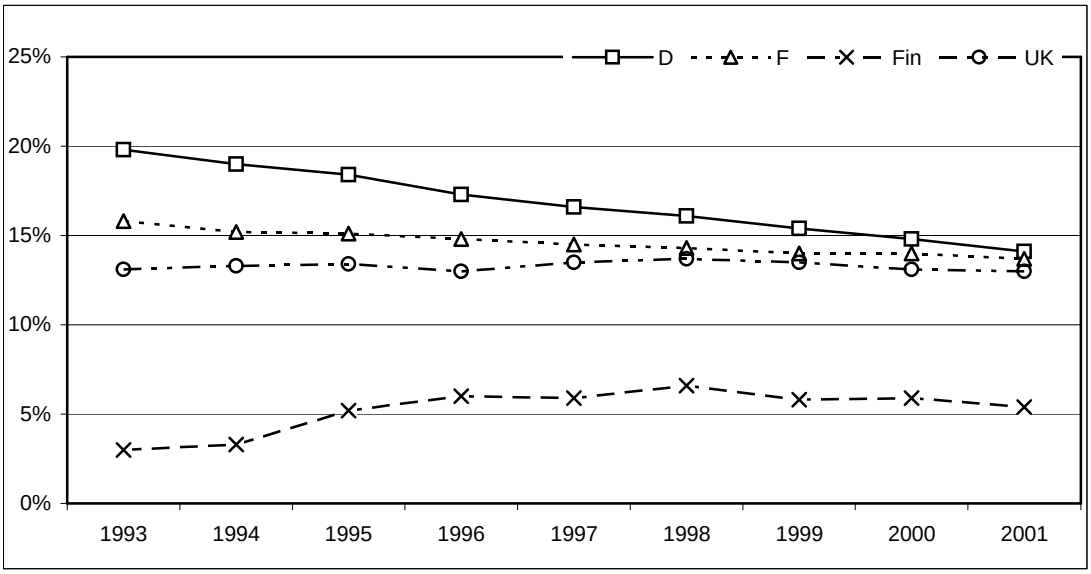
support from a male earner, whose partner relations are thus more traditional, and who face bleak labour market prospects compared to women with higher skill endowments. In contrast, higher educated women are reluctant to place the transition to parenthood within an unemployment episode. Rather, these women focus on a reintegration into the labour market obviously in order to avoid a reduction to the role of the sole homemaker, which would not only lead to a depreciation of their human capital investments and hamper their career options, but which would also establish economic and social dependence from a breadwinner.

Except for the findings for Finland, which are biased by a severe labour market crisis that hampered occupational prospects, the evidence suggests a close labour market attachment of women in Germany and the UK, and particularly in France. While family formation during unemployment is obviously a promising option due to the low price of time among German and British women, women in these countries only opt accordingly if a close link to the labour market has been severed, and chances of quickly finding a job have been discouraged.

8) Appendix:

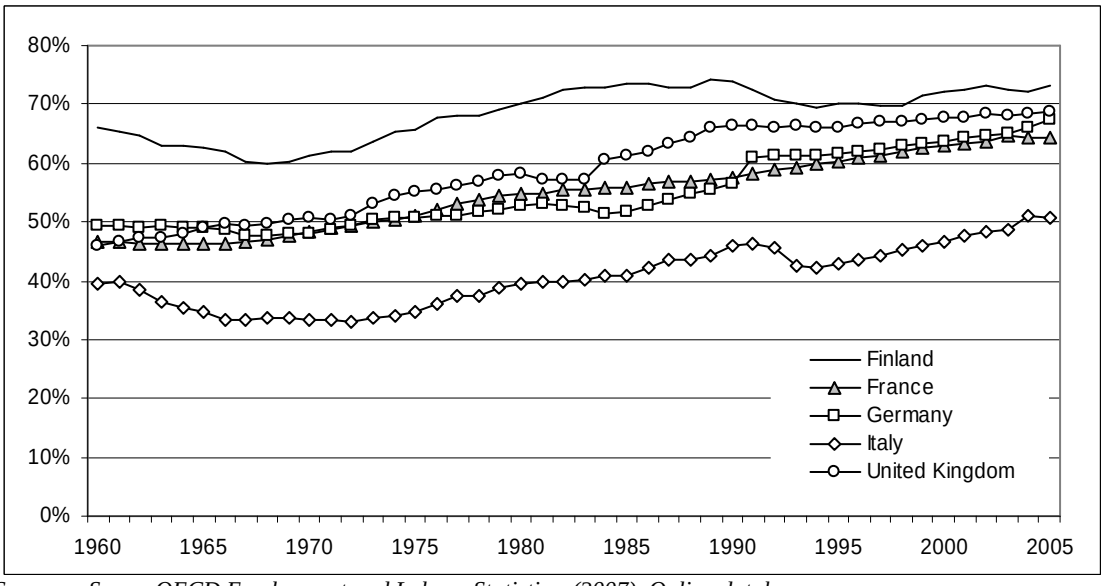
(A) Additional Structural Indicators

Figure 5: Male-Female Employment Ratio Gap1993 – 2001



Source: SourceOECD Employment and Labour Statistics, (2007). Online database.

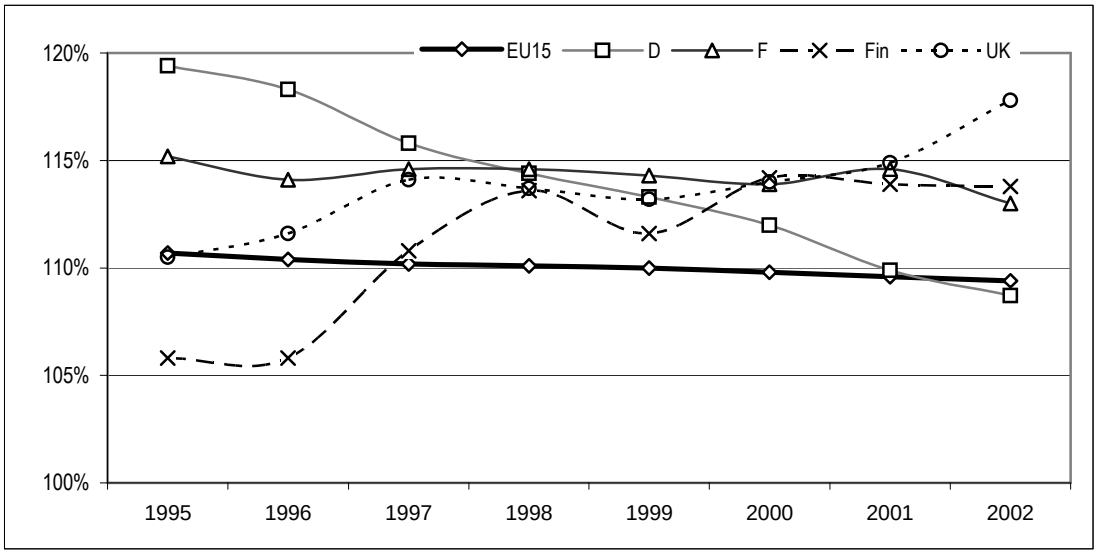
Figure 6: Female Labour Force Participation 1960 – 2005 by Country



Source: SourceOECD Employment and Labour Statistics, (2007). Online database.

Note: Values for Germany before 1991 apply to West Germany only.

Figure 7: Gross Domestic Product (GDP) per Capita in Purchasing Power Standards (PPS)



Source: *Eurostat Structural Indicator, 2007. Online database.*
Note: *EU25 = 100.*

(B) Descriptive Statistics

(See following page)

Table 3: Sample of Respondents – Selected Descriptive Statistics

Descriptive Statistics (all values in percent)	*France*		*Finland*		*Germany*		*UK*	
	Men	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**
Birth Cohorts								
1955-1964	18.9	14.5	21.7	16.5	21.8	17.7	27.2	21.6
1965-1974	47.5	44.6	31.7	27.0	47.1	43.6	43.1	41.9
1975-1983	33.7	41.0	46.6	56.5	31.1	38.7	29.6	36.5
Partnership Status								
Single / Living Apart Together	74.5	69.1	68.8	61.2	68.4	58.3	60.8	55.0
Consensual Union	12.9	14.8	16.8	20.4	12.6	15.2	14.8	15.7
Married	12.6	16.1	14.5	18.4	19.0	26.3	24.3	29.3
Duration of Marriage up to 1Y.	2.2	2.6	1.6	1.9	2.4	3.1	2.8	3.1
Duration of Marriage 2-3 Years	4.8	5.8	5.3	6.2	6.1	7.7	8.1	8.7
Duration of Mar. 4 Years & More	4.8	6.9	6.6	9.3	8.9	13.7	11.7	15.4
Educational Attainment								
ISCED levels 0-2 (lower 2nd Lvl.)	26.5	21.4	32.0	33.2	32.2	32.7	34.9	32.6
ISCED level 3 (upper 2nd Lvl.)	34.2	35.4	52.5	42.0	52.1	52.1	15.1	16.2
ISCED levels 5-7 (3rd Lvl. Ed.)	21.0	26.6	15.4	24.4	12.8	10.5	46.5	48.9
Activity Status								
Full-time & Permanent Contr.	35.6	25.3	30.4	20.7	41.7	34.1	52.5	43.8
Full-time & Public Employment	7.2	8.3	6.1	7.1	9.0	14.8	9.6	15.8
Full-time & Fixed Term Contract	6.9	5.3	6.4	8.6	4.7	4.1	3.1	3.2
Part-time Employed	2.5	5.5	3.0	5.1	4.3	6.5	3.3	6.5
Self-Employed	3.1	1.1	8.1	2.4	3.6	1.3	7.1	2.8
In Education/ Apprenticeship	27.7	38.1	26.3	39.4	24.8	28.8	13.8	18.7
Economically Inactive	2.7	2.6	0.7	1.1	0.5	2.5	2.3	3.4
Retired / Other / Missing	5.6	4.2	10.1	8.5	5.1	3.0	1.9	2.1
Unemployment								
Unemployed (UE)	8.8	9.6	8.9	7.4	6.4	5.1	6.4	3.7
Short-term UE (1-4 months)	3.2	3.4	3.4	3.4	2.4	1.9	2.4	1.7
Longer UE (> 4months)	5.6	6.2	5.5	4.0	4.0	3.2	4.0	1.9
Long-term UE during last 5 Yr.?	8.2	7.8	12.7	7.3	6.1	4.9	11.1	4.6
Partner Context								
ISCED Levels 0-2	24.0	28.6	12.9	14.7	14.9	14.1	30.5	26.2
Level 3	36.0	34.6	46.5	56.1	67.5	60.1	13.1	13.1
Levels 5-7 (3rd Lvl. Edu.)	30.1	26.0	40.4	28.9	16.2	24.5	54.9	58.6
Relative Income: Similar Level	29.8	29.3	24.0	23.1	39.2	38.9	35.8	38.4
Traditional (♂ 1/3 above ♀)	46.8	46.6	45.5	41.9	42.9	41.3	45.8	39.1
Fem. Main Earner (♀1/3>♂)	13.5	14.1	16.5	19.1	13.8	15.4	12.6	16.8
Both not working	6.3	6.8	9.6	11.2	2.9	3.1	3.5	3.6
Employment: Partner Inactive	4.5	1.2	1.0	0.4	3.9	0.7	5.9	1.3
Partner Unemployed	12.1	6.7	9.5	7.8	5.1	4.8	2.7	4.2
n of person-months	155.211	127.291	77.893	62.872	166.077	133.783	120.035	98.510
n of cases	2.851	2.465	1.635	1.389	2.754	2.372	2.177	1.861
n of cases w. Partner(Model IV)	1.198	1.208	782	786	1.321	1.356	1.183	1.103
n of births (backdated) '94-2000	579	632	249	250	547	588	456	480

Source: ECHP 1994-2001 (author's calculations).

Note: Sample description reflects person-months of observations (i.e. repeated records for each observed person), except where specified differently; values in percent.

(C) Piecewise-Constant Exponential Hazard Estimates on First-Birth Risk

Model Description:

Model I: Duration of unemployment, prior to the month of decision for parenthood (t_{birth} – 10 months). Binary coding of:
Short-term (up to 4 months of continuous unemployment);
Mid-term (more than four months of continuous unemployment).
All adult respondents of cohorts 1955-1983

Model II: Duration of unemployment, prior to the month of decision for parenthood (t_{birth} – 10 months). Unemployment duration measured as part of the employment status with full-time employment as reference category. Additional covariates (net-income, ISCED, partnerships status, etc. Long-term unemployment during the last 5 years, unemployment rate (nuts1 level).
All adult respondents of cohorts 1955-1983

Model III: Interaction effects of unemployment by education (at t_{birth} – 10 months).
Identical to Model II. Exception: Unemployment duration excluded in favour of interaction effects of unemployment by educational attainment (ISCED).
All adult respondents of cohorts 1955-1983

Model IV: Partner Model (at t_{birth} – 10 months).
Identical to Model II. Exception: Covariates on partner added, incl. partner's income, partner's unemployment/inactivity, partner's education, relative income.
Only couples with partner being panel respondent, cohorts 1955-1983.

Model V: Cross national partner Model (at t_{birth} – 10 months).
Identical to Model IV. Date pooled across country.
Only couples with partner being panel respondent, cohorts 1955-1983.

Note: Models I through IV are based on separate estimates by gender for each country; Model V is based on differentiation solely by gender.

Table 4: Determinants of First-Birth Risk - Piecewise Constant Estimates for **France** by Gender (note: this table continued on next page)

	Model I				Model II				Model III				Model IV			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Baseline Hazard (Effects apply to Hazard / Month)																
16 to 21 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.01)***	0.01	(0.00)***
22 to 26 Years	0.00	(0.00)***	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.00)***	0.01	(0.00)***
27 to 33 Years	0.01	(0.00)***	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.01)***	0.01	(0.00)***
33 to 38 Years	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.00)***	0.00	(0.00)***
39 to 45 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Ever Worked?																
Yes (1)					1.51	(0.61)	1.33	(0.29)	1.51	(0.61)	1.36	(0.30)	0.95	(0.38)	1.09	(0.26)
Activity Status *Reference:* Full-time Employed w. Permanet Contract (Omitted Categories: Full-time w. Fixed Term Contract / FT+Public Employ. / Self Employment)																
Part-Time Employed					0.78	(0.25)	1.17	(0.17)	0.78	(0.25)	1.17	(0.17)	0.76	(0.25)	1.13	(0.17)
In Education/Apprentice					0.50	(0.18)**	0.41	(0.10)***	0.49	(0.17)**	0.42	(0.10)***	0.46	(0.19)*	0.35	(0.10)***
Economically Inactive					0.48	(0.30)	1.71	(0.40)**	0.50	(0.31)	1.73	(0.41)**	0.87	(0.54)	1.55	(0.39)*
Short-Term UE (1-4 months)	0.87	(0.22)	1.23	(0.24)	1.32	(0.33)	0.99	(0.20)					1.50	(0.49)	0.95	(0.21)
Longer UE (5 or more mo.)	0.40	(0.11)***	0.81	(0.14)	1.04	(0.30)	0.79	(0.15)					1.26	(0.43)	0.69	(0.15)*
UE*Lower Educ. (ISCED 0-2)									1.48	(0.45)	0.76	(0.21)				
UE*Mid Education (ISCED 3)									0.77	(0.32)	1.03	(0.23)				
UE*Higer Educ. (ISCED5-7)									0.66	(0.40)	0.72	(0.19)				
Partners Employment Status																
Unemployed / Inactive													1.03	(0.14)	1.17	(0.27)
Long-term UE (>12Months) During the last 5 Years? *Reference:* Not Long-Term UE during last 5 years																
Yes (1)					0.71	(0.15)*	1.25	(0.16)*	0.69	(0.15)*	1.22	(0.16)	0.81	(0.17)	1.25	(0.18)

Table continued on next page…

Table 4 continued…

	Model I				Model II				Model III				Model IV			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Regional UE Rate																
(Nuts1 Level)					1.02	(0.02)	1.03	(0.02)*	1.02	(0.02)	1.03	(0.02)*	1.03	(0.02)	1.04	(0.02)**
Education *Reference:* 2nd Stage of Secondary Education (ISCED 3)																
Less than 2nd Stage of Secondary Education (ISCED 0-2)					1.12	(0.13)	1.07	(0.13)	1.08	(0.13)	1.11	(0.14)	1.13	(0.13)	1.03	(0.14)
Third Level Education (ISCED 5-7)					0.84	(0.10)	1.07	(0.10)	0.84	(0.10)	1.11	(0.11)	0.83	(0.10)	1.16	(0.12)
Individual Income (Euro/Month PPP adjusted)																
Net Income, Work & Assets					1.12	(0.03)***	1.08	(0.05)	1.12	(0.03)***	1.08	(0.05)	1.09	(0.03)**	1.12	(0.06)**
Public Transfers (excl. Unemployment Benefits)					3.47	(1.22)***	5.96	(1.34)***	3.42	(1.20)***	5.96	(1.34)***	3.35	(1.22)***	6.63	(1.70)***
Type of relationship *Reference*: Single / Living Apart Together																
Consensual Union					21.47	(5.47)***	6.48	(1.20)***	21.37	(5.44)***	6.49	(1.20)***	*Reference:* Consensual Union			
Married for up to 1 Year					47.18	(12.81)***	10.29	(2.16)***	47.29	(12.80)***	10.33	(2.16)***	2.16	(0.33)***	1.57	(0.26)***
Married 2 to 3 Years					55.36	(14.69)***	16.16	(3.22)***	54.97	(14.57)***	16.20	(3.23)***	2.52	(0.27)***	2.33	(0.26)***
Married 4 Years or more					35.69	(9.73)***	10.18	(2.15)***	35.52	(9.66)***	10.17	(2.15)***	1.66	(0.22)***	1.49	(0.20)***
Partnerinformation (Reference categories as above)																
P. Education (ISCED 0-2)													0.95	(0.13)	1.10	(0.13)
P. Education (ISCED 5-7)													1.14	(0.12)	0.85	(0.10)
P. Net Income (Euro/Month PPP adjusted)					1.14	(0.04)***	1.13	(0.02)***	1.14	(0.04)***	1.13	(0.02)***	1.15	(0.05)***	1.09	(0.03)**
Relative Income *Reference:* Equal Income Level																
Traditional (♂ 1/3 above ♀)													1.02	(0.11)	1.14	(0.13)
Fem. Main Earner (♀1/3>♂)													0.76	(0.14)	0.72	(0.12)*
n of Person-Months =	152429		124894		152429		124894		152429		124894		38752		38521	
n of Subjects / Events =	2851 / 579		2465 / 632		2851 / 579		2465 / 632		2851 / 579		2465 / 632		1198 / 551		1208 / 556	
Log Pseudolikelihood =	-212.28		171.1		352.14		326.82		353.91		327.25		456.01		491.24	
Wald Chi^2 =	15650.00		15991.52		11739.73		12878.16		11771.69		12859.51		10011.78		9423.06	

Source: ECHP 1994 to 2001 (author's calculations). *Significance levels based on p < 0.10 (*), p < 0.05 (**) and p < 0.01 (***).*

Table 5: Determinants of First Birth Risk - Piecewise Constant Estimates for **Finland** by Gender *(note: this table continued on next page)*

	Model I				Model II				Model III				Model IV			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Baseline Hazard (Effects apply to Hazard / Month)																
16 to 21 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.00)***
22 to 26 Years	0.00	(0.00)***	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.00)***
27 to 33 Years	0.01	(0.00)***	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.00)***
33 to 38 Years	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
39 to 45 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Ever Worked?																
Yes (1)					1.29	(0.72)	0.91	(0.24)	1.27	(0.71)	0.93	(0.25)	0.50	(0.24)	0.78	(0.22)
Activity Status *Reference:* Full-time Employed w. Permanet Contract (Omitted Categories: Full-time w. Fixed Term Contract / FT+Public Employ. / Self Employment)																
Part-Time Employed					1.34	(0.45)	0.74	(0.23)	1.34	(0.45)	0.74	(0.23)	1.30	(0.50)	0.66	(0.23)
In Education/Apprentice					0.50	(0.16)**	0.77	(0.17)	0.50	(0.16)**	0.76	(0.18)	0.54	(0.20)*	0.80	(0.21)
Economically Inactive					omitted		2.82	(1.15)**	omitted		2.82	(1.16)**	omitted		2.82	(1.29)**
Short-Term UE (1-4 months)	0.48	(0.24)	2.78	(0.61)***	0.50	(0.26)	2.29	(0.57)***					0.26	(0.19)*	2.29	(0.62)***
Longer UE (5 or more mo.)	0.48	(0.18)*	1.26	(0.37)	0.83	(0.32)	1.23	(0.41)					0.73	(0.32)	1.22	(0.45)
UE*Lower Educ. (ISCED 0-2)									1.03	(0.60)	1.77	(0.83)				
UE*Mid Education (ISCED 3)									0.36	(0.19)*	1.93	(0.64)**				
UE*Higher Educ. (ISCED5-7)									1.54	(0.81)	1.70	(0.55)				
Partners Employment Status																
Unemployed / Inactive													2.54	(0.53)***	0.67	(0.24)
Long-term UE (>12Months) During the last 5 Years? *Reference:* Not Long-Term UE during last 5 years																
Yes (1)					0.82	(0.19)	0.93	(0.22)	0.82	(0.19)	0.85	(0.20)	0.73	(0.19)	0.83	(0.21)

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Table 5 continued…

	Model I				Model II				Model III				Model IV			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Regional UE Rate																
(Nuts1 Level)					1.02	(0.03)	1.04	(0.03)	1.02	(0.03)	1.04	(0.03)	1.02	(0.03)	1.04	(0.03)
Education *Reference:* 2nd Stage of Secondary Education (ISCED 3)																
Less than 2nd Stage of Secondary Education (ISCED 0-2)					0.88	(0.20)	1.76	(0.38)***	0.81	(0.20)	1.78	(0.42)**	0.98	(0.26)	1.45	(0.33)
Third Level Education (ISCED 5-7)					0.85	(0.15)	1.42	(0.24)**	0.80	(0.14)	1.46	(0.26)**	0.83	(0.16)	1.52	(0.27)**
Individual Income (Euro/Month PPP adjusted)																
Net Income, Work & Assets					1.11	(0.07)	1.17	(0.06)***	1.11	(0.07)	1.17	(0.06)***	1.09	(0.10)	1.17	(0.06)***
Public Transfers (excl. Unemployment Benefits)					2.44	(0.83)***	1.51	(0.99)	2.44	(0.83)***	1.58	(1.02)	2.34	(0.88)**	1.14	(0.92)
Type of relationship *Reference*: Single / Living Apart Together																
Consensual Union					2.94	(0.90)***	8.97	(2.97)***	2.94	(0.90)***	8.99	(2.96)***	*Reference:* Consensual Union			
Married for up to 1 Year					17.55	(5.59)***	42.66	(14.79)***	17.62	(5.57)***	42.90	(14.88)***	7.03	(1.77)***	5.17	(1.29)***
Married 2 to 3 Years					8.98	(2.74)***	24.00	(8.35)***	8.82	(2.68)***	24.13	(8.36)***	3.25	(0.68)***	2.76	(0.56)***
Married 4 Years or more					5.97	(1.90)***	20.57	(7.50)***	5.95	(1.89)***	20.58	(7.48)***	2.38	(0.53)***	2.47	(0.58)***
Partnerinformation (Reference categories as above)																
P. Education (ISCED 0-2)													1.10	(0.29)	1.23	(0.30)
P. Education (ISCED 5-7)													1.44	(0.25)**	0.83	(0.15)
P. Net Income (Euro/Month PPP adjusted)					1.18	(0.09)**	1.15	(0.07)**	1.18	(0.09)**	1.15	(0.07)**	1.19	(0.11)*	1.15	(0.08)**
Relative Income *Reference:* Equal Income Level																
Traditional (♂ 1/3 above ♀)													1.06	(0.23)	1.10	(0.23)
Fem. Main Earner (♀1/3>♂)													1.10	(0.30)	0.89	(0.23)
n of Person-Months =	76413		61651		76413		61651		76413		61651		23772		23833	
n of Subjects / Events =	1635 / 249		1389 / 250		1635 / 249		1389 / 250		1635 / 249		1389 / 250		782 / 219		786 / 227	
Log Pseudolikelihood =	-129.11		-111.84		65.35		70.55		67.20		69.07		147.29		129.98	
Wald Chi^2 =	7010.22		6619.78		15563.11		8788.73		15780.84		9575.46		8664.15		7078.84	

Source: ECHP 1994 to 2001 (author's calculations). *Significance levels based on p < 0.10 (*), p < 0.05 (**) and p < 0.01 (***).*

Table 6: Determinants of First-Birth Risk - Piecewise Constant Estimates for **Germany** by Gender *(note: this table continued on next page)*

	Model I				Model II				Model III				Model IV			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Baseline Hazard (Effects apply to Hazard / Month)																
16 to 21 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
22 to 26 Years	0.00	(0.00)***	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
27 to 33 Years	0.01	(0.00)***	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
33 to 38 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
39 to 45 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Ever Worked?																
Yes (1)					1.53	(0.69)	1.81	(0.52)**	1.53	(0.70)	1.79	(0.52)**	1.21	(0.68)	1.17	(0.41)
Activity Status *Reference:* Full-time Employed w. Permanent Contract (Omitted Categories: Full-time w. Fixed Term Contract / FT+Public Employ. / Self-Employment)																
Part-Time Employed					0.68	(0.19)	0.91	(0.17)	0.68	(0.19)	0.91	(0.17)	0.74	(0.22)	0.97	(0.20)
In Education/Apprentice					0.84	(0.20)	0.54	(0.11)***	0.85	(0.20)	0.54	(0.11)***	1.02	(0.30)	0.68	(0.15)*
Economically Inactive					omitted		1.53	(0.33)**	omitted		1.54	(0.33)**	omitted		1.21	(0.31)
Short-Term UE (1-4 months)	0.58	(0.22)	1.23	(0.35)	0.69	(0.27)	1.28	(0.38)					0.61	(0.27)	1.22	(0.41)
Longer UE (5 or more mo.)	0.65	(0.17)*	1.82	(0.33)***	1.11	(0.29)	2.30	(0.50)***					0.87	(0.29)	2.01	(0.54)***
UE*Lower Educ. (ISCED 0-2)									0.88	(0.33)	1.99	(0.54)**				
UE*Mid Education (ISCED 3)									0.98	(0.29)	1.74	(0.41)**				
UE*Higher Educ. (ISCED5-7)									0.47	(0.48)	1.96	(1.08)				
Partners Employment Status																
Unemployed / Inactive													1.88	(0.29)***	0.74	(0.22)
Long-term UE (>12Months) During the last 5 Years? *Reference:* Not Long-Term UE during last 5 years																
Yes (1)					0.82	(0.20)	0.80	(0.20)	0.86	(0.22)	0.87	(0.21)	0.88	(0.24)	0.64	(0.20)

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Table 6 continued…

	Model I				Model II				Model III				Model IV			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Regional UE Rate																
(Nuts1 Level)					0.96	(0.03)	0.96	(0.03)	0.96	(0.03)	0.96	(0.03)	0.96	(0.03)	0.98	(0.03)
Education *Reference:* 2nd Stage of Secondary Education (ISCED 3)																
Less than 2nd Stage of Secondary Education (ISCED 0-2)					1.28	(0.16)*	1.48	(0.17)***	1.29	(0.17)**	1.46	(0.18)***	1.34	(0.18)**	1.40	(0.18)**
Third Level Education (ISCED 5-7)					1.11	(0.13)	0.93	(0.13)	1.12	(0.13)	0.92	(0.13)	1.22	(0.16)	0.94	(0.14)
Individual Income (Euro/Month PPP adjusted)																
Net Income, Work & Assets					1.11	(0.05)**	1.27	(0.09)***	1.11	(0.05)**	1.27	(0.09)***	1.10	(0.06)*	1.26	(0.08)***
Public Transfers (excl. Unemployment Benefits)					1.03	(0.58)	13.58	(4.51)***	1.03	(0.58)	13.53	(4.49)***	0.63	(0.40)	18.16	(7.22)***
Type of relationship *Reference*: Single / Living Apart Together																
Consensual Union					2.84	(0.72)***	1.70	(0.36)**	2.84	(0.72)***	1.70	(0.36)**	*Reference:* Consensual Union			
Married for up to 1 Year					20.81	(4.86)***	9.56	(2.01)***	20.67	(4.82)***	9.56	(2.01)***	7.87	(1.52)***	6.00	(1.16)***
Married 2 to 3 Years					17.12	(4.06)***	9.98	(2.02)***	17.13	(4.06)***	9.92	(2.00)***	6.54	(1.11)***	6.25	(1.05)***
Married 4 Years or more					12.97	(3.11)***	7.26	(1.50)***	12.95	(3.11)***	7.25	(1.50)***	4.95	(0.86)***	4.77	(0.81)***
Partner Information (Reference categories as above)																
P. Education (ISCED 0-2)													1.33	(0.17)**	1.38	(0.18)**
P. Education (ISCED 5-7)													0.83	(0.12)	1.09	(0.15)
P. Net Income (Euro/Month PPP adjusted)					1.12	(0.09)	1.07	(0.06)	1.12	(0.09)	1.07	(0.06)	1.25	(0.09)***	1.11	(0.06)*
Relative Income *Reference:* Equal Income Level																
Traditional (♂ 1/3 above ♀)													1.16	(0.14)	1.04	(0.14)
Fem. Main Earner (♀1/3>♂)													1.14	(0.25)	1.06	(0.20)
n of Person-Months =	163853		131925		163853		131925		163853		131925		51642		54822	
n of Subjects / Events =	2754 / 547		2372 / 588		2754 / 547		2372 / 588		2754 / 547		2372 / 588		1321 / 491		1356 / 484	
Log Pseudolikelihood =	-313.57		-286.86		130.62		74.07		130.81		72.74		282.84		256.33	
Wald Chi^2 =	15580.61		15740.94		12711.16		13745.21		12733.39		15094.11		9490.44		9326.65	

Source: ECHP 1994 to 2001 (author's calculations). *Significance levels based on p < 0.10 (*), p < 0.05 (**) and p < 0.01 (***).*

Table 7: Determinants of First-Birth Risk - Piecewise Constant Estimates for the **UK** by Gender *(note: this table continued on next page)*

	Model I				Model II				Model III				Model IV			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Baseline Hazard (Effects apply to Hazard / Month)																
16 to 21 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.01)***	0.00	(0.00)***
22 to 26 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.00)***	0.00	(0.00)***
27 to 33 Years	0.01	(0.00)***	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.00)***	0.00	(0.00)***
33 to 38 Years	0.01	(0.00)***	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.00)***	0.00	(0.00)***
39 to 45 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Ever Worked?																
Yes (1)					0.74	(0.31)	1.35	(0.34)	0.82	(0.36)	1.30	(0.33)	0.60	(0.28)	0.93	(0.29)
Activity Status *Reference:* Full-time Employed w. Permanent Contract (Omitted Categories: Full-time w. Fixed Term Contract / FT+Public Employ. / Self-Employment)																
Part-Time Employed					0.97	(0.28)	1.01	(0.20)	0.98	(0.29)	1.01	(0.20)	1.06	(0.32)	1.15	(0.24)
In Education/Apprentice					0.18	(0.11)***	0.37	(0.11)***	0.19	(0.12)***	0.36	(0.11)***	0.44	(0.29)	0.46	(0.20)*
Economically Inactive					1.24	(0.47)	6.04	(1.16)***	1.30	(0.49)	5.97	(1.15)***	2.28	(1.00)*	6.31	(1.36)***
Short-Term UE (1-4 months)	1.28	(0.37)	1.11	(0.40)	1.18	(0.39)	1.27	(0.48)					1.46	(0.62)	1.40	(0.62)
Longer UE (5 or more mo.)	0.79	(0.22)	2.26	(0.56)***	0.68	(0.21)	3.00	(0.85)***					1.08	(0.39)	2.59	(1.01)**
UE*Lower Educ. (ISCED 0-2)									1.08	(0.33)	2.31	(0.76)**				
UE*Mid Education (ISCED 3)									0.65	(0.50)	1.39	(1.02)				
UE*Higher Educ. (ISCED5-7)									0.62	(0.31)	1.66	(0.66)				
Partners Employment Status																
Unemployed / Inactive													3.73	(0.65)***	1.54	(0.40)*
Long-term UE (>12Months) During the last 5 Years? *Reference:* Not Long-Term UE during last 5 years																
Yes (1)					1.01	(0.19)	0.94	(0.22)	0.97	(0.18)	1.02	(0.24)	0.98	(0.19)	0.74	(0.20)

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Table 7 continued…

	Model I				Model II				Model III				Model IV			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Regional UE Rate																
(Nuts1 Level)					1.00	(0.02)	1.02	(0.02)	1.00	(0.02)	1.02	(0.02)	1.00	(0.03)	1.01	(0.02)
Education *Reference*: 2nd Stage of Secondary Education (ISCED 3)																
Less than 2nd Stage of Secondary Education (ISCED 0-2)					1.20	(0.20)	1.34	(0.21)*	1.16	(0.20)	1.32	(0.21)*	1.40	(0.25)*	1.28	(0.22)
Third Level Education (ISCED 5-7)					1.07	(0.17)	1.10	(0.16)	1.06	(0.17)	1.10	(0.16)	1.18	(0.20)	1.14	(0.18)
Individual Income (Euro/Month PPP adjusted)																
Net Income, Work & Assets					1.01	(0.04)	1.04	(0.06)	1.01	(0.04)	1.04	(0.06)	0.98	(0.05)	1.08	(0.07)
Public Transfers (excl. Unemployment Benefits)					0.91	(0.30)	1.09	(0.41)	0.90	(0.33)	1.09	(0.41)	0.68	(0.33)	0.48	(0.26)
Type of relationship *Reference*: Single / Living Apart Together																
Consensual Union					9.61	(2.43)***	3.09	(0.63)***	9.57	(2.42)***	3.09	(0.64)***	*Reference:* Consensual Union			
Married for up to 1 Year					28.13	(7.45)***	8.57	(2.06)***	27.56	(7.30)***	8.57	(2.07)***	2.97	(0.58)***	2.58	(0.52)***
Married 2 to 3 Years					25.96	(6.67)***	9.75	(2.05)***	25.56	(6.55)***	9.71	(2.05)***	2.85	(0.42)***	3.08	(0.47)***
Married 4 Years or more					23.14	(6.03)***	6.63	(1.46)***	22.77	(5.95)***	6.65	(1.47)***	2.58	(0.38)***	2.21	(0.35)***
Partner Information (Reference categories as above)																
P. Education (ISCED 0-2)													1.06	(0.19)	1.24	(0.23)
P. Education (ISCED 5-7)													1.05	(0.17)	1.13	(0.19)
P. Net Income (Euro/Month PPP adjusted)					1.07	(0.06)	1.03	(0.05)	1.07	(0.06)	1.03	(0.05)	1.09	(0.06)	0.94	(0.08)
Relative Income *Reference:* Equal Income Level																
Traditional (♂ 1/3 above ♀)													1.25	(0.17)*	1.38	(0.20)**
Fem. Main Earner (♀1/3>♂)													1.25	(0.26)	1.04	(0.21)
n of Person-Months =	117942		96742		117942		96742		117942		96742		46227		43621	
n of Subjects / Events =	2177 / 456		1861 / 480		2177 / 456		1861 / 480		2177 / 456		1861 / 480		1183 / 423		1103 / 408	
Log Pseudolikelihood =	-247.16		-216.92		94.42		83.67		94.25		81.96		198.76		210.62	
Wald Chi^2 =	13294.98		13136.34		12029.83		13192.69		12016.81		13271.73		8758.21		1.50e+12	

Source: ECHP 1994 to 2001 (author's calculations). *Significance levels based on $p < 0.10$ (*), $p < 0.05$ (**) and $p < 0.01$ (***).*

Table 8: Determinants of First-Birth Risk - Piecewise Constant Estimates across Countries by Gender *(note: this table continued on next page)*

	Model V			
All Countries / Couples Only	***Men***		***Women***	
	hazard ratio	**se**	**hazard ratio**	**se**
Baseline Hazard (Effects apply to Hazard / Month)				
16 to 21 Years	0.01	(0.00)***	0.01	(0.00)***
22 to 26 Years	0.00	(0.00)***	0.00	(0.00)***
27 to 33 Years	0.00	(0.00)***	0.00	(0.00)***
33 to 38 Years	0.00	(0.00)***	0.00	(0.00)***
39 to 45 Years	0.00	(0.00)***	0.00	(0.00)***
Ever Worked? (Yes)	0.85	(0.19)	1.00	(0.14)
Activity Status *Reference*: Full-time Employed w. Permanent Contract (see above for omitted categories)				
Part-Time Employment	0.89	(0.15)	1.07	(0.11)
In Education/Apprentice	0.72	(0.13)*	0.55	(0.07)***
Inactive*France	0.80	(0.49)	2.00	(0.46)***
Inactive*UK (for Finland & German see note below)	1.71	(0.59)	4.00	(0.75)***
Short-Term Unemployment (1-4 Months)*France	1.53	(0.43)	1.24	(0.25)
Short-Term Unemployment (1-4)*Finland	0.38	(0.27)	2.31	(0.52)***
Short-Term Unemployment (1-4)*Germany	0.63	(0.26)	0.97	(0.31)
Short-Term Unemployment (1-4)*UK	1.29	(0.48)	1.23	(0.50)
Longer Unemployment (5+Months)*France	1.24	(0.41)	0.85	(0.18)
Longer Unemployment (5+)*Finland	1.13	(0.45)	1.24	(0.41)
Longer Unemployment (5+)*Germany	0.90	(0.26)	1.74	(0.40)**
Longer Unemployment (5+)*UK	1.03	(0.32)	2.38	(0.85)**
Partner Unemployed / Inactive	1.97	(0.16)***	1.05	(0.15)
Long-term UE (>12Months) During the last 5 Years? *Reference:* Not Long-Term UE during last 5 years				
Long-Term UE *France	0.98	(0.22)	1.77	(0.24)***
Long-Term UE *Finland	0.69	(0.17)	0.90	(0.22)
Long-Term UE *Germany	0.74	(0.19)	0.57	(0.17)*
Long-Term UE *UK	1.00	(0.17)	0.61	(0.17)*
Regional UE Rate (Nuts1)	1.01	(0.01)	1.01	(0.01)
Education *Reference:* 2nd Stage of Secondary Education (ISCED 3)				
Less than 2nd Stage of Secondary Ed.(ISCED 0-2)	1.23	(0.08)***	1.19	(0.08)**
Third Level Education (ISCED 5-7)	0.94	(0.06)	1.14	(0.07)**
Partner's Education *Reference:* (ISCED 3)				
Partner's Education (ISCED 0-2)	1.07	(0.08)	1.18	(0.08)**
Partner's Education (ISCED 5-7)	1.13	0.07)**	0.90	(0.06)
Individual Income (Euro/Month PPP adjusted)				
Net Income from Work & Assets	1.06	(0.03)*	1.10	(0.04)***
Public Transfers (excl. Unemployment Benefits)	1.43	(0.17)***	4.45	(0.77)***
Partner's Net Income from Work & Assets	1.12	(0.03)***	1.07	(0.03)**

Table continued on next page…

Table 7 continued…

Relative Income *Reference:* Equal Income Level				
Traditional (♂ 1/3 above ♀)	1.09	(0.07)	1.10	(0.08)
Female Main Earner (♀1/3>♂)	1.03	(0.11)	0.90	(0.09)
Type of relationship *Reference*: Consensual Union / Unmarried				
Married for up to 1 Year	3.47	(0.31)***	2.76	(0.26)***
Married 2 to 3 Years	3.14	(0.22)***	3.08	(0.22)***
Married 4 Years or more	2.35	(0.18)***	2.07	(0.16)***
Summary Statistics				
n of Person-Months =	160.393		160.797	
n of Subjects / Events =	4.484 / 1.684		4.453 / 1.685	
Log Pseudolikelihood =	913.04		890.85	
Wald Chi^2 =	32505.56***		31898.14***	

Source: ECHP 1994 to 2001, (author's calculations).

Notes: Significance levels based on p < 0.10 (*), p < 0.05 (**) and p < 0.01 (***).
Effects for inactivity in Germany and Finland estimated but results omitted due to low n of cases.

Notes for Table 4 – Table 8:

(1) Method: piecewise constant exponential hazard.

(2) Estimates controlled for repeated observations (robust standard errors).

(3) All estimated chi^2 values significant on basis of $p < 0.0001$.

(4) Dependent variable set at t-10 months from time of birth.

(5) Process time measured in months since person's birth.

(6) Considered age span: 16-45 years of age within cohorts 1955-1983

(7) No ECHP data for wave 1 and 2 in Finland.

(8) Estimated but not displayed variables include public employment, self-employment, fixed-term employment, country of origin, household size & control dummies for calendar year, dummy sets include flag variables for missing values, where necessary.

(9) Variable East/West included for Germany, to account for region specific effects.

(10) Net income & public transfer in purchasing power parity adjusted Euros.

References:

Aaberge, Rolf, Ugo Colombino, Daniela Del Boca, John Ermisch, Marco Francesconi, Silvia Pasqua, and Steinar Strøm. 2005. "Women's Participation in the Labor Market and Fertility: The Effects of Social Policies." Pp. 121-153 in *Women at Work. An Economic Perspective*, edited by T. Boeri, D. Del Boca & C. Pissarides. Oxford: Oxford University Press.

Adsera, Alicia. 2005. "Where are the Babies? Labor Market Conditions and Fertility in Europe." *IZA Discussion Paper Series* 1576.

Andersson, Gunnar. 2000. "The Impact of Labor-Force Participation on Childbearing Behavior: Pro-Cyclical Fertility in Sweden during the 1980s and the 1990s." *European Journal of Population* 16:293-333.

Azmat, Ghazala, Maia Güell, and Alan Manning. 2006. "Gender Gaps in Unemployment Rates in OECD Countries." *Journal of Labor Economics* 24:1-37.

Beaujot, R. and J. Liu. 2002. "Children, Social Assistance and Outcomes: Cross National Comparisons." *Luxembourg Income Study, Working Paper Series* 304.

Beblo, Miriam. 2001. *Bargaining over Time Allocation: Economic Modeling and Econometric Investigation of Time Use within Families, Dissertation*. Heidelberg: Springer/ Physika.

Becker, Gary S. 1993. *A treatise on the family. Enlarged Edition*. Cambridge MA: Harvard University Press.

Bielby, William T. and Denise D. Bielby. 1992. "I Will Follow Him: Family Ties, Gender-Role Beliefs, and the Reluctance to Relocate for a Better Job." *American Journal of Sociology* 97:1241-1267.

Blau, Francine D. and Lawrence M. Kahn. 2000. "The Gender Earnings Gap: Learning from international Comparisons." *American Economic Review* 82:533-539.

Bongaarts, John. 1982. "Infertility After Age 30: A False Alarm." *Family Planning Perspectives* 14:75-78.

Bradshaw, Jonathan and Naomi Finch. 2002. "A comparison of Child Benefit packages in 22 countries." *Department for Work and Pensions Research Report* 174.

Brewster, Karin L. and Ronald R. Rindfuss. 2000. "Fertility and Women's Employment in Industrialized Nations." *Annual Review of Sociology* 26:271-296.

Butz, William P. and Michael P. Ward. 1979. "The Emergence of Countercyclical U.S. Fertility." *The American Economic Review* 69:318-328.

Carone, Guiseppe, Herwig Immervoll, Dominique Paturot, and Aino Salomäki. 2004. "Indicators of Unemployment and Low-Wage Traps (Marginal Effective Tax Rates on Labour)." *OECD Social, Employment and Migration Working Paper* 18.

D´Ambrosio, Conchita. and C. Grandin. 2003. "Income Distribution and Social Exclusion of Children: Evidence From Italy and Spain in the 1990s." *Journal of Comparative Family Studies* 34:456-479.

Dienel, Christiane. 2003. "Die Mutter und ihre erstes Kind - individuelle und staatliche Arrangements im europäischen Vergleich." *Zeitschrift für Familienforschung* 15:120-145.

Diewald, Martin and Stephanie Sill. 2004. "Mehr Risiken, mehr Chancen? Trends in der Arbeitsmarktmobilität seit Mitte der 1980er Jahre." Pp. 39-62 in *Beschäftigungsstabilität im Wandel*, edited by O. Struck & C. Köhler. München: Hampp.

DiPrete, Thomas A. 2002. "Life Course Risks, Mobility Regimes, and Mobility Consequences: A Comparison of Sweden, Germany, and the United States." *American Journal of Sociology* 108:267-309.

DiPrete, Thomas A., Dominique Goux, Eric Maurin, and Amelie Quesnel-Vallee. 2006. "Work and Pay in Flexible and Regulated Labor Markets: A Generalized Perspective on Institutional Evolution and Inequality Trends in Europe and the U.S." *Research in Social Stratification and Mobility* 24:311-332.

DiPrete, Thomas A. and Patricia A. McManus. 2000. "Family Change, Employment Transitions, and the Welfare State: Household Income Dynamics in the United States and Germany." *American Sociological Review* 65:343-370.

DiPrete, Thomas A., Philip S. Morgan, Henriette Engelhardt, and Hana Pacalova. 2003. "Do Cross-National Differences in the Costs of Children Generate Cross-National Differences in Fertility Rates?" *Population Research and Policy Review* 22:439-477.

Dornseiff, Jann-Michael and Reinhold Sackmann. 2003. "Familien-, Erwerbs- und Fertilitätsdynamiken in Ost- und Westdeutschland." Pp. 309-348 in *Partnerschaft und Familiengründung. Ergebnisse der dritten Welle des Familien-Survey.*, vol. 11, edited by W. Bien & J. H. Marbach. Opladen: Leske & Budrich.

Drobnic, Sonja, Hans-Peter Blossfeld, and Götz Rohwer. 1999. "Dynamics of Women's Employment Patterns over the Family Life Course: A Comparison of the United States and Germany." *Journal of Marriage and the Family* 61:133-146.

Easterlin, Richard A. 1962. *The American Baby Boom in Historical Perspective*. New York: National Bureau of Economic Research, Occasional Paper 79.

—. 1966. "Economic-Demographic Interactions and Long Swings in Economic Growth." *The American Economic Review* 56:1063-1104.

Esping-Andersen, Gosta. 1999. *Social Foundations of Postindustrial Economies*. Oxford University Press.

European Parliament. 1996. "Social Policy in Finland - an Overview." *Directorate-General for Research. Working Document. Social Affairs Series* W9.

Eurostat. 2007. "Eurostat Structural Indicators -General Economic Background. GDP per capita in PPS." Eurostat. Statistical Office of the European Communities.

Finch, Naomi and Jonathan Bradshaw. 2003. "Fertility and Supporting the Costs of Children." *Paper prepared for the Conference on Recent Fertility Trends in Northern Europe, May 15th-16th, 2003, Oslo*.

Friedman, Debra, Michael Hechter, and Satoshi Kanazawa. 1994. "A Theory of the Value of Children." *Demography* 31:375-401.

Fuwa, Makiko. 2004. "Macro-Level Gender Inequality and the Division of Household Labor in 22 Countries." *American Sociological Review* 69:751-767.

Gangl, Markus. 2006. "Scar Effects of Unemployment: An Assessment of Institutional Complementarities." *American Sociological Review* 71:986-1013.

Gauthier, Anne Helene and Jan Hatzius. 1997. "Family Benefits and Fertility: An Econometric Analysis." *Population Studies* 51:295-306.

Golsch, Kathrin. 2004. *The Impact of Labour Market Insecurity on the Work and Family Life of Men and Women. A Comparison of Germany, Great Britain and Spain. Dissertation*. Bielefeld: University of Bielefeld.

Gornic, Jennifer. C., M. K. Meyers, and K. E. Ross. 1996. "Public Policies and the Employment of Mothers: A Cross-National Study." *Luxemburg Income Study, Working Paper Series* 140.

Günther, Roland. 2003. "Report on compiled information." *Chintex Working Paper Series* 19.

Hakim, Catherine. 2003. "A New Approach to Explaining Fertility Patterns: Preference Theory." *Population and Development Review* 29:349-374.

Hall, Peter A. and David Soskice. 2001. "An Introduction to Varieties of Capitalism." Pp. 1-70 in *Varieties of Capitalism. The Institutional Foundations of Comparative Advantage*, edited by P. A. Hall & D. Soskice. Oxford: Oxford University Press.

Hank, Karsten., Michaela. Kreyenfeld, and C.Katharina. Spieß. 2004. "Kinderbetreuung und Fertilität in Deutschland." *Zeitschrift für Soziologie* 33:228-244.

Happel, S. K., J. K. Hill, and S. A. Low. 1984. "An economic analysis of the timing of childbirth." *Population Studies* 38:299-311.

Hobcraft, John and Kathleen E. Kiernan. 1995. "Becoming a Parent in Europe." *Prepared Paper: European Population Conference, September 4-8, 1995, Milano, Italy*.

Hoem, Britta. 2000. "Entry into motherhood in Sweden: the influence of economic factors on the rise and fall in fertility, 1986-1997." *Demographic Research* 2.

Huinink, Johannes. 2001. "The Macro-Micro-Link in Demography - Explanations of Demographic Change." in *EuroConference: The Second Demographic Transition in Europe*. Bad Herrenalb, Germany.

Huinink, Johannes and Michaela Kreyenfeld. 2004. "Family Formation in Times of Social and Economic Change: An Analysis of the 1971 East German Cohort." *MPIDR Working Paper Series* 13.

ILO Bureau of Statistics. 2007. "LABORSTA. Public Employment Database. Online Reference: http://laborsta.ilo.org/ Access date: 02/10/2007." International Labour Office.

Jenkins, Stephen. P. 2005. *Survival Analysis*. Colchester: ISER Universtiy of Essex.

Jenkins, Stephen. P., C. Schluter, and Gert G. Wagner. 2003. "The Dynamics of Child Poverty: Britain and Germany Compared." *Journal of comparative family studies* 34:337-356.

Kamerman, Sheila B. 2000. "Parental leave policies: An essential ingredient in early childhood education and care policies." *Social Policy Report* 14:3-15.

Kim, Anna and Karin Kurz. 2003. "Prekäre Beschäftigungsverhältnisse in Großbritannien und Deutschland. Welche Rolle spielen unterschiedliche institutionelle Kontexte? ." Pp. 167-197 in *Mehr Risiken – Mehr Ungleichheit? Abbau des Wohlfahrtsstaates, Flexibilisierung des Arbeitsmarktes und die Folgen*, edited by W. Müller & S. Scherer. Frankfurt/Main: Campus.

Klein, Thomas, Yasemin Niephaus, Heike Diefenbach, and Johannes Kopp. 1996. "Entwicklungsperspektiven von Elternschaft und Ehelicher Stabilität in den neuen Bunesländern seit 1989." in *Familie an der Schwelle zum Neuen Jahrtausend. Wandel und Entwicklung Familialer Lebensformen*, edited by W. Bien. Opladen: Leske & Budrich.

Kohler, Hans-Peter, Francesco C. Billari, and Jose Antonio Ortega. 2002. "The Emergence of Lowest-Low Fertility in Europe during the 1990s." *Population and Development Review* 28:641-680.

Kohn, Melvin. L. 1987. *Cross-National Research in Sociology*. Newbury Park, London, New Dehli: Sage.

Kramer, Walter and Klaus Neusser. 1984. "The Emergence of Countercyclical U.S. Fertility: Note." *The American Economic Review* 74:201-202.

Kravdal, Oystein. 2002. "The impact of individual and aggregate unemployment on fertility in Norway." *Demographic Research* 6.

Kreyenfeld, Michaela. 2000. "Changes in the timing of first birth in East Germany after re-unification." *Schmollers Jahrbuch* 120:169-186.

—. 2001. "Timing of First Births in East Germany after Reunification." *Vierteljahreshefte zur Wirtschaftsforschung* 70:74-79.

—. 2005. "Economic Uncertainty and Fertility Postponement: Evidence from German Panel Data." *MPIDR Working Paper Series* 34.

Kreyenfeld, Michaela and Johannes Huinink. 2003. "Der Übergang zum ersten und zweiten Kind. Ein Vergleich zwischen Familiensurvey und Mikrozensus." Pp. 43-64 in *Partnerschaft und Familiengründung. Ergebnisse der dritten Welle des Familien-Survey.*, vol. 11, edited by W. Bien & J. H. Marbach. Opladen: Leske & Budrich.

Kurz, Karin. 2002. "Fixed-term contracts and unemployment at the beginning of the employment career in Germany: does gender matter?" Pp. 133-157 in *The gender dimension of social change. The contribution of dynamic research to the study of women's life courses*, edited by E. Ruspini & A. Dale. London: Polity Press.

Kurz, Karin, Nikolei Steinhage, and Kathrin Golsch. 2001. "Case Study Germany: Global Competition, Uncertainty and the Transition to Adulthood." *Globalife Working Paper* 16.

Leibenstein, Harvey. 1975. "The Economic Theory of Fertility Decline." *The Quarterly Journal of Economics* 89:1-31.

Lewis, Jane. 1992. "Gender and the Development of Welfare Regimes." *Journal of European Social Policy* 2:159-173.

Liefbroer, Aart C. and Martine Corijn. 1999. "Who, What, Where and When? Specifying the Impact of Educational Attainment and Labour Force Participation on Family Formation." *European Journal of Population.* 15:45-75.

Lindenberg, Siegwart. 1986. "Individual Economic Ignorance versus Social Production Functions and Precarious Enlightenment." *Journal of Institutional and Theoretical Economics* 142:20-26.

—. 1991. "Social Approval, Fertilty and Female Labour Market Behaviour." Pp. 32-61 in *Female Labour Market Behaviour and Fertility*, edited by J. J. Siegers, Jenny de Jong-Gierveld & E. Van Imhoff. Berlin, Heidelberg, New York, London, Paris, Tokyo, Hong Kong, Barcelona, Budapest: Springer.

Lundberg, Shelly and Robert A. Pollak. 2007. "The American Family and Family Economics." *The Journal of Economic Perspectives* 21:3-26.

Macunovich, Diane J. 1995. "The Butz-Ward Fertility Model in the Light of More Recent Data." *The Journal of Human Resources* 30:229-255.

Mahon, Rianne. 2002. "Child care: Toward what kind of "social Europe"?" *Social Politics* 9:343-379.

Mahy, Benoit, Robert Plasman, and Francois (Eds.) Rycx. 2006. *Gender Pay Differentials - Cross National Evidence from Micro-Data*: Palgrave MacMillan.

Mayer, Karl Ulrich. 2004. "Whose Lives? How History, Societies, and Institutions Define and Shape Life Courses." *Research in Human Development* 1:161-187.

—. 2005. "Life Courses and Life Chances in a Comparative Perspective." Pp. 17-55 in *Analyzing Inequality: Life Chances and Social Mobility in Comparative Perspective*, edited by S. Svallfors. Stanford, CA: Stanford University Press.

McDonald, Peter. 2000. "Gender Equity in Theories of Fertility Transition." *Population and Development Review* 26:427-439.

Mills, Melinda and Hans-Peter Blossfeld. 2003. "Globalization, Uncertainty and Changes in Early Life Courses." *Zeitschrift für Erziehungswissenschaft* 6:188-218.

Mincer, Jacob and Haim Ofek. 1982. "Interrupted Work Careers: Depreciation and Restoration of Human Capital." *The Journal of Human Resources* 17:3-24.

Mincer, Jacob and Solomon Polachek. 1974. "Family Investments in Human Capital: Earnings of Women." *The Journal of Political Economy* 82:S76-S108.

MISSOC. 2002. *Social protection in the Member States of the European Union. Situation on 1 January 2002 and evolution*. Luxembourg: European Communities.

Morgan, Philip S. 2003. "Is Low Fertility a Twenty-First-Century Demographic Crisis?" *Demography* 40:589-603.

Murphy, Mike. 1989. "Unemployment among Young People: Social and Psychological Causes and Consequences." *Youth and Policy* 29:11-19.

Neyer, Gerda. 2003. "Family Policies and Low Fertility in Western Europe." *Journal of Population and Social Security (Population)* Supplement to Vol. 1:49-93.

OECD. 1995. "OECD Employment Outlook. Part Two. Key Issues for Labour Market and Social Policies." Pp. 101-138. Paris: Organisation for Economic Co-operation and Development OECD.

—. 1996. *OECD Employment Outlook*. Paris: Organisation for Economic Co-operation and Development OECD.

—. 2001. *Bildung auf einen Blick. OECD-Indikatoren*. Paris: Organisation for Economic Co-operation and Development OECD.

—. 2005. *OECD Factbook*: Organisation for Economic Co-operation and Development OECD.

—. 2007. "SourceOECD. Employment and Labour Market Statistics. Labour force statistics - Summary tables Vol 2006 release 03. Online Reference: http://oberon.sourceoecd.org/vl=6959625/cl=27/nw=1/rpsv/statistic/s5_about.htm?jnlissn=16081161 Access date: 01/10/2007." Organisation for Economic Co-operation and Development OECD.

Ollikainen, Virve. 2006. "Gender Differences in Transitions from Unemployment: Micro Evidence from Finland." *Review of Labour Economics and Industrial Relations* 20:159-198.

Oppenheimer, Valerie Kincade. 1994. "Women's Rising Employment and the Future of the Family in Industrial Societies." *Population and Development Review* 20:293-342.

Ott, Notburga. 1995. "Fertility and Division of Work in the Family. A Game Theoretic Model of Household Decisions." Pp. 80-99 in *Out of the Margin. Feminist Perspectives on Economics*, edited by E. Kuiper & J. Sap. London: Routledge.

—. 1998. "Der Familienökonomische Ansatz von Gary S. Becker." Pp. 63-90 in *Gary Beckers ökonomischer Imperialismus.*, edited by I. Pies & M. Leschke. Tübingen: Morh & Siebeck.

Pellizzari, Michele. 2004. "Unemployment Duration and the Interactions Between Unemployment Insurance and Social Assistance." in *IGIER (Innocenzo Gasparini Institute for Economic Research) Working Paper Series*, vol. 272: Bocconi University.

Pfau-Effinger, Birgitt. 1996. "Analyse internationaler Differenzen in der Erwerbsbeteiligung von Frauen. Theoretischer Rahmen und empirische Ergebnisse." *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 48:462-492.

Rubery, Jill, Mark Smith, Colette Fagan, and Damian Grimshaw. 1998. *Women and European Employment*. London, New York: Routledge.

Sackmann, Reinhold. 2000. "Geburtenentscheidungen und Lebenslaufpolitik im ostdeutschen Transformationsprozess." Pp. 146-163 in *Übergänge – Individualisierung, Flexibilisierung und Institutionalisierung des Lebensverlaufs. 3. Beiheft der Zeitschrift für Soziologie der Erziehung und Sozialisation*, edited by W. R. Heinz.

Schoen, Robert, Young J. Kim, Constance A. Nathanson, Jason Fields, and Nan Marie Astone. 1997. "Why Do Americans Want Children?" *Population and Development Review* 23:333-358.

Sorensen , Jesper B. 1999. "STPIECE: Stata module to estimate piecewise-constant hazard rate models." Chicago: University of Chicago.

Soskice, David. 2005. "Varieties of Capitalism and Cross-National Gender Differences." *Social Politics* 12:170-179.

Tölke, Angelika. 2004. "Die Bedeutung von Herkunftsfamilie, Berufsbiographie und Partnerschaften für den Übergang zur Ehe und Vaterschaft." *MPIDR Working Paper Series* 17.

—. 2005. "Die Bedeutung von Herkunftsfamilie, Berufsbiografie und Partnerschaften für den Übergang zur Ehe und Vaterschaft." Pp. 98-126 in *Männer - Das ‚vernachlässigte" Geschlecht in der Familienforschung, Zeitschrift für Familienforschung. Sonderheft 4.*, edited by A. Tölke & K. Hank. Wiesbaden: VS-Verlag für Sozialswissenschaften.

Tölke, Angelika and Martin Diewald. 2003. "Insecurities in Employment and Occupational Careers and their Impact on the Transition to Fatherhood in Western Germany." *Demographic Research* 9:41-67.

Trappe, Heike. 1995. *Emanzipation oder Zwang? Frauen in der DDR zwischen Beruf, Familie und Sozialpolitik*. Berlin: Akademie-Verlag.

Trzcinski, Eileen. and Elke Holst. 2003. "Hohe Lebenszufriedenheit teilzeitbeschäftigter Mütter." *DIW Wochenbericht* 70:539-545.

Veil, Mechtild. 2005. "Geschlechterbeziehungen im deutsch-französischen Vergleich - ein Blick auf Familien und Arbeitsmarktpolitik." in *Arbeitsmarkt, Wohlfahrtsstaat, Familienpolitik und die Geschlechterfrage - deutsch-französische Konvergenzen und Divergenzen*, edited by G. Achcar, D. Simon & M. Veil. Berlin: Social Science Research Center Berlin (WZB).

Vikat, Andres. 2002. "Fertility in Finland in the 1980s and 1990s: Analysis of Fertility Trend by Age and Parity." *Yearbook of Population Research in Finland* 38:159-178.

—. 2004. "Women's labor force attachment and childbearing in Finland." *MPIDR Working Paper Series*.

Wells, William. 2001. "From Restart to the New Deal in the United Kingdom." Pp. 241-262 in *Labour Market Policies and the Public Employment Service. Part II. Unemployment Benefits and Activation Measures*, edited by OECD. Paris: Organisation for Economic Co-operation and Development OECD.

Witte, James C. and Gert G. Wagner. 1995. "Declining Fertility in East Germany After Unification: A Demographic Response to Socioeconomic Change." Pp. 387-397, vol. 21: Population Council.
Wrohlich, Katharina and Fabien Dell. 2005. "Steuerliche Familienförderung in Frankreich und Deutschland." *DIW Wochenbericht* 72:479- 486.
Zimmermann, Klaus F. and John DeNew. 1990. "Arbeitslosigkeit und Fertilität." Pp. 95-109 in *Bevölkerung und Wirtschaft.*, edited by B. Felderer. Berlin.