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**WOMEN'S CAREER STRATEGY CHOICES
AND FERTILITY IN DIFFERENT
WELFARE REGIME CONTEXTS**

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LIST OF ACRONYMS

adjTFR	Bongaarts-Feeney tempo-adjusted total fertility rate
ASFR	Age-specific fertility rate
BSC70	British Cohort Study 1970
CTFR	Cohort total fertility rate
FLFP	Female labor force participation
FRG	Federal Republic of Germany
GDR	German Democratic Republic
HCA	Home Care Allowance (in Finland)
MAB	Mean age of the mother at birth
Parity	Biological birth order
PATFR	Parity-adjusted total fertility rate
PPR	Parity-progression ratio
SOEP	German Socio-Economic Panel
TFR	Total fertility rate

CHAPTER 1

INTRODUCTION

The future of the welfare state as we have gotten to know it appears gloomy in the light of the demographic changes the western developed countries are experiencing. The baby boom after the World War II was followed by a decrease in fertility and in many countries the period total fertility rate (TFR) eventually stabilized below the sub-replacement levels. In 1970 only seven of the 30 OECD member countries experienced fertility rates below the replacement rate¹ of 2.1, but 26 years later in as many as 13 countries the fertility rate was below 1.5, and only in five countries above 2.0 (OECD 2009a). At the same time the life expectancy has been increasing: The average life expectancy in the OECD countries (Canada excluded) in 1970 was 67.7 years, whereas in 2006 it was almost nine years higher, at 76.2 years (OECD 2009b). Consequently, the average age-dependency ratio (the population aged 65+ as a percentage of the population aged 15-64) of the OECD countries which was 20.6% in 2006 will, according to the projections, grow to 47.4% by 2050 (OECD 2005:27). Moreover, if the impact of migration is excluded from the equation, the sub-replacement fertility will, in the long run, result in a population decline.

The growing share of the elderly is in particular causing sleepless nights for the decision makers who must figure out how to cope with the situation where the number of taxpayers is decreasing but the receivers of the welfare are increasing². In 2009, for example, 59% of the governments in the more developed regions (Europe, North America, Australia, New Zealand, Japan) stated that they were concerned with the size of the population of working age, 61% were also concerned with the low fertility and as many as 79% were worried about the population aging (United Nations 2010:7). Even though several different strategies, such as immigration,

¹ For an explanation of replacement fertility, see Smallwood and Chamberlain (2005).

² Naturally, the review of the consequences of the demographic changes can be broadened from the concentration on the unbalanced welfare state budgets to the many other difficulties that may arise (e.g. Bernardi 2005; Kaufmann 2005). It is likewise important to notice that some remain sceptical to the negative interpretations of the demographic changes and see the future from a more optimistic perspective. For instance, Hondrich (2007) claims that *Weniger sind mehr* ("less is more").

increases in the labor force participation, and changes in social policy can and must be combined to solve the problems related to the aging of the population (e.g. McDonald and Kippen 2001), in many countries it is crucial to increase the fertility to restore the demographic stability.

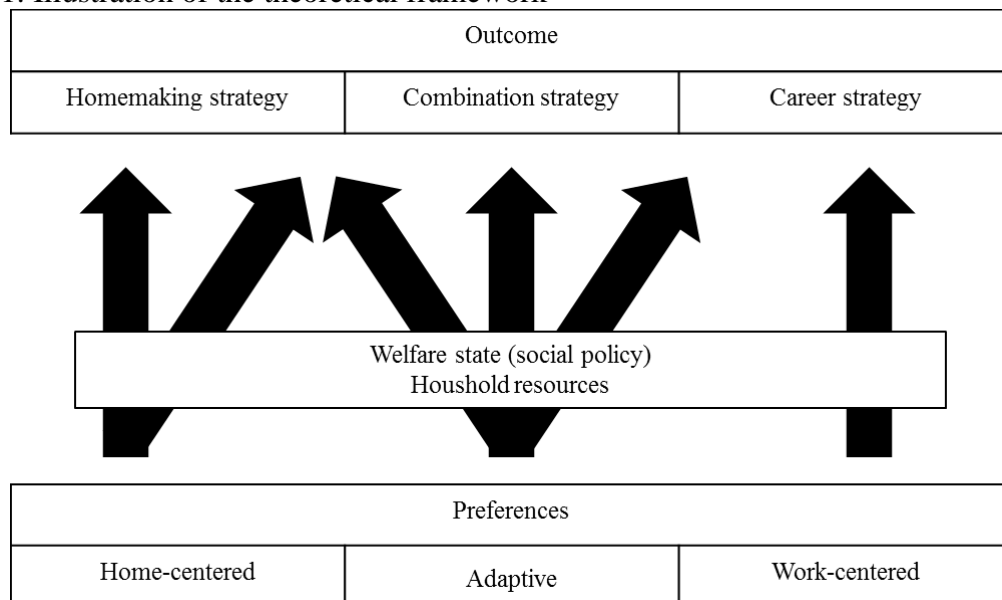
Several countries have already, implicitly or explicitly, discussed an increase of the birth rate as an aim for social policy (for Australia, see Brennan 2007; for Germany, see Henninger et al. 2008). The underlying assumption behind this standpoint is that fertility, at least to some extent, can be influenced by policy. The empirical evidence on the relationship between fertility and social policy is still inconclusive, but several demographers are convinced that the implementation of family policies which aim to improve women's possibilities to combine work and family will have a positive impact on the fertility rates (see Chapter 3). In other words, the demographers' discussion on low fertility intersects more and more frequently with the feminist welfare state scholars' discussion on the changing role of the women (see Chapter 4). It is in this landscape that the current study takes place.

1.1 AIM OF THE RESEARCH

The comprehensive aim of this study is to increase the understanding of the cross-country differences in fertility in the western developed countries. The focal interest lies in the interaction between women's preferences, family policy, female labor force participation, and fertility. By combining the theories on childbearing with the gendered welfare state theories, a new framework for analyzing fertility is developed. The framework is based on Hakim's (1998, 2000, 2002, 2003a, 2003b, 2003c) preference theory, according to which women have heterogeneous preferences when it comes to childbearing and employment. In the current study it is assumed, as argued by Hakim, that some women prefer to concentrate only on homemaking, some on working, and a large majority prefers to combine both spheres. In the framework employed here it is further assumed that women choose between - to borrow Bernhardt's (2000) conceptualization - three types of career strategies on basis of these preferences: the homemaking strategy, the combination strategy, and the career strategy. From the comparative welfare state research it is well known that different welfare regimes and welfare arrangements treat women differently (see Chapter 4). In other words, family policy either encourages or discourages the different career strategies. Finally, as economic theorizing on a household's decision-making indicates (see section 3.1.2), a household's own resources are crucial for the decision-making and it is therefore assumed that factors such as income and the availability of child care provided for

example by the spouse or the grandparents also influence women’s choices when it comes to family and work. In brief, preferences, family policy, and the household’s own resources are here argued to determine not only the women’s choice of the career strategy, but also the number of children. Because family policy differs considerably from one welfare state to another, the number of women who choose a particular strategy is assumed to vary between the countries. The cross-country differences in the relative share of the women choosing the different strategies and in the level of fertility within the career strategy groups are claimed to be the most important reasons for the between-country differences in fertility (see the illustration of the theoretical framework in Figure 1.1).

Figure 1.1: Illustration of the theoretical framework



The overall research questions are:

(1a) What is the share of the women belonging to the different career strategy groups within one country and (1b) how does the relative share of the homemakers, combiners, and careerists vary between the countries?

(2a) How do the patterns of childbearing (timing, level) vary, on the one hand between women belonging to the different groups within one country and, (2b) on the other hand between the different groups between the countries?

(3a) What are the typical characteristics of the homemakers, combiners, and careerists, and (3b) what are the differences and similarities between the countries in this respect?

(4a) What are the central determinants of fertility within the groups, that is, what kind of differences and similarities can we detect, on the one hand, between the groups within one country and, (4b) on the other hand, between the different groups between the countries?

Three country studies are conducted to answer these questions and one country from each of the three welfare state clusters (Esping-Andersen 1990, 1999) is chosen: Germany from the conservative, the UK from the liberal, and Finland from the social-democratic cluster. In each country women born around 1970 are observed until they reach the age of 35. The division of the women into the three different career strategy groups is made based on longitudinal data on the labor market attendance from the 18th birthday. Thereafter, the fertility within and between the groups is studied, the characteristics of the women that belong to the different groups are discussed, and the determinants of the first and second birth before the age of 35 within each group is studied with the help of event history techniques.

1.2 DELIMITATIONS: POLITICAL SCIENCE AND DEMOGRAPHY

The delimitations of this study are discussed in four different steps below. At first a brief description of those aspects of political science which are related to the current study is given. This is followed by a short general overview of the demographic research. Thereafter the associations between political science and demography are discussed, and finally the study is placed on the intersection of political science and demography.

1.2.1 Political science and comparative welfare state research

According to the most straightforward definition, political science is a study of policies, polity, and politics (Böhret et al. 1988:3ff.). The spectrum of the field is wide and stretches from the studies on political philosophy (Strauss 1959) and party systems (Lipset and Rokkan 1990) to clashing civilizations (Huntington 1993) and the influence of values on party preferences (Inglehart 1971). This study ties to the subfield of comparative welfare state policies, which in turn is one of the most extensively studied subfields of comparative government activities. One reason to political scientists' enthusiasm towards the welfare state might be the central role of the welfare state in guaranteeing the rights of the citizen. After all, citizenship can be understood as

consisting of three different types of rights, namely civil, political, and social (Marshall 1950/2000). Another likely reason for the many investigations is that governments spend more on welfare and social policy annually than on any other government activity. For example, as to the total general government expenditure in 2011 in the EU-27 countries, as much as 19.6%, 7.3%, and 5.3% of the GDP went to social protection, health expenditure, and education respectively. These numbers can be contrasted to the total government expenditure, which amounted to 49.1% of GDP (Eurostat 2013).

As customary in comparative political science research in general (Landman 2008), even in the comparative study on the welfare state three different types of studies can be distinguished, namely descriptive, explanatory, and outcome-oriented/predictive. As to the **descriptive studies**, some authors discuss a large variety of policies (e.g. Titmuss 1974; Esping-Andersen 1990; Ferrera 1996; Bonoli 1997; Obinger and Wagschal 1998; Castles 2008; for an overview, see Arts and Gelissen 2002), and thus aim to identify the most important differences and similarities between the welfare states. Others focus on one or few policy areas, such as education (Iversen and Stephens 2008; Busemeyer and Trampusch 2011), pensions (Bonoli 2003), taxation (Steinmo 1993; Wagschal 2001), or family policy (see Chapter 4). In addition, there are several studies which concentrate on the changes in welfare policies and/or welfare state over the time. Currently, for example, there is a vivid discussion on whether the changes in social policies bring about a convergence or divergence among the welfare states over time (Schmitt and Starke 2011; for an overview, see Starke et al. 2008).

The central result from the above studies is that, roughly speaking, the welfare state similarities and differences follow geography and we can thus distinguish between Anglo-Saxon, Northern European, Southern European, Continental European, Eastern European, Latin American, and Eastern Asian welfare state. This is however only a very general picture, which changes somewhat depending on which policies are studied. Moreover, very little is still known about the developing welfare states (for a review, see Peng and Wong 2010 for East Asia; Cook 2010 for Eastern Europe; Huber and Bogliaccini 2010 for Latin America), and it is likely that future research will identify separate clusters within these geographic areas (e.g. for Latin America, see Franzoni 2008). In this study the different classifications and typologies concerning family policy in the western developed countries are discussed in depth in Chapter 4.

While to some extent true for descriptive investigations, the scholars engaged in explanatory studies are faced even more so with the so called “dependent variable problem” (Clasen and Siegel 2007a). In essence this means that there is no agreement on the best possible way to conceptualize, operationalize, or measure the welfare states. For example, it is not clear if explanatory studies should concentrate on individual policies or the welfare state as a whole. Moreover, even if one could agree that the focus should be on the welfare state as whole, it would be unclear what policies should be included. The problems with the conceptualization in turn have consequences for the operationalization and measurement: It is for example possible to divide between aggregated and disaggregated social expenditure, measure expenditures both as gross and net spending, and naturally also separate between public and private spending (cf. Clasen and Siegel 2007b; for data, see OECD 2014a). All in all then, given the plethora of different options, the many explanatory studies must encompass a large amount of dependent variables.

In **explanatory studies** several different questions are being asked. Most common is to try and explain the cross-country differences, or changes/stability of the different welfare state policies. As to the independent variables in these studies, political scientists concentrate on factors related to polity and politics (for a review, see e.g. Myles and Quadagno 2002; Ullrich 2005:28-40). To briefly review some of the central arguments in the field, Wilensky (1975) suggested that industrialization and with it economic development and aging of the population determine welfare state expansion and social policy development (“logic of industrialism”). Recently, some scholars have argued that this explanation does not take into account the possibility for an opposite causality (“welfare state developmentalism”), i.e., many late industrializers introduce social policies in order to give a push to industrialization and economic development (for a review, see Kwon et al. 2009). Moreover, even though it is true that the welfare states are countries which have reached advanced levels of economic development, the theory fails to explain the differences between the mature welfare states. This in turn has inspired many scholars to develop other kind of theories. The first kind of such explanations concentrate on power resources in general and on political parties in particular. Explanations based on the power resources investigate the influence of organized interest groups such as labor unions on the welfare state (e.g. Korpi 2000). Notice here that political parties can be understood as groups organized around particular interests, or cleavages (Lipset and Rokkan 1990). Moreover, as

pointed out by Schmidt (2010) in his review of the literature, empirical studies have documented that parties have different views on social policy. Moreover, it can be assumed that these views translate into differences in welfare state policies, given that the governing parties' preferences about the social policy determine the actual decisions that are being made about the policies. Especially the positive influence of leftist movements and social democratic parties on welfare state generosity is emphasized in this line of research (most notably Esping-Andersen 1990), although an increasing number of scholars has studied the role of Christian democracy to better understand the social policies in countries where Christian Democratic movements have been powerful (van Kersbergen 1995; Kalyvas and van Kersbergen 2010). The influence of parties might not, however, always be as straightforward as the theories assume. For example, in a recent contribution Jensen (2010) noted that in countries where left-wing parties have traditionally been in power, right-wing governments actually spend more than the left-wing governments – a finding which he explains as the need of the right-wing parties to compensate for the left-wing parties issue ownership on welfare policies.

Naturally, parties and organizations always operate in different institutional contexts, and the influence of these contexts should not be underestimated. That means that parties and other actors are not free to act according to their preferences, but are limited in their decision making by different institutions (Schmidt 1996). For example, different veto players (Tsebelis 2002) can make it very difficult for governments to implement the kind of social policy they are interested in. Moreover, it is possible that change in a welfare state and its policies is path dependent. Indeed, Rose (1990) pointed out that newly elected governments inherit a massive amount of programs, which means that their possibilities to make changes are constrained by the choices made by the previous governments. Pierson (1996, 2001) in turn states that in the era of welfare state retrenchment, political parties which may want to cut benefits and services are faced with citizens who do not wish to lose existing benefits, and powerful interests groups which can easily mobilize a large amount of individuals. Consequently then, in this atmosphere, welfare states have been relatively persistent and radical reforms have often not taken place. However, it is still relatively unclear how factors such as globalization (Brady et al. 2005) or Europeanization (Chalmers and Lodge 2003) influence the welfare state.

As to the explanations of family policies in particular, similar themes to the mainstream welfare state studies can be distinguished. For example, in accordance with the functionalist

theories on the welfare state, recent qualitative studies find that at least partly as a consequence of the low fertility rates, some governments have started to implement reconciliation policies to boost childbearing (Brennan 2007; Henninger et al. 2008). Moreover, closely related to the power resource argument and following Anne Phillipps' (1995) discussion on the politics of presence, women's descriptive presentation is found to have a positive influence on subjective representation (Schwindt-Bayer and Mishler 2005; for review, Wängnerud 2009). For instance, Kittilson (2008) finds that women's parliamentary presence has positively influenced e.g. the adoption and extent of, as well as the compensation for parenting leaves. However, it needs to be emphasized that women's movements and individual women have different ideologies, and similar policy outcomes cannot be expected across countries based on the fact that women are present in the government, or that women's movements are powerful. For example, as pointed out by Ostner (1993:94f), the conservative family policies in West Germany have for the most part been in accordance with local feminist thought. Finally, as to the role of political parties, the social democratic ideology is usually seen as more women friendly (e.g. Hernes 1987/1989) than the Christian democratic thought. Indeed, Christian democracy is inspired by the Catholic teachings on subsidiarity and Christian democratic parties have thus traditionally supported policies which support the male breadwinner organization of the society (Ostner 1993; van Kersbergen 1995).

In addition to the descriptions and explanations of the welfare state, scholars are interested in the **influence of social policies** on different areas of life. To name some, there are investigations for example on the impact of welfare state on poverty (Kenworthy 1999), income equality (Korpi and Palme 1998), budget consolidation (Wagschal and Wenzelburger 2008), and on different demographic variables such as fertility and life expectancy (see section 1.2.2).

1.2.2 Demography

Demography is the study of human populations, which includes fertility, mortality, and migration, although in a broader definition even studies which deal for example with family demography are integrated to the field (Siegel and Swanson 2004; Koskinen et al. 2007). In essence, demographers aim to describe and explain demographic trends, as well as understand their consequences. Scholars operate in the broad frameworks of the first and second transition theories (see Chapter 3). **Descriptive studies** have established that all developed countries have now passed the first demographic transition (that is, the long-term declines from originally very

high levels of fertility and mortality), and are currently in the middle of the second demographic transition. The general trends as well as the cross-country differences of the second demographic transition are well documented. For example, we know that in most countries the fertility rates have declined below sub-replacement levels and the mean age of the mother at birth has increased, which in turn means that a larger share of the births occur at older ages (Frejka and Sobotka 2008). At the same time several changes have occurred in family formation. For example, marriage has become a less popular alternative, and a large share of couples choose to cohabit. Consequently, the share of extra-marital births has increased. Those who eventually decide to marry do so at older ages, which in turn shows in the increases in the mean age of the marriage. At the same time marriages are less stable than before, and divorces are more common (Sobotka and Toulemon 2008).

Equally radical changes can be observed also when it comes to mortality and migration. To start with life expectancy, due to decreases in child mortality, the life expectancy at birth has increased during the past centuries. However, during the past decades even the life expectancy at older ages has increased: For example in Germany, an increase of 1.6 years could be observed for each decade between 1970-2002 when it comes to life expectancy at age 65. Such large changes lead naturally to the question of how old age should be defined and measured (Sanderson and Scherbov 2008). It is also important to bear in mind that there are notable differences in life expectancy between Eastern and Western European countries: In the Eastern European countries the increases in life expectancy have not been as large as in Western Europe, and even temporary periods of stagnation or decline can be observed during the past decades (Vågerö 2010). As to the differences within populations, it is well known that life expectancy varies between men and women (Rigby and Dorling 2007), although there are some signs that the gap is narrowing (Thorslund 2013).

Finally, the second demographic transition theory suggests that population aging and decline leads to a demand for foreign workers, which consequently translates to increases in immigration. The best attempts to estimate migration flows are by the OECD, which publishes yearly International Migration Outlooks. The data shows continuous increases in international migration, where the western developed countries are destination countries for migration from the developing world. Moreover, the free movement within the European Union has boosted

migration, and a noteworthy trend is movement from the eastern member states to the western ones (e.g. OECD 2013a).

As to the **explanatory studies** concerning the trends described above, the studies concerning the reasons to low fertility identify factors such as income, religion, and social policies as determinants of fertility. These studies are reviewed in Chapter 3. The explanatory studies on health, life expectancy, and mortality emphasize partly the same variables as the studies on fertility. For example, as to the studies on health, van de Kaa (2002) suggests that a change in values contributes to improvements in health. Furthermore, factors such as poverty, low income, and lower educational qualifications are found to influence health negatively (Kawachi et al. 2002). Likewise, the role of income inequalities for health is frequently discussed (for a review, see Lynch et al. 2004). Additionally, the importance of factors such as lifestyle choices concerning for instance alcohol consumption (Room et al. 2005) and physical activity (Warburton et al. 2006) and the interaction between lifestyle and socioeconomic status (Hanson and Chen 2007) are emphasized.

As to the reasons for migration, the theory on immigration suggests that both reasons in the source country (push-factors) and reasons in the host country (pull-factors) need to be considered (e.g. Borjas 1994; Zimmermann 1996; for review, see Arango 2000). As to the push-factors, they vary from poor economic conditions to lack of democracy and human rights violations (Neumayer 2005). Concerning the pull-factors, Borjas (1999) suggests that generous welfare state benefits might attract those immigrants who are welfare recipients, which in turn would suggest that the variation in welfare state generosity might partly explain variations in immigration. Moreover, better employment opportunities and economic situation in the host countries are found to explain immigration flows (Jennissen 2003; Mayda 2010). However, even non-economic factors such as network effects are found to influence the choice of the new home country (Pedersen et al. 2008).

As to the studies on the **outcomes**, as demonstrated in the demographic transition theories, it is for example possible to see how the different demographic variables influence each other: In the first demographic transition theory the mortality decline was also the explanation to fertility decline, and in the second demographic transition theory the aging and decline of the natural population is assumed to be one of the reasons for increases in immigration. Likewise, at micro-level the trend of postponing births to higher ages might lead to, among other things,

increases in the level of childlessness and to smaller family size than originally desired (Schmidt et al. 2012). The most common study of the outcomes is on the consequences of the past and current demographic trends for future population structure and size. A good example would be United Nations' World Population Prospects, which is regularly updated and where different scenarios in mortality, fertility, and migration are assumed to calculate different scenarios for the future in all countries of the world (UN 2013). National statistical offices conduct similar prognosis for their respective countries. Such prognoses in turn lay the foundation for, for instance, governments planning concerning the future. For example, the demand for high school teachers after 15 years is partly determined by the number of children who are being born today.

1.2.3 The associations between political science and demography

There are several ways in which **demography influences politics**, both directly and indirectly. An example from above, the increases in the elderly population, *ceteris paribus*, translate to increases in welfare state expenditures and decreases in welfare state financiers (e.g. Meier and Werding 2010). These problems related to the welfare state budgets might even be further intensified due to the increasingly large share of the aging voters. The IMF (2004:165) for example calculated when “the last train for pension reform departs”, meaning the year in which over 50% of the voting age population is 50 years and older, and thus have the majority of the electoral power. For most of the included countries, this transformation will take place between 2015 and 2025. Consequently, political scientists are especially interested in the direct influence of the aging electorate on electoral outcomes (Goerres 2008; Tepe and Vanhuysse 2009), and find that even though age certainly matters when it comes to attitudes towards public policy, the influence of age varies across the different social policies and is further influenced by other variables such as income and country context (e.g. Busemeyer et al. 2009).

Further, to take another example of the influence of demography on politics, the increases in immigration to the western world have changed the political landscape significantly. Consequently, the interest of political scientists concerning the influence of immigration on politics touches several different aspects: Topics such as the determinants of state accommodation of religious practices (Tatari 2009), the relation between welfare state and immigration (for a review, see Nannenstad 2007), feminist perspectives on multiculturalism (Moller Okin 1997), and the association between immigration, anti-immigrant opinion, and right-

wing parties (Rydgren 2008; Arzheimer 2009) are now frequently discussed within the community of political scientists.

The ways in which **politics influence demography** are likewise many. Governments can, for example, directly influence the amount and structure of the (legal) immigration through political decisions. This has led political scientists to study the determinants of party preferences for immigration (e.g. Breunig and Luedtke 2008). Direct influence of politics on fertility, mortality, and emigration is naturally also possible, and there are horrifying examples of such cases from the non-democratic governments. For instance, Romania under Ceausescu's leadership banned both abortion and contraceptives, and also took several other measures to control reproductive behavior. As a consequence, the fertility rate increased temporarily - together with maternal mortality rates which were due to unsafe abortions (Stephenson et al. 1992). In democratic countries the influence of politics on demographic variables is, other than on immigration, mostly indirect. For example, several authors have discussed the role of political traditions (Navarro et al. 2006), welfare state types (Eikemo et al. 2008; Karim et al. 2010), and welfare state development (Tapia Granados 2010) for health indicators such as child mortality, life expectancy, and health inequalities. The findings from these studies are however nevertheless still mixed, and it is unclear if, how, and to how large an extent social policies actually are responsible for health-related issues.

1.2.4 Current study at the intersection of political science and demography

Social policies can also influence fertility rates, and it is in this particular intersection of political sciences and demography that the current interdisciplinary study takes place. Thus, the current study on the influence of family policy on fertility can be seen as a subfield of political science and government activity/welfare state studies. The purpose is however not to study the factors which explain the differences in family policies between the countries or changes within the countries, but to focus on the consequences of these policies for fertility. Furthermore, the other consequences of family policies are superficially touched upon only in so far as gender equity and women's employment are concerned; all other consequences fall outside the scope of this study. Accordingly, even though in Chapter 4 the cross-country differences in family policies are described, and likewise in Chapters 5, 6, and 7 the general characteristics of the family policies in Germany, the UK, and Finland are reviewed, the study does not aim to extensively discuss why different welfare states have developed different kinds of family policies to begin with, why there

have been changes in these policies, and what kind of consequences these policies have. For a reader interested in a detailed account of the determinants of government activity in general and welfare state policies in particular, the above cited literature is recommended. In addition, for details concerning the determinants of social policies in Germany, the UK, and Finland the reader is advised to the referred literature in the country chapters.

1.3 OUTLINE OF THE THESIS

This thesis is organized in the following way: The current chapter, **Chapter 1**, has given a short review of the demographic changes that are taking place in the Western developed countries, it has discussed some of the reasons for the non-academic interest on the subject, presented the research questions, and clarified the relationship of the current study to political science and demography.

In **Chapter 2**, the trends in period fertility in 16 OECD countries are described. The chapter provides an overview of the fertility trends from approximately 1990 onwards and concentrates on discussing the cross-country differences in fertility by studying fertility by birth order. In connection to this the interaction between the tempo and quantum of fertility, as well as the strengths and weaknesses of the different fertility measures, are discussed. The chapter can be understood as a description of the problem that the current research is trying to solve.

In **Chapter 3** a review of the different theories and studies on low fertility is provided. The research on fertility decline and the fertility differences between and within countries is still, to borrow the expression from Thomas Kuhn (1962/1970), in a pre-paradigm phase. Therefore, the chapter does not concentrate on any particular vein of research but gives an overall picture of the different explanatory frameworks that are employed in the investigations on fertility, and attempts to highlight the complexity of the subject by discussing a large variety of variables.

In **Chapter 4** some of the theories reviewed in Chapter 3 are considered again, this time in the light of the feminist theory on the welfare state. The many connection points between these two genres of research, as well as the ways in which the conclusions drawn by the gendered welfare state researchers can improve the study on fertility, are discussed. Moreover, the theoretical framework employed in the thesis is developed. The central argument presented in this chapter is that as each career strategy is to a varying extent encouraged or discouraged by the family policy, a woman's heterogeneous preferences transform differently to the three different

career strategies in the different welfare state settings and as a result, the level of fertility varies between countries.

The rest of the study is devoted to exploring the fruitfulness of the theoretical framework. For this purpose, three different country studies are conducted and one chapter is devoted to each country. In **Chapter 5** women's career strategy choices in Germany are discussed; in **Chapter 6** these issues are explored in the British context and **Chapter 7** looks at Finland. Each of these chapters is structured in a similar manner: At first, an overall description of the patterns of fertility, family formation, and female labor force participation is given to set the stage for the analysis. Thereafter, preferences, family policy, and the household's own resources, and their influence on fertility and women's employment in the country in question, are discussed. The purpose of these reviews is to show that, as assumed in the theoretical framework, women are heterogeneous in their preferences in each of the countries studied, that family policy encourages certain strategies at the expense of others, and that the household's own resources influence the women's choices. The empirical section consists of dividing the women into the three different career strategy groups and investigating the relative size of the groups, childbearing within each group, and the characteristics of the women belonging to the different groups. Finally, event history analysis is employed to study the determinants of the entry into motherhood and the propensity of giving birth to the second child.

The comparative discussion on the results is not taken up in the country chapters, but postponed to the concluding **Chapter 8**. In this final chapter also the methodological problems related to the country studies, alternative causal explanations to the results, and the implications of the study for the future research are discussed. The study ends with a short discussion on how the welfare states can influence fertility with family policy.

CHAPTER 2

CROSS-COUNTRY DIFFERENCES IN PERIOD FERTILITY

The purpose of this chapter is to provide both a discussion on the reliability of the most common period fertility measures, as well as an overview of fertility differences in 16 countries during the period 1990-2005 (Australia, Austria, Canada, Denmark, England and Wales, Finland, Germany, Greece, Iceland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, the USA). As the period fertility indicators which express the rate of total fertility hide important details about the changes in the timing of the births as well as about the level of fertility at different birth orders³, the chapter aims to integrate these aspects into the description by comparing the fertility levels between the countries by birth order and by employing different types of fertility measures.

The chapter is divided into following sections: In section 2.1 the most common ways to measure period fertility by birth order are introduced and the advantages and disadvantages of the different indicators are discussed. Section 2.2 gives the reader information on the methods and material which are employed to calculate the different measures for the cross-country comparison, and also provides a brief discussion on the problems related to the data availability.

³ During the past two decades several studies have discussed the influence of postponement of the births on period fertility rates (for example the cited work of Sobotka), and there is also an increasing number of cross-country comparative studies which employ parity specific cohort measures (Bosveld 1996; Rowland 1998; Sobotka 2005; Frejka and Sardon 2006; Frejka and Sardon 2007; Shkolnikov et al. 2007; Frejka 2008; Breton and Prioux 2009). Numerous descriptions have even integrated birth order into the descriptions of period fertility, but these contributions tend to concentrate on fertility in one or a few countries only (see Kojima and Rallu 1998 for Japan and France; Andersson 2002 for Sweden and Norway; Kohler and Ortega 2002a for Sweden, the Netherlands and Spain; Kreyenfeld 2002b for West Germany and Kreyenfeld et al. 2010 for eastern and western Germany; Smallwood 2002a for England and Wales; Vikat 2002 for Finland; Sobotka 2003 for the Czech Republic, Italy, the Netherlands and Sweden; Kippen 2004 for Australia, and Schoen 2006 for the USA). More comprehensive descriptions (Bosveld 1996; Barkalov and Dorbritz 2005; Devolder et al. 2002) are relatively rare, which is surprising given that the first remarks on the importance of integrating the birth order into fertility analysis were made already for decades ago (see Lotka and Spiegelman 1940 for a description of fertility trends by birth order, Galbraith and Thomas 1941 for a study on the impact of the economic cycles at different birth orders and Whelpton 1946 for an attempt to adjust fertility rates for parity).

Section 2.3, then, is the heart of the chapter and consists of the descriptions of period fertility by birth order. Finally, some concluding remarks are made in section 2.4.

2.1 PERIOD FERTILITY INDICATORS AND BIRTH ORDER

There are several ways to measure the birth order distribution of the births in a given period. The simplest way is naturally to calculate the total number of births by birth order. Three almost equally straightforward measures are the proportional distribution of births by birth order, the crude order specific fertility rate (obtained by dividing the total number of births of a given order by the total number of the population) and the general order specific fertility rate (obtained by dividing the total number of births of a given order by the total number of women in their reproductive ages). For cross country comparisons these indicators are, however, too coarse measures of fertility and further standardization is required. Below, three different kinds of fertility indicators which can be employed in order to evaluate the period fertility by birth order are discussed: The age-order specific total fertility rate, the parity and/or duration adjusted indicators and the tempo adjusted fertility rates. This section does not aim to provide a profound description of all the fertility measures at hand, but rather gives a short introduction on the issue by reviewing some of the most common period indicators and by discussing their advantages and disadvantages. For more sophisticated reviews on fertility indicators, see Rallu and Toulemon (1994) and Ortega and Kohler (2002). For advantages and disadvantages of the different period fertility measures, Ní Bhrolcháin (2007, 2008) is recommended.

2.1.1 The order specific total fertility rate

The most widely used measure of period fertility is the total fertility rate (TFR), which is obtained as a summation of the age specific fertility rates (i.e., the number of children given birth to by women at age a divided by the number of women at age a in the measurement year).⁴ When we in addition to the number of births and age of the mother have information on the distribution of births according to the (biological) birth order, we can calculate the age and order specific fertility rates: The number of births of order i at age a are divided by the number of women at age

⁴ The TFR is often understood as an indicator for the fertility of a synthetic, hypothetical cohort and it is commonly interpreted as the average number of births per woman (the average number of births a woman would have, if she at each of her reproductive years would give birth to that number of children which is observed at each age of the synthetic cohort). Some authors (e.g. Ní Bhrolcháin 2008; Sobotka and Lutz 2009) warn about this interpretation as it is misleading and makes the TFR to something that it is not.

a. The summation of the age and order specific fertility rates gives the TFR_i , and the order specific TFRs in turn sum up to the aggregate TFR.

The standardization for age can be considered as a major improvement when compared to the measures such as the general order specific fertility rate, whose denominators are not sensitive to the changes which occur in the population structure. The most evident practical benefit of the TFR is that it enables a reasonable comparison between countries and over time. As a further advantage counts that the data needed for calculating the age and order specific components of the TFR is available for quite many countries and years, and that the calculation procedure is relatively uncomplicated. However, the disadvantages of the measure are making the use of the TFR_i to a highly questionable affair.⁵

A large share of the critique directed towards the aggregate TFR deals with the distortions caused by the changes in the timing of the births: When the cohorts postpone or advance⁶ their births, the TFR gives quite mistaken predictions about the level of cohort fertility (e.g. Bongaarts and Feeney 1998). For instance, in the case of postponement the women of cohort *c2* aged *a* in year *t* may postpone their births and therefore have less children than women of cohort *c1* aged *a* in year *t-1*, which means that the age specific fertility rate for age *a* year *t* is lower than that for year *t-1*. This can give the false impression that the women of cohort *c2* have fewer children than those of cohort *c1*, when in reality the postponed births might be caught up in the future, and both cohorts can end up with the same total fertility.⁷ It is well known that postponement has been one of the most important trends in childbearing in the past decades and has deflated the TFR in comparison to the cohort measures. The impact of postponement is most pronounced when it comes to the first births, which means that especially the TFR_1 is significantly distorted by the timing of the births and gives rather unreliable results, and overestimates the level of ultimately childless women (e.g. Sobotka 2003a).

Interestingly, though, if we accept the claim according to which period fertility measures should not be judged by how close they approximate cohort fertility but rather by how well they represent the level of fertility of a given period or the time trends in fertility, the changing timing

⁵ Sobotka and Lutz (2009), for instance, discuss whether the TFR should be used at all.

⁶ The concepts “postponement” and “advancement” are here used to describe the changes in the mean age at the childbirth. See Ní Bhrolcháin and Toulemon (2005) for a discussion on alternative definitions.

⁷ For a more profound illustration of the problem, see Hajnal (1947:147), Bongaarts and Feeney (1998:275f) or Sobotka (2003:160f).

of the births is not to be seen as a problem. Nevertheless, even in that case we are forced to conclude that the TFR fails to give a satisfactory picture because it suffers from inadequate standardization when it comes to allowing the fertility histories of women (Ní Bhrolcháin 1992, 2007, 2008). Firstly, it is clear that not all women are at risk of i :th birth but only those at parity $i-1$. However, when the age and order specific fertility rates are calculated, we continuously expose all women, regardless of their parity, to the risk of childbearing by using the number of all women at age a as the denominator. We can illustrate this problem by describing the fertility in years t and $t+5$: Suppose that the number of women in each cohort is the same and that in the beginning of the year t , a majority of the women is still childless, but that some women are at parity two and have their third child during the year t . Assume now that after five years, in the beginning of the year $t+5$, a majority of the women is at parity two and that the same proportion of women as in year t give their third birth during $t+5$. In other words, the likelihood of the women at parity two to continue to parity three is the same for both years, but as a larger number of women have their third child in the year $t+5$, the number of third births is higher in $t+5$ than in t and hence, if we would calculate the TFR_3 for both years, it would be higher for $t+5$ than for t . As this example shows, the parity structure can be favourable (or unfavourable) to certain order births and, therefore, the TFR does not only measure the fertility of the given period but mirrors the past fertility behaviour as well (this compositional problem of the TFR_i is discussed for example by Rallu and Toulemon 1994:75ff, and Kojima and Rallu 1998:323ff).

Secondly, in addition to the parity composition distortions, the TFR is flawed as it ignores the interval from the previous birth, a property which in a similar manner as the parity divides women into different categories. For instance, a woman who has had her first birth for only a couple of years ago is more likely to have her second child in the near future than a woman who has had her first birth for, say, 15 years ago. Indeed, it is evident that having a child is not only a question of how old a woman is or how many children she has, but also a question of how long time interval has passed since the previous birth and hence, it is meaningful to introduce the duration- factor into the calculation of period fertility.

2.1.2 Parity and duration adjusted measures

The above mentioned problems of inadequate standardization can naturally be solved by taking the parity or/and duration into account when period fertility measures are calculated. There are three possible ways to do this: (1) To standardize for age and parity (expose only the women at

age a and parity $i-1$ to the risk of i :th order birth at age a), (2) to standardize for parity and duration (expose only women at parity $i-1$ and duration d to the risk of i :th order birth at duration d), or (3) to standardize for age, parity and duration (expose only women at age a , parity $i-1$ and duration d to the risk of i :th order birth at age a and duration d). Regardless of which of the three alternatives is chosen, two different kinds of indicators with differing interpretations can be constructed. To give an example on the rates adjusted for age and parity, the first alternative is to construct a measure that bears a close resemblance to the TFR. This measure, the $PATFR_i$ ⁸, expresses the level of fertility at birth order i in a given year, and the $PATFR_i$ s sum up to the aggregate PATFR. Another possibility is to estimate the so called period parity progression ratios (Feeney and Yu 1987; Ní Bhrolcháin 1987), which indicate the proportion of women at parity $i-1$ who during the measurement period progress to parity i . These two rates are calculated in a similar manner and there is a simple association between them: PPR_i , expressing the probability of women at parity $i-1$ to progress to parity i is calculated by dividing the $PATFR_i$ with the $PATFR_{i-1}$.

As might be expected, differently standardized period measures behave differently both when it comes to expressing the level of and time trends in fertility (e.g. Rallu and Toulemon 1994; Rallu and Kojima 1998). The evident question thus is: Which of the measures is the best one? Of course, the ultimate measure should take all the three properties (age, parity, duration) into account (Rallu and Toulemon 1994:86; Ní Bhrolcháin 2007:8). Notice, however, that the parity-duration measures are superior in comparison to the parity-age measures, since parity and duration influence the propensity to give birth to a larger extent than the age (Ní Bhrolcháin 1992:616). All things considered, it is safe to state that parity-age, parity-duration, and parity-age-duration standardized measures are, in comparison to the conventional TFR, more accurate indicators of period fertility. Yet, the practical weaknesses of these measures explain why they are not more frequently employed: On the one hand, the parity distribution of women by age is often not available and the time evolved since the last birth is an even more seldom recorded property. On the other hand, the calculation of these indicators is rather complicated and time consuming.

⁸ The summary index of the age-parity-specific birth probability (Park 1976), or the summary index of parity- and age-specific fertility (Rallu and Toulemon 1994).

2.1.3 Tempo adjusted fertility indicators

Above we made clear that the changes in the timing of births distort the period TFR and that the current postponement of births for this reason deflates the level of the period TFR in comparison to the cohort TFR. Consider now that the women postpone, for example, their first births. As a consequence, more women remain childless a longer time, i.e., the parity composition of the female population changes. The denominator of the age and order specific fertility rates does not take the changing parity composition into account. However, when we use a denominator which pays attention to the parity, we can eliminate this effect caused by the changing timing of the births. In other words, the tempo distortions can partly be understood as compositional effects and are removed by better standardization (e.g. Ní Bhrolcháin 2007:8f). Even though better standardization in most cases manages to bring period measures closer to cohort measures (e.g. Bongaarts and Feeney 1998; Sobotka 2003a), the period fertility measures are still distorted in comparison to the cohort fertility measures. To overcome this problem, the timing effects are addressed by a special empirical strategy called tempo adjustment.

Although the problem of tempo distortions was acknowledged already by Hajnal (1947), a more intensive discussion on tempo adjustment methods began as late as with the influential strategy suggested by Bongaarts and Feeney (1998), who define the quantum of the TFR as the level of fertility which would be measured if the timing of the births would not change. Further, the distortions caused by changes in the timing of the childbearing are called tempo effects. The aim of the adjustment is to measure only the quantum component and for that purpose Bongaarts and Feeney introduce the change in the mean age of the mother to the computation process. The famous formula of their tempo adjustment is $TFR_i/(1-r_i)$, where r_i stands for the change in the mean age of the mother at birth order i (calculated from the age and order specific fertility rates). The tempo adjusted birth order components sum up to the overall measure, commonly known as the adjusted TFR (adjTFR), which Bongaarts and Feeney themselves interpret as the TFR “that would have been observed in the absence of changes in the timing of childbearing” (Bongaarts and Feeney 1998:272).

The tempo adjustment by Bongaarts and Feeney has been criticized because of several methodological problems: The adjustment is based on an improperly standardized measure; the assumption of the constant fertility schedules of the cohorts, in which the adjustment relies on, is violated; the fertility of every cohort does not necessarily follow the same pattern as the cohorts

carry different past and can therefore be differently affected by periodical changes (e.g. Kim and Schoen 2000; Van Imhoff and Keilman 2000; Kohler and Philipov 2001; Van Imhoff 2001). Attempts to solve these problems have been made by extending the logic of the tempo adjustment. In order to solve the problem of the constant fertility schedules, Kohler and Philipov (2001) introduce the variance of the mean age of the mother into the adjustment formula. Kohler and Ortega (2002b), on the other hand, tempo adjust birth probabilities, and end up with a tempo adjusted PATFR. The possibilities of the tempo adjustment are positively seen by the same authors, who elsewhere conclude that it is possible to extend the idea of the tempo adjustment to any measure which is calculated by using the tempo adjusted age and parity specific measures (Ortega and Kohler 2002:1).

Despite the lively discussion on tempo adjustment and the development of the more refined ways to remove the tempo effects, it still remains somewhat unclear how the adjusted measures should be interpreted and for what purposes they should be used. Bongaarts and Feeney (2000) for example clearly state that their purpose is not to measure or predict the underlying cohort fertility. But if this is not the case then, as Smallwood (2002b) asks, what is the purpose of the adjusted measures and moreover, what in that case are the adjusted measures “/.../ actually giving. In other words, what is meant by the ‘period’ quantum, which their tempo adjusted measure represents?” (Smallwood 2002b:39). An optimistic answer is given by Bongaarts (2002:435) who claims that the analysis of tempo effects is important especially when tempo effects are large or when the tempo of childbearing changes rapidly, as in these cases the changes of the TFR might hide important information when it comes to the timing of the births. A pessimistic verdict is given by Ní Bhrolcháin (2007, 2008) who states that as it in period mode is impossible to distinguish between tempo and quantum, the adjusted measures are not appropriate indicators when it comes to the measurement of the level and trends of period fertility; tempo changes are part of what we should be aiming to measure.

2.2 DATA AND METHODS

The availability of the data needed for calculation of the order specific TFRs and the adjTFRs varies largely between the countries. When it comes to the European countries, there is available data for many of the Eastern European countries, but they are excluded from the analysis. A majority of the Western European countries records births by biological birth order and Eurostat’s (2008) New Cronos database is a valuable source for this information. However, for

France, the data in New Cronos overestimates the number of first births at the expense of the higher order births (Prioux 2003:530) and for this reason France was dropped from the analysis. For Austria, Denmark, Finland, Greece, Italy, Norway, Portugal, Spain and Sweden, the data on births by birth order and mother's age is from Eurostat (2008). For Iceland, fertility data for the years 1992-2005 likewise comes from Eurostat (2008), but for the years 1990, 1991 and 2006 the data was obtained directly from Statistics Iceland (2008). New Cronos served also as a source for the female population estimates in the beginning of the year for all the countries mentioned above. For the Netherlands the order specific TFR is readily available from the CBS (2008), but the TFR and the adjTFR for the Netherlands are, nevertheless, calculated by using the CBS' population data.

In some Western European countries (Belgium, Germany, Ireland, Luxembourg, Switzerland, the United Kingdom) the marital birth order (or rather, the birth order within the current relationship) is recorded instead of the biological birth order. As a considerable number of the births in these countries occurs outside the marriage,⁹ and as there is reason to believe that the birth order distribution of the marital births is different from that of the non-marital births, this data cannot be used to estimate the birth order of the non-marital births and consequently, Belgium, Ireland, Luxembourg and Switzerland are excluded from the analysis. For England and Wales, however, there are estimates of the number of the births by biological birth order (ONS 2009a). Likewise, Kreyenfeld et al. (2010) have employed perinatal statistics to calculate the order specific fertility rates for Germany and their estimates are used.

When it comes to the non-European countries, Statistics Canada (2006:106f; 2008:40f) provides estimates of the birth order specific TFR for Canada. For the USA, the data on births comes from the CDC (2008), and the data on female population (resident population) comes from the U.S. Census Bureau (2008). The register data in Australia and New Zealand does not enable the calculation of the order specific period fertility measures (for birth order registration in Australia and New Zealand, see Corr and Kippen 2006) and therefore, New Zealand was left outside the analysis. For Australia, Kippen (2003, 2004) has combined different data sources to estimate the number of births at each birth order, as well as the female population at risk and her estimations for years 1991-2000 are employed.

⁹ The proportion of live births outside the marriage (2006) was as large as 25% in Belgium (1999), 30% in Germany, 33% in Ireland, 29% in Luxembourg, 15% in Switzerland and 44% in the United Kingdom (Eurostat 2008).

The TFR is calculated as a sum of the age and order specific fertility rates which in turn are calculated as follows:

$$(2.1) \quad TFR_t = \sum_i TFR_{i,t} = \sum_i \sum_a \frac{B_{a,i,t}}{P_{a,t+0,5}}$$

where t is year, $t+0,5$ is mid-year population, i is birth order, a is age reached during the year, B is births and P is female population.

In several cases, the data on birth order was not in period-cohort (mother's age reached during the year), but in age-period (mother's age at last birthday, i.e., current age) form. In order to overcome this difficulty, the data was transformed from age-period form to period-cohort form:

$$(2.2) \quad B_{a,i,t} = (B_{A-1,i,t} + B_{A,i,t})/2$$

where a stands for the age reached during the year, and A for the age in completed years.

In two cases, the USA (1990-2005) and Denmark (1997-2005), many births were registered to an unknown birth order. In the US case, the share of these births was minor, approximately only below one percentage of the total number of the births. In the Danish case, 0.6-4% of the births were registered to an unknown order. For these two countries, the distribution of the births of unknown order was assumed to follow the distribution of the births of known order.

For the computation of the Bongaarts-Feeney $adjTFR_i$, equation three in Bongaarts and Feeney (1998:278) has been employed:

$$(2.3) \quad adjTFR_i = TFR_i / (1 - r_i)$$

where r_i is change in the mean age of the mother and is calculated, following Bongaarts and Feeney, as a change of the mean age in the beginning and end of the year. The $adjTFR$ was calculated for birth orders one, two and three only; following Sobotka's (2004) example, the $adjTFR_{4+}$ was excluded from the analysis due to the minor tempo changes at this birth order.

The data employed for the calculations of the $PATFR_i$ comes from various sources. For Australia, Kippen's (2003, 2004) estimates of female population and births by parity are used. For Denmark, there are estimates of the proportion of the childless women by age (mid-year population, Statistics Denmark 2008). For Finland, the data on women by parity (31.12. each

year) is register data from Statistics Finland (2009).¹⁰ For the Netherlands there is register data on cohort fertility rates by parity, which can be used to calculate the cumulative cohort fertility and thus, to estimate the number of women at each parity (CBS 2008). For Spain, the occurrence-exposure rates from Kohler and Ortega (2002a) are used. For England and Wales, ONS (2009a) has estimated the distribution of women by parity (mid-year). And finally, the indicators for Austria, Sweden and the United States come directly from the Human Fertility Database (2009). For those countries for which the rates were calculated, the first step was the calculation of the occurrence-exposure rates. Thereafter, all the obtained occurrence-exposure rates were transformed to probabilities with the formula:

$$(2.4) \quad q_i = 1 - \exp(-m_i)$$

where q refers to probabilities and m to occurrence-exposure rates. Fertility tables were constructed for parities one, two, three and four by adapting equations seven and eight from Ortega and Kohler (2002:13):

$$(2.5) \quad B'_i(a) = D_i(a)q_i(a)$$

$$(2.6) \quad D_i(a+1) = D_i(a) - B'_i(a) + B'_{i-1}(a)$$

where B' refers to the table number of births at certain parity, and D refers to the table population. Notice that the table population D for parity zero is a chosen radix, whereas the table population D for other parities is 0.

2.3 PERIOD FERTILITY BY BIRTH ORDER

In this section the cross country differences in period fertility are investigated by taking, at first, a look at the four-year averages of the order specific TFRs to get an overview of the situation. Next, a more nuanced picture on the issue is gained by considering the four-year averages of the PATFRs and the PPRs at birth orders one, two, three and four. Furthermore, we take a look at the adjTFRs at birth orders one, two and three to evaluate the tempo changes during the observation period and ask if the changes in tempo can provide an explanation to the differences between the countries.

¹⁰ For 1990-1999 the data on women by parity was kindly provided by Vikat (2002), for 2000-2006 the data was provided by Statistics Finland (2009).

2.3.1 TFR by birth order

Table 2.1 shows four-year averages of the TFR by birth order for the countries included in the study. Based on the level of the TFR we can distinguish between three different clusters of countries: (1) The low fertility cluster ($TFR < 1.5$) which consists of the continental European and Mediterranean countries, (2) the moderately low fertility cluster ($TFR 1.7-1.8$) which consists of the Nordic countries, Australia, England and Wales, and the Netherlands, (3) and the high fertility cluster ($TFR > 1.99$) which consists of Iceland and the USA. Canada is somewhat an outlier and has a slightly higher fertility (1.53) than the low fertility countries but noticeably lower fertility than the moderately low fertility countries.

When the TFR is broken down to its order specific components, we notice that in the low fertility countries and Canada the TFR_1 is at or below 0.70, whereas in the other countries the TFR_1 is at or above 0.75. There are, however, two exceptions from this rule, namely Portugal and Australia. The first birth fertility in Portugal (0.78) is significantly higher than in the other low fertility countries, whereas the TFR_1 in Australia is relatively low (0.71) in comparison with the TFR_1 in the moderately low and high fertility countries. Despite these two exceptions, the results suggest that the differences in the TFR_1 provide a valuable starting point for the discussion about the differences in total fertility between the countries with the TFR above and below 1.5.

The low fertility countries experience lower fertility than the moderately low fertility countries and the high fertility countries even at higher birth orders. The very homogeneous TFR_2 in the continental and Mediterranean countries (0.43-0.49) is contrasted with the TFR_2 of 0.54-0.71 in the other countries included in the study. Likewise, the TFR_3 in the low fertility countries stays between 0.10-0.17, whereas in the other countries the TFR_3 varies between 0.20-0.38, and further, also the TFR_{4+} for the continental/Mediterranean cluster (0.03-0.07) stays below the TFR_{4+} of the other countries (0.08-0.22). If we, to give some examples of comparison, look at the country with the highest TFR (the USA) and the country with the lowest TFR (Italy), we notice that the fertility difference at first birth order is 0.21 units, at second birth order 0.23 units, at third order 0.22 units and at fourth-and-higher birth order 0.18 units, which sum up to the total difference of 0.84 units. A comparison between Austria (with low fertility) and Finland (with moderately low fertility), in turn, shows that the total difference of 0.38 units is due to a difference of 0.08 units at first, 0.10 units at second, 0.10 units at third and 0.10 units at fourth-and-higher birth order. Also, it can be mentioned as an interesting detail that a comparison

between the levels of the TFR_1 in the continental/Mediterranean countries and the levels of the TFR_2 in the rest of the countries reveals that in several cases the TFR_2 for the moderately low or high fertility countries is higher, or at the same levels, than the TFR_1 for the low fertility countries (e.g. the TFR_1 for Greece is 0.62, whereas the TFR_2 for Norway is 0.65).

Table 2.1: The TFR by birth order for selected countries, four-year averages

Country	Years	TFR_1	TFR_2	TFR_3	TFR_{4+}	TFR
Italy	1993-1996	0.61	0.43	0.12	0.04	1.21
Spain	2001-2004	0.70	0.45	0.10	0.03	1.29
Greece	2002-2005	0.62	0.49	0.13	0.05	1.30
Germany	2002-2005	0.67	0.46	0.15	0.07	1.35
Austria	2002-2005	0.67	0.48	0.17	0.07	1.40
Portugal	2002-2005	0.78	0.48	0.12	0.05	1.43
Canada	2002-2005	0.69	0.54	0.20	0.10	1.53
Sweden	2002-2005	0.79	0.62	0.22	0.10	1.72
Netherlands	2002-2005	0.82	0.62	0.21	0.08	1.73
Australia	1996-1999	0.71	0.59	0.28	0.17	1.75
Denmark	2001-2004	0.79	0.64	0.24	0.09	1.76
Finland	2002-2005	0.75	0.58	0.27	0.17	1.77
England and Wales	2003-2006	0.78	0.59	0.25	0.15	1.78
Norway	2002-2005	0.78	0.65	0.28	0.10	1.80
Iceland	2002-2005	0.78	0.71	0.38	0.14	2.00
The USA	2001-2004	0.82	0.66	0.34	0.22	2.04

Notes: The TFR in column seven is the four-year average of the TFR which was obtained in the computation process. Due to the rounding, the other columns do not necessarily add up to the same value.

When it comes to the fertility differences between the countries with moderately low and high fertility, the Netherlands and the USA experience the highest first birth rates (0.82), followed by Denmark, Sweden England and Wales, Iceland and Norway, with the TFR_1 within the interval of 0.78-0.82. Australia and Finland are somewhat outliers: The TFR_1 for Australia is 0.71 and for Finland 0.75. This homogeneity in the first birth rates indicates that the differences

in total fertility between the moderately low and high fertility countries cannot be explained simply by the varying levels of first birth fertility.

As to the second births, the countries with the highest levels of total fertility do not necessarily have significantly higher levels of the TFR_2 . Even though Iceland has the highest TFR_2 (0.71), the USA, Norway and Denmark have TFR_2 between 0.64-0.66, whereas the Netherlands, Sweden, Australia, England and Wales and Finland have TFR_2 between 0.58-0.62. At the third birth order, however, both Iceland and the USA, the two countries with the highest TFR, have higher levels of the TFR_3 (0.34 and 0.38) than the other countries of which Norway, Australia, Finland, and England and Wales and Denmark have TFR_3 between 0.24-0.28 and Sweden, the Netherlands and Canada TFR_3 between 0.20-0.22. A similar pattern emerges also when it comes to the fourth-and-higher order births: The USA has the highest rate of the TFR_{4+} (0.22), followed, surprisingly, by Australia and Finland (0.17), England and Wales (0.15) and Iceland (0.14). The rest of the countries in the moderately low or high fertility clusters have TFR_{4+} at or below 0.10. To exemplify, the total fertility difference of 0.30 units between the Netherlands and the USA lets itself to be explained with a difference of 0.04 units at second, 0.13 units at third and 0.14 units at the fourth-and-higher birth orders. The fertility difference between Sweden and Iceland, on the other hand, is due to a difference of 0.01 units at first, 0.09 units at second, 0.16 units at third and 0.04 units at fourth-and-higher birth order.

All in all, the tentative conclusion that can be drawn is that the countries with the TFR above 1.5 have in general higher fertility at each birth order than the countries with the TFR below 1.5. However, Portugal with its relatively high TFR_1 and Australia with its relatively low TFR_1 appear to be exceptions from the rule. When it comes to the fertility in the moderately low and high fertility clusters, the levels of first and second order fertility are rather homogeneous. What partly provides an explanation to the high TFR in Iceland and in the USA is, hence, not the high fertility at the first and second order, but rather the high fertility at higher birth orders.

2.3.2 Parity adjusted rates and PPRs at birth orders one, two, three and four

Table 2.2 shows four-year averages of the PATFR and the TFR at birth orders one, two, three and four, both in the beginning and in the end of the observation period. As can be read from the table, the four-year averages of the measures are somewhat different. At first birth order the PATFR is in general higher than the TFR, at second birth order the indicators show quite similar values and at third and fourth birth order the PATFR is in most cases lower than the TFR. The

relative error of the TFR as an estimator of the level of period fertility (in comparison to the PATFR) is largest at the third and fourth birth orders: At third order, the TFR overestimates the level of fertility with 0 to 30%, and at fourth birth order the relative error varies from an 8% underestimation (the USA 1991-1994) to an overestimation of 83% (Australia 1996-1999). At lower birth orders the relative error varies from an overestimation of 2 % to an underestimation of 15% at first birth order, and from an overestimation of 5% to an underestimation of 8% at second order.

When the fertility differences between the countries are studied we can state that the choice of the measure matters, at least to some extent. For example, if we rely on the TFR we conclude that Austria and Spain have lower fertility than the rest of the countries at each birth order both in the beginning and in the end of the observation period. The usage of the PATFR narrows the gap between the countries at first birth order and consequently, in the beginning of the observation period, Spain, Austria, the Netherlands, Finland and England and Wales appear to experience very similar rates of first birth fertility (0.77-0.79). Further, when the levels of the TFR_1 were discussed, Australia was an exception among the moderately low fertility countries and had a relatively low rate of first birth fertility. However, the $PATFR_1$ for Australia (0.80-0.81) is slightly above the levels of the $PATFR_1$ in Finland and England and Wales, which means that the level of first birth fertility in Australia is not remarkably low after all. Finally, when it comes to the differences between the moderately low and high fertility countries, even when measured with the PATFR the USA does not appear to have exceptionally high fertility at first and second orders, but at third and fourth order, meaning that the conclusion regarding the exceptional higher order fertility for the USA which was drawn by using the TFR still stands.

A look at the parity progression ratios in Table 2.3 supports these conclusions, but also reveals some new information. As could be expected, the progression from first to second births is much lower in Spain and Austria (0.64-0.66) than in the rest of the countries (0.75-0.82). Further, the progression from second to third (0.48-0.49) and third to fourth (0.38-0.40) births is much higher in the USA than in the moderately low fertility countries, where the progression from second to third births varies within the interval of 0.31 to 0.46 and from third to fourth births within the interval of 0.23-0.34. Surprisingly, the parity progression ratios from second to third births in Austria (0.31-0.34) are at the same levels than the progression ratios in the Netherlands and Sweden (2002-2005). Moreover, the Austrian ratios when it comes to

progression from third to fourth births (0.27) are at the same levels than in Australia and Finland. Evidently, the low fertility at third-and-higher orders in Austria is not due to low progression from the second and third births, but can be better explained by the low progression to first and second births.

Table 2.2: The PATFR_i and TFR_i at birth orders 1-4 for selected countries, four-year averages

Country	Years	Birth order: 1		Birth order: 2		Birth order: 3		Birth order: 4	
		PATFR ₁	TFR ₁	PATFR ₂	TFR ₂	PATFR ₃	TFR ₃	PATFR ₄	TFR ₄
Spain	1990-1993	0.78	0.66	0.50	0.46	0.10	0.13		
Austria	1991-1994	0.77	0.70	0.51	0.52	0.17	0.19	0.05	0.06
	2002-2005	0.74	0.67	0.48	0.48	0.15	0.17	0.04	0.05
Sweden	1990-1993	0.87	0.86	0.71	0.72	0.32	0.34	0.10	0.11
	2002-2005	0.85	0.79	0.66	0.62	0.21	0.22	0.05	0.06
Netherlands	1990-1993	0.78	0.71	0.59	0.56	0.19	0.22		
	2002-2005	0.81	0.82	0.63	0.62	0.21	0.21		
Australia	1992-1995	0.81	0.73	0.64	0.61	0.25	0.31	0.07	0.12
	1996-1999	0.80	0.71	0.62	0.59	0.22	0.28	0.06	0.11
Denmark	1990-1993	0.85	0.80						
	2001-2004	0.84	0.79						
Finland	1991-1994	0.79	0.74	0.59	0.62	0.24	0.30	0.07	0.10
	2002-2005	0.78	0.75	0.58	0.58	0.23	0.27	0.06	0.09
England and Wales	1990-1993	0.77	0.74	0.61	0.62	0.24	0.28	0.08	0.10
	2002-2006	0.79	0.78	0.60	0.59	0.23	0.25	0.08	0.09
The USA	1991-1994	0.84	0.86	0.65	0.65	0.32	0.32	0.13	0.12
	2001-2004	0.86	0.82	0.66	0.66	0.32	0.34	0.12	0.13

An additional analysis of the time trends in fertility, measured with the TFR_i and the PATFR_i at birth orders one, two and three (not shown), gave results similar to those obtained by others (e.g. Rallu and Toulemon 1994; Sobotka 2003a). That is, the TFR_i fluctuates considerably more than the PATFR_i. Given that the PATFR_i is a more reliable indicator, we can conclude that

the TFR_i lies about the period trends by suggesting period changes when, in reality, no changes occur. On the other hand, the $PATFR_i$ and the TFR_i show quite similar time trends in some cases, especially at second birth order. The problem for the observer is that there are no guiding lines which would tell us for which countries, years and birth orders we are able to trust the TFR_i . All in all, the birth-order specific TFR is at least as questionable as the aggregate TFR when time trends in fertility are measured, as it is difficult to know in what cases the TFR indicates the time trends correctly and in what cases it misleads the interpreter either in the wrong direction or in the right direction but with wrong magnitude. Finally, as an interesting detail it can be mentioned that when the $PATFR_1$, $PATFR_2$ and $PATFR_3$ within one country are compared to each other, the major trends are quite similar, which suggests that the births at each order are similarly influenced by the same period factors.

Table 2.3: Parity progression ratios (PPR), four-year averages for selected countries

Country	Years	PPR 0>1	PPR 1>2	PPR 2>3	PPR 3>4
Spain	1990-1993	0.78	0.64	0.20	
Austria	1991-1994	0.77	0.66	0.34	0.27
	2002-2005	0.74	0.65	0.31	0.27
Sweden	1990-1993	0.87	0.82	0.46	0.32
	2002-2005	0.85	0.78	0.31	0.23
Netherlands	1990-1993	0.78	0.76	0.32	
	2002-2005	0.81	0.78	0.33	
Australia	1992-1995	0.81	0.79	0.39	0.28
	1996-1999	0.80	0.77	0.36	0.27
Denmark	1990-1993	0.85			
	2001-2004	0.84			
Finland	1991-1994	0.79	0.75	0.41	0.29
	2002-2005	0.78	0.75	0.39	0.28
England and Wales	1990-1993	0.77	0.79	0.39	0.34
	2002-2006	0.79	0.76	0.38	0.34
The USA	1991-1994	0.84	0.78	0.49	0.40
	2001-2004	0.86	0.77	0.48	0.38

Notes: Parity progression ratio is an indicator of the share of the women who progressed to a higher parity. Thus, PPR 1>2 for example indicates the share of women who already have one child, and who decided to have their second child.

2.3.3 Tempo adjusted TFR at birth orders one, two and three

Table 2.4 shows the extent of the tempo effect at birth orders one, two and three as well as the sum of the tempo effects at these birth orders in the beginning and in the end of the observation period (a four-year average of both the adjTFR_i and TFR_i was calculated and the tempo effect was estimated by subtracting the former from the later.) As can be read from the table, all countries have experienced some fertility postponement during the period. However, the extent varies considerably between the countries. In the beginning of the observation period the overall tempo effect is largest for Iceland (0.90) and Spain (0.47), followed by Greece, the Netherlands, Portugal, Denmark, Italy and Norway (0.27-0.34). Australia, Sweden as well as England and Wales experience somewhat lower tempo effect (0.22-0.25) and lastly, the effect is most humble in Finland, Austria and the United States (0.14-0.18).

For a majority of the countries the total tempo effect is smaller in the end of the period. The most noticeable decrease occurs in Iceland where the tempo effect is only 0.09 units in the end of the period. For Spain and the Netherlands the tempo effect decreases to 0.08 and 0.10 units respectively. For England and Wales, Greece, Portugal, Sweden and Norway the decrease is less extensive (0.20-0.27). For a minority of the countries the tempo effect is larger in the end of the period: For the USA, Austria and Italy the tempo effect is 0.22, 0.26 and 0.41 units, and for Finland and Denmark it is 0.42 and 0.67 units respectively.

The considerations of the total tempo effect tell basically the same story as several other studies before: The completed cohort fertility is likely to be higher than what the period TFR gives reason to expect. The fact that the tempo effect for most countries has become smaller during the period demonstrates, however, that the pace of the postponement is, in general, decreasing. Of interest here is also that the postponement does not appear to be the only factor which explains the level of the TFR. If we for example take a look at Spain we notice that the TFR in the beginning of the period is 1.32 and the tempo effect 0.47 units. In the end of the period the TFR is only slightly lower, 1.29, whereas the tempo effect has decreased to 0.08 units. In other words, the postponement appears to be a reasonable explanation to the low TFR for Spain in the beginning of the period, but fails to explain the low TFR in the end of the period.

When it comes to the tempo effects by birth order, they are in most cases largest at first (0.03-0.48) and second (0.02-0.23) birth orders, but relatively small at third birth order (0.00-0.07, except in Iceland, where the effect was as large as 0.20 units in 1991-1994). At first order

the tempo effect in the beginning of the period is largest in Iceland (0.48), followed by Spain (0.31), Denmark, Sweden, Greece, the Netherlands, Portugal, Italy, Norway, Australia, Austria, Finland, and England and Wales (0.10-0.20). The tempo effect was very small only for the USA (0.03).

Table 2.4: The TFR and the tempo-effect, four-year averages for selected countries

Country	Years	Birth order: 1		Birth order: 2		Birth order: 3		Total	
		TFR ₁	Tempo-effect	TFR ₂	Tempo-effect	TFR ₃	Tempo-effect	TFR	Tempo-effect
Italy	1990-1993	0,64	-0,15	0,46	-0,10	0,15	-0,03	1,29	-0,27
	1993-1996	0,61	-0,24	0,43	-0,14	0,12	-0,03	1,21	-0,41
Spain	1990-1993	0,66	-0,31	0,46	-0,14	0,13	-0,02	1,32	-0,47
	2001-2004	0,70	-0,04	0,45	-0,04	0,10	0,00	1,29	-0,08
Greece	1993-1996	0,60	-0,15	0,49	-0,15	0,15	-0,04	1,32	-0,34
	2002-2005	0,62	-0,14	0,49	-0,07	0,13	-0,02	1,30	-0,24
Germany	2002-2005	0,67	-0,15	0,46	-0,07	0,15	-0,01	1,35	-0,23
Austria	1991-1994	0,70	-0,12	0,52	-0,05	0,19	-0,01	1,49	-0,18
	2002-2005	0,67	-0,15	0,48	-0,09	0,17	-0,02	1,40	-0,26
Portugal	1991-1994	0,78	-0,15	0,49	-0,11	0,14	-0,03	1,51	-0,30
	2002-2005	0,78	-0,18	0,48	-0,08	0,12	-0,01	1,43	-0,27
Sweden	1990-1993	0,86	-0,19	0,72	-0,06	0,34	0,00	2,08	-0,25
	2002-2005	0,79	-0,12	0,62	-0,08	0,22	-0,02	1,72	-0,23
Netherlands	1990-1993	0,71	-0,15	0,56	-0,13	0,22	-0,04	1,60	-0,32
	2002-2005	0,82	-0,07	0,62	-0,02	0,21	0,00	1,73	-0,10
Australia	1992-1995	0,73	-0,12	0,61	-0,11	0,31	-0,03	1,84	-0,26
	1996-1999	0,71	-0,15	0,59	-0,10	0,28	-0,03	1,75	-0,27
Denmark	1990-1993	0,80	-0,20	0,61	-0,08	0,22	-0,02	1,72	-0,30
	2001-2004	0,79	-0,36	0,64	-0,23	0,24	-0,07	1,76	-0,67
Finland	1991-1994	0,74	-0,12	0,62	-0,03	0,30	0,00	1,82	-0,15
	2002-2005	0,75	-0,21	0,58	-0,17	0,27	-0,04	1,77	-0,42
England and Wales	1990-1993	0,74	-0,10	0,62	-0,09	0,28	-0,02	1,80	-0,22
	2003-2006	0,78	-0,13	0,59	-0,06	0,25	-0,01	1,78	-0,20
Norway	1992-1995	0,77	-0,13	0,67	-0,10	0,32	-0,03	1,87	-0,27
	2002-2005	0,78	-0,13	0,65	-0,07	0,28	-0,02	1,80	-0,22
Iceland	1991-1994	0,78	-0,48	0,69	-0,22	0,48	-0,20	2,19	-0,90
	2002-2005	0,78	-0,05	0,71	-0,04	0,38	0,00	2,00	-0,09
The USA	1991-1994	0,86	-0,03	0,65	-0,06	0,32	-0,04	2,03	-0,14
	2001-2004	0,82	-0,10	0,66	-0,08	0,34	-0,04	2,04	-0,22

Notes: A four-year average of both the adjTFR_i and TFR_i was calculated, and the tempo effect was estimated by subtracting the former from the later.

For Iceland, Spain, Greece, the Netherlands and Sweden the tempo effect at first birth order decreases towards the end of the period (to 0.04-0.14 units), whereas for the other countries it increases (to 0.10-0.36). For Norway, the tempo effect is equally large in the beginning and in the end of the period.

As already stated, the tempo effect is in general larger at the first than at the second order (except for Spain in 2001-2004 and Greece in 1993-1996, when the tempo effect was equally large at both birth orders and for the USA in 1991-1995, when the tempo effect was larger at second birth order). In the beginning of the period the tempo effect at second order varied between 0.03 in Finland to 0.22 in Iceland, and the majority of the countries experienced a tempo effect of 0.05-0.15 units. In the end of the period the majority of countries experienced a tempo effect from 0.02 to 0.09 units, whereas the tempo effect in Finland (0.17), Italy (0.14) and Denmark (0.23) was larger.

To sum up, the results suggest that the countries which belong to the low, moderately low and high fertility clusters experience equally large tempo effects (measured in units, not in percentages) at all birth orders. For this reason the fertility differences between the countries can only to a limited extent be explained by the differing sizes of the tempo effect.

2.4 CONCLUDING REMARKS

The aim of this chapter was to learn about the different fertility measures, but also to describe period fertility by birth order in order to gain a more profound understanding of the fertility differences between the countries. The comparisons by birth order showed that there are differences between the countries not only when it comes to total fertility, but also when it comes to the birth order specific fertility and the size of the tempo-effect. For example, the results suggest that the USA and Iceland experience near replacement fertility because of the higher rates of fertility at third and fourth birth orders, that Portugal has very high first birth fertility in comparison to the other low fertility countries, and that Austria despite the low level of total fertility has relatively high parity progression ratios at second and third orders (for similar results concerning cohort fertility in these countries, see e.g. Frejka and Sardon 2007 and Sardon 2008). In other words, some cross-country differences in fertility cannot be detected by employing the total fertility rate only, and it is likely that the future research must take stand on whether the total rates of fertility, the birth and parity specific rates or the parity progression ratios are most

suitable when it comes to the macro level descriptions and explanatory studies where the level of period fertility is treated as dependent variable.

CHAPTER 3

PREVIOUS RESEARCH ON CHILDBEARING

The description of period fertility by birth order in the previous chapter illustrated the cross-country variations in fertility behavior. This chapter, in turn, reviews both the theoretical perspectives that aim to explain these variations as well as the empirical research on the determinants of low fertility. Given the complex character of the low fertility- puzzle, it is useful to begin the chapter by pointing out five aspects which commonly create confusion when the childbearing behavior is discussed: (1) The first aspect that sometimes causes confusion is that low fertility can be defined in several ways and that the researchers accordingly try to solve different low fertility- puzzles. Firstly, low fertility can refer to a fertility rate below the replacement level¹¹ of 2.1. Secondly, fertility can be defined as low in comparison to the past fertility. Thirdly, low fertility can refer to the low level of fertility in one country compared to the levels of fertility in the other countries.¹² Fourthly, low fertility can be understood as a lower realized fertility in comparison to the desired one. (2) In addition to the differences in the definition of low fertility, one must bear in mind that low fertility can be defined both from period and cohort perspectives and, likewise, the research can be conducted from these two different viewpoints. (3) As was discussed in chapter 2, regardless of the definition or the chosen perspective, the aggregate measures can be broken down to their birth order components and it is possible that fertility at different birth orders is affected differently by different variables, or that some variables have influence at some birth orders but not at the others. (4) Although the research on low fertility has mainly concentrated on explanations for the levels of fertility or the rates of progression to higher parities from either cohort or period perspective, there is a broad agreement on that the changing timing of the births bears a significant explanatory power when it

¹¹ Notice that the 2.1 is not a universal replacement rate, but that in developing countries replacement fertility is much higher (Espenshade et al. 2003).

¹² There are even considerable within-country differences in fertility which also require an explanation. For discussion, see for example Hank (2001) for West Germany; Sobotka and Adigüzel (2002) for the Netherlands; Kulu et al. (2007) for the Nordic countries, and Kulu and Boyle (2009) for Finland.

comes to the period fertility rates (see chapter 2). This notion has resulted in confusion about the “real” changes in fertility. That is, it is now asked to how large extent the changes in period fertility are due to the changes in the quantum of fertility and how much of the changes are due to the changing timing of the births. Moreover, the magnitude of and the reasons for the changing timing have become further study objects in fertility research, and an additional question is whether the quantum and tempo of fertility are influenced by similar or different factors. (5) Finally, all of the above mentioned aspects can, naturally, be studied both at macro and micro levels, and some further disorder is added as the present evidence indicates that the association between fertility behavior and certain variables is in some cases quite different at these two levels.

These five elements are usually combined in a variety of ways both in the theoretical discussions as well as in the empirical research. Needless to say, it is impossible for a short overview chapter to take all these aspects into consideration and/or to give equally emphasis to all of them. Though, an understanding of the interaction between these different aspects is necessary if one wants to gain a complete picture of the situation. Hence, this chapter aims to discuss each aspect briefly, and ignores thus many of the interesting details: Firstly, some of the theories aimed at explaining the childbearing behavior in low fertility societies are reviewed.¹³ The review is followed by a section where the empirical research on the determinants of fertility is discussed. The chapter ends with some concluding remarks.

3.1 THEORETICAL FOUNDATIONS

There are two frameworks which are more important than the others when it comes to our understanding of the long term changes in the demographic structure of the population, namely the theories on the first and second demographic transition (for an overview, see van de Kaa 2008). The theory on the (first) demographic transition was developed in the first half of the 20th century and provided an explanation to the long term population changes. It postulates that when a society is going through the process of modernization, the demographics of its population change. The gradual decline of the mortality rates is claimed to initiate the transition, which later continues with more rapid decline in mortality, and eventually even in fertility. The transition is assumed to end with low levels of both fertility and mortality, and the outcome is predicted to be

¹³ There are, of course, many theoretical frameworks which fall outside this review. For an interested reader the reviews by Caldwell and Schindlmayr (2003) as well as Morgan and Taylor (2006) are recommended.

stable population. In other words, it is assumed that in those countries which have experienced the transition, the fertility will converge near the replacement fertility of 2.1 (for discussion, see Davis 1945; Szreter 1993; Kirk 1996).

The notion that many variables related to fertility and family formation were undergoing substantial changes in the developed countries from the 1960s and onwards, as well as the fact that these changes did not fit in the stable population assumption of the (first) demographic transition theory evoked thoughts of a new transition taking place. Lesthaeghe and van de Kaa¹⁴ labeled the new demographic patterns to a second demographic transition (for discussion, see e.g. van de Kaa 1987; Lesthaeghe and Surkyn 2004). The authors claim that unlike the first transition which was driven by changes in mortality, the second one is driven by changes in fertility: Due to the sub-replacement fertility and increases in life expectancy at birth, the death rates will exceed the birth rates, which eventually results to a decline of the natural population. Consequently, due to the labor shortage caused by these changes, the demand for foreign labor, and thus immigration, will increase (van de Kaa 2002:3).

When it comes to the family dimension of the second transition, van de Kaa (1987; 2002) has claimed that, in essence, the transition consists of a decline in period fertility (which can, at least partly, be explained by the postponement of the births), a decline in the total first marriage rate (but an increase in the mean age of first marriages), a substantial increase of divorces/union dissolutions, cohabitation and extra-marital births and, finally, changes in contraceptive behavior from traditional to modern methods. There is no doubt that these changes described by the second transition theorists would not have been taken place. For example, the period fertility in the OECD-countries declined from 2.71 in 1970 to 1.65 in 2006 (OECD-30), the mean age of women at first childbirth increased during the same period from 24.0 years to 27.6 years in 2004 (OECD-16), the share of the extra marital births of all births increased from 7.5% to 36.5% (OECD-22), the crude marriage rate declined from 8.1 to 5.1 (OECD-26) and the crude divorce rate, in turn, increased from 1.1 to 2.3 in 2005 (OECD-25) (Source: OECD 2009c). Yet, many remain somewhat skeptical to the very concept of a “second demographic transition”. Coleman (2004:11), for instance, concludes that the second demographic transition is “/.../ not so much “second” but “secondary”, is not really “demographic” and cannot properly be described as a

¹⁴ The idea was at first presented in Dutch in 1986 by Lesthaeghe and van de Kaa (“Twee demografische transitie?”), but in the English-speaking literature one often refers to van de Kaa’s (1987) essay as the first piece of literature on the issue.

“transition” at all.” In other words, Coleman draws attention to factors such as the many previous changes in the living arrangements and the concentration of the second transition theory on non-demographic factors (marriage and its alternatives). Further, Coleman questions the completeness and irreversibility of the transition and points out that the behavior postulated by the theory remains highly heterogeneous within and between the populations. (For critical commentaries, see also Livi-Bacci 2001; Bernhardt 2004).

3.1.1 Value change and post-modernization

The second demographic transition theorists have emphasized the role of values. A specific “mind set” has been postulated to be the reason for the changes in fertility, mortality and migration (e.g. van de Kaa 2004a:6). That is not to deny the impact of cultural, social, economic or technological factors, which all are assumed to be important determinants of the second demographic transition, but merely to suggest that the values have had a crucial role in shaping the demographics of the second transition (e.g. van de Kaa 2002, 2004a; Lesthaeghe and Surkyn 2004).

The values that are assumed to be significant for the transition are those of individualization and appreciation of life quality. Van de Kaa (1987:5), for instance, claims that the second transition is based on individualistic values, such as self-fulfillment and the rights of the individual. Elsewhere, he describes the value change as a change towards post modernity i.e., towards a fading appreciation of material values as determinants of well-being and life quality (van de Kaa 2001). Similarly, Lesthaeghe and Neels (2002:11) argue that the second transition is grounded on “higher-order needs”, which are connected to the “individual autonomy” and “self-actualisation”.

Central to the argument is self-selection of the individuals into certain life choices. For instance, the choice of living alone after parental home is argued to be a manifestation of a non-conventional mind set, whereas living at home until getting married reflects the opposite kind of values, the conventional ones (Surkyn and Lesthaeghe 2004). Notice, however, that even though the new mind set would be about individualization and self-fulfillment, this does not mean that the people with a non-conventional mind set would automatically decide against children. What might have changed instead is the reason to have them. Aries (1980) discusses the issue in the light of two different kinds of views on family, the one based on “king-couple” and the other on “king-child”. According to Aries, king-child was previously the dominant model of the family:

The family was concentrated around the children and children's well-being. At the present king-couple model it is the couple that is important. The motivation to have children now is thus different from the motivation before: The child may even fit into the lifelong planning of individuals, but he “/.../ fits into them as one of the various components that make it possible for adults to blossom as individuals” (Aries 1980:650). Van de Kaa (2004b) claims that it is precisely these kinds of considerations that people have when they make the decision to have or not to have children; what determines is the function of children in the own life-fulfillment.

3.1.2 Economic perspectives on childbearing

A completely different view on the matter is taken by the economists who have developed the economic theory on fertility (for a review, see for example Sanderson 1976; Willis 1987; Robinson 1997). In its initial formulation, Becker (1960) suggests that as children give both psychological and material income to their parents and as the gained income varies depending on the age of the child, the children can, for analytical purposes, be treated as consumer durables. This, in turn, enables an analysis of the demand for children with the frameworks conventionally employed in an analysis for the demand for other goods. Consequently, household's demand for children is claimed to depend on its tastes, which in the model are taken as given and constant, but which, in reality, depend on factors such as religion, social norms and age. The tastes can be about the quantity, but also about the quality of children, which is to be understood as the total expenditure on children. Or to make a comparison, a household does not only have preferences when it comes to the number of cars they want to have, but also on the quality, the make of the cars.

Children cost money, and higher quality children cost more money. To a large part, hence, the number of children is, given the preferences, determined by the extent to which the household can afford to have them. The affordability naturally depends on household income and the costs of children. Further, the initial formulation¹⁵ of the theory postulates that the quantity income elasticity (that is, how much the demand for a durable changes when the income increases) is smaller than the quantity elasticity, which in practice means that when the income increases, the quantity of children does not increase rapidly, but it is rather the quality of the children that changes. The quantity-quality trade-off is also discussed for example by Becker and

¹⁵ In the initial formulation, Becker (1960) discussed also the knowledge of the contraceptive methods, uncertainty and supply of children.

Lewis (1973) who show how the changes in income and price affect the marginal costs of the quality and quantity, which, in turn, further affect the choices of the household. For example, if the costs of the number of children increase, then also the marginal costs of quantity, relative to the marginal costs of quality and other goods, increase. This might lead to a fall in the quantity of children. However, a reduction in quantity means also a reduction in the marginal costs of quality, which would lead to a greater investment in child quality. Hence, when the costs of children increase, this might result not only on the reduction of the number of children, but also on an increase in the child quality.

To sum up the above review on the economic theorizing so far, any increase in income or decrease in the costs of children is assumed to increase either the quantity or quality of children in a household. However, much of these considerations on the influence of household wealth and cost of the children relies on the assumption that one parent is specialized in market employment and the other one in household work. In practice, this assumption is often violated and applies only to a minority of the households. Thus, the opportunity costs of the female employment are integrated into the theory (e.g. Willis 1974). When this is done, it is not clear what kind of consequences an increase in female wage will have. On the one hand, as discussed above, an increase in fertility can be expected. On the other hand, the higher the income, the higher are also the opportunity costs of having children; childbearing and childrearing mean inevitably a decrease in the working hours, even though for a short period of time. Thus, women with high income might actually choose to have a career instead of children, and higher income can hence lead to a lower level of fertility.

Noteworthy is that at the early stages of the development of the theory, also competitive economical thoughts on fertility were expressed. The rivalry school was known as “Easterlin school” and it contributed to the understanding of fertility by combining economical and sociological arguments and questioning the assumption of stable preferences which was taken as given in the above explained “Chicago school” approach (e.g. Easterlin 1966, 1978). In a somewhat simplified form, the basic assumption in the approach outlined by Easterlin is that the relative size of the younger and older cohorts determines the income of the cohorts at childbearing age. The fertility is assumed to depend on the actual income of the potential parents, but also on their material aspirations. These, in turn, are influenced by the living standard the

potential parents get used to during their upbringing, and are thus a function of the income of the parents at the childhood home.

3.1.3 Role incompatibility theory

In the perspective provided by the new home economics, the female labor force participation is treated as a factor which increases a woman's income, and thus also her opportunity costs of having children. The role incompatibility theory that is reviewed here also discusses female labor force participation, but from another perspective. The key aspect which is under scope is the incompatibility between worker and care giver roles in the modern society. Issues concerning the role incompatibility have been discussed already for decades (e.g. Stycos and Waller 1967), but the compatibility between mother and worker roles has again been subjected to reflections when it was noticed that the earlier negative macro level association between female labor force participation and the TFR has since the mid-1980s been positive (see section 3.2.6. for discussion). Rindfuss and Brewster (1996), Brewster and Rindfuss (2000) and Rindfuss et al. (2003) suggest that the incompatibility between the worker and mother roles is a variable which mediates the relationship between female employment and fertility, and bears explanatory power when it comes to the differences in the levels of the average fertility over time and between the countries.

The argument that the authors put forward is as follows: Women face several constraints when they try to combine their roles as mothers and workers. The nature of these constraints is complex, and they vary from the structural institutional factors (e.g. availability of day care, job characteristic) to ideational factors (e.g. attitudes towards women's/mothers' work). The combination of these characteristics is the role incompatibility- variable, which can take different values in different countries and over time, a fact which also explains the differences in fertility (and to some extent, also in female labor force participation). A fertility increase is according to Rindfuss and Brewster (1996:263) to be expected “/.../ in response to any easing of the worker-mother conflict /.../”.

The causal link between the (mostly macro) variables that add up to the role incompatibility-variable and with the micro level behavior is to be understood in the light of the increases in the women's desire to work, a development that began in the 1960s. A woman who prefers to work experiences the level of role incompatibility as a constraint of her possibilities to realize her aspirations. As a strategy to deal with these constraints, the woman can either choose

to adjust her fertility to her labor market career, or adjust her labor market career to her fertility. According to the supporters of the role incompatibility theory, the women do both. To take an example, when the degree of role incompatibility is high, different types of fertility behavior can be observed. Some women decide to postpone their births, but many of the postponed births are ultimately foregone, as some women come to the decision not to have children at all, whereas others no longer can have them because they have reached the limits of their fecundity. Consequently, the level of childlessness is likely to be high when the roles are incompatible. Some women, on the other hand, have children, and try to combine the work and family in one way or another. Due to the problems, however, they remain out of the labor force long periods, which results to a low overall female participation.

3.1.4 Gender equity and fertility

Very similar considerations about fertility and female labor force participation are put forward by scholars who concentrate on women's status and gender equity as determinants of fertility. Clearly, to borrow Chesnais' (1996) expression, when taking a look at the levels of fertility between the countries, a "feminist paradox" can be observed: The level of fertility tends to be high in those countries where women are empowered and where their status is high both within the professional and domestic spheres. A more elaborated standpoint on this paradoxical relationship between fertility and gender equity is developed by McDonald (2000a; 2000b; 2002), who discusses the macro level average fertility behavior and concentrates on the differences in the quantum of fertility, over time and between the countries. According to McDonald, the degree and interaction of gender equity in family-oriented institutions (institutions which treat people due to their role in the family, for example taxation) and individual-oriented institutions (institutions which treat people as individuals, most importantly labor market and education) explains the changes in fertility rates over time and across the countries.

The fertility decline that began in the 1960s in the developed world as well as the present fertility differences between the countries are explained in the following manner by McDonald: Until the 1970s, the family was organized around the male breadwinner model, that is, the father was assumed to work outside the home and earn the bread for the family, whereas the mother's place was at home. Other social and economic organizations in the society were, accordingly, organized around the current standard family, the tax system for example guaranteed generous rules for families. All in all, the level of gender equity was relatively low both when it comes to

the family- and individual oriented institutions. During the past decades, however, both institutions have gone through some serious changes and moved gradually towards a higher degree of gender equity. The transformation of the institutions has, however, developed with a different speed and even differently in different countries. Hence, there are gaps in the degree of gender equity between the family oriented institutions and individual oriented institutions, and it is precisely the extent of these gaps that according to McDonald explain the differing levels of fertility between the countries.

At present, the gaps are quite small and the fertility thus quite high in the English-speaking developed countries and in the Nordic countries: Equally many women and men enroll to higher education, the attitudes towards the employment of women are positive and female labor participation rates are high. Moreover, those women who work are not discriminated and there is equal pay for equal work. Similarly, when it comes to the family oriented institutions, the support for the male breadwinner organization of the family is relatively low or non-existent, and the employers have likewise adapted to the situation by supporting the needs of the new family types (e.g. leave regulations, child care). In other countries, too, the individual oriented institutions have moved towards gender equity, but in the family oriented institutions the male breadwinner logic is still persistent (e.g. the attitudes towards male breadwinner family are more positive and the tax system supports the traditional family). Due to the high levels of equality in the individual oriented institutions and low levels of gender equity in the family oriented institutions, also the fertility is low. Or to put it differently, the high degree of gender equity in individual oriented institutions rewards employment. When the family oriented institutions still reward social reproduction, some women might restrict their fertility in order to improve their future living conditions (that is, maximize market employment). The situation is different when gender equity in both family and individual oriented institutions is high: It is possible to take part of the rewards of the market production and have children at the same time.

3.1.5 Preference theory

A common denominator for all the above theories is that they take the preferences of women for granted and, moreover, assume that women have more or less homogeneous preferences. Hakim's (1998, 2000, 2002, 2003a, 2003b) preference theory, instead, highlights the heterogeneity of women's preferences and discusses the importance of these preferences for women's labor market careers and fertility. According to Hakim, five historical changes have

changed the opportunity structures for women. Firstly, the contraceptive revolution gave the women the possibility to control their own fertility. Secondly, the equal opportunities revolution made it possible for women to gain access to the same positions, occupations and careers as men had access to. Thirdly, the expansion of the white-collar works broadened the possibilities for women, as these jobs are more popular among women than men. Fourthly, the creation of jobs for secondary earners guaranteed women the possibility to work without necessarily needing to prioritize the work before other activities in life and fifthly, the importance of the personal desires and attitudes when it comes to life time choices has increased. According to Hakim the effect of these changes is cumulative, and they create a completely new scenario for women, making it possible for them to choose the kind of life they prefer.

However, when it comes to the choices about market employment and family, Hakim claims that women do not have similar preferences. According to the central argument of the preference theory, a minority group of women (10-30%) is home-centered, with a desire for large families and homemaking. Another minority group of women (10-30%) is work-centered, with the primary interest and priority of making career and often even with the preference of not having children at all. A majority of women are adaptive (40-80%), that is, they do not prioritize either employment or family, but wish to combine these two. Noteworthy is that Hakim claims that social, economic, and cultural capital are not important as predictors of preferences, meaning that the preference groups cut across many variables, especially education. It must also be pointed out that Hakim does not completely deny the impact of the different kinds of constraints, but argues nevertheless that the importance of the institutional constraints is decreasing and once the country has reached the new scenario, they are important only at the margin. Moreover, Hakim claims that the relative size of each group in the countries that have not reached the new scenario is dependent on public policies, which favor some group over the others.

Hakim sees the differences in women's labor market careers as natural, following from the differences in preferences. Also, given the different preferences, the theory predicts that women's responses to the social policy differ and that the interests of the different groups of women are in conflict with each other. The home-centered women are claimed to be responsive to social policy and family wealth, but not to employment policy. The work-centered women on the other hand are not responsive to either of these, but they are responsive to the different opportunities that arise. Finally, the adaptive women are responsive to the governmental

policies, such as social and family policy. According to Hakim the reason for the present low fertility is that the public policy has not managed to create favorable circumstances for all groups of women; the best possibility of public policy to influence fertility is to support each group of the women.

3.1.6 Low-fertility trap hypothesis

A rather recent theoretical framework on low fertility is presented by Lutz and Skirbekk (2005) and further elaborated by Lutz, Skirbekk and Testa (2006), who theorize about the interconnection between demographic, sociological and economical aspects. The supporters of the theory argue that the number of children is determined by the past levels of period fertility, but also by the age structure of the population, which in turn is determined by the past fertility. Considering that a low number of children influences the environment in which the younger generations live their daily life, the number of children being born can also influence the personal ideal family size of people, which in turn influences fertility. Finally, the gap between consumption aspirations and expected income might lead to a postponement of births and lower fertility (in fact, this is an assumption that is directly taken from the Easterlin hypothesis). Notice that the past low fertility also influences the expected income of the younger generations, as the population structure can be expected to have impact, among other things, on economic growth and less social security for younger people.

The low fertility trap hypothesis is somewhat unusual in the low fertility context, as it does not concentrate solely on how the institutions and individual factors influence fertility, but also on how low fertility influences institutions and individual factors. The theory contributes thus by pointing out the mutual causality between demography and society, that is, the possibility of a self-reinforcing downward spiral of the negative population momentum in the low fertility countries.

3.2 EMPIRICAL EVIDENCE

The above review demonstrates the variety of the possible perspectives to approach fertility behavior. However, most often the approach that is taken in the empirical research does only loosely follow the paths pointed out by the theories. There is, for example, only very little research on the determinants of fertility at cross country macro-level, although several of the theories concentrate on this aspect. Similarly, although parity specificity remains somewhat

ignored in the theorizing, micro-level research often distinguishes between births at different birth orders. Moreover, the choice of the variables included in the investigations is very often motivated with only a vague reference to the existing theories and/or with a mere notion that in previous studies the same (kind of) variable was found to have an impact.¹⁶ Consequently, given the nature of the research, the review of it is bound to be variable-centered as well. In what follows I will lift up some of the variables that are pointed out or/and found out to have an impact on fertility. As often as possible, I will try to build a bridge from the theories to the variables in question.

3.2.1 Decomposition and demographic variables

There are several demographic factors which are known to explain some of the differences in the levels of fertility between the countries and over time, or/and between the cohorts and individual women. These demographic explanatory variables are: (1) Disaggregation of the data on total fertility into the birth order specific components, (2) postponement of childbearing as an inflator of the levels of period fertility, (3) the age at childbearing as well as the interval between the births as explanatory variables for subsequent childbearing and (4) immigration. Despite the fact that these variables are known to have an impact on the total level of fertility, they are far from fully included in the above theories. On the other hand, each of these factors is in itself a variable that needs to be explained.

When it comes to the **birth order components of fertility**, the completed cohort fertility rate is broken down into its birth-order specific components for example by Bosveld (1996), Frejka and Sardon (2007), and Frejka (2008). Moreover, several papers address the issue of childlessness from a descriptive basis (Rowland 1998; Sobotka 2005; Frejka and Sardon 2006; but see also Breton and Prioux 2009 for childlessness and one child families). The above studies provide, for instance, evidence of the increasing levels of cohort childlessness in Europe. At the same time, however, the amount of one-child families shows stability in some countries (Austria, Sweden), whereas in other countries the number of one-child family is decreasing (Germany, England and Wales, Finland, France, Denmark), and in others increasing (the Netherlands, Norway, Spain, Italy, Greece) over the cohorts (Breton and Prioux 2009).

¹⁶ In addition to the loose connection between theory and empirical investigations, the research on fertility suffers from several other problems (such as not sequencing the existing information, as well as publishing the results of advanced statistical analysis in a manner that makes it impossible for the reader to make comparisons between different studies) that according to Taagepera (2008) hinder, in general, the development of social sciences.

Bosveld (1996) approaches the changes in fertility from period perspective, and shows that the fertility decline from the 1960s to the beginning of the 1990s can be explained by a decline of the third and higher order births, followed by a postponement of first and second order births, which lead to decreases in first- and second birth rates¹⁷. Macro studies on the determinants of the level of the order-specific fertility are non-existent, which can probably be explained by the scarce availability of the data needed for the calculation of the suitable fertility indexes (see section 2.1. for a more profound discussion). At micro-level, on the other hand, the birth-order question has gained popularity and especially the childlessness, the choice of having children or not, has become a distinct vein of study within the fertility research¹⁸.

The birth order aspect is somewhat connected to the other demographic variable which influences the total level of fertility, namely the **postponement of childbearing**. According to Ni Bhrolcain and Toulemon (2005), the term is used in a variety of ways by different authors and can be understood either as an individual-level behavior (potential parents delay the births, actively or passively, and have the idea of having children at later ages) *or* as a macro-level statistical feature (declining fertility at younger ages is followed by an increasing fertility at more advanced ages). Although the behavioral underpinnings of the postponement are not clear, in statistical terms the postponement is an undisputed fact. Several period studies show that the mean age of the mothers has increased and that the number of births at younger ages has declined, whereas the number of births at older ages has increased (e.g. Billari et al. 2007). The same is true even when the timing of births is studied from the cohort perspective (e.g. Frejka and Calot 2001; Billari and Kohler 2004; Frejka and Sardon 2006; Frejka and Sardon 2007). However, these studies also show that the pace and extent of the postponement varies between

¹⁷ Also Devolder et al. (2002) and Barkalov and Dorbritz (2005) have examined cross-country differences in period fertility. Devolder et al. draw the conclusion that the differences between the countries are especially large when it comes to the third parity, whereas the changes in first and second births appear to provide a good starting point for the study of the within-country differences in period fertility over time. Barkalov and Dobritz in turn find for example that the Eastern European countries have lower levels of childlessness than the other European countries. However, both of these studies are based on survey data and the results are consequently tentative.

¹⁸ The authors usually distinguish between voluntary and involuntary/circumstantial childlessness. Whereas voluntary childlessness is often found to depend on factors such as rejection of motherhood, selfishness, aversion to life style changes etc., involuntary childlessness is found to be associated with issues such as finding the right partner, having a too demanding career to have children or being childless because the partner does not want to have children (for Australia, see Carmichael and Whittaker 2007; for Italy, see Tanturri and Mencarini 2008). Typical for the research on childlessness is also that it commonly identifies pathways to childlessness. Noteworthy is also that men and women have somewhat different paths to childlessness (Keizer et al. 2007).

the countries and over time, and moreover, the postponement is found to be, in general, largest at the first birth orders; especially the first birth - i.e. the motherhood - is postponed. In conclusion, the period fertility rates of the developed countries would be higher without the postponement (e.g. Bongaarts 2002). Moreover, the different extent and pace of the postponement between the countries explains a part of the cross-country differences in fertility. According to Sobotka's (2004:206) calculations, for instance, the differences in period fertility between the Northern and Southern Europe decrease with one quarter when the postponement effect is taken into account.¹⁹

Whereas the changing timing of births has explanatory power both when it comes to the changes in period fertility rates within the countries and fertility differences between the countries, it is possible that the increasing age of childbearing also influences the level of fertility at the individual level and thus cohort fertility. The later the childbearing begins, the fewer years a woman has to give births to higher parity children. Depending on how old the woman is when the entry into the motherhood occurs, it is possible that she has no time to have the number of children she had desired before she reaches the end of her reproductive years. Also, if the first birth is postponed to very old ages, the probability of being able to have children declines due to biological constraints (see for example Billari et al. 2007:155ff for a discussion on the physical limits of childbearing).

As the current levels of period fertility can at least partly be explained by the postponement, an important question is what factors affect the timing (tempo) of births and which factors, in turn, affect the level (quantum). Ní Bhrolcháin (2007) claims that there is no evidence that the quantum and tempo of fertility would be affected by different factors. Lutz and Skirbekk (2005) in turn go as far as to suggest tempo-policies, i.e., policies which aim to influence the tempo of childbearing for example by shortening the interval between those events (e.g. education) that at present precede childbearing.

At micro-level, the most robust findings on the determinants of fertility are on the impact of two demographic variables, namely **the age at child birth and the interval between the births**. When it comes to the first births, for example Breton and Prioux (2009) found that in

¹⁹ A recent study on first birth timing in ten European countries shows that there are both genuine effects between the countries, but also compositional effects that in some cases partly explain the timing differences between the countries (Nicoletti and Tanturri 2008).

France high age at first birth increases the probability of having only one child. Also, lower age at first birth is in many cases found to increase the risk of a second child (for Austria, see Prskawetz and Zagaglia 2005; for France see Köppen 2006; for Denmark, see Gerster et al. 2007). Notice, however, that this does not necessarily give support to the conclusion that postponement influences the total number of children, but it is also possible that the women who have their only child at a higher age are a selective group who has planned to have only one child.

The probability of a second child is found to depend on the interval from the first birth, but the length of the most optimal interval varies somewhat between the countries, a very short and very long interval often being the most non-optimal (for Germany, see Cooke 2004; for the USA, see Torr and Short 2004; for Austria, see Prskawetz and Zagaglia 2005). Likewise, a relatively short interval between the first and second birth is found to increase the odds of having a third child. Even here the length of the most optimal interval varies between the countries (for Sweden, see Hoem and Hoem 1989, Berinde 1999; for Norway, see Kravdal 1992; for Canada, see Statistics Canada 1997; for France, see Breton et al. 2005). Many of these studies have also included the age aspect and find that the younger the mother is at second (and/or first) birth, the higher the risk of having a third child.

Finally, also **immigration** is known to have an impact on the levels of fertility. It has been found that, in general, immigration contributes with 0.05-0.10 units to the observed TFRs in the European countries (Sobotka 2008). However, even though immigrants in general have higher fertility than the native population, the impact of immigration background depends to a large extent on the country of origin and on the time lived in the new home country (e.g. Lappegård 2000, 2004; Andersson 2004; Parr 2007).

3.2.2 Preferred fertility and its determinants

A simple solution to the fertility puzzle would be that the behavior is completely determined by preferences, which would mean that it is the preferences in the first hand that require an explanation. This thought is reasonable due to the **contraceptive revolution**, which made the realization of the preferences, both when it comes to the timing and number of the births, highly possible²⁰. The question of whether fertility preferences have predictive value when it comes to

²⁰ Although the new birth control devices (the pill, IUDs) did not necessarily increase the contraceptive use, they were more efficient and reliable than the other measures (see for example Murphy 1993 for a demonstration of the direct influence of the pill use on fertility), and also gave women the control over their fertility, when previously most of the methods were controlled by men. However, even though the contraceptive revolution has made it

fertility has been frequently discussed. For example, the value change- theory can be interpreted to mean that the adaptation of the more individual values has influenced individuals' childbearing desires in a negative manner and hence lead to fertility decline. Also, the supporters of the low fertility trap hypothesis discuss to a considerable extent how the childbearing preferences, influenced negatively by the childfree-environment and period fertility for example, can contribute to a low fertility spiral.

A look at the aggregate level data shows that the **preferred fertility** is higher than the realized one. For instance, to review two of the recent macro-findings, the results from Eurobarometer 2001 and 2006 rounds show that the ideal average²¹ family size in the EU-15 countries is still at or above 2.0, except in Austria and Germany. Though, for Germany this is true only when it comes to the results from Eurobarometer 2001 (Goldstein et al. 2003; Testa 2007). The existence of the “child gap” suggests that the preferred family size does not explain the low fertility rates of the industrialized countries and that the reason for low fertility lies rather on constraints, such as for example a high degree of role incompatibility, that hinder the women to realize their fertility desires. Though, there are even other aspects that might explain, at least partly, the existence of the child gap. For instance, a comparison of the aggregate measures on realized fertility (such as the TFR) with the aggregate measures on wanted fertility might exaggerate the width of the “child gap” at macro level (e.g. Sobotka and Lutz 2009). Noteworthy is even that the information on fertility preferences is collected in surveys and that the expressed wanted fertility of the respondents might not, depending for example on how the question is asked or what the prevailing stereotypes are, reflect the own true preferences of the respondents (for discussion see e.g. Girard and Roussel 1982; Bongaarts 1990, 2001; Livi-Bacci 2001; Testa and Grilli 2006). Moreover, the fact that fertility preferences tend to change over the life course (Heiland et al. 2008; Hayford 2009; Liefbroer 2009) awakens the question of what is the best

possible for women to reduce the number of unwanted pregnancies, the influence of modern contraceptives should not be exaggerated, but as pointed out by Leridon (2006), the fertility decline started already before the wide use of the pill.

²¹ Noteworthy is that when it comes to the compositional preferences, i.e. the percentage distribution of women who want zero, one, two or three or more children, the shares vary significantly between the countries. In the EU-15 countries, childlessness is a popular choice among women in the Netherlands and Austria, whereas one-child families are preferred especially in Germany. Women in Spain, together with western Germans and Italians have highest preferences for two-child families, whereas the women in Finland and Ireland show the highest preferences for three or more children (see figure 2 in Goldstein et al. 2003:486).

time to measure preferences. Finally, the explanation for the child gap does not necessarily need to be a very complex one relating to socioeconomic variables as suggested by the theories that emphasize the role of the institutional constraints. It is, for instance, known that men and women have, in general, similar childbearing preferences. Yet it is possible that two persons with different preferences partner, which in turn influences their fertility (e.g. Voas 2003). This view is supported for example by Thomson (1997), who shows that when the spouses have different fertility desires, it will have a negative impact on their fertility intentions and consequently also on the number of the births (see also Thomson and Hoem 1998).

Despite the existence of the child gap, hardly anyone would deny the importance of the preferences. Thus, the central question is not if the preferences influence childbearing behavior, but to how large extent they do it and in what manner. Indeed, there is a large field of research on the determinants of fertility preferences, as well as on the association between fertility preferences and fertility intentions on one hand, and on fertility intentions and realized fertility on the other hand (e.g. Westoff and Ryder 1977; Trent and Crowder 1997; Schoen et al. 1999; Testa and Grilli 2006; Vitali et al. 2009). A nice example of the influence of fertility preferences on childbearing behavior is the influence of the **sex of the children** on continued fertility. Although for some countries no sex preferences at all can be found, and for some countries there are minor preferences either for boys or girls, the evidence supports the idea of mixed-sex preferences. That is, parity progression ratios from second to third child, or from third to fourth child tend to be higher for parents whose previous children are of same sex (for 17 European countries, see Hank and Kohler 2000; for the Nordic countries, see Andersson et al. 2006a; for Finland and Sweden, see Andersson et al. 2007; for Australia, see Kippen et al. 2006).

When it comes to the determinants of fertility preferences, Heiland et al. (2008:136f) divide them into three different groups: (1) individual background characteristics, such as religion and attitudes, (2) factors related to family background and early influences and (3) different life course events, for example divorce, education, childbirth. To take an example of the individual characteristics, **religion and/or religiosity** are often found to be associated with the desired, intended and realized fertility (for a discussion see e.g. Sander 1992; McQuillan 2004). Many studies have concentrated on fertility differences between the different religious groups: Adsera (2006) for example finds that in 13 developed countries fertility ideals are higher for the Catholics and the conservative Protestants than for the mainline Protestants and people without

religious affiliation. Similar conclusions about the realized fertility are drawn by Frejka and Westoff (2008) who suggest that both in the US and in Europe, the Protestants and the Catholics have higher fertility than those who do not belong to any denomination. Further, Westoff and Frejka's (2007) study shows that Muslim women have higher fertility than women who belong to the main affiliations in Europe (see also Adsera 2006b for similar conclusions for Spain). However, the indicators that measure religiosity instead of affiliation are suggested to be better (Lesthaeghe and Surkyn 1988:10) and when the religiosity is under scope, it has found to have a positive impact on fertility ideals and intentions in European countries (Philipov and Berghammer 2007) but also on fertility behavior (for third births in Canada, see Statistics Canada 1997; for fourth and higher order births in the Netherlands, see Sobotka and Adigüzel 2002; for transition to first births in West Germany, see Kreyenfeld 2004; for second births in Austria, see Prskawetz and Zagaglia 2005; for Europe and the USA, see Frejka and Westoff 2008; for the probability of having only one child in France, see Breton and Brioux 2009; for the USA, see Westoff and Marshall 2010).

Secondly, also family background and early experiences might shape fertility preferences. For example, it might not be only the individual's own religiosity, but also her parents' religiosity which influences fertility (for the positive influence of religious socialization on fertility in Spain, see Branas-Garza and Neuman 2006; and for third births in the Netherlands, see Berghammer 2009). There is also evidence on the **intergenerational transmission**, that is, individuals who have had many own siblings tend to have larger families or higher probability for further parity progression than women from smaller families (for the USA, see Anderton et al. 1987; for Poland, Italy and Norway, see Murphy and Wang 2001; for Denmark, see Murphy and Knudsen 2002; for West Germany, see Kreyenfeld 2004; for France, see Breton and Prioux 2009). The impact is substantial: Murphy and Knudsen (2002:247) state that 8.8% of the 1968-69 cohort had four or more siblings, and in the end of the 1994, these persons had counted for 15.1% of all births of the cohort. Likewise, there is evidence that parents' age at childbirth influences their children's decisions of the timing of the births (for teenage births in the USA, see Furstenberg et al. 1990; for the first births in the Netherlands, see Steenhof and Liefbroer 2008). Interestingly, Murphy and Wang (2001) find that the transmission gets stronger with time and likewise, Steenhof and Liefbroer (2008) find that the strength of the intergenerational transmission from mothers to children increased across the cohorts. At macro level, it appears that in those regions

where the realized fertility of the older cohorts is higher, also the individual fertility preferences of the younger cohorts are higher, a result that lends support to the low fertility trap hypothesis (Testa and Grilli 2006).

Finally, different life course events also shape preferences for children. For instance, several studies suggest that the childbearing behavior in the individual's **social networks** might influence the propensity to have children. Lyngstad and Prskawetz (2010) show that a sibling's entry into motherhood influences the individual's own propensity to have her first child. The most typical influence of the life-course events on fertility is that of the **marital status**. For example, at micro-level most studies find that being married increases the fertility in comparison to cohabitation, living apart or being single (for second births in Sweden, see Hoem and Hoem 1989; for first and second births in Western Germany, see Hank 2003; for second births in Denmark, see Gerster et al. 2007; for second births in Finland and Norway, see Rønsen 2004; for second births in Australia, see Parr 2007; for second births in Austria, see Prskawetz and Zagaglia 2005). Some of these studies also differentiate between cohabiting women and women who live alone and find that women who cohabit have higher fertility than women who live without a partner. Noteworthy is, however, that there are even differences between those who cohabite without marrying at all and those who marry after pregnancy or childbearing. For example, in a study with Swedish data, Berinde (1999) finds that couples who marry after their first or second birth have a higher risk of third births than couples who have been married already before the first birth or couples who have cohabited. Naturally, the higher fertility rates among the married persons do not automatically have to mean that the experience of marriage would increase the fertility through preferences. Rather, those who marry can be a selective group with higher childbearing preferences (value change- theory, preference theory²²), or their household

²² As highlighted by the second demographic transition theory, cohabitation, marital/union dissolution and repartnering have become increasingly common in western societies and the supporters of the theory claim that adoption of a new mindset is responsible for these changes. What contradicts the theory is that the transition has occurred at different speed in different countries and that those countries which are seen as forerunners of the transition (the Nordic countries) have higher fertility rates in comparison to those countries, which are lagging behind (Mediterranean and German-speaking continental countries). Even in this respect, as pointed out by Castles (2003), the world has turned upside down: in 1980 the total divorce rate for example was still negatively correlated with fertility, whereas in 1998 the correlation had an opposite sign. What further disagrees with the theory is that, as discussed above, in all countries the ideal family size preferences have been high and quite stable. Moreover, it has proven to be difficult to find evidence on the macro level association of values on fertility, even though the new value set characterized by individualization appears to be associated with postponement of both marriage and childbearing (van de Kaa 2001).

income increases with marriage and thus the price of the children becomes lower when they get married or live with a partner (economic theory). Also, role compatibility and gender equity at micro-level might increase if there are two persons to take care of the children.

The high divorce rates and repartnering at younger ages have also lead to an increase of **stepfamilies**. Evidence from Europe suggests that the share of women who enter their second union before the age of 35 varies from 2% in Italy to 28% in Sweden, and the number of women who enter the second union with pre-union child varies from 1.1% in Italy to 19.5% in Estonia (Prskawetz et al. 2003). Mainly three mechanisms are suggested to link childbearing and repartnering, namely preferences for confirmation of adulthood (the desire to be parent), union commitment and siblings for the already existing children (Griffith et al. 1985). In general, it is found that fertility (or fertility desires) is elevated in stepfamilies (e.g. Vikat et al. 1999; Buber and Prskawetz 2000; Klein and Eckehard 2004; Thomson 2004)²³ and especially the desire for first shared child appears to be strong. However, the results might partly be explained by the differing timing of the births in the conventional and step-families, as childbearing at different durations from the union formation is different between the step-families and the conventional families which means that the differences in fertility might be small when longer durations are taken into consideration (Henz 2002).

3.2.3 Education and income

Many of the above reviewed theories on low fertility and fertility decline assume that education and income are important when women and families make decisions about having children. According to the value change- theory the highly educated groups in the society are the first ones to adopt the new mind set. In the economic theory, higher education can be seen as an indicator for higher potential earnings and thus, higher opportunity costs and lower fertility. In addition, higher income is assumed to lead the parents to have higher quality children instead of increasing the quantity of children. Further, according to the role incompatibility theory and the gender equity theory, higher educational attainment and fertility can be assumed to correlate negatively as the level of incompatibility increases with the educational attainment. Though, it can also be assumed that the highly educated women can afford child care to a larger extent than the women with lower education and can thus partly buy themselves free from the role incompatibility.

²³ There is also evidence for the opposite (e.g. Stewart 2002). These negative results are however explained by the methodological problems in the study design (Thompson 2004:121,130).

Moreover, women with higher educational attainment can more freely choose family-friendly working places and working times. Finally, when it comes to the preference theory the preferences are assumed to cut through all educational classes.

As to the empirical investigations on the influence of **educational level and attainment**²⁴, female education is quite sensitive for the specification of the model (Kreyenfeld 2002:37), which perhaps can partly explain the inconclusive findings. Some studies namely conclude that women's education has a negative impact on fertility (for first births in Germany, see Kreyenfeld 2004 and Klein and Eckhard 2007; for the USA, see Westoff and Marshall 2010) and moreover, higher educational levels are found to increase the risk of childlessness (for Netherlands, see Keizer et al. 2007). A majority of the studies, however, find a positive effect of education on fertility at higher parities (for second and third births in Sweden, see Hoem and Hoem 1989; for third births in Sweden, see Berinde 1999; for second births in Sweden, see Oláh 2003; for second births in the USA, see Short and Torr 2004; for second and third births in Sweden, see Andersson et al. 2006; for second births in Denmark, see Gerster et al. 2007; for second births in France, see Breton and Prioux 2009).

Kreyenfeld (2002) provides three possible explanations for the positive influence of education. Firstly, the highly educated women postpone their births, and when they finally decide to have children, they approach the biological limits of their fertility and thus want to squeeze the births more near each other. Secondly, the highly education women who already have one child are a selected group with stronger preferences for children. Thirdly, there is a partner effect, i.e., women and men with the same educational levels tend to partner and the positive relationship between women's education might be explained by the income and education of her partner.

Several studies have found that education influences the timing of the births (for first births in the Netherlands and Flanders, see Liefbroer and Corijn 1999; for first births in France, see Meron et al. 2002; for first births in Norway, see Lappegård and Rønsen 2005; for first births in European countries, see Nicoletti and Tanturri 2008). The time-squeeze hypothesis itself, however, does not get much support from the evidence (for second births in West Germany, see

²⁴ In addition to the field and level of education, investigations of the relatively unexplored variables together with education might give helpful insights. For instance Newman and Hugo (2006) discuss the association between religion and education in Southern Australia and show that in general, the university educated women with no religion are likely to have lower fertility than the university educated women who have a religion.

Kreyenfeld 2002; for second births in Denmark, see Gerster et al. 2007). The selection-hypothesis is supported to some extent both by Kravdal (2001) and Kreyenfeld (2002), who find that by introducing a common unobserved factor, the effect of education turns out to be negative. Finally, the third hypothesis about the partner effect appears to be the most convincing one. For second (Prskawetz and Zagaglia 2005) and third births (Hoem et al. 2001) in Austria, the influence of mother's educational level vanishes when both partner's educational level is taken into consideration. For second births in West Germany and France, Köppen (2006) finds that when controlled with partner's education, the positive impact of mother's education becomes weaker (most notably in Germany). Further, the impact of father's education is found to be positive in several other studies (for second births in Spain, see Brodman et al. 2007; for second and third births in Norway and Sweden, see Duvander et al. 2010; for fertility intentions in Italy and the Netherlands, see Mills et al. 2008). Dribe and Stanfors (2010) find that the Swedish couples where both spouses are highly educated are more likely to continue to further parities than the couples where the spouses' educational attainment is lower. On the other hand, in some studies the income or/and education of the father has not found to have any significant impact on childbearing (for second births in Sweden and Hungary, see Oláh 2003; for second births in Denmark, see Brodman et al. 2007).

Noteworthy is that some studies point out that the educational level might not be the only important aspect of the relation between education and fertility, but that the **field of education** might also have a decisive impact. A profound discussion on the issue is provided for example by Hoem et al. (2006a:334ff), who identify three different channels through which the educational field might affect fertility. The first channel goes through the educational system itself. On the one hand, the level of flexibility of the system influences the possibilities a woman has when she makes decisions and changes plans during her life course. On the other hand, the gendered structure of the social environment during the study years may impact fertility indirectly, for example, by encouraging the combination of motherhood and labor market attendance. The second road from educational field to fertility goes through labor market. The level of job security, skill depreciation and gender dominance on the job as well as the nature of the job content and job prospects vary between different occupational fields. Thirdly, the interaction of preferences, social norms and education might explain the childbearing behavior.

The studies on educational field and fertility underline the importance of discussing both the horizontal and vertical aspects of education. Hoem et al. (2006a) find that Swedish women with education in teaching and health care occupations have in general lower level of childlessness than other women (for similar findings for childlessness in Greece, see Bagavos 2010). Hoem et al. (2006b), in turn, conclude that the(se) women even have a higher total fertility. Yet, all studies find that higher education within a specific educational field has a negative impact on fertility (see also Lappegård 2002 for Norway; Lappegård and Rønsen 2005 on the timing of the first births and Van Bavel 2010 on the postponement of first births).

Education is often understood as a proxy for **income** and hence, similar theoretical arguments than those presented above can also be claimed to apply to the association between income and fertility. Likewise, as with education, it is of importance to make a difference between the woman's own and her spouse's income. When it comes to the influence of female income on fertility, the findings are mixed. In some countries and at some parities female income is found to correlate negatively with fertility (for a macro level study of total fertility in the USA, see Butz and Ward 1979; for first to third births in Norway, see Rønsen 2004; for first to third births in Italy, see Rondinelli et al. 2010). Other studies, in turn, find a positive influence of income on fertility (for first births in Sweden, see Hoem 2000; for first and second births in Sweden, see Andersson 2000; for first and third births in Finland, see Vikat 2004). Further, at some parities the income does not appear to have any impact on fertility (for third births in Sweden, see Andersson 2000). Finally, some studies find that the relationship is U-shaped, which means that the fertility rates are higher for women who belong to the higher and lower income groups (for second births in the United Kingdom, see Kreyenfeld and Zabel 2005). However, some studies do not measure the female, but family or spouse income. Interestingly, Westoff and Marshall (2010) find for the USA that the lower the family income, the higher the fertility. Dribe and Stanfors (2010) find that for the Swedish couples with high income the risk of second birth is higher than for those with low family income, whereas in transitions to third and fourth parities it is the other way around and lower income is positively correlated with fertility.

3.2.4 Female labor force participation

The impact of the female labor force participation on fertility belongs to the most discussed themes in the fertility research. Indeed, the above review of the theoretical foundations of fertility analysis reveals that many theories lay their concentration on this issue. The large interest in

women's work in relation to childbearing is understandable considering, for instance, that in many developed countries the decline in fertility has gone hand in hand with increases in FLFP but yet, in the contemporary low fertility societies the countries with the lowest fertility also have the lowest female participation rates, whereas the countries with the highest fertility also have high participation. However, before the mid-1980s the correlation between female participation and fertility was still negative (e.g. Ahn and Mira 2000; Castles 2003; Rindfuss et al. 2003; but see also Castles 2003²⁵).

At micro-level, the economic theory on fertility posits that increases in women's work outside home lead to lower fertility, given that women's employment increases their opportunity costs of childbearing²⁶. The preference theory, in turn, states that the inactive women are a selective group with strong preferences for homemaking and children and thus, it should be expected that these women have higher fertility. In accordance with these assumption, the empirical evidence shows that in comparison to the active women, the inactive women have higher fertility, or higher propensity to have children at given parities (for births at parities 0-4+ in the USA, see Blau and Robins 1989; for second and third births in Sweden, see Hoem and Hoem 1989; for third births in Sweden, see Berinde 1999; for second births in Sweden, Oláh 2003; for second births in Germany, see Cooke 2004; for first births in Germany, see Kreyenfeld 2004; for second births in Austria, see Prskawetz and Zagaglia 2005, for second births in Italy and Spain, see Cooke 2008; for France, see Breton and Prioux 2009). In addition, Matysiak and Vignoli (2008) find that the negative effect of employment on childbearing is weaker at lower parities compared to the higher ones.

The macro-level observations on a positive correlation between fertility and female participation contradict the micro-level theory and findings. It is also partly against this background that the theory on role incompatibility was developed. However, several researchers

²⁵ As pointed out by Castles (2003), not only the association between FLFP and TFR, but even the association between fertility and many other variables had changed signs. A more elaborate study on the changing signs can be found in Bujard (2010: Chapter 6).

²⁶ It is also important not to take as given that the trend in female labor force participation is increasing. Vere (2007), for instance, reports that in the USA female labor force participation might in fact be decreasing. He finds that the college educated women in the 1968-1979 cohort have both lower labor market attendance and higher fertility than the women who were born toward the end of the baby boom. Vere concludes that increases in education and demand for female labor cannot explain the trend, but it is likely that women simply make different kind of decision than the previous cohorts.

have pointed out that the positive cross-country association between these two variables at one point in time does not mean that there would be a positive time-series correlation within the countries (Engelhardt et al. 2004; Kögel 2004; Mishra and Smyth 2010). In particular, Kögel (2004) finds that the positive correlation can be explained by country effects and by a variation in the magnitude of the negative correlations. Nevertheless, despite the fact that female labor force participation and fertility still are negatively correlated over time, for some countries the negative correlation has become weaker over the years, which could be interpreted as a confirmatory evidence for the role incompatibility (and gender equity) theory.

Although the time-series association has not changed, the positive cross-country correlation has been of interest for several researchers. Many have claimed that the relationship is spurious. Apps and Rees (2004), for example, claim that taxation and child care play the key role: Individual taxation and governmental support for child care facilities tend to lead to higher female labor force participation and fertility, whereas joint taxation and child payments have a negative impact on both. Del Boca (2002), in turn, finds for Italy that the availability of child care and part-time work increases both the probability of having children and working. Moreover, in an investigation of fertility rates and employment in the USA in 1948-1997, Ridao-Cano and McNown (2005) find that several variables associate inversely to fertility in respect to female labor force participation. Also, in support to the spurious relationship is a meta-analysis by Matysiak and Vignoli (2008) at micro-level which finds that the relationship varies over time and between the welfare states.

These findings are well in line with the theories about role incompatibility and gender equity, but in addition to the distinction between employment and inactivity, these theories as well as the preference theory predict that it might be important to distinguish between, at least, full-time and part-time employment. The argument of the role incompatibility and gender equity theories is that part-time work is more compatible with childrearing than full-time work, whereas the preference theory postulates that the adaptive women prefer part-time work prior to full-time work. Moreover, the economic theory claims that the opportunity costs are not as high when the woman is at part-time work in comparison to the full-time employment. The evidence on the matter is, however, not clear. Some studies find that there are no significant differences in fertility between the part-time and full-time working women (for second and third births in Sweden, see Hoem and Hoem 1989; for second births in Sweden, see Oláh 2003; for second

births in Denmark, see Brodmann 2007), whereas other studies find that part-time working women have higher propensity to have children (for the Netherlands and Flanders, see Liefbroer and Corijn 1999; for second births in western Germany and Great Britain, see Kreyenfeld and Zabel 2005).

Furthermore, unemployment at macro and micro levels is suggested to influence fertility. When it comes to macro-level, Engelhardt and Prskawetz (2004) find in their descriptive contribution that the heterogeneity in the magnitude of the negative effect of participation on fertility can be explained by cross-country differences in female unemployment, share of family allowances for the first child and mean age at first birth. Even several other studies have found unemployment to be of importance when trying to explain the positive correlation between the female employment and fertility. Adsera (2004), for instance, finds a negative impact of unemployment on fertility rates. She suggests that the level and persistence of unemployment, among other things, indicates the flexibility of the labor markets; when women are able to enter to and exit from the labor market without any greater difficulties, and when the negative consequences of short-time exits from the labor market are not too high, the fertility rate is high. Unemployment is also declared to be a large part of the solution by Da Rocha and Fuster (2006), who argue that labor market frictions determine the relationship between fertility and female employment; low probability of finding a job is related to low female employment and fertility. Similarly, Adsera (2005) finds that in an array of European countries long-term unemployment and a relatively large gender gap in unemployment delays births at first, second and third order.

At micro-level the findings are inconclusive (see Özcan et al. 2010 for discussion). Some researchers find that unemployment has a negative influence on fertility (for higher order births in Norway, see Kravdal 2002), whereas others conclude that unemployment and childbearing are positively related (for first births in Norway, see Kravdal 2002; for third births in Finland, see Vikat 2004). Also, some studies claim that the unemployed women do not differ from employed women in their childbearing propensities (for second births in Finland, see Vikat 2004). Also, continuous employment has found to increase the probability of childlessness (for Netherlands, see Keizer et al. 2007), whereas in some cases unemployment is found to speed up the entry into the motherhood (for the Netherlands and Flanders, see Liefbroer and Corijn 1999; for first births in Germany among women without education, see Kreyenfeld 2010). Further, Meron et al. (2002) find that the unemployed and inactive women in France differ in their fertility behavior:

The unemployed women delay births longer than those employed women who have not experienced unemployment, whereas the transition to motherhood is fastest among the inactive women.

3.2.5 Family policy and fertility

As pointed out by Rønsen (2004b:281), merely the fact that family policy and fertility vary similarly across the countries suggests that family policy indeed has an impact on fertility.²⁷ Also from the theoretical point of view this conclusion looks highly reasonable; many of the above reviewed theories, for example, are either emphasizing the role of the family policy or discussing variables that can be influenced through public policies. To give some examples, the economic theory leaves at least three channels open for the influence of the family policy: Family policy can alter the direct or/and indirect costs of children, the household's budget constraint and the preferences for children (Gauthier 2007:327). The role incompatibility theory and gender equity theory in turn are heavily concentrated on that kind of family policy which either reduces or increases the role incompatibility and gender equity. Similarly, the preference theory, in essence, claims that the explanation to low fertility lies partly in that the family policy is heavily biased towards one group of women, thus not creating optimal conditions for childbearing for the women in the other two groups. Finally, even the low fertility trap- hypothesis seems to leave some space for the influence of the family policy. It can be assumed, for instance, that family policy can provide income security for the generations in childbearing age and further, reduce the gap between consumption aspirations and expected income and, consequently, affect childbearing in a positive manner.

Despite the well-grounded theoretical arguments, the empirical findings do not give a particularly strong support to the assumption that family policy would affect fertility. Gauthier's (2007) review of the literature on the association between family policy and fertility reveals that the evidence is mixed and contradictory. Her conclusion is that family policy might indeed influence fertility, though the magnitude of the impact is likely to be small and the possibility exists that the impact has not so much to do with the quantum of fertility, but rather with the tempo (see also Sleebos 2003). McDonald (2002:442) in turn concludes that the studies of policy

²⁷ Especially the Swedish case has gained large attention when fertility and family policy is discussed and several authors argue that family policy in Sweden, supporting both fertility and female employment, has a positive impact on fertility (e.g. Sundström and Stafford 1992; Björklund 2006).

impact on childbearing “/.../ all suggest some level of success for particular policy initiatives in particular places at particular times.” On the other hand, Rønsen and Skrede (2010), who review the evidence on the association between family policy and fertility in the Nordic countries conclude that there is a significant positive impact.

To take a look at some of the empirical evidence, the availability²⁸ of **day care** is commonly held as a crucial factor when it comes to reducing the opportunity costs of women’s labor market participation and enabling the reconciliation of work and family (for further discussion, see Baizán 2009). In support of the theoretical arguments, some studies find that child care has a positive influence on fertility (see Kravdal 1996 for third births in Norway; Del Boca 2002 for childbearing in Italy; Oláh 2003 for the intensity of second births in Sweden; Rindfuss et al. 2007 for first birth timing in Norway; Bonoli 2008 for the level of fertility in Switzerland; Baizán 2009 for first and higher order births in Spain). However, contrary to the expectations, some studies evidence even that child day care supply has a negative influence on childbearing (see Andersson et al. 2003 for third births in Sweden; Rønsen 2004 for first, second and third births in Norway and Finland). Finally, some studies do not find any statistically or substantially significant impact at all (see Hank and Kreyenfeld 2003 for a positive but insignificant effect for first and second births in western Germany; see Lappegård 2010 for Norway). The negative or not-significant results have received several different explanations. Hank and Kreyenfeld (2003), for instance, discuss their non-significant results in the western German context claiming that the problems with the institutional settings of the child care (e.g. inflexible opening hours) and the fact that the other components of the family policy are organized around the male breadwinner principle explain why the child care availability does not have the expected positive influence. Rønsen (2004), in turn, explains her results with the Norwegian and Finnish data by assuming that the availability- variable itself is related to the growth in female labor market participation and that the growing participation, in turn, might signal about stronger commitment to work among the women thus affecting the individual preferences about fertility and employment.

²⁸ Also acceptability, accessibility, quality and costs of child care are likely to play a crucial role when it comes to the decisions about childbearing (e.g. Rindfuss et al. 2003). For instance: Blau and Robinson (1989) who have studied the association between fertility and the costs of childcare in the USA find that high child care costs reduce the fertility of the inactive women, but not of the employed women. On the other hand, Andersson et al. (2003) find that regional variations in child care characteristics in Sweden are not very important determinants of childbearing and draw the conclusion that the overall availability, quantity, quality and costs of day care are already at sufficient levels in all Swedish regions.

Along the availability of child care, **parental leave policies** are said to have key role in facilitating the combination of mother and worker roles and in reducing opportunity costs: A leave in connection to the childbearing makes it possible for a woman to concentrate on child(ren) without losing her job or needing to choose between work and family. Moreover, the parental benefit makes a short leave economically affordable. Many studies find that parental leave extensions, extensions of the so called care leaves, or increases in the compensation for those leaves have had a positive impact on fertility (for timing of the third births in Austria, see Hoem et al. 2001; for timing of the second and third births in Norway, see Aassve and Lappegård 2009; for positive effect on both tempo and quantum in Austria, see Lalive and Zweimüller 2009; for western European countries, see Kalwij 2010). More specifically, Rønsen (2004) finds that the positive influence of the maternity leave extensions in Finland (and Norway) increases by parity. Further, Lappegård (2010) shows that among the Norwegian couples where at least the mother uses the parental leave have higher propensity to progress to second parity than couples where none of the parents uses the leave, yet the opposite is true when progressing to third parity. On the other hand, Gauthier and Hatzius (1997) find that neither the duration of or the compensation for the maternity leave has any influence on fertility, and Vikat (2004) finds that the extension of the home-care leave in Finland has had a positive influence on third, but not on second births. All in all, the Swedish “speed premium” remains as the best known example of the influence of the parental leave policies on fertility. Normally, the compensation for parental leave in Sweden is calculated as a percentage of the mother’s wage prior to the childbirth. Speed premium refers to an important exception from this rule: When the mother gives birth to her next child during a certain time from her last birth, the amount of the compensation can still be calculated from the wage prior to the first childbirth, and not from the income between the births. This kind of premium has found to speed up the progression to subsequent births (e.g. Hoem 1990; Oláh 2003; Andersson et al. 2006).

A third kind of policy instrument that is lifted up in the discussion about fertility and family policy is the financial support directed to families (e.g. Cigno 1986). It is well known that the organization of the **tax and transfers system** varies largely between the countries (e.g. Sainsbury 1999; Montanari 2000; Dingeldey 2001; Nolan 2006), and can potentially influence

childbearing in several ways²⁹. For instance, taxes and transfers alter the income of the family, and according to the economic theory, any changes in the household budget constraint will, in turn, lead to changes in child quality and/or quantity. Moreover, taxation has an impact on the marginal costs of women's employment thus creating incentives or disincentives for the second partner's market employment. In other words, the tax and transfers system is a variable influencing both the degree of role incompatibility, and the level of gender equity within the family oriented institutions. When it comes to taxes and transfers in relation to the preference theory, to give an example, the kind of tax system that supports the male breadwinner organization of the family can be assumed to increase the fertility for the home-centered women (as their fertility is dependent on the income of the family and the possibilities to stay at home full-time).

If only the generosity of the tax and transfers system is examined, there are several studies that find support for a positive influence of family benefits on fertility, both at macro (for 22 industrialized countries, see Gauthier and Hatzius 1997; for the USA, see Georgellis and Wall 1992 as well as Ridao-Cano and McNown 2005; for Switzerland, see Bonoli 2008) and at micro-level (for the USA, see Whittington 1992; for Quebec, see Milligan 2005; for Israel, see Schellekens 2009; for Spain, see Azmat and González 2010; for third births in Norway, see Lappegård 2010). Also, in accordance with many of the theoretical assumptions presented above, the tax system that is organized around the male breadwinner model of family is found to influence women's labor market participation negatively (e.g. Gustafsson 1992). Moreover, Apps and Rees (2004) have found that individual tax system together with an extensive child care supply has a positive influence on fertility rates and women's employment.

²⁹ What needs to be considered when the tax system is discussed is at least the generosity of the tax system (that is, the amount of the financial benefit that is directed to families through the tax system), the organization of the tax system, and its influence on different types of families (e.g. one-earner families with children, two-earner families with children, lone parents). What further complicates the empirical studies on taxation and on the other instruments that alter family income is the fact that such transfers can take many different forms. For example, in some countries child allowances can be considered to be taxable income whereas in other countries they are non-taxable. Moreover, whereas in some countries cash payments can be applied, in other countries the same kind of support can be payable as tax allowances and tax credits. Also, the amount of the transfers might vary depending on the number of children. Furthermore, the tax system is working together with the other policies directed to the families, making it difficult to isolate the influence of the tax system alone: In some countries there might be publicly provided low-cost child care, whereas in other countries the high prices of private child care might be partly compensated in the frames of the tax system as tax deductions (for a discussion, see for example O'Donoghue and Sutherland 1999; Kurjenoja 2003).

Finally, it should be noticed that in addition to the above mentioned policies there might be other family policy- related factors that need to be taken into consideration. For example, the results from the studies on the **domestic division of care and/or household** work suggest that a more equal division of household work or father's attendance on child care can have a positive impact on childbearing³⁰ (for a desire for second child in Austria, see Buber-Ennsner 2003; for second births in the USA, see Torr and Short 2004; for second births in Germany, see Cooke 2004; for second births in Denmark, see Brodmann et al. 2007; for second births in Spain and Italy, see Cooke 2008; for fertility intentions in Italy and the Netherlands, see Mills et al. 2008). In particular, studies conducted with data from Nordic countries conclude that father's take of parental leave increases the probability of continued childbearing in the family (for second births in Sweden and Hungary, see Oláh 2003; for second and third births in Sweden, see Duvander and Andersson 2006; for second and third births in Norway and Sweden, see Duvander et al. 2010). Also, Duvander et al. (2010:53) point out that it is possible that the fathers' take of parental leave signalizes about stronger initial preferences for children, or acts as a means for increasing preferences for children, and/or is a way to reduce the role incompatibility for the mothers. Similar arguments can probably be used also when explaining why a more equal division of household and care work has a positive impact on fertility. However, many of the above cited studies also find that in families where the mother takes responsibility for the largest share of the household/care work, the level of fertility is higher. The study by Torr and Short (2004), for instance, reports that the traditional families where women do over 84 % of the household work also have a higher propensity of second births. Thus, the authors suggest that the relationship between women's share of household work might be U- shaped. Similarly, Duvander and Andersson (2010) find for Norway and Sweden that the mothers who take the longest share of the parental leave have the highest propensity to have a third child. Finally, there is even evidence that suggest that a more equal division of household work does not influence fertility, but the time the woman spends on household work influences fertility negatively (for second births in Australia, see Craig and Siminski 2010).

³⁰ See also the literature on the influence of gender role attitudes on fertility preferences and intentions (e.g. Puur et al. 2008; Miettinen et al. 2011).

3.3 CONCLUDING REMARKS

The aim of this chapter was to review previous research on low fertility. The pages above showed that, as so aptly put by Manne, “All of the leading interpretations of falling fertility /.../ fit *some* of the facts, but *none* of them fit *all* of the facts.” (Manne 2001:9, her cursives). Despite the lack of a unifying theoretical framework we know, nevertheless, plenty about the association between different variables and childbearing at different birth orders and in different countries, or to put it differently, we have detailed information on several subfields of the fertility research but the big picture remains unclear. However, as the review showed, a large and increasing part of the attention has been given to the association between family policy, women’s labor force participation and fertility. Hence, in next chapter we continue with this theme and discuss fertility theory on family policy, female participation and childbearing in the light of the gendered welfare state research.

CHAPTER 4

FERTILITY, FAMILY POLICY AND WELFARE REGIMES³¹

***Abstract:** This paper is inspired by the many similarities between gendered welfare state research and demographic research on the determinants of fertility. The first part of the paper discusses some of the theories on childbearing in the light of the gendered welfare state theory. One important similarity between these two genres is that when work-life choices are studied, the emphasis is on policies which enable women to reconcile employment and family. Support for informal care is accordingly treated as having a negative influence on work-life compatibility, and women are moreover assumed to have homogeneous preferences, i.e., they are supposed to want to combine work and family. However, such an approach does not pay sufficient attention to informal care and to heterogeneity among women, either when it comes to preferences or to behaviour. To address these gaps, in the second part of the paper a new framework to analyse women's work-life choices is developed. The suggested framework gives considerable attention to the way in which formal as well as informal care is supported or enforced in different welfare states and the consequences such support has on women's decision making. Moreover, heterogeneity among women is emphasised, both in preferences and when it comes to behaviour. The central argument is that women's heterogeneous preferences transform differently to different lifestyle career strategies (with regard to employment and childbearing) in different welfare state settings, as each lifestyle strategy is encouraged or discouraged by family policy to differing degrees. Hence, the number of women who choose a particular strategy, as well as the level of fertility, varies between the welfare states. In addition, household resources are assumed to influence the choices that are being made. The argument that is put forward is illustrated with recent data on family policy, women's employment patterns and fertility in the social-democratic (Denmark, Finland, Norway, Sweden), conservative (Austria, Belgium, France, Germany, Greece, Italy, the Netherlands, Portugal, Spain) and liberal welfare states (Australia, Canada, Ireland, the UK, the USA). Moreover, a reinterpretation of the findings on the relationship*

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between family policy, female employment and fertility is provided in the light of the framework outlined.

4.1 INTRODUCTION

For a welfare state researcher, a quick look at total fertility rates (TFR) in the developed countries probably awakens thoughts of the striking resemblance between the welfare regime types and levels of period fertility: In general, the liberal and social democratic regimes experienced relatively high fertility during 1990-2010 (1.7-2.1), whereas the conservative regimes have struggled with low (below 1.5) or lowest-low (below 1.3) fertility.³² However, there are some exceptions to this general rule. Most notably, fertility rates in Canada have been somewhat lower than in the other liberal countries. TFR in Belgium, France and the Netherlands has been only somewhat below or at the same levels as in the liberal and social democratic countries, and finally in Sweden the fertility rates have fluctuated radically, and occasionally approached the 1.5 limit (OECD 2012).

Given the similarities between the welfare state types and levels of fertility, it is not surprising that a number of scholars engaged in the gendered³³ welfare state study discuss the possibility that some welfare state arrangements have an impact on childbearing (e.g. Esping-Andersen 1999; Bettio/Plantenga 2004; De Henau et al. 2006; Fagnani 2007). During the past decades, the influence of family policy on fertility has also been examined by demographers to an increasing extent (see section 3 below). The question of whether and how family policy can influence fertility rates is naturally also of interest to decision makers, who in many countries are worried about sub-replacement fertility levels (UN 2010:7) and wish to take action to increase childbearing (for Germany, see Henninger et al. 2008). However, despite the extensive discussion on the matter, our understanding of the relationship between family policy and fertility is still somewhat limited (Gauthier 2007; Neyer 2011).

In contemporary discussions the recipe for high fertility is often claimed, by both welfare state researchers and by demographers, to be generous family policy which enables the reconciliation of work and family (see sections 2 and 3). Such an approach nevertheless ignores two important issues: Firstly, women have heterogeneous preferences, varying from home-centeredness to work-centeredness, and women with different preferences will respond

³² See section 4.1 for the list of countries included in each cluster.

³³ “Gendered” and “feminist” are used as synonyms here.

differently to different social policies (Hakim 1998, 2000, 2002, 2003a/b). Secondly, the concentration on policies which enable the reconciliation of work and family ignores the role of informal care, the cross-country variation in welfare state support it receives as well as the many changes that have taken place in this sphere (Pfau-Effinger 2004, 2005).

This paper focuses on the relationship between family policy and fertility, and has two aims. Firstly, as the many similarities between gendered welfare state research and research on fertility call for a comparison between these fields, after a short review of the gendered welfare state theories (section 2) we discuss how demographers can learn from gendered research on the welfare state (section 3). Secondly, a suggestion of how Hakim's preference theory and feminist research on the welfare state can be combined into a new framework is put forward (section 4). The central argument made in the paper is that women's heterogeneous preferences transform differently to different lifestyle career strategies (with regard to employment and childbearing) in different welfare state settings, as each lifestyle strategy is encouraged or discouraged by family policy to different degrees, and in addition influenced by household resources. Consequently, the number of women who choose a particular strategy, as well as the level of fertility, varies between the welfare states. These claims are illustrated with recent data on family policy, women's employment patterns and fertility in social-democratic (Denmark, Finland, Norway, Sweden), conservative (Austria, Belgium, France, Germany, Greece, Italy, the Netherlands, Portugal, Spain) and liberal countries (Australia, Canada, Ireland, the UK, the USA). In addition, a brief reinterpretation of the findings on the relationship between family policy, female employment and fertility is provided (section 5). The paper ends with concluding remarks (section 6).

4.2 WOMEN, FAMILIES AND WELFARE REGIMES

A useful starting point for a review of gendered welfare state research is provided by the intensive critique which Esping-Andersen (1990) received from feminist scholars after he had put forward his argument about the tripartite welfare regime typology. Esping-Andersen's well known key idea is that there are qualitative differences between the welfare states and that these differences can be analysed with help of three different indicators. Firstly, the extent of de-commodification (i.e. welfare state protection of workers who are unable to earn their living on the labour market) varies between the welfare states. Secondly, there are cross-country differ-

ences concerning the most important provider of welfare in terms of state, market and family. Thirdly, due to the differences in the degree of de-commodification and the interplay between state, market and family, different welfare states promote different patterns of social stratification. The dissimilarities between the welfare states, analysed along these three dimensions, permit the countries to be classified into three clusters, each characterised by its own logic. In the Northern European social democratic regimes, the state is the major actor when it comes to de-commodification. The benefits are generous and universal, and the system tends to create social equality among citizens. In turn, the liberal Anglo-Saxon regimes only allot a minimal role to the state and rely heavily on market-based solutions, such as private insurance. The market-based practices, combined with a low degree of de-commodification through the state, mainly to the very marginalised groups (means testing), maintain the socioeconomic differences between those who can afford market-based welfare and those who cannot. A third type of de-commodification is put into practice in the Western and Southern European conservative welfare regimes, where the state and the family take on the major responsibility. De-commodification is provided based on the occupational status, and its extent varies accordingly, so that the system maintains the prevailing work-related status composition of the people.

This elegant classification of welfare states initiated a vivid discussion (for methodological problems in Esping-Andersen's work, see Obinger/Wagschal 1998; for a review, see Arts/Gelissen 2002). In particular, feminist researchers accused Esping-Andersen of having based his classification on male standards and of leaving women and the family outside the analysis. Indeed, the worker whom Esping-Andersen has in mind is one with market employment and, consequently, de-commodification is not relevant for the large amount of women who work at home and are not commodified. Further, unpaid household work is also done by women who are in market employment, but as this kind of work is excluded from Esping-Andersen's conceptualisation, the typology unavoidably ignores the family as a provider of care and welfare. It is also worth noting that many housewives are not dependent on the labour market, but on their husbands, and their relation with the welfare state is defined through their roles as mothers and/or wives (not as workers). Finally, women and families are treated differently in different welfare states, and hence welfare state arrangements do not only have an impact on the socioeconomic stratification, as suggested by Esping-Andersen, but also on gender relations (Lewis 1992; Orloff 1993; Ostner 1995; Anttonen/Sipilä 1996; Sainsbury 1994; and for a review, Lewis 1997). In

other words, the feminist critique concentrates on unpaid care work (e.g. Daly/Lewis 2000), which was largely ignored in Esping-Andersen's presentation.

As a result of the feminist critique, Esping-Andersen (1999) integrated the family dimension into his typology with two new concepts, "familialism" (state and market non-provision of welfare services) and "de-familialization"³⁴ (the extent to which the welfare burden of the family is eased through state or market provision of services, or/and through the arrangements within the family). According to Esping-Andersen, the high degree of familialism in the conservative countries discourages female employment, whereas de-familialization in the social democratic countries enables women to become commodified. These new concepts do not change the original typology of the three welfare regime types, although Esping-Andersen acknowledges that there are some differences between the Continental and Southern European countries. Most notably, the degree of de-familialization by the state and within the family is lower in the Continental European countries, child benefits are lower in the Southern European countries and, finally, the tax and transfers system in the Continental European countries creates disincentives for the second earner's employment, whereas this is not the case in the Southern European countries.

Even Esping-Andersen's gendered framework is sometimes claimed to be unsatisfactory (Knijn/Ostner 2002; Pfau-Effinger 2004, 2005; Woods 2006; Leitner/Lessenich 2007). In particular, Leitner (2003) puts forward a more nuanced framework of familialism and emphasises the fact that the state can either support the family in its caring function (familialization) or ease the welfare responsibilities of the family (de-familialization). Further, in Leitner's framework the magnitude of familialization and de-familialization can be either strong or weak, which results in four different combinations of familialism. However, instead of improving Esping-Andersen's conceptualisations, many scholars have concentrated on the creation of completely new frameworks. Lewis and Ostner for example distinguish between three different types of breadwinner regimes, namely strong, modified and weak (Lewis 1992; Ostner 1995). Further, Pfau-Effinger (2004, 2005) emphasises the interaction between institutions and cultural factors and distinguishes between the dual breadwinner family model and the modernised male breadwinner model. Finally, some studies classify countries based on how they cluster when a particular statistical method is applied (Thévenon 2011).

³⁴ Originally introduced to the research vocabulary by Lister (1994) and McLaughlin/Glending (1994).

The results of the above studies in terms of the countries belonging to the different clusters are found in Table 1. As can be read from the table, the number of clusters varies from three to five and has remained relatively stable during the past two decades. In general, the Nordic as well as the Anglo-Saxon countries and the Continental European countries together with the Southern European countries, form one group each. There are some exceptions from this rule. Some studies have found Belgium and France to be more similar to the Nordic than to the Continental European countries (Leitner 2003; Pfau-Effinger 2005), or they are even distinguished constituting a separate cluster (Lewis 1992; Ostner 1995). Southern European countries are likewise sometimes clustered into a separate cluster which is distinct from the Continental European countries due to the limited support for informal care (Leitner 2003; Thévenon 2011, but see also Esping-Andersen 1999). Moreover, in two cases the UK is classified together with the Continental European countries which are biased towards informal care (Lewis 1992, Ostner 1995; Pfau-Effinger 2005), and one of these studies (Pfau-Effinger 2005) also finds that Norway displays certain similarities with the Continental European countries.

In this context, it is important to remember that concentration on the general cross-country differences can sometimes overlook the many goals of family policy. Thévenon (2011) for example distinguishes between six different aims, namely poverty reduction and income maintenance, direct compensation for the economic costs of children, promotion of employment, promotion of gender equity, support for early childhood development and increasing fertility. These aims are adopted to differing degrees in different welfare state regimes, which also translates to the differences in the actual policies. For instance, gender equity and women's employment are given the key role in the Northern European welfare states, whereas Anglo-Saxon countries prioritise poverty reduction and income maintenance. Furthermore, the different policy goals may clash, which can result in inconsistencies. In Austria and Germany, for example, the reconciliation of work and family is to a certain extent supported by parental leave regulations, but at the same time the daycare system is underdeveloped since it has traditionally served the goal of early education (Leitner/Wroblewski 2006).

Table 4.1: Family policy clusters

	I	II	III	IV	V
Lewis (1992), Ostner (1995)	<i>Weak breadwinner:</i> Denmark Finland Sweden	<i>Moderate breadwinner:</i> Belgium France	<i>Strong breadwinner:</i> Germany Ireland Netherlands UK		
Esping- Andersen (1999)	<i>Social- democratic:</i> Denmark Finland Norway Sweden	<i>Liberal:</i> Australia Canada Ireland UK USA	<i>Conservative:</i> <i>Continental Europe:</i> Austria Belgium France Germany Netherlands	<i>Southern Europe:</i> Italy Portugal Spain	
Leitner (2003) (childcare only)	<i>Optional familialism:</i> Belgium Denmark Finland France Sweden	<i>Explicit familialism:</i> Austria Germany Italy Luxembourg Netherlands	<i>De-familialism:</i> Ireland UK	<i>Implicit familialism:</i> Greece Portugal Spain	
Pfau-Effinger (2005)	<i>Dual breadwinner family model:</i> France Denmark Sweden Finland	<i>Modernisation of the male breadwinner model:</i> UK Norway Netherlands Western Germany			
Thévenon (2011)	<i>Continuous strong support for working parents of children under age 3:</i> Denmark Finland Iceland Norway Sweden	<i>High financial support, but limited support for dual-earner families with children under age 3:</i> Austria Belgium France Germany Luxembourg Netherlands	<i>Short leave, support targeted to low-income single parent families and families with preschool children:</i> Australia Canada Ireland New Zealand Switzerland UK USA	<i>Limited assistance for families:</i> Greece Italy Korea Japan Portugal Spain	<i>Long leave but low cash benefits and childcare for children under age 3:</i> Czech Republic Hungary Poland Slovakia

In addition to the country groupings and studies on social policy, many feminist scholars have contributed to the research by evaluating the gender stratification of the welfare state and social policy against the standards of woman-friendliness (Hernes 1987/1989; for critique see Borchorst/Siim 2008), gender equality and gender equity. In these contributions the welfare state is often considered to be the central actor which either encourages or discourages gender equity (Mazur 2002: 15). It is common that three different definitions of gender equity are applied. Probably the most profound argumentation on the issue is that provided by Fraser (1994), who discusses the types of gender equity along the lines of what she chooses to call the “universal breadwinner model”, where gender equity is striven for by promoting female employment, and the “caregiver parity model”, where gender equity is promoted by supporting informal care work. Fraser herself concludes that neither of the models is good enough as they do not require men to change and, consequently, she claims that gender equity can be achieved only when men become more like women, i.e., when men also combine care-giving and employment. In practice, according to Pfau-Effinger (2004, 2005), a somewhat evolutionary view of gender equity has dominated the research, that is a high proportion of public childcare and female labour force participation (high degree of de-familialization) is seen as the woman-friendly and gender-equal alternative, whereas a low share of public child care and female employment (high degree of familialism) is understood as less women-friendly and gender equal. Pfau-Effinger herself has criticised this approach by pointing out that there is evidence of several different paths which are taken to gender equity, and that the one-dimensional frameworks (such as familialization and de-familialization) are not adequate to capture current welfare state developments.

4.3 WHAT LESSONS CAN DEMOGRAPHERS LEARN FROM GENDERED RESEARCH ON THE WELFARE STATE?

In order to exemplify how demographers can benefit from gendered welfare state research, this section compares the theories discussed above on the welfare state with two types of theories on fertility, namely the economic theory on fertility and gender equity and role incompatibility theories.

4.3.1 New home economics and welfare state institutions

The economic theory on fertility treats children as consumer durables and analyses household demand for children with the same tools as demand for any other durable. In this framework, the

number of children is assumed to depend on a household's preferences, the quality and quantity of children, household income and the costs of children (Becker 1960; Becker/Lewis 1973; Willis 1973; Becker 1981/1991). Women's employment and thus their opportunity costs are in turn often presumed to influence fertility negatively. That is, the higher education and income, the higher the opportunity costs and the lower fertility.

The importance of this theory for fertility research has been vast, but one of its drawbacks is that it ignores the fact that choices are made in national institutional contexts which differ substantially, as discussed above. Consequently, it is probable that the economic theory, or at least research based on the theory, would benefit if the knowledge of gendered welfare state research were taken into account when it comes to the differences between the institutional logics in the treatment of the family. Many scholars already refer to welfare state literature when they make hypotheses or interpret the results (e.g. Köppen 2006; Brodmann et al. 2007). However, a more extensive discussion of the institutional constraints in different countries would enable more systematic context-specific hypothesising, and therefore also allow systematic predictions about the influence of the central variables on fertility in different types of welfare states.

It is, for example, well known that women's inactivity influences fertility positively at micro-level (Hoem/Hoem 1989; Berinde 1999; Oláh 2003; Cooke 2004; Kreyenfeld 2004; Prskawetz/Zagaglia 2005; Cooke 2008; Breton/Prioux 2009). As the direction of the impact is well established, the possible differences in the magnitude of the effect should be discussed. The descriptive evidence provided by feminist scholars concerning the welfare state support for informal care could prove to be helpful here. A possible hypothesis could be, for instance, that in countries where the male breadwinner family is generously supported (e.g. Germany), the household income of families where the woman is inactive, and hence the fertility is higher, than in countries where practically no support is provided for male breadwinner families (e.g. Sweden). Other areas where the gendered welfare state theories might help in a similar manner to increase our understanding of the magnitude of the influence are for instance the negative impact of educational attainment on first births (Kreyenfeld 2004; Klein/Eckhard 2007; Westoff/Marshall 2010), and the mixed evidence of the impact of female income, varying from negative (Rønsen 2004; Rondinelli et al. 2010) to positive (Hoem 2000; Andersson 2000; Vikat 2004) and even U-shaped (Kreyenfeld/Zabel 2005) depending on the country and parity that are studied. With a similar logic, considerations of the interaction between welfare state institutions

might help researchers to explain why certain variables sometimes behave contrary to expectations. For example, the weak support for the impact of family policy on fertility (Gauthier 2007) might be better understood by paying more attention to the welfare state institutions and especially to the consistency of family policies (e.g. Leitner/Wroblewski 2006).

4.3.2 Role compatibility, gender equity and de-familialization

The change in the macro-level association between female labour force participation and fertility from negative to positive in the mid-1980s (Ahn/Mira 2002; Rindfuss et al. 2003; but see also Castles 2003) inspired several scholars to theorise about the influence of family policy on fertility and women's employment. For instance, Rindfuss and Brewster (1996), Brewster and Rindfuss (2000) and Rindfuss et al. (2003) argue that, whereas governments in some countries are better at implementing policies that reduce role incompatibility between market employment and parenthood, institutions in other countries have not adapted to the labour force participation of mothers. According to them, high role incompatibility leads to low participation and low fertility, whereas role compatibility leads to both high participation and high fertility. McDonald (2000a/b, 2002), in turn, claims that the size of the gap between gender equity in family-oriented institutions (institutions which deal with people as family members, such as joint taxation) and individual-oriented institutions (institutions which treat people as individuals, such as education and labour market) determines the level of fertility. According to McDonald, the levels of gender equity in the individual-oriented institutions are high at present in all developed countries. Those countries in which gender equity in the family-oriented institutions is likewise high have the highest fertility, whereas those countries where the degree of gender equity in family-oriented institutions is lower, experience lower levels of fertility.

There are several parallels between these theories on fertility and Esping-Andersen's framework on familialization and de-familialization, which is also recognised by the authors themselves (Rindfuss et al. 2003: 415; McDonald 2000a: 1, 2002: 429). Indeed, role compatibility and gender equity are basically de-familialization in disguise: In all theories, family policy which eases the welfare responsibilities of the family is identified as a key determinant of high fertility. Consequently, a very similar critique as that which has been targeted towards the concept of de-familialization can be targeted towards the role incompatibility thesis, as well as to gender equity theory. For example, all three theories in essence exemplify Pfau-Effinger's (see section 2) description of an evolutionary approach to social policy where the changes in informal

care and different developmental paths of the welfare states are ignored and the focus is instead placed on the ways in which the different countries support women’s labour market participation. As I see it, the minor attention given to informal care and to the ways in which it is organised considerably weakens the analytical power of the frameworks discussed above. To put it differently, the theories do not take into consideration that a low degree of role compatibility and gender equity might mean completely different things in different countries, and that this might in turn have different consequences for fertility. Moreover, the increases in role compatibility and gender equity can take different paths, each of which might influence fertility differently.

Table 4.2: Leitner’s (2003) framework on familialism

Familialization	De-familialization	
	Strong	Weak
Strong	Optional familialism	Explicit familialism
Weak	De-familialism	Implicit familialism

Source: Table 1 in Leitner (2003:358).

One way to understand these difficulties which arise from the lack of a profound consideration of informal care is to consider these theories in the light of the framework of Leitner (2003) discussed above. To briefly repeat the argument, Leitner distinguishes between strong and weak defamilialization and familialization, respectively. This distinction results in a framework in which family policy can be classified into four different types (Table 2): Strong familialization and strong de-familialization (optional familialism), weak de-familialization, but strong familialization (explicit familialism), strong de-familialization, but weak familialization (de-familialism), and weak familialization and weak de-familialization (implicit familialism).

If the arguments put forward by the supporters of the role incompatibility thesis, and by McDonald, are considered in the light of Leitner’s framework, it is not very clear what, for example, a low degree of role compatibility and a low degree of gender equity in family-oriented institutions mean. In this case, are we dealing with explicit or implicit familialism, or with both alternatives? After all, the degree of role compatibility and gender equity in the family-oriented institutions is low in both cases, yet in the first case the state supports the family in its caring function (explicit familialism), whereas in the other case the state lets the family survive on its own resources (implicit familialism). A classic example here would be the low degree of childcare provision in the conservative welfare states (weak defamilialiaization), but generous tax

support for male breadwinner families as well as in generously compensated long leave periods, for example in Germany (strong familialization), and the lack of such tax support and shorter, poorly-compensated leave periods in Greece (weak familialization). Despite the common denominator of a low degree of role compatibility, defamilialization and gender equity, it appears logical that fertility is affected differently by family policy in these two countries.

The same logic applies to the rising level of de-familialization: The theories of role incompatibility and gender equity assume that any increase in the degree of role compatibility or gender equity in the family-oriented institutions leads towards higher fertility. Yet it is not clear whether the increases in the level of de-familialization, on the one hand, or familialization, on the other, influence fertility differently, or do so to differing degrees. For example: An increase in childcare supply increases the level of role compatibility and gender equity in family-oriented institutions (strong defamilialization), but does this increase influence fertility in a similar way and to a similar extent as an increase in parental leave periods and compensation (strong familialization)?

These problems naturally do not challenge the core claims made by the supporters of these theories as to the positive impact of generous reconciliation policies on fertility. However, a further specification of these theories might result in a better understanding of the causal mechanisms between family policy and fertility, and thus of the cross-country differences in fertility.

4.4 TOWARDS AN INTEGRATED APPROACH

The introduction of the gendered welfare state perspective on demographic theories on childbearing can probably contribute to a better understanding of fertility behaviour. However, even though the theoretical frameworks on fertility discussed above have significantly increased our understanding of the influence of micro and macro level factors on fertility, none of them has provided us with a comprehensive explanation of the variations in fertility between the countries. Thus, it is reasonable to ask whether a further step should be taken towards a combined theory. One of the many possibilities to take an integrated approach is outlined below. The suggestion of combining elements from both sides of the research is not new, but comparable considerations have been articulated for example by McDaniel (1996), Neyer (2006), as well as by González and Jurado-Guerrero (2006). The approach taken in this paper differs from the earlier attempts in that

it also introduces women's heterogeneous preferences and systematically discusses the way in which these preferences in different welfare states transform into different choices in terms of employment and family.

4.4.1 From preferences to career strategies

According to the preference theory by Hakim (1998, 2000, 2002, 2003a/b), women today have better possibilities to lead the kind of life they want, due to several historical changes which have contributed to a new scenario (contraceptive revolution, equal opportunities revolution, expansion of white-collar occupations, employment opportunities for secondary earners, and the increasing importance of attitudes, values and personal preferences when it comes to the choices made about lifestyle). Consequently, both the variation in women's fertility and labour market participation can be explained with the heterogeneity in women's lifestyle preferences when it comes to employment and childbearing.

Hakim further argues that it is possible to distinguish between three different groups of women based on their preferences: The majority group (40-80 percent of the female population) consists of adaptive women who either wish to combine work and family without giving priority to either of them, or have unplanned careers and drift in a sense that they do not have a clear idea of how they want to lead their lives. These women are highly responsive for example to employment and social policy, as these policies influence working conditions and the degree of role compatibility. A minority of women (10-30 percent of the female population) are home-centred. The primary aspiration of these women is to devote themselves to homemaking, and they usually have large families. Their employment choices are not affected by employment policy (as they prefer not to work, at least not when their children are young), but their fertility is partly determined by social policy, as it influences family income, which in turn influences fertility. Finally, another minority group of women (also 10-30 percent of the female population) is work-centred. For these women, work is their first priority and they only have children, if it is possible in the context of their work. Consequently, and contrary to the other two groups of women, work-centred women are not very responsive to social or family policy. The sizes of the preference groups vary between the countries, as the policies normally support one group of women at the expense of the others. This, according to Hakim, is also the reason for low fertility; when women are not supported in their preferred lifestyles by the government, they have fewer children than they would like to have.

The preference theory is found to be problematic, both when it comes to theory and practice. Several researchers have, for example, accused Hakim of ignoring the fact that preferences alone do not explain women's employment patterns but that women's work orientations are a sum of nationally and culturally different opportunities and constraints (Crompton/Harris 1998a/b; McRae 2003a/b). Furthermore, Pfau-Effinger (2004) has pointed out that Hakim has not made it clear why women choose different labour market careers than their preferences would suggest, as well as why different types of preference have evolved in the first place, and why an individual woman chooses one preference group over the others. Moreover, at the theoretical level it is difficult to draw a demarcation line between the different preference groups (McRae 2003a: 333), whereas at practical level it has proven to be difficult to distinguish between the groups using the existing survey material (Hakim 2003c). The studies support the idea that preferences have an impact on women's employment patterns at least to some extent, but the interplay between preferences and constraints (Doorewaard et al. 2004; Crompton/Lyonette 2005; Kan 2007; Kangas/Rostgaard 2007; Debacker 2008; Gash 2008), as well as the complex association between attitude formation and behaviour (Steiber/Haas 2009), is underlined. Moreover, the employment status and work preferences of mothers with children under school age are found to correspond poorly in most of the countries (Beets et al. 1997; Evans/Kelley 2001; Hakovirta/Salin 2006; Wall 2007). Also, the evidence indicates that women who prefer to have one to two children usually prefer market employment, whereas women who desire larger families more often wish to concentrate on homemaking or work part-time (Lee/Gramotnev 2006). Vitali et al. (2009) in turn find that in the European countries there is an association between employment-childbearing preferences and realised fertility behaviour, whereas no link can be found between preferences and fertility intentions.

All in all, then, although it is clear that more research is needed in order to establish a detailed understanding of women's lifestyle preferences, in the light of the present evidence it appears reasonable to assume that, as suggested by Hakim, women have differing preferences when it comes to childbearing and employment. It further appears reasonable to assume that by studying these preferences it is possible to group women into the three different groups of home-centred, adaptive and work-centred. The starting point of the current framework is thus that, as suggested by Hakim, women have heterogeneous preferences. One of the strengths of this approach is that it acknowledges that women within and between the countries are not to be

treated as one homogeneous group with similar kinds of desires, but that we should expect variation in the responses to, for instance, public policy. Moreover, the theory guides us in the identification of the different groups, and allows us to make suggestions about their relative size in each population.

Even though the assumption about the heterogeneity of women's preferences is warranted, the above literature overview shows that it is not obvious how strongly these preferences influence behaviour. What the findings of the cited studies do show is that women are also heterogeneous when it comes to labour market participation and to fertility. Heterogeneity of behaviour is discussed for example by Bernhardt (2000: 10), who divides women into three different groups according to their "lifetime career strategies in relation to childbearing". The first of these strategies is "career strategy", and it is chosen by women who engage in a demanding career. Given the demanding career, careerists often remain childless or only have one child. The second group of women, according to Bernhardt, chooses a "combination strategy", that is these women are interested in staying in employment, but are also willing to restrict their employment when they have children. Bernhardt further states that these women have more children if society is family-friendly. Finally, the third group of women chooses a "homemaking strategy", which means that they choose homemaking, or at least long periods of homemaking, after the first child is born. This group of women also usually has more children than those who choose the career or combination strategies.

Considering the evidence for and against the preference theory, as well as that on women's heterogeneous choices when it comes to fertility and employment, it appears plausible to assume that the preferred lifestyles are constrained to some degree. It can be similarly assumed that, given the constraints and preferences, women need to make different lifestyle choices when it comes to employment and fertility, and that women consequently end up with realising, at least roughly speaking, either the career strategy, the combination strategy or the homemaking strategy. These different categories proposed by Bernhardt are convenient, as the association between the different preferences and strategy groups is straightforward: Home-centred women prefer the homemaking strategy, adaptive women the combination strategy and work-centred women the career strategy. However, as the preferences remain an important determinant of lifestyle choices, it can be further postulated that when faced with constraints, and if she needs to choose a career strategy not in line with her initial preference, an individual woman will choose

the strategy which bears the closest resemblance to her original desires. In other words, only in a very particular situation will, for example, a home-centered woman who cannot realise the homemaking strategy choose the career strategy instead of the combination strategy.

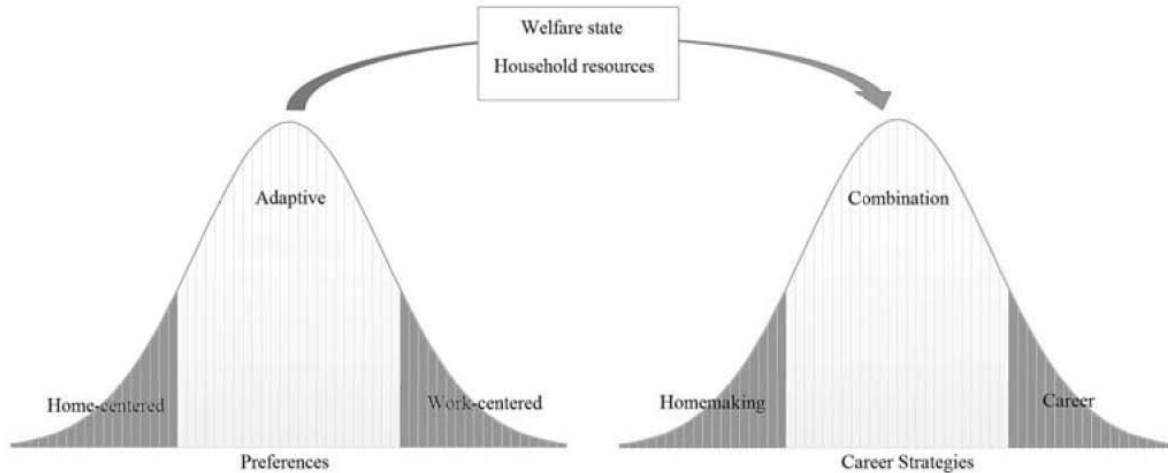
To understand the relations suggested above, it is helpful to think in terms of distributions (Fig. 1). What Hakim basically argues is that the range of women's preferences varies from exceptionally home-centred to exceptionally work-centred, and that three different groups of women can be distinguished within this range. According to Hakim's theory, the three different groups are sufficient to capture the most important aspects of the variation between women, but it is basically possible to divide the female population into even a larger number of groups (e.g. ten groups based on deciles). Hakim furthermore gives some loose suggestions concerning the skewness (the relative size of the different groups) of the distribution. According to her, basically any combination from a positively skewed distribution, where 30 percent of the women are home-centred women, 60 percent adaptive and 10 percent work-centred women, to a negatively skewed distribution, where 10 percent of the women are home centred, 60 percent adaptive and 30 percent work centred, is possible. However, she does not make any comments on the kurtosis (how homogeneous we can expect the women within the three different groups to be).

In a similar manner, we can understand women's career strategies as a distribution where we find women who basically never work (homemaking strategy in its extreme form) at one end and at the other those women who continuously work full-time (career strategy in its extreme form). In between these two extreme types, we find women who divide their time at home and employment differently. Unlike Hakim, Bernhardt does not make any numerical suggestions as to what the distribution of the women might look like. The shape of the distribution (that is the size of the different groups of women as well as the homogeneity within the groups), both when it comes to preferences and to career strategies, is naturally ultimately a matter for empirical investigation.

My suggestion is to link these two theories or distributions together. Were work-family choices to be solely determined by preferences, the distribution based on preferences would be identical with the distribution based on the chosen career strategies. However, because of different constraints that limit women's opportunities, the preference distributions and career strategy distributions are not congruent. Below I will argue that family policy as well as household resources determine the way in which the preference distribution transforms into

career strategy distribution to a large extent.

Figure 4.1: From preferences to career strategies



Source: own design

4.4.2 Welfare state policies, household resources and women's career strategy choices

What kind of contextual factors help or hinder women in realising their preferences, and thus influence the way in which the preference distribution transforms to career strategy distribution? Welfare state researchers, labour market specialists and demographers have pointed out that for example the tax system (Gustafsson 1992; Dingeldey 2001; Apps/Rees 2004), parental leave regulations (Rönsen 2004; Andersson et al. 2006; Lalive/Zweimüller 2009), child care supply (Oláh 2003; Uunk et al. 2005; Baizán 2009) and the possibility to work part-time (Del Boca 2002; Lewis et al. 2008) influence women's labour market participation and fertility and shape the opportunity structures. These macro-level factors might have an impact on both the number of women who choose a certain strategy and on how the different strategies are realised. For instance, some adaptive women might see long periods of part-time work as a means to realise the combination strategy, whereas other adaptive women realise the same strategy by taking a very long parental leave. Further, as there are significant differences between the welfare states when it comes to family policy, it is reasonable to assume that in different countries the preference distributions transform to career strategy distributions differently and to a differing degree.

In addition to welfare state policies, household resources such as financial assets (wage,

income, inheritance) and the number of family members and relatives who can share the burden of childcare with the mother are important for women's choices. For instance: Family income can influence the possibilities to buy good quality childcare, whereas care provision from family members, in turn, is particularly important for working mothers when welfare state support for childcare is inadequate or childcare is expensive. Finally, even childbearing itself can act as a constraint. Under some circumstances (e.g. expensive child care), an adaptive woman might therefore be able to realise the combination strategy by part-time work, but once she has her second child the combination becomes too costly and she has to opt for homemaking instead.

Table 3 shows data on the above variables for selected countries (except for part-time work, as indicators on part-time work measure the number of women working part-time rather than the actual availability of part-time employment). The number of full-rate equivalent parental leave weeks (column 1) and the maximum length of leave for the mother (column 2) show in particular whether and how the choices of the adaptive women, and thus the combination strategy, are supported: The longer and better compensated the leave, the better the support for the realisation of the combination strategy by long inactive periods. The shorter and more poorly compensated the leave, the more restricted the support for the combination strategy with long periods of inactivity, and the higher the incentives for a realisation of the career strategy, homemaking strategy or combination strategy with part-time work. As work-centred women who have children most likely wish to return to employment as soon as possible, the generosity or maximum length of leave periods is not likely to influence their decisions to any great extent, given that all countries provide for the possibility for at least brief leave periods. Homemakers, however, are likely to benefit from long and generous leave periods.

Enrolment in childcare for children under three years of age (column 3) as well as the average hours spent in daycare (column 4) in turn say something about the state support for adaptive and work-centred women: The higher the enrolment ratios and the number of hours in care, the better the support for the combination strategy and career strategy with children. The lower the enrolment ratios and the number of hours in care, the more incentives there are for work-centred women to stay childless. Further, the lower the enrolment ratios and hours in care, the more incentives there are for adaptive women to realise either the combination strategy by limiting their fertility (as it might be difficult to find formal or informal childcare for several children) or choose the homemaking or career strategy. In consequence, if the combination

strategy is too difficult or even impossible to realise, adaptive women might need to choose between having children and remaining inactive, or not having children but work.

The structure of the tax system shows in particular whether and if so what kind of support is available for home-centred and adaptive women. The tax rate for a family where only one of the spouses is in full-time employment (column 6) is an indicator of the disposable income of the family: The lower the tax rate, the higher the disposable income of the one-earner family and the better the possibilities for homemaking or the combination strategy with long periods of inactivity. The higher the tax rate, the more pressure there is for the second earner to enter employment and thus more support for the combination strategy through part-time employment. The family privilege (column 7) is calculated by dividing the tax rate in column 6 by the tax rate of a single person without children (cf. Sainsbury 1999). The closer to the unit the ratio is, the less support there is for the one-earner family model, in other words for the homemaking strategy or the combination strategy with longer employment breaks. Likewise, the further away the ratio is from the unit, the higher the support for the homemaking strategy and the combination strategy with longer breaks from employment. In addition (columns 8 and 9), following OECD (2001: 142), we take a look at how much the net income of a two-child family with average earnings (100-0) increases if the other spouse decides to work short part-time hours (100-33) or long part-time hours (100-67). The closer the net income increase is to the gross income increase (133 and 167 respectively), the more incentives there are for the second earner to enter employment, and the better the support for the realisation of the combination strategy by employment. The lower the income increase, the higher the incentives for the homemaking strategy or the combination strategy with longer inactive periods.

As to the household resources, it is difficult to find applicable macro level data and consequently only the net costs of childcare are included as a percentage of family income for a dual earner family with two children (column 5). Childcare costs are likely to give some indication of how much the strategy choices of adaptive and work-centred women in particular are influenced by household income: The higher the costs, the more likely it is that the choices are determined by income. For example, adaptive women on a low wage might be attracted to homemaking if the costs of childcare make employment unbeneficial.

Table 4.3: Determinants of women's opportunity structures

	Leaves for mother		Childcare for children aged 0-2			Taxation			
	Length of the FRE paid leave (weeks)	Max length (weeks)	Enrolment rate	Average hours of attendance per week	Net costs in % of family income	Tax rate: Single-earner family	Family privilege	Net income when couple works 100-33	Net income when couple works 100-67
	1	2	3	4	5	6	7	8	9
Social democratic									
Denmark	32.3	64	66	34	8	36	0.87	124	152
Finland	35.7	156.5	29	32	7	30	1.00	137	167
Norway	38.8	100	51	33	8	27	0.92	131	161
Sweden	37.7	60	47	34	6	27	1.00	134	163
Conservative									
Austria	35.3	112	12	19	15	32	0.95	132	158
Belgium	14.4	28	48	29	4	31	0.74	126	144
France	43.8	159.0	42	38	11	22	0.79	133	158
Germany	54.6	162.0	18	31	8	24	0.56	123	144
Greece	25.4	73.3	16	28	5	27	1.01	138	170
Italy	23.8	46	29	29	-	22	0.75	129	153
Netherlands	21.3	42	56	23	12	33	0.93	134	162
Portugal	17	30	47	30	4	15	0.65	129	153
Spain	16	162	37	19	-	11	0.59	128	161
Liberal									
Australia	0	52	29	16	10	23	1.00	126	151
Canada	27.5	52	24	20	22	17	0.74	126	152
Ireland	6.6	56	31	31	29	7	0.46	128	152
UK	12.8	65	41	18	33	24	0.94	135	162
USA	0	12	31	32	19	11	0.46	126	153

Notes: Columns 1- 4: Data approximately for 2008. Column 5: Refers to a dual-earner family with full-time arrangements of 167 percent of the average wage in 2004 and two children aged 2 and 3 in full-time care. Column 6: Refers to average payments to government in percent of gross household earnings in 2008 of a couple with two children, where one partner's gross income is 100 percent of average worker earnings, and where the other partner does not work at all. Column 7: Calculated by dividing column 6 with the average payments to government of a childless single person with gross income of 100 percent of the average earnings. Columns 8-9: Calculations based on data on income tax plus employee contributions less cash benefits as percent of gross wage earnings, one partner working full-time, the other working short part-time hours (column 8) or long part-time hours (column 9).

Sources: Columns 1-5, OECD (2012). Columns 6-7: OECD (2008:50). Columns 8-9: Author's calculations based on OECD (2008:52).

The outcomes which are generated by the different opportunity structures are shown in Table 4. Even though the outlined theory concentrates on women's heterogeneity, and in essence requires to be tested with longitudinal micro level data, some trends can even be distinguished from the macro-level data. Employment patterns among couple families with youngest child aged between 3 and 5 (columns 1-4) gives information on the actual choices women make concerning employment and family. The parity-adjusted total fertility rate PATFR (or TFR), and $PATFR_1$ (or TFR_1) (columns 5-6) in turn indicate the level of total and first birth fertility. Finally, the proportion of live births by rank of the children (columns 7-9) sheds some further light on fertility trends.

To organise the data and the discussion, Esping-Andersen's typology is employed. As the review of the gendered welfare state literature in section 2 shows, there is no consensus on how the countries cluster in terms of family policy. However, given that the results from different studies during the past two decades overlap relatively well with Esping-Andersen's typology, his framework is employed here for its overall clarity.

4.4.2.1 Social democratic countries

In social democratic countries, family policy works in favour of the combination and career strategies at the expense of the homemaking strategy. Adaptive women can rely on the generous parental leave arrangements which enable mothers to stay home for long periods without worrying about losing their jobs (the FRE leave varies from roughly 32 weeks in Denmark to almost 39 weeks in Norway, and the time rights are even more generous, particularly in Finland and Norway). At the same time, extensive, affordable childcare³⁵ enables mothers, regardless of their household income, to return to work without difficulties related to the organisation of childcare. Thus, adaptive women are able to combine work and the preferred number of children relatively well, even though they may face constraints such as low local availability of part-time work, which in addition to the childbearing preferences, the costs of children and household income limit their fertility. Furthermore, especially due to the good availability of affordable childcare work-centred women can have children without childbearing needing to interfere too

³⁵ Enrollment rates in Finland are considerably lower, but according to the Finnish legislation the municipalities have to organise childcare for all children below the age of three (Välimäki/Rauhala 2000). The low enrollment rates thus do not signal a limited supply, but rather a limited take-up.

much with their career plans, and consequently the level of childlessness is likely to be low. The homemaking strategy is not supported to any large extent, except for Denmark where the family privilege is relatively high and the second earner's employment is discouraged. In other countries, homemaking is costly and difficult to realise, and many home-centred women are likely to opt for the combination strategy. Those home-centred women who choose the homemaking strategy are likely to be either a group of women whose household income is high enough to enable homemaking, or whose marginal income is low, or who have very strong preferences for homemaking. For these women, as for homemakers in general, the level of fertility can be assumed (as suggested by the economic theory on fertility) to depend on childbearing preferences, on the direct costs of children, as well as on household income.

As to the outcomes, data on women's employment patterns only exist for Finland and Sweden. The relative share of mothers in employment is highest in these two countries in the cross-country comparison and the number of one earner families is the lowest. Notice, however, that it is common in Finland for both partners to work full-time, and the role of part-time work is marginal, whereas in Sweden it is almost the other way around. A somewhat larger share of women in Finland are inactive, which is likely to be due to the extensive time rights connected to leave. In other words, the data suggests that in Sweden women even realise the combination strategy often through part-time work, whereas in Finland the combination strategy is mainly realised by prolonged inactive periods followed by a return to full-time employment. As to childbearing, all four Nordic countries experience relatively high levels of fertility. However, the levels of fertility are lowest in Denmark, which disagrees with the theoretical framework given that Denmark gives the best incentives for all women to choose as they desire. The explanation of this discrepancy might be related to the lifestyle and childbearing preferences of Danish women. Rates for first birth fertility are high for both Norway and Sweden, but are considerably lower for Finland. In all countries the share of first births from the total is relatively low (from 42 percent in Finland to 45 percent in Sweden), which indicates that many women have more than only one child. Notice further that particularly in Finland the share of higher-order births is relatively high, which might be related to the higher share of inactive women: Combination through inactivity might favour larger families than combination through part-time work.

Table 4.4: Indicators of employment patterns and fertility

	Employment patterns among couple families when the youngest child is aged 3-5 (%) ^a				Fertility rate		Proportion of live births by rank of children ^f		
	Both full-time	One parent full-time	One parent full-time, other part-time	Other	Total	First birth	1	2	3+
	1	2	3	4	5	6	7	8	9
Social democratic									
Denmark	-	-	-	-	1.84 ^e	-	43	37	20
Finland	63	19	12	7	1.87 ^b	0.79 ^b	42	33	25
Norway	-	-	-	-	1.98 ^c	0.87 ^c	43	35	21
Sweden	33	15	43	9	1.94 ^b	0.87 ^b	45	36	19
Conservative									
Austria	15	27	51	8	1.41 ^b	0.73 ^b	47	35	18
Belgium	32	23	36	9	1.86 ^e	-	-	-	-
France	46	24	22	8	1.99 ^e	-	-	-	-
Germany	13	30	47	10	1.38 ^d	0.68 ^d	49 ^d	34 ^d	17 ^d
Greece	47	44	6	3	1.52 ^c	0.74 ^c	47	38	15
Italy	30	42	22	6	1.41 ^e	-	-	-	-
Netherlands	4	20	62	14	1.79 ^b	0.83 ^b	45	37	18
Portugal	67	22	7	4	1.41 ^b	0.86 ^b	53	35	11
Spain	38	40	17	5	1.39 ^c	0.77 ^c	57	33	10
Liberal									
Australia	21	30	40	9	1.90 ^e	-	-	-	-
Canada	-	-	-	-	1.67 ^b	0.78 ^b	-	-	-
Ireland	-	-	-	-	2.07 ^e	-	-	-	-
UK	19	28	43	11	1.94 ^e	-	-	-	-
USA	-	-	-	-	2.14 ^b	0.88 ^b	-	-	-

Notes: ^a data for approximately 2007; ^b data on PATFR for 2009, except for Canada and the USA for 2007; ^c data on TFR for 2009; ^d data on TFR for 2008; ^e data on TFR for 2009; ^f data for 2008, except for Denmark for 2005.

Source: ^{a, e, f} OECD (2012); ^b Human Fertility Database (2012); ^c author's calculations based on data from Eurostat (2012); ^d Kreyenfeld et al. (2010).

4.4.2.2 Conservative countries

There is a general bias in the conservative cluster towards the homemaking strategy, and this strategy is accordingly chosen by home-centred women as well as by many adaptive women. Homemakers are likely to have a large number of children, which means that the parity progression ratios to higher birth orders are probably higher in the conservative than in the social-democratic country cluster. Some adaptive women are able to realise the combination strategy, but need to rely extensively on childcare provided by their friends and relatives. Indeed, even though childcare services are relatively affordable, the scarce availability of them means that the

compatibility of work and family is difficult regardless of the household income. Consequently, households resources in terms of childcare provided by relatives and friends are likely to play a crucial role. If this kind of care is not available, homemaking becomes an attractive choice. Moreover, a majority of work-centred women, as well as some adaptive women, are likely to choose the career strategy without children, which results to a relatively high degree of childlessness.

Even though a common general pattern can be identified, there is a considerable variation between the countries in how the mechanism works. Both in Austria and Germany the limited childcare supply and very long leave periods enforce and encourage homemaking, even for adaptive women. The tax system in Germany additionally reinforces the homemaking strategy, but in Austria the tax system encourages part-time work. Also in Greece, the lack of childcare enforces homemaking, but support for adaptive women is even more limited than in Austria and Germany as FRE leave is relatively short. Moreover, the tax system incentivises women's employment and leaves homemakers without support. As to the outcomes, a significantly higher share of mothers in Austria and Germany are inactive in comparison to the social democratic countries. Those women who are in employment mostly work part-time, and in accordance with the tax incentives, part-time work is somewhat more widespread in Austria than in Germany. In Greece, in turn, there is a strong polarisation between those mothers who work full-time and those who stay at home, and the role of part-time work is rather marginal. The level of total and first birth fertility is low in all countries, and the share of first-rank births is somewhat higher than in the social democratic countries. In other words, the data suggests that many women choose the career strategy without children, and those women who choose the combination strategy limit the number of children they have.

For Italy and Spain, it is primarily the restricted length of well-compensated parental leave combined with the considerable male breadwinner bias in taxation that makes homemaking beneficial for both home-centred and for adaptive women. At the same time, childcare supply is better in these countries than in Austria, Greece and Germany, which gives somewhat better possibilities for adaptive and work-centred women to live according to their preferences. As to realised behaviour, the share of inactive mothers in Italy and Spain is at the same levels as in Greece, which suggests that many women in these countries indeed relatively often opt for homemaking or the combination strategy by longer inactive periods. The share of part-time

working women is lower than in Austria and Germany, whereas the share of full-time working women in turn is relatively high. Thus, whereas in Austria and Germany it is mainly the restricted supply of daycare services that force women to choose the homemaking strategy and part-time work, the somewhat better daycare supply in Italy and Spain appears to allow the women to choose the career strategy with full-time work to a larger extent, and the restricted leave periods force them to do so. Notice further that both the total and first-birth fertility rates in Spain are low, and a high share of the births are of first rank. In other words, the data suggests that many women choose to realise the career strategy by staying childless or by only having one child.

Portugal deviates from the patterns in these two countries. Even though family policy structures are relatively similar to those in Italy and Spain in that the leave periods are short and there is a male breadwinner bias in the tax system, the availability of daycare services is relatively good. As to the outcomes, mothers' full-time employment is even more popular in Portugal than for example in Finland and the share of inactive women is likewise at the same level as in Finland. The role of part-time work, in turn, is very marginal. Moreover, even though the level of total fertility is low, the level of first birth fertility is relatively high. Over 50 percent of the births are first births, and only 11 percent third or higher are order births. In other words, Portuguese women appear to a very large extent to choose the career strategy with only one child.

In Belgium and France, in turn, the male breadwinner bias in the tax system enables home-centred women to choose the homemaking career, but at the same time the good availability of affordable childcare in both countries and the long generous leave periods in France enable adaptive and work-centred women to choose according to their preferences. However, the length of the leave periods is more limited in Belgium, which means that Belgian adaptive women are attracted to realise the combination strategy by part-time work to a larger extent than adaptive women in France. The activity data shows that the share of inactive women is indeed slightly higher than in the social democratic countries (as the possibilities to realise the homemaking strategy are better) but lower than for example in Austria, Germany and Greece (as adaptive women are not forced to choose the homemaking strategy but have good possibilities to opt for the combination strategy). Further, the share of part-time working women is higher in Belgium than in France, which is in accordance with the family policy incentive structures. The higher share of full-time working mothers in France in turn suggests that many women realise the combination strategy by longer inactive periods and return to full-time employment. Finally, the

fertility rates in both countries are at the same level as in the social democratic countries, but there is unfortunately no available good quality data on the level of first birth fertility or the distribution of the births by birth order.

In the Netherlands, there is some bias towards homemaking created by the family privilege in taxation. However, in general the tax system encourages part-time work, the relatively short leave periods provide incentives for adaptive women to realise the combination strategy by part-time work and the availability of part-time childcare is likewise relatively good. Consequently, the share of inactive mothers is somewhat lower than in Belgium and France, but still higher than in Sweden and at the same level as in Finland. However, the extremely high share of part-time working mothers (62 percent), accompanied with a very low share of full-time working mothers, cannot be explained with the incentive structures alone. One possibility is that the career strategy is not a very popular alternative among Dutch mothers, or that having children is not very popular among work-centred women. In any case, the huge popularity of the combination strategy is likely to be the main reason behind the high total and first birth fertility.

4.4.2.3 Liberal welfare states

In the liberal countries, there is some support for each career strategy, but women's possibilities to choose according to their preferences often depend on household resources. The family taxation shapes the constraints by favouring one earner families and the homemaking strategy, which makes the homemaking strategy easily available for the home-centred women. Given the lack of well-compensated parental leave and publicly provided childcare, but the good availability of privately provided, expensive childcare, the career strategy choices of adaptive and work-centred women are likely to depend heavily on the initial resources of the family. Many adaptive women can choose the strategy they desire by buying childcare from the market (or by relying on help from their friends and relatives). For those adaptive women who cannot afford market-based childcare, or obtain help in childcare from friends and relatives, homemaking becomes an attractive alternative. Indeed, even though the enrolment rates in the liberal countries are at the same levels as in many of the conservative countries, the reason for the low enrolment is likely to be different. That is, in the conservative countries the low enrolment rates are probably due to the limited supply of public childcare, whereas in liberal countries the low enrolment rates indicate the limited take-up at current high prices. However, some adaptive women, due to the short compensated leave, might realise the combination strategy by working

part-time, whereas some might even opt for the career strategy. Finally, many work-centred women are able to have children according to their preferences due to the availability of private childcare, and hence the level of childlessness is likely to be low, or in other words at the same levels as in the social democratic cluster. Consequently, the overall level of fertility is relatively high. There are some exceptions from these general patterns. Most notably, the amount of FRE leave in Canada is somewhat longer than in the other countries, the tax system in the UK encourages short part-time work rather than homemaking, and childcare costs are relatively low in Australia.

As to the outcomes, it is difficult to obtain a good picture of what is going on in the liberal countries as there is only a very limited amount of data available. The fertility rates are high in all countries except for Canada. Data on first-birth fertility is only available for Canada and the USA, and shows that part of the reason for the low Canadian total fertility is the relatively low level of first-birth fertility. On the other hand, first-birth fertility is relatively high in the USA. The data on women's employment for Australia and the UK in turn indicates that women's realised behaviour corresponds relatively well to the incentive structures. In accordance with the generous incentives for homemaking, the share of inactive women is at comparable levels to Austria and Germany for example. As could be expected based on the limited possibilities to take leave, the share of part-time working mothers is likewise relatively high and indicates that the combination strategy is often realised by part-time work. Notice furthermore that many mothers work full-time, which suggests that a relatively high share of the mothers choose the career strategy.

4.5 PREVIOUS RESEARCH ON FERTILITY, FAMILY POLICY AND WOMEN'S EMPLOYMENT REVISITED

How useful is the framework outlined above when it comes to understanding the previous research on the determinants of childbearing? As to the relationship between employment and fertility, there is a relatively robust finding on the positive influence of inactivity on fertility across the welfare states (see section 3.1). This is consistent with the above framework, given that homemakers and combiners are frequently inactive for longer periods and likewise have more children than careerists. Further, the results from the meta-analysis conducted by Matysiak and Vignoli (2008) show that the negative influence of employment on childbearing increases by parity and is strongest in the liberal and conservative countries, but weaker in the social

democratic countries. These too are results which we would expect based on the outlined framework. The first finding on the increases in the negative influence of employment by parity basically tells us that homemakers (who are inactive for very long periods) and combiners (who are frequently inactive for relatively long periods), have a higher propensity to continue childbearing than the careerists (who are inactive only very seldom and shorter periods) who often stay childless or have only one child. The second finding is also partly in accordance with the claim put forward above: Since the social democratic welfare states create good circumstances for combiners and careerists (that is, for working mothers) to have children, the negative effect of employment on fertility should be smaller in this country cluster than in the conservative countries.

It is further interesting that the results on the influence of part-time and full-time employment on childbearing vary depending on the welfare state. No significant differences in the impact of part-time and full-time work on childbearing is found in the social democratic context (for second and third births in Sweden, see Hoem/Hoem 1989; for second births in Sweden, see Oláh 2003; for second births in Denmark, see Brodmann et al. 2007). However, in the Netherlands (Liefbroer/Corijn 1999) as well as in Western Germany and in the UK (for second births, see Kreyenfeld/Zabel 2005) part-time working women have a higher propensity to have children. This is consistent with the discussion above: In the Scandinavian countries where generous parental leave enable longer breaks from employment and where the daycare supply makes it possible to return to full-time employment, adaptive women realise the combination strategy both by working full-time and part-time, which might explain why no major differences are detected between part-time and full-time working women. However, in the Netherlands, Germany and the UK, where part-time work is the main means for adaptive women to realise the combination strategy and where full-time working mothers are careerists to a greater extent, it is logical that a positive influence of part-time work on fertility is found.

Concerning family policy and fertility, many studies find that childcare – regardless of the welfare state context – exerts a positive influence on fertility (see Kravdal 1996 for third births in Norway; Del Boca 2002 for childbearing in Italy; Oláh 2003 for the intensity of second births in Sweden; Bonoli 2008 for the level of fertility in Switzerland; Baizán 2009 for first and higher order births in Spain; Rindfuss et al. 2010 for the level of fertility in Norway). Likewise, several studies conclude that parental leave extensions, extensions of so-called care leaves, or increases

in compensation for such leave periods, have a positive impact on fertility (for the timing of third births in Austria, see Hoem et al. 2001; for the timing of second and third births in Norway, see Aassve/Lappegård 2009; for the positive effect on both tempo and quantum in Austria, see Lalive/Zweimüller 2009). Since adaptive and work-centred women are responsive to the availability of childcare, and since adaptive and home-centred women are responsive to the generosity of the parental leave, the results are consistent with the framework. Notice also that the positive influence of maternity leave extensions in Finland is found to increase by parity (Rønsen 2004). A likely reason is that extensions in the leave periods create better conditions particularly for home-centred and adaptive women, who respond by having a higher number of children, whereas work-centred women who often only have one child are not influenced by these changes due to the already good possibilities to realise the preferred strategy.

As to the domestic division of unpaid household work, there are several studies which show that a more equal division of unpaid work at home has a positive influence on fertility (for second births in the USA, see Torr/Short 2004; in Germany, see Cooke 2004; in Denmark, see Brodmann et al. 2007; in Spain and Italy, see Cooke 2008), or that the probability of continued childbearing is higher when the father takes parental leave (for second births in Sweden and Hungary, see Oláh 2003; for second and third births in Sweden, see Duvander/Andersson 2006). One interpretation of these results is that the elevated birth risks indicate a higher propensity of adaptive women to proceed to higher parities if they have a supportive spouse who helps them to realise their preferences smoothly. However, Torr and Short (2004) report that those families where the women do a large majority of the household work also have a higher propensity of second births, and Cooke (2004) shows that the more the women spend time on childcare, the higher the risk of second birth. In other words, these results indicate that homemakers who are likely to spend most time on household responsibilities have higher propensity to continue to higher parities. Further, Duvander and Andersson (2006) point out that the risk of a birth in terms of mother's parental leave take is inverted U-shaped for the second births (e.g. the risk is lowest for those mothers who take out least and most leave) and J-shaped for third births. The low propensity of second births for mothers who only take short leave periods in connection with their first birth can probably be attributed to the careerists, who are likely to take the shortest leaves and often have only one child. Likewise, the J-shaped pattern for third births clearly indicates that homemakers and combiners who are likely to take the longest leave also have the

highest propensity to continue to higher parities. However, it is not clear why long leave periods in connection with the first birth would lead to a lower propensity of second births, or why short leave periods in connection with the second birth would lead to a higher propensity of third births.

4.6 CONCLUDING REMARKS

In the first part of the paper, I discussed some ways in which demographers may benefit from gendered research on the welfare state. However, many perspectives on fertility which, for example, emphasise the role of values (van de Kaa 1987, 2002; Lestaeghe/Surkyn 2004), as well as the way in which past fertility and population structures influence current fertility ideals and decisions (Lutz/Skirbekk 2005; Lutz et al. 2006) were excluded from this overview. Thus, in addition to the above mentioned topics and subjects, there might be several other ways in which demographers will find the research conducted by welfare state researchers beneficial. Further, the above review is relatively rough, and future contributions on the topic should be more detailed. Finally, it needs to be pointed out that even though the current paper concentrates on the lessons that demographers might be able to derive from welfare state research, an equally important question is naturally what welfare state researchers can learn from demographers. All in all, a further discussion between these two disciplines is recommended.

The second part of the paper outlined a new framework which emphasises the role of preferences, family policy and household resources in women's decision making. In other words, the framework only concentrated on a handful of variables, even though the research on the determinants of fertility has identified even several other variables which are at play when decisions about childbearing are made. However, individual level variables such as values (van de Kaa 2001), number of own siblings (Murphy/Knudsen 2002; Kreyenfeld 2004), own (Adsera 2006) and parents' religion (Branas-Garza/Neuman 2006; Berghammer 2009), as well as other similar attributes which are found to influence fertility, might partly operate through preferences by having an impact on women's lifestyle desires. Other factors, for instance the level (Kreyenfeld 2002, 2004) and field (Hoem et al. 2006a/b) of education, which have an impact on fertility, might in turn be determined at least to a certain degree by lifestyle preferences. Finally, some factors, such as difficulties to find a spouse (Tanturri/Mencarini 2008), infertility or conflicting preferences on the number of children with the spouse (Voas 2003) naturally also influence the individual women's choices, and may even add to substantial patterns in the overall

population. However, not all women do face these problems and circumstances, but all women make their choices within those structures which are determined by family policy and household resources. To put it differently, the point I want to make here is that in order to understand the cross-country differences in fertility we need to recognise the heterogeneous preferences of women, understand how the contextual factors shape women's lives and carefully study how the preferences transform into choices. How other variables relate to this "big picture" is not unimportant, but it is unlikely that factors such as choices about educational field or conflicting preferences with the spouse would be significantly different or more common in some countries than in others, and such variables are thus likely to have less explanatory power on fertility differences between the countries.

CHAPTER 5

WOMEN'S CAREER STRATEGY CHOICES

IN GERMANY

According to the theoretical framework outlined in previous chapter, the organization of family policy in the conservative welfare states is such that it enables the home-centered women to choose the homemaking strategy. In addition, given that the support for the working mothers is poor, the family policy also enforces many of the adaptive women to choose the homemaking strategy. It was also assumed that in the conditions characterized by high degree of role incompatibility, the work-centered women as well as some adaptive women would choose the career strategy without children. Moreover, it was suggested that the homemakers and the combiners would have a relatively high level of fertility whereas the overall fertility would be low mainly due to the large number of women who choose the career strategy and remain childless.

Germany provides an excellent case to test these assumptions: Independently from which criterion or framework is applied, the country is classified as the prototype of the conservative regime, or at least as a country where the family policy is very conservative and supports the male breadwinner organization of the family (e.g. Ostner 1995; Esping-Andersen 1999; Leitner 2003; Bettio and Plantenga 2004). Therefore, women's career strategy choices in conservative welfare states are in this chapter discussed in the German context. The chapter aims to answer the research questions that were asked in chapter 1.1 from those parts which involve Germany, that is: (1) What is the share of the women belonging to the different career strategy groups? (2) How do the patterns of childbearing (timing, level) vary between the women belonging to the different groups? (3) What are the typical characteristics of the homemakers, combiners, and careerists, and (4) what are the central determinants of fertility within the groups; what kind of similarities and differences can we detect between the groups? The questions are answered by using the data from the German Socio-Economic Panel (SOEP) and by observing the women until they reach

the age of 35. Before going into the details about the method and the results (5.3), a brief description of fertility, family formation, female labor force participation (5.1), and of the preferences, family policy and household's own resources (5.2), is given.

5.1 FERTILITY, FAMILY FORMATION AND FEMALE EMPLOYMENT

In this section the patterns of fertility, family formation and female labor force participation in Germany are discussed (for a more profound review, see e.g. Kreyenfeld 2001 and Dorbritz 2008). Due to the many differences between the FRG and the GDR in these respects, as well as due to the persistence of the differences even several years after the reunification, the review distinguishes between the eastern and western parts of the country. The large regional differences in fertility within the western part of the country (Hank 2001, 2002) are, though, left without discussion.

5.1.1 Patterns of fertility

Both the FRG and the GDR experienced an after-war baby boom, followed by a decline in period fertility from the mid-1960s and it was not until the mid-1970s when the fertility rates in the two German states diverged (Figure 5.1). In East Germany, the TFR increased to 1.94 during the 1970s, thereafter it declined but remained well above 1.5 until the reunification. In West Germany, in turn, the TFR stabilized below 1.5 in the 1970s and has thereafter fluctuated between 1.28 and 1.45. The reunification left the western German period fertility to a large extent unaffected, but in eastern Germany the TFR rapidly declined to below 1.0 in the beginning of the 1990s. However, the crisis³⁶ in fertility was short-lived and signs of recovery could be observed already in the mid-1990s. Since then the TFR in the two parts of Germany has converged, and the TFR was 1.38 in the western Germany in 2007 and 1.37 in the eastern Germany.

The TFR tells, however, only one part of the story and the picture of the similarities and differences between the two parts of Germany changes somewhat when the mean age at birth³⁷ is taken into consideration. In general, the East German women had their births earlier than their

³⁶ A sudden decline of the TFR in the beginning of the 1990s was typical for the eastern European countries (e.g. Sobotka 2003b), but the decline of the eastern German period fertility was particularly drastic. Eberstadt (1994), for example, talks about a "birth shock". Even so, some (e.g. Conrad et al. 1996) claimed that the decline was a first sign of the adaptation of the eastern German women to the western German fertility behavior.

³⁷ Notice also that the variance around the mean age was quite large among the West German cohorts in comparison to the East German ones (chapter 4 in Kreyenfeld 2001).

West German counterparts. For example in 1970 when the trends in period fertility were relatively similar, the MAB was considerably higher in the FRG (26.9) than in the GDR (25.4). Thereafter, the MAB in East Germany remained well below that in West Germany throughout the 1970s and the 1980s, and in the year of the reunification the MAB in East Germany was 28.3, but only 25.1 in West Germany, the difference thus being as large as 3.2 years (Council of Europe 2005:82). The western German postponement of births that had begun for decades earlier continued after the reunification: The age-specific fertility rates for the 25-29 year old women have further declined, whereas for the age groups of 30-34 and 35-39 the trend has been increasing. Even in East Germany some traces of postponement could be observed before the reunification, but since 1990 the rate of postponement has accelerated³⁸. In particular, the fertility rates for the 25-39 years old women have increased considerably during the past two decades (e.g. Pötzsch 2005; Statistisches Bundesamt 2007a:14f).

Figure 5.1: The TFR in Germany, 1955-2007



Sources: Statistisches Bundesamt (2009).

In addition to the above discussed differences in the level and timing of fertility in the two German states, there were even some differences in the ultimate number of children the East and West German women had. For example, for the cohort of 1955 the level of childlessness was

³⁸ According to Kreyenfeld (2001) the sudden decline of the period fertility rates in eastern Germany in the 1990s can be explained with an increasing age at childbearing and especially with the postponement of first births.

higher in West Germany, where 19% of the women remained childless in comparison to only 8% in East Germany. Even the $CTFR_2$ was higher for the East German cohorts, yet the $CTFR_3$ and the $CTFR_{4+}$ were at the same levels in the two German states. Thus, a larger share of the West German mothers progressed from second to third and from third to higher order parities. Consequently, even though the level of fertility in East Germany was higher, the families in West Germany were larger (Kreyenfeld 2003:308).

5.1.2 The changing familial context of childbearing

Many of those changes in family formation that in addition to the decline in fertility and postponement of births are typical to the second demographic transition have occurred to a varying pace and extent in the eastern and western parts of Germany (Tables 5.1 and 5.2). Cohabitation has increased both in western and eastern Germany, but remains higher in the eastern part where 14.9% of all couples were cohabiting in 2004, compared to 10.2% in western Germany. Also the share of cohabiting couples with children is larger in eastern (46.3%) than in western (25.7%) Germany. Moreover, the number of children born outside marriage is higher in the eastern part: In the year of the reunification the share of out-of-wedlock births was 10.5% of all births in western Germany, but as high as 35.0% in eastern Germany. In 2005 the gap was even wider, with 23.1% of births in western Germany and 59.5% of the births in eastern Germany occurring outside the marriage.

Simultaneously with the increases in cohabitation and childbearing outside the marriage, the crude marriage rate has decreased from 8.8 to 4.8 in western Germany and from 8.7 to 4.4 in eastern Germany between 1955 and 2005. During the same period the age at first marriage has in turn increased, from 24.4 to 28.5 in the western and from 23.2 to 28.0 in the eastern part. The increases in the age of marriage and declines in the propensity to marry are accompanied by increases in the number of divorces: The crude divorce rate has during the period 1965-2005 increased from 1.0 to 2.7 in western and from 1.6 to 2.2 in eastern Germany. Moreover, it is interesting how the patterns of family formation in eastern Germany have changed after the reunification: Even though the crude marriage rate was higher in the GDR than in the FRG, the propensity to marry has been lower in the eastern parts of Germany since 1990. The age at first marriage in the eastern parts of the country, in turn, has increased especially after the reunification. Finally, even though the propensity of divorce was higher in the GDR, after 1990

the situation turned upside down as the reunification was in eastern Germany followed by a sudden decline of the divorce rates.

Table 5.1: Indicators of family formation in western Germany, 1955-2005

	(1) Cohabitation, %	(2) Cohabitation with children, %	(3) Children outside marriage, %	(4) Crude marriage rate	(5) Age at first marriage (women)	(6) Crude divorce rate	(7) Children in divorces, %
1955	-	-	7.9	8.8	24.4	-	-
1965	-	-	4.7	8.4	23.7	1.0	-
1975	-	-	6.1	6.3	22.7	1.7	58.9
1985	-	-	9.4	6.0	24.6	2.1	52.5
1990	-	-	10.5	6.6	25.9	1.9	48.6
1995	7.7a	20.4a	12.9	5.7	27.5	2.2	52.4
2000	-	-	18.7	5.4	28.5	2.4	47.1
2005	10.2b	25.7b	23.1	4.8	-	2.7b	49.8b

Notes: (a) refers to 1996. (b) Refers to 2004. Cohabitation in (1) and (2) refers to couples in non-marital-living-forms (“nichteheliche Lebensgemeinschaften”) as a percentage of all couples. The figures in column (2) indicate the share of couples cohabiting with children as a percentage of all cohabiting couples. (3) Refers to the number of children born outside marriage as a percentage of all children. (7) Refers to number of divorces in which children were involved as a percentage of all divorces.

Sources: Columns (1) and (2): Statistisches Bundesamt (2006a). Columns (3) - (5): Statistisches Bundesamt (2009). Columns (6) and (7): Emmerling (2005, p. 1275 and p. 1280).

Table 5.2: Indicators of family formation in eastern Germany, 1955-2005

	(1) Cohabitation, %	(2) Cohabitation with children, %	(3) Children outside marriage, %	(4) Crude marriage rate	(5) Age at first marriage (women)	(6) Crude divorce rate	(7) Children in divorces, %
1955	-	-	13.0	8.7	23.2	-	-
1965	-	-	9.8	7.6	22.9	1.6	-
1975	-	-	16.1	8.4	21.8	2.5	71.0
1985	-	-	33.8	7.9	22.7	3.1	70.2
1990	-	-	35.0	6.3	23.7	2.0	67.0
1995	10.9a	47.0a	41.8	3.5	26.4	1.5	70.7
2000	-	-	51.5	3.9	28.0	2.1	58.3
2005	14.9b	46.3b	59.5	4.4	-	2.2a	52.0b

Sources: See table 5.1.

Despite the overall increases in the divorce rate during the period, the share of divorces to couples with children under 18 years of age has declined in both parts of the country. In year 2004, 49.8% of all the divorces in western and 52.0% of the divorces in eastern Germany

occurred in families with children, whereas the corresponding numbers in 1975 were 58.9% and 71.0% respectively. Stepfamilies are, however, not very common in Germany. Only approximately 13.2% of the families in western and 15.6% of the families in eastern Germany are stepfamilies (Steinbach 2008).

Finally, Table 5.3 shows the variation in the number of children between the couples in different kind of living arrangements. The average number of children among married couples is higher than among cohabiting couples, which in turn is at the same levels as the average number of children among lone parents. Notice also that over 60% of the cohabiting and lone parents with children have only one child, whereas the share of persons who have two or more children in married couples is higher than in the two other living forms. These numbers are in accordance with the studies that evidence about the influence of the marital status on fertility: Having a partner or being married increases the probability of the first child (see Hank et al. 2003 for eastern and western Germany; Le Goff 2002 for western Germany; Schmitt and Winkelmann 2005 on the influence of partnership on childlessness). Köppen (2006), in turn, finds that the second birth risks for western German never married or divorced women is significantly lower than the risk for the married women.

Table 5.3: Marital status and number of children in western and eastern Germany, 2006

	Western Germany			Eastern Germany		
	Married	Cohabiting	Lone parents	Married	Cohabiting	Lone parents
Percentage of all couples with children with						
1 child	45.3	65.6	66.7	59.3	70.4	75.8
2 children	41.6	26.8	26.7	32.2	24.4	19.5
3+ children	13.1	7.6	6.7	8.4	4.8	4.4
Average number of children	1.71	1.44	1.41	1.51	1.36	1.30

Sources: Author's calculations from table 5 in Statistisches Bundesamt (2007b). The average number of children comes directly from table 6 in the same publication. Children are included only if they are under 18 years of age.

5.1.3 Female labor force participation

In the GDR women's labor force participation was common and at the same levels than that of men's. Childbearing did not have a large impact on the activity in the labor market but women with children worked outside the home as often, or even more often, as the childless women³⁹. In the FRG, the situation was the opposite: The gender gap in the participation rates was large and women often exited, either temporarily or permanently, from the labor force when they had children. Moreover, women's part-time employment was more common in the FRG, whereas women in the GDR typically worked full-time. Yet, in both countries the gender pay-gap was almost equally large, and women had the main responsibility for the unpaid household work (Kirner and Schulz 1991; Trappe 1996; Rosenfeld et al. 2004).

Table 5.4: Patterns of female labor force participation in eastern and western Germany, 1991-2006

	1991	1996	2001	2006
Employment rate, %				
Germany West	57.2	58.9	62.3	67.1
Germany East	74.8	71.5	70.6	73.4
Part-time rate, %				
Germany West	-	28.1	-	33.1
Germany East	-	19.8	-	27.4
Unemployment rate, %				
Germany West	7.0	9.9	7.7	10.2
Germany East	12.3	19.9	19.0	18.8

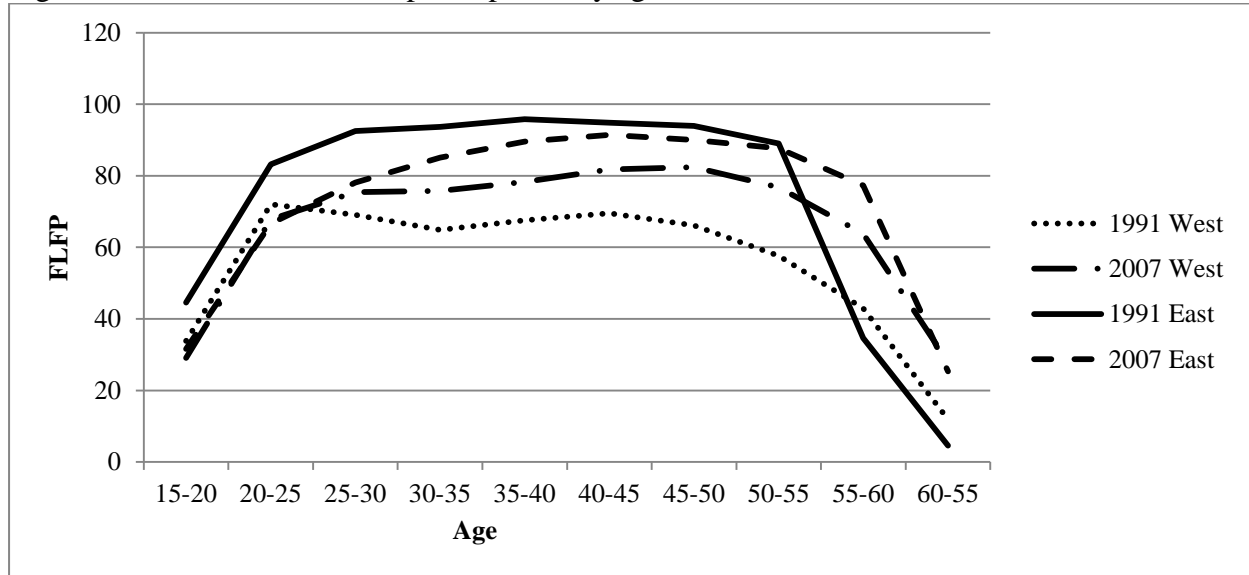
Sources: Data on employment rates is from BA (2009:100), data on part-time employment is from BA (2001:193) and from BA (2009:180). Data on unemployment rate is from BA (2001:186) and BA (2009:173).

After the reunification the eastern German women experienced declines in full-time employment, increases in part-time employment and radical increases in unemployment. These developments meant a tremendous change from the previously continuous employment and secure income (e.g. Kolinsky 1998). At the same time there has been an overall increase in the participation rates in the western parts of the country, but regardless of these changes the eastern

³⁹ The research on the influence of labor market status on fertility in Germany shows that in a similar manner as in other developed countries, the inactive women have higher propensity to have children (for first births, see Schröder and Brüderl 2008; for second births, see Cooke 2004 and Köppen 2006). Further, when labor force participation is broken down to part-time and full-time work, Kreyenfeld and Zabel (2005) find that part-time working western German mothers have higher propensity to continue to second parity than the mothers who work full-time. Schröder and Brüderl (2008), in turn, find that there are no large differences in transition to first births between part-time and full-time working women.

German women still have higher participation rates. Moreover, a lower share of the eastern German women works part-time in comparison to their western counterparts (Table 5.4).

Figure 5.2: Female labor force participation by age, 1991 and 2007



Sources: BA (2009:102f).

A look at the age-specific employment rates (Figure 5.2) shows that the decrease in the eastern German women's employment is to a large part due to a decline in the employment of women in their 20s and 30s, that is, a decline of employment at the ages when childbearing and childrearing commonly take place. For western Germany, in turn, the increase in the overall female employment rate appears to be more equally spread along the different age groups. Notice also that in 2007 the employment patterns for women aged 15-25 are identical but thereafter some differences emerge. The participation rate for the eastern German women increases continuously until the women are in their mid-40s, whereas for the western German women the small increase from ages 15-25 to 25-30 turns into a decline, followed then by a continuous increase for women in their mid-30s. These developments probably reflect the differing impact the children have on the labor market participation in eastern and western parts of the country.

Finally, it is important to bear in mind that these overall rates hide large differences in the employment patterns by the age and number of children⁴⁰. Kreyenfeld and Geisler (2006), for

⁴⁰ See also Fouarge et al. (2010), who discuss the polarization among women when it comes to the timing of the return to the labor market after child birth.

instance, show that both in eastern and western parts of the country the share of mothers who work full-time or part-time increases when the children grow older and consequently, the share of the inactive mothers (or mothers on parental leave) decreases. The association between employment and number of children is shown in Table 5.5. As can be read from the table, the number of mothers who work part-time increases with the number of children in both parts of Germany (an exception is the decrease of part-time work for western German women with three or more children). Interestingly, the share of total and full-time employment in eastern Germany is higher regardless of the number of children, whereas part-time work is more common in western Germany.

Table 5.5: Employment of mothers at age 15-65 (%) by the number of children, 2002

	Western Germany			Eastern Germany		
	Total	Full-time	Part-time	Total	Full-time	Part-time
One child	61.2	24.6	36.6	69.4	49.3	20.1
Two children	60.9	16.4	44.5	71.3	48.5	22.8
3+ children	46.9	12.4	34.5	51.9	28.9	23.0

Sources: Data on full-time and part-time employment rates come directly from Statistisches Bundesamt (2005:34). Total rate is calculated by adding up full-time and part-time rates.

5.2 PREFERENCES, FAMILY POLICY AND OWN RESOURCES

Below we will take a look at the factors that according to the theoretical framework presented in chapter 4 shape women's decisions when it comes to career strategy choices. Firstly, the empirical evidence on women's preferences and attitudes towards employment and childbearing is reviewed. The purpose of this section is to show that the assumptions that in chapter 4 were made about female preference heterogeneity are valid in German context. Secondly, main elements of the family policy are reviewed in order to discuss how the German institutions are likely to influence the different groups of women. Thirdly, previous research on the relationship between "own resources" and career strategy choices is reviewed to show what kind of an impact the household's own resources are found to have on women's employment choices.

5.2.1 Preferences for childbearing and employment

Although there is an ongoing discussion on the interesting changes in the average ideal family size among the German women⁴¹, this evidence is not very interesting if it is assumed that joint preferences on childbearing and employment should be at the centre of the analysis. However, studies that concentrate on joint preferences are still rare. An exception is that of Vitali et al. (2009), which employs data from European Social Survey 2004/2005 in order to classify women into different groups as suggested by the preference theory. The findings are well in accordance with the preference theory: 12% of the German women are found to be home-centered, 72% adaptive and 16% work-centered.

Table 5.6: Ideal choice of German women concerning work and family, %

	Western Germany	Eastern Germany
A full-time job and no children	10.5	6.4
A full-time job and one child	5.1	20.9
A full-time job and two children	5.8	19.6
A full-time job and more children	1.4	4.0
A part-time job and no children	1.6	0.8
A part-time job and one child	13.7	9.4
A part-time job and two children	27.4	21.4
A part-time job and more children	6.3	6.7
No job as long as the children are young	24.0	8.6
No job at all when there are children	4.2	2.1

Source: Dorbritz (2004:351).

In the German Population Policy Acceptance study (2003 round) the respondents were asked about their ideal choice when it comes to work and family (Table 5.6). The results obtained from the study are not suitable to estimate the size of the different preference groups, but nevertheless show that women's preferences vary in a similar manner as suggested by the preference theory. For example, both in western (28.2%) and in eastern (10.7%) Germany there is a minority of women who either wants to remain inactive when the children are young, or does

⁴¹ The research on average preferred family size in Germany indicates that desired fertility in both the eastern and western parts of the country has fallen below 2.0 after having remained persistently above 2.1 for decades (Goldstein et al. 2003; Dorbritz 2008). However, Testa (2007) finds that the mean ideal family size in both parts of Germany has again increased to levels above 2.0, which is well in accordance with Heiland's (2008) conclusions about the instability of fertility preferences in the western German context.

not want to work at all when they have children. Further, 47.4% of the western German women prefer to have children and work part-time, whereas the corresponding number for the eastern German women is 37.8%. The preference for full-time work and children, in turn, is more popular in the eastern Germany, where 44.5% of the women prefer this choice in comparison to 12.3% in the western part of the country. Finally, 10.5% of the western German women and 6.4% of the eastern German women wish to work full-time and remain childless.

Also the studies on the preferred working time of the mothers evidence about preference heterogeneity (Störtzbach 1993; Evans and Kelley 2001; OECD 2001b; Statistisches Bundesamt 2005; Hakovirta and Salin 2006; Holst 2009; Salles et al. 2010). In particular, Beckmann (2002) studies the work-time preferences of the eastern and western German mothers with child(ren) at different ages (under 3, 3-6, and 6-9 years). Independently of the age group of the children, an overwhelming majority (between 60-70%) of both the western and eastern German women preferred the family model of one part-time and one full-time working parent. The western German mothers remained considerably more skeptical to the full-time-dual-earner family (preferred only by under 10% of the mothers) than the eastern German mothers (preferred approximately by 20% of the mothers). The male breadwinner model, in turn, was more popular among the western German women (preferred by over 10% of the mothers) than among the eastern German women (preferred by under 10% of the mothers).

In conclusion, previous research shows that German women have differing preferences when it comes to work and family, but it remains unclear whether women can be classified into three categories as suggested by the preference theory. However, the spectrum of the preferences is large, and varies from the preferences for inactivity or long absences from the labor market when the children are young, to full-time work and childlessness or small families. If the preferences for inactivity and long absences are interpreted as home-centeredness, the preferences for part-time work as adaptive preferences and the preferences for full-time work as work-centeredness, a tentative conclusion that can be drawn based on the above review is that a larger share of the western German women than of the eastern German women are home-centered or adaptive, whereas a larger share of the eastern German women are work-centered.

Finally, it is important to notice that many of the above cited studies which evidence about heterogeneity in preferences also find that the preferred lifestyles do not automatically correspond with the realized behavior. The study by Vitali et al. (2009), for example, finds that

many of the home-centered women work and have remained childless. An illustrating example of the discrepancy between preferences and actual working patterns is given by the results in Statistisches Bundesamt (2005:36f) which show that in 2004 as many as 55% of the eastern German part-time working mothers stated that they worked part-time because no full-time employment was available, but only 5% of the western German part-time working mothers gave this answer.

5.2.2 The institutional context of the career strategy choices

According to the theoretical framework that was put forward in chapter 4, the welfare state institutions can either encourage or discourage certain career strategies, and therefore have a significant influence on the decisions women make. When it comes to East Germany, the family policy supported the dual breadwinner/state carer model of family (Pfau-Effinger and Geissler 2002). Thus, the East German family policy is often given the credit for the high female labor force participation and relatively high fertility (e.g. Ostner 1994; Kreyenfeld 2004). Likewise, the West German family policy, constructed around the principle of subsidiarity, is blamed⁴² for the low female participation and fertility (e.g. Esping-Andersen 1999; Ostner 1995; Bettio and Plantenga 2004). To put it differently, one could claim that the social policy in East Germany promoted the combination and career strategies at the expense of the homemaking strategy. In West Germany, in turn, the bias towards the male breadwinner family meant a support for the homemaking strategy, but at the same time constrained women's possibilities to choose the combination strategy or the career strategy with children. As the empirical part of this chapter concentrates on women who have lived (most of) their reproductive years either in West Germany or in the reunified Germany that adopted the family policy institutions from West Germany, some peculiarities of the (West) German family policy are briefly discussed below. For a profound historical review of the West German family policies, politics and polity from the 1950s and onward, Münch (1990) is recommended.

One of the core instruments of German family policy is the *Ehegattensplitting* which was introduced already in 1958 (e.g. Ostner 1994:43). According to this taxation principle, the total household income of the married couples is divided by two and a tax rate is applied to both

⁴² Contrary to the feminists in other countries, the West German feminists did not require equity through employment, but rather took the difference-approach on gender equity and emphasized the need for compensation for women's unpaid work at home. Thus, the state policy towards families, even though build around the principle of subsidiarity, was much in accordance with the feminist ideas (Ostner 1993).

halves. Thus, the same income is taxed more heavily if the household consists of a single person instead of two persons. The difference in the after-tax income between these two household types is called “splitting advantage” (*Splittingvorteil*), and its size varies depending on the progressivity of the income tax tariff, the division of the income within the household and the total income of the household (for an overview, see Baclet et al. 2005:9; Schlick 2005). The system is by many feminists seen as notorious, especially in combination with a progressive tax system as in Germany, as splitting is known to decrease the marginal income of the second earner and is thus suggested to discourage women’s employment, or alternatively to encourage part-time employment only (e.g. Sainsbury 1999; Dingeldey 2001). If interpreted in the light of the theoretical framework, joint taxation is a social policy instrument that gives the home-centered married women better possibilities to devote to homemaking according to their preferences. At the same time, though, income splitting might become a trap for many women. Especially the women with low labor income might feel discouraged from working, as they due to the splitting would need to work disproportionately much in order to earn a reasonable wage in comparison to the *Splittingvorteil*. Indeed, even though the absolute amount of the *Splittingvorteil* increases with income, the relative advantage of splitting combined with tax allowances for children and child allowances is higher at the lowest income levels (Baclet et al. 2005). Also, the fact that other policy instruments give only limited support for working mothers is likely to strengthen the negative influence of the tax system on labor force participation, and thus make homemaking to a relatively attractive second best choice for the adaptive women who have difficulties to combine work and family according to their wishes.

Those women who wish to combine work and family in Germany have for long been faced with a short maternity leave, an ungenerously compensated long parental leave and a poor provision of child care, although the recent changes in the regulations have aimed to improve the situation of the working women (Ostner 2010). Indeed, the German family policies have recently moved towards adult-worker model, and many of the changes have, surprisingly, been introduced when the Christian Democratic party has had the government responsibility (for the changed in the Christian Democratic position, see Fleckenstein 2011; for party positions and politics concerning family policies in general, see Münch 2004). To take a look at the parental leave regulations, maternity leave regulations have been in place for decades (Kreyenfeld 2004:384), and currently the German maternity leave of 14 weeks is compensated with 100% of the wage

(OECD 2014b). After the maternity leave it is possible to take parental leave and receive parental benefit. The regulations concerning parental leave benefits were introduced in 1979 (for mothers) when the length of the leave was assigned to six months and compensation set to the same levels as that of sick pay. In 1986 the maternal leave was replaced with parental leave, which had the length of ten months. Thereafter the length of the leave was successively prolonged, and in 1992 the duration was changed to three years. Moreover, *Kündigungsschutz* was introduced in 1992, which meant that the employers were not allowed to terminate a mother who decided to take parental leave. The changes in the parental leave regulations in 2001 introduced the possibility to work 30h/week on part-time work while on parental leave. Moreover, the parents were now also given the opportunity to choose if they would like to, instead of the maximum of two years of paid parental leave, take only one year but with a higher compensation (450e/month for one year instead of 300e/month for two years). In 2007 the parental benefit was changed to an earnings-related benefit and in addition two daddy months were introduced. The earnings-related benefit was set on 67% of the wage (up to 1800e/month), but this applies only to the first year (and the two daddy months). In case the parents want to take two years of leave, total compensation remains the same as for the first year, but is now spread over the whole period. In addition to these governmental benefits, some of the *Länder*, with varying rules and regulations, give monetary support for parents on parental leave (Kreyenfeld 2004:281ff; BMFSFJ 2004; BMFSFJ 2005:311f; BMFSFJ 2009).

As to the career strategy choices, the short maternity leave might be enough for the work-centered women who probably want to return to work quickly, but will not be sufficient for the adaptive women. The long parental leave, however, gives the adaptive women some possibilities to choose the combination strategy. The time-rights that are provided are generous, and allow even for part-time work, and make parental leave thus ideal both for the adaptive women who want to combine mother and worker roles by staying at home for longer periods, *and* for those adaptive women who would like to realize the combination strategy by working part-time. The low compensation is nevertheless a weakness. Moreover, even though the parental leave would enable the adaptive women to choose the combination strategy, the limited supply of child care makes both the combination of motherhood and part-time work as well as the return to work before the youngest child turns into three, difficult. Long absences from work, in turn, might lead

to difficulties to find work after the parental leave and long periods of unemployment could thus, transform the chosen combination strategy to an unwillingly chosen homemaking strategy.

International comparisons show that child care supply for children under three years of age in Germany is relatively poor (e.g. Leitner 2003). The German government has tried to improve the situation during the past decades. Most notably, from 1996 all children above the age of three were entitled to a part-time day care place and from 2013 all children who have reached their first birthday have the right for a day care place (Spieß 2011). However, it is questionable how much the guarantee of a day care place for the older children which came into force in 1996 actually improved the compatibility of work and family, given that the availability of day care for this age group was already before relatively high, only part-time day care was guaranteed, and in general the younger age groups are considered as more critical when it comes to the role compatibility.

A distinction between the eastern and western parts of the country is also necessary as the day care in Germany is primarily the responsibility of the local authorities and this has contributed to the maintenance of the pre-unification differences in the child care supply (Evers et al. 2005). As the Table 5.7 shows, the availability of child care for the age group of 0-2 has increased in western Germany from 1990, but is still below ten percentages. The coverage in eastern Germany for the same age group has declined since the reunification, but is still approximately 40%. For the age group of 3-6 years, the western parts of the country have reached the coverage level of 85 %, whereas in eastern Germany the coverage is slightly higher.

To sum up, during the time span of this study the German family policy has actively encouraged and enforced homemaking by giving less choice to those who would like to realize the combination and career strategies with children. Due to the *Ehegattensplitting* the German family policy provides the home-centered women with good possibilities to choose the homemaking strategy. However, combination of the tax system and insufficient provision of child care might enforce some of the adaptive women to choose the homemaking strategy. As the tax system does not treat part-time work as disadvantageously as it treats full-time work and as the parental leave makes it possible to take longer breaks from work in connection to the childbearing, part-time work and/or longer periods of inactivity might appear as attractive combination strategies for many of the adaptive women. Nevertheless, many adaptive women might not have the possibility to realize the combination strategy with the means that are

provided, but choose to remain childless and stay continuously active in the labor market instead. Finally, the work centered women who would like to have children face the same problems as the adaptive women, which probably results in that many will remain childless. Notice, though, that due to the better availability of child care, the eastern German adaptive and work-centered women are in a better position to realize their preferences⁴³.

Table 5.7: Availability of day care (% of the age group), 1990-2006

	0-2 years of age		3-6 years of age	
	West	East	West	East
1990/1991^a	1.8	54.2	78.3	114.3
1994	2.2	41.6	73.0	96.2
1998	2.8	36.3	86.8	111.8
2006^b	8.0	39.7	86.1	92.4

Notes: (a) Refers to the situation in 1990 in western Germany and situation in 1991 in eastern Germany. (b) Refers to enrollment instead of the availability of day care.

Sources: For 1990-1998: Deutsches Jugendinstitut (2002:34). For 2006: Deutsches Jugendinstitut (2008:13).

5.2.3 Household's own resources and career strategies

In addition to the joint preferences and institutional context, household's own resources were argued to be important for the career strategy decisions. When it comes to education and income, no assumptions on the association between these variables and career strategies in the conservative cluster were made in the theoretical framework as, due to the lack of market-based day care, higher education or income does not necessarily mean better possibilities to combine work and family. Yet, previous studies on the association between education and employment in Germany show that the higher the education, the higher the propensity to work part-time or full-time instead of being inactive (Kreyenfeld and Geisler 2006; Konietzka and Kreyenfeld 2010). Further evidence also shows that highly educated mothers and mothers with high income are

⁴³ As an excursion it can be mentioned that the studies on the association between child care and fertility in the German context are rare, and give hardly any support to the importance of child care to fertility decisions. Hank (2001) finds that local child care supply has a negative influence on the total level of fertility in the western German regions, and suggests that parents in areas where fertility is low probably require more child care for their children. In a multilevel approach on first and second births in western Germany, Hank (2002) finds that regional child care availability does not have either statistically or substantially significant impact. Likewise, in a multilevel analysis, Hank and Kreyenfeld (2003) find a positive but a statistically non-significant impact on first births in western Germany and explain the result with the practical problems connected to the provision of child care (e.g. inflexible opening hours), and the male breadwinner model of family pervading the organization of family policy.

more likely to return to work sooner after the parental leave (Kuhlenkasper and Kauermann 2010). Even though these results do not tell anything about the long term decisions concerning employment and childbearing, they nevertheless suggest that high education and income are correlated with the combination and career strategies whereas low income and education seem to associate with the homemaking strategy. This conclusion seems reasonable also if we consider that the tax system benefits the families with lowest incomes most and thus increases the incentives of the low educated women with low expected market income to remain inactive.

As to the husband's education and income, Matysiak and Steinmetz (2008) find that both in the eastern and western parts of Germany, women with non-working husbands have an increased probability of inactivity. On the other hand, if the husband is working, the higher his education is, the higher is also the risk that the wife is inactive. This, though, applies only for the western German families, whereas the effect was not found for the eastern German married couples. Further, Kreyenfeld et al. (2007) show that among those western German couples where the wife has higher education than her husband, or where both are college educated, the wife has higher propensity to work full-time than if both the husband and wife have no higher education. Moreover, when the husband has higher educational qualifications than his wife, the wife's propensity to work full-time is lower in comparison to all the above mentioned groups. If these results are interpreted in the light of the theoretical framework on career strategy choices, they indicate that in the western parts of the country women with either a non-working husband or with a husband with high education have an increased propensity to choose the homemaking strategy. Husband's higher education, in turn, seems to lead the women to realize the combination strategy by working part-time.

In addition to education and income, the person(s) who help the mother with child care were included in the definition of household's own resources. It was assumed that, considering the poor provision of child care in Germany, this resource would many times be decisive for women's possibilities to realize their preferences. The data in Table 5.8 on the organization of child care during mothers' working time in 2005, differentiated by the age of the youngest child, illustrates the relative importance of household's own resources⁴⁴. The numbers show that only

⁴⁴ Notice also that Cooke (2004) finds that one percentage point increase in child care provided by the husband increases the propensity of second birth in Germany with one percentage. Moreover, Ete and Ruckdeschel (2007) find that informal care has positive influence on the desires to have second child. Further, Hank et al. (2003) find that when the grandmother is living in the same district, the transition to first births is significantly higher for the western

approximately one fourth of the working mothers with children under three years of age rely on child care services when they work. 36.5 % of the working mothers rely on care provided by partner living in the same household and 27.7 % rely on the help of the relatives, neighbors and friends. The relative importance of child care services grows to 52.1 % when the children are between 3-5 years old, which is logical given that the supply of day care is better for children in this age group. At the same time, though, partner and social networks remain as important sources of child care.

Table 5.8: The organization of child care when the mother is working in 2005, %

Age of the youngest child	Child care services	Partner living in the same household	Relatives, neighbors, friends	No child care
0-2	25.7	36.5	27.7	n.a.
3-5	52.1	21.1	19.7	n.a.
6-9	23.1	24.8	25.4	26.7
10-14	n.a.	22.8	11.8	60.4

Source: Statistisches Bundesamt (2006b:21).

5.3 CAREER STRATEGIES AND FERTILITY: EMPIRICAL FINDINGS

Above it was discussed how preferences, family policy and household's own resources might be related to choices women make about employment and childbearing. In this section, the choices of German women are studied by employing the data from German Socio-Economic Panel (SOEP). The section is organized as follows: Firstly, women are classified into different categories based on their lifetime career choices, and the characteristics of women belonging to each group as well as the patterns of childbearing within each group are discussed. Secondly, the regression technique and the variables that are included in the analysis are briefly reviewed, and the results of the regression analysis are presented.

5.3.1 Classification of women into the different career strategy categories

The first step in the analysis is to distinguish between women who have chosen different strategies. In principle this would require that we follow women throughout their reproductive years, but in practice the availability of such longitudinal data is restricted. The study

German women. Analogous result is also found by Hank and Kreyenfeld (2003), who however find that this kind of family networks do not have any influence on the propensity of having the second child.

compromises with the theoretical requirements and practical data availability by following women until they reach the age of 35. Although many women have children even after this age, the mean ages for first, second and third births for the cohorts that already have ended their childbearing have been below 35 (Statistisches Bundesamt 2008:58) and the information on childbearing patterns up to this age should thus be instructive.

The original SOEP-sample consists of West German households, but other samples have been added during the years. Women can enter and exit the panel at any age. Due to the requirement of the long follow-up period, all women from cohorts 1965-1972 who exited the panel before the year of their 35th birthday were excluded from the analysis. As the information of the yearly activity status employed in the analysis is collected also retrospectively, the date of entry into the panel is irrelevant, although there is a risk of recall-bias. All the eastern German women who were born before 1970 are excluded, as the purpose is not to study childbearing in East Germany and likewise, those women who have immigrated to Germany after they had reached the age of 15 were excluded from the analysis.

A problem related to the yearly activity statuses is that multiple statuses for one year were allowed, that is, a person could say that she was, for example, both studying and working part-time during the year. Using Newspell (Pischner 2005), a program that is developed to deal with the SOEP-data, the activity statuses were re-examined in order to eliminate the possible multiple statuses. This was done by giving priority to certain spells over all the other ones. The activity statuses “school, college”, “apprenticeship, training” and “military, civil service” were given the first priority (the group is labeled for “in education”). Next, “part-time employment”, “unemployment” “housewife, husband” and “full-time employment” were given priority in the mentioned order. Finally, “pensioner” and “other activity”, were together grouped into the last priority group, which was labeled for “other”. After the multiple statuses were eliminated, durations of the different statuses were added together.

The distinction between the three different lifetime career strategy groups was made based on the length of the different activity phases: (1) Women who have been unemployed or/and housewives or/and been included in the category “other” totally six years or longer are classified as homemakers (that is, these women have not been in education, or in part-time or full-time job at least for totally six years). (2) Those women who have been studying and/or in full-time work during at least 16 years are classified as careerists. (3) All women who have not

been classified as homemakers or careerists are assumed to be combiners. In other words, this group consists of women who have at least during two years been in part-time work, been unemployed or housewives, or belonged to the category “other”, but who have not been inactive, unemployed and/or belonged to the category “other” for more than five years. All women for whom there was not enough data on activity history to make the categorization were excluded from the analysis, which means that we were left with 1400 women. The survey suffered from attrition and for example households with low income, female head or individuals who had experienced separation from partner were underrepresented (Pannenberg et al. 2005). To improve the representativeness of the results, the individual weights that are included in the SOEP-data were employed when the relative size of each career strategy group, the number of children and characteristics of the women were estimated.

The findings on the number of women who chose the different career strategies (Table 5.9) indicate that by the age of 35, 24% of all women have chosen the homemaking strategy, 48% the combination strategy, and 28% the career strategy. Thus, the results evidence about a polarization among the female population. It is naturally possible, if not likely, that some changes will occur even after the women have reached their mid-30s and that the ultimate share of women in each category is somewhat different than what the results above indicate. Some of the women now classified as combiners might stay inactive for long periods and end up as homemakers. Likewise, some of the women now classified as careerists might after the observation period work part-time or remain inactive for so long that they would be classified as combiners or homemakers. To put it differently, the relative share of the homemakers can only grow, the share of the careerists can only get smaller, but the influence of the possible changes on the share of the combiners remains unclear.

As to the childbearing, the average fertility of all women is estimated to be 1.23. The official estimate for the cumulative cohort fertility for the cohorts of 1965-1972 is 1.26 (Human Fertility Database 2011), which indicates that although the results of this study somewhat underestimate the cumulative cohort fertility, the overall representativeness is nevertheless quite good. Further, according to the present study as many as 29% of all women are still childless when they reach the age of 35, and 32% are at first, 29% at second, 8% at third and 2% at fourth or higher parity. Unfortunately there are no official estimates on the parity distribution of the women, to which these findings could be compared.

Table 5.9: Lifetime career strategy categories and fertility, cohorts 1965-1972

	All	Homemakers	Combiners	Careerists
Number in population, %	100	24	48	28
Number of children, %				
0	29	8	15	73
1	32	23	41	23
2	29	39	37	5
3	8	22	6	0
4+	2	8	1	0
Average fertility	1.23	1.99	1.38	0.32

Notes: Twin and triple-births were included when the number of women at different parities was calculated.

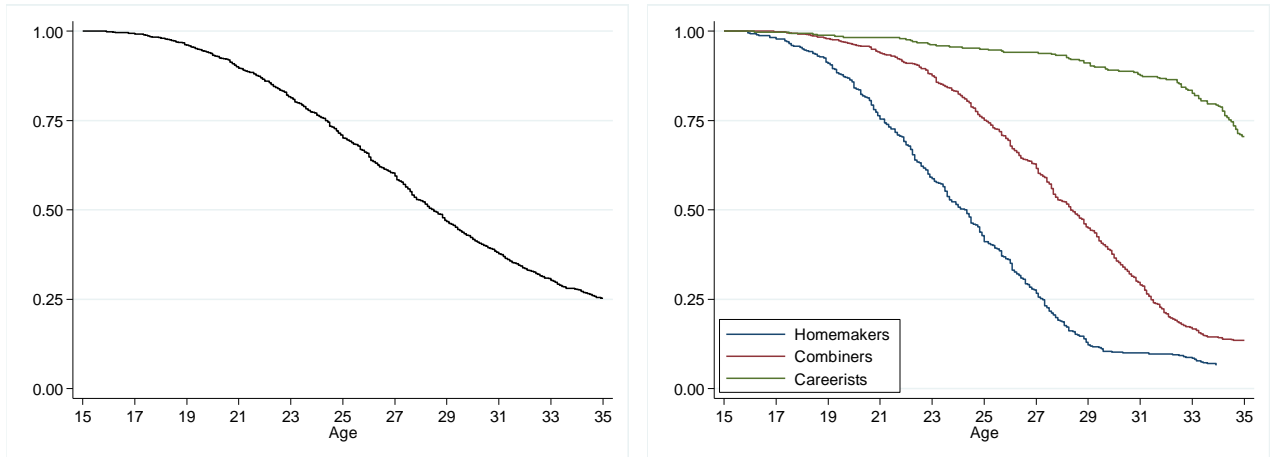
A look at the total average fertility for each group reveals that the homemakers experience a near replacement fertility of 1.99. The combiners, in turn, experience a considerably lower level of average fertility, 1.38, and the average fertility of the careerists is as low as 0.32. A detailed inspection of the number of women at different parities within and between the groups shows that as many as 73% of the careerists are still childless. At the same time, only 8% of the homemakers have not yet entered the motherhood. Moreover, it is noteworthy that of those careerists who have children, only a quite small amount (5%) has continued to second parity. The homemakers, in turn, have largest families. As many as 22% of the homemakers have three children (this can be compared with 23% of the careerists with only one child) and 8% have four or more children. The combiners are found somewhere between these two extremes. Many combiners (15%) are still childless, they have larger families than the careerists but smaller families than the homemakers. All in all, even though the women included in the study are still fecund more than a decade and some changes in the total and parity specific fertility is to be expected, it is evident that there at the age of 35 is a considerable polarization in childbearing between the three groups.

Table 5.10: Contribution to fertility by women belonging to the different groups

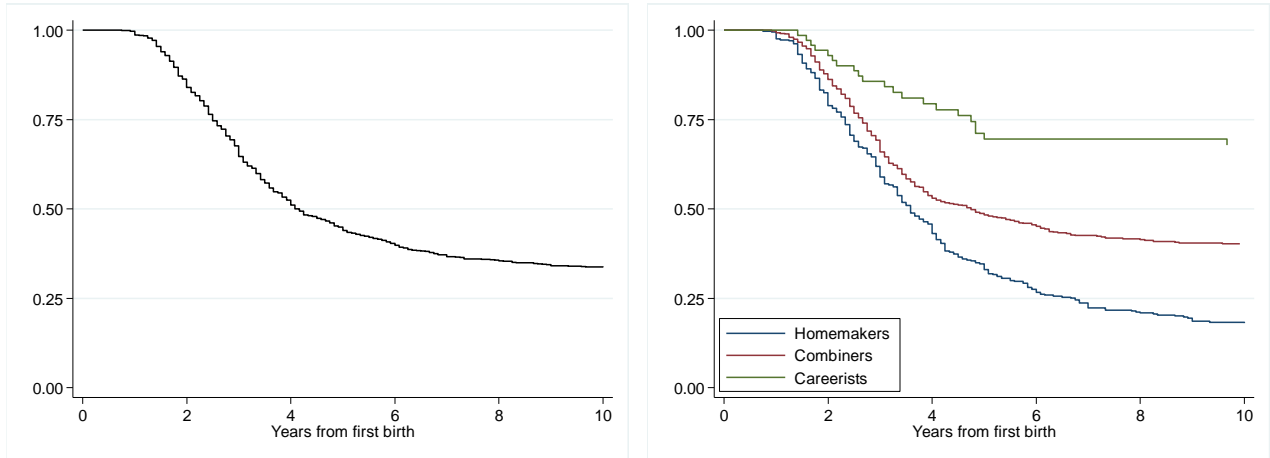
	All	Homemakers	Combiners	Careerists
0	100	7	24	69
1	100	18	62	20
2	100	33	62	4
3	100	65	35	0
4+	100	82	18	0
Average fertility (%)	100	39	53	7
Contribution in units	1.15	0.48	0.66	0.09

If we then change the perspective and consider the relative contribution of each group to total fertility as well as to the parity-specific fertility (Table 5.10), we notice that even though the homemakers consist of only $\frac{1}{4}$ of all women, they are responsible of 39% of the total average fertility of the whole female population. This can be explained by the fact that the contribution of the homemakers at higher parities is important: 65% of all women with three children and 82% of all women with 4+ children are homemakers. The contribution of the combiners to the total average level of fertility is 53%, which is slightly more than their relative share of the population. Notice that a majority of the women at parities 1-2 are combiners. Finally, the contribution of the careerists to the total average fertility is only 7%, although their share of the female population is 28%. This extremely low contribution is mostly due to the fact that as many as 69% of the German childless women are careerists.

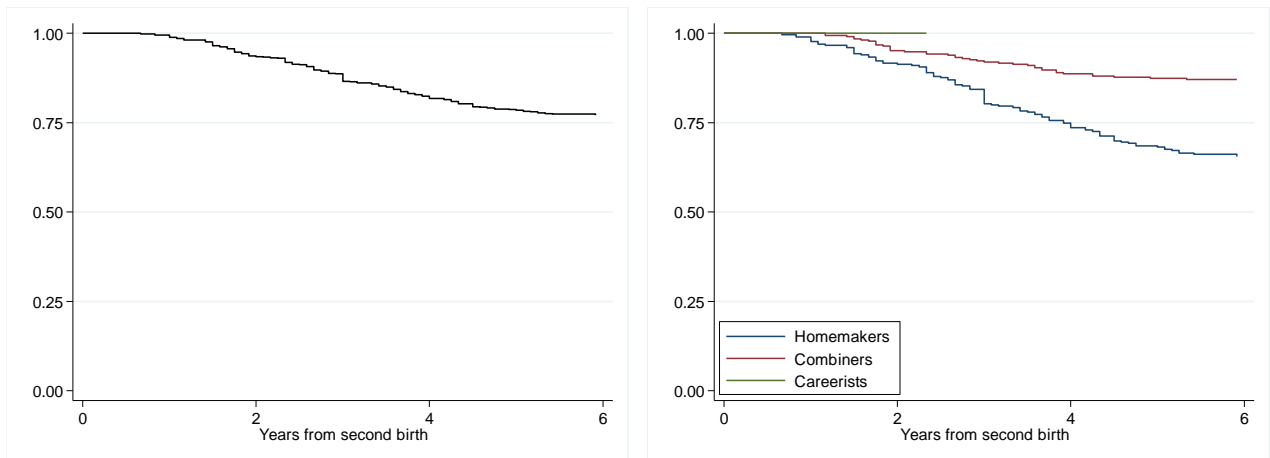
Figure 5.3: Transition to first, second and third parity before the age of 35



Transition to motherhood by age: All women, and women by career strategy



Transition to second parity in years from first birth: All women, and women by career strategy



Transition to third parity in years from second birth: All women, and women by career strategy

As to the timing of fertility, the Kaplan-Meier survivor curves for all women as well as for each group of women separately are shown in Figure 5.3. Notice that the survivor functions are based on non-weighted values, which means that they give somewhat different results than those which are shown in Table 5.9. Nevertheless, they are likely to give a good overall impression of the most important trends within and between the different groups. A comparison of the Kaplan-Meiers when it comes to the entry into motherhood reveals that the homemakers are the fastest ones to have their first child, followed by the combiners and the careerists. The result is an expected one: As so many homemakers have already progressed to higher parities they must have started their childbearing relatively early. However, it is noteworthy that the transition pattern for the homemakers and for the combiners is very similar, except that the homemakers start their childbearing earlier. The careerists, in turn, experience very different patterns of first birth transition characterized by a slow entry into the motherhood at older ages. Finally, as an interesting detail it can be pointed out that although childbearing before the age of 20 is, in general, not very common, it is most common among the homemakers. This could mean that the women who have children in their teens have strong preferences for homemaking, or alternatively that the women who have their first child in their teens have difficulties to establish their position in the labor market.

As the women are censored when they reach the age of 35, the transitions to second and third parities reflect much more the timing of the first births and the intervals between the first and second, as well as second and third births than any ultimate trends. For this reason, the Kaplan-Meiers for these birth orders do not deserve any lengthy comments. A general impression is that a similar pattern as for the first births is repeated, that is, the homemakers are the fastest to have subsequent children, followed by the combiners and finally by the careerists. Interestingly, the differences between the homemakers and combiners are relatively minor when it comes to the transition during the first four years after the childbirth. Finally, at all birth orders, the Kaplan-Meier for all women appears to be positioned somewhere between that of the homemakers and combiners.

5.3.2 Characteristics of the women

In Table 5.11 information on the characteristics of the women when it comes to their place of birth, place of upbringing, mothers education and frequency of attending religious services (measured at the year or at the year before the last interview) is shown. The first observation that

can be made is that relatively many homemakers (12%) have immigrant background in comparison to the combiners (3%) and the careerists (1%). This might indicate that the women with immigrant background often have home-centered or adaptive preferences, or that they face particularly many constraints in the labor market which enforces them for longer inactive periods and/or part-time work. As to the career strategy choices of the East and West German women, 7% of the homemakers, 12% of the combiners and 4% of the careerists are from East Germany, whereas 81% of the homemakers, 85% combiners and 95% careerists are from West Germany. The finding is in accordance with the above discussed preferences of the German women.

As to the place where the women grew up, there are no larger differences between the groups, except that a relatively large share of the homemakers (40%) and of the careerists (35%) comes from the countryside in comparison to the combiners (28%). The data on mother's education, in turn, shows a relatively strong correlation to the chosen career strategy. The homemakers have, in general, less educated mothers than the combiners and the careerists: Of the homemakers' mothers, 7% has no education, the comparable number being 3% for both the combiners and the careerists. Likewise, 77% of the homemakers have a mother with secondary school education, in comparison to 65% of the combiners and 59% of the careerists. Further, a larger share of the careerists' mothers had an intermediate education (32%) compared to the combiners (28%) and especially to the homemakers (9%). Notice also that the careerists are somewhat more likely to have a mother with upper secondary school level education.

Finally, the data on the attendance on religious events suggests that the homemakers and combiners are more religious than the careerists. The homemakers are slightly more likely to attend religious events weekly (12%) in comparison to the combiners (7%) and the careerists (5%). The combiners, in turn, are most likely to attend services monthly (11%), followed by the homemakers (8%) and careerists (5%). Further, the homemakers and combiners are less likely to attend events less frequently (36% and 37% respectively) in comparison to the careerists (44%).

As to the educational attainment of the women and their current spouses, the SOEP-data included a transformation of German educational degrees into the international ISCED97 classification, and this classification was used here (ISCED97 levels 1 and 2 were here classified as low education, levels 3 and 4 as medium and 5 and 6 as high education). As can be read from the table, the careerists are the most highly educated group, whereas the educational level is lowest among the homemakers: There are almost as many careerists with low education (6%) as

there are homemakers with high education (10%). Likewise, the number of careerists with high education (36 %) is almost comparable to the number of homemakers with low education (29%). Of the combiners, in turn, 8% has low education and 29% has high education. Thus, the women with no education often choose the homemaking or the combination strategies, while the highly educated women choose the combination or the career strategies. These results on the association between career strategy choices and education are hardly surprising as the previous research discussed above shows that high education correlates with activity in the labor market, whereas low education correlates with inactivity. Notice, however, that 61% of the homemakers, 63% of the combiners and 58% of the careerists have medium level education, which means that medium level education is not as good predictor of the career strategy choices as the low or high education.

Table 5.11: Descriptive findings on the characteristics of the women, %

	All	Homemakers	Combiners	Careerists
Country of origin				
West Germany	87	81	85	95
East Germany	8	7	12	4
Other	5	12	3	1
Place of upbringing				
Large city	24	21	24	24
Medium city	21	17	24	19
Small city	23	22	24	22
Countryside	33	40	28	35
Mother's education				
No degree	4	7	3	3
Secondary school	66	77	65	59
Intermediate school	25	9	28	32
Upper secondary school	3	2	3	5
Other	2	4	2	1
Attends religious events				
Weekly	7	12	7	5
Monthly	9	8	11	5
Less frequently	39	36	37	44
Never	45	45	45	46

Notes: The columns for each characteristic add up to 100.

Finally, when we take a look at the current partner and his education, we can observe that the homemakers are the ones most likely to have a partner, and that the difference between the least partnered group, the careerists, is substantial (23% of the homemakers have no spouse,

whereas 42% of the careerists are not partnered). Of the partnered women, the homemakers are more likely to have a partner with low or medium education in comparison to the combiners and the careerists: 12% of the homemakers, 8% of the combiners and 5% of the careerists are partnered to a spouse with low education, the percentages being 58%, 52% and 51% concerning the partners with medium education. Finally, 30% of the partnered homemakers, 40% of the partnered combiners and 44% of the partnered careerists have a spouse with high education.

Table 5.12: Descriptive findings on education and spouse's education, %

	All	Homemakers	Combiners	Careerists
Education				
Low	12	29	8	6
Medium	61	61	63	58
High	27	10	29	36
Spouse's education				
No spouse	31	23	28	42
Low	8	12	8	5
Medium	53	58	52	51
High	38	30	40	44

Notes: The columns for each characteristic add up to 100.

5.3.3 Determinants of first birth

In the study on the determinants of childbearing, event history analysis technique called Cox proportional hazards model is applied. Event history analysis is suitable technique to deal with data such as the current one: Childbearing varies by the age of the women, and it is thus natural to ask not only if the woman has had a child, but also when she gave birth to the child. Moreover, one of the benefits of the survival analysis is the uncomplicated way to treat those women who have not yet experienced a birth, but who might do so after we stop observing them. The reason for applying the Cox proportional hazards model is that it, in distinction to other event history techniques, provides the advantage of not defining the shape of the transition rate in advance, and is therefore an appropriate tool for preliminary analysis (Blossfeld et al. 2007).

The Cox model is here applied to study the propensity to enter into motherhood before the age of 35, as well as to investigate the propensity to have a second child before the age of 35. The regression is run for all women, but also separately for each career strategy group. For the first births the process time is the time from the month the individual reached the age of 15. Right-censoring occurs when the individual reaches the age of 35. For the second births, all women who had their birth before reaching the age of 33 are included, and for these women the process

time starts from the month the individual had her first birth. The women are likewise censored at the age of 35. In case there was information on the birth year but the birth month was missing (for the woman and/or child), it was assumed to be January. The results are expressed as relative risks.

The reader should bear in mind that several complications are connected with the study on childbearing when the women are censored already at the relatively early age of 35, given that women are often assumed to be fecund until they reach the age of 50. Consequently, the results should be considered as tentative. The problem is especially large at the second birth order: Firstly, women who have had their first birth before the age of 35 are a selective group. Thus, what in fact is analysed is the propensity that a woman who has had her first birth before the age of 35 also has her second birth before that age. Secondly, the analysis of second births is also influenced by the interval from last birth. In an analysis where right-censoring occurs already at the age of 35, those women who have had their first birth for instance at the age of 19 have been exposed to the risk of second birth a longer time than those women who have given birth at the age of, say, 30. Thirdly, the definition of the women at risk is relatively uncomplicated in the case of first births. For subsequent births it is more problematic to define the risk set. In principle, a woman is exposed to next conception directly as she has given birth to her last child which means that the next birth can occur nine months after the last one. In reality, however, it is not very likely that a woman has her next child nine months after her previous birth. On the other hand, there are some women who can even have their next birth within an 8 month interval from the first one. Here, a decision was made to include only women who have had their first birth before the age of 33 to the risk set. Due to similar kind of considerations, the study on third births was not conducted.

As to the causal order of the events, a minimal requirement for a possible causal association between the dependent and independent variable is that the second one precedes the first one in time. Therefore, when it comes to the measures such as education and partner's education, it would be preferable to integrate them as time-varying, but this possibility is in several cases restricted by the data availability and consequently, several of the included variables are measured after the woman has already given birth to a child(ren). It is important to keep in mind that in addition to this shortcoming with the independent variables, the possibility to study the causal order of events is already distorted when the women were divided into the

different career strategy groups. However, the main purpose of the regressions is not to make strong claims about the causal associations between the different variables, but to conduct a preliminary analysis in order to find out whether the different variables appear to influence the transition rates to different direction or to a different extent among the women who belong to the different groups. To put it differently, the theoretical basis of the study is that the women in different career strategy groups are at least partly selected based on their preferences. Consequently, each of the three groups forms a selective group of women, and it is reasonable to assume that women in the different groups respond differently to the different variables. Moreover, due to the same reasons, it is interesting to study if the women within the same selective group are homogeneous when it comes to their responses to the different independent variables.

A final problem is that many of the variables do not necessarily satisfy the proportionality assumption (the influence of a certain variable, for example education, is the same during the whole observation period) that is required in the Cox model. Hence, the results of the analysis should be interpreted as averages over time (Box-Steffensmeier et al. 2003).

The first results of the regression analysis are shown in Table 5.13 (bivariate regressions). If we at first take a look at the country of origin, we notice that the East German women have higher propensity of first birth than their West German counterparts. The result, although not statistically significant for the homemakers and the careerists, is in accordance with the previous studies and might at least partly be related to the age of the mother. The higher fertility of the immigrant women is likewise in accordance with the previous studies, and the effect is particularly strong among the careerists.

Concerning the place where the women grew up, almost all of the results are statistically insignificant, but suggest nevertheless that the careerists who grew up in other places than in large cities have higher fertility in comparison to the reference category (those who grew up in a large city), whereas the place of upbringing is not that important for the homemakers and combiners (except for the homemakers who grew up in a medium sized city who seem to have slightly higher fertility). Mother's higher education shows a negative influence on the propensity of first birth, the result is though statistically significant only for the group "all women" and for the homemakers. Finally, the less frequently the combiners and homemakers attend religious services, the less likely are they to have their first births, but for careerists monthly or less

frequent attendance on religious services actually increases the entry into motherhood in comparison to the weekly attendance.

Table 5.13: Relative risks of the transition to motherhood, the influence of characteristics of the women (bivariate regressions)

	All	Homemakers	Combiners	Careerists
Country of origin				
West Germany	1	1	1	1
East Germany	1.42**	1.18	1.56**	1.54
Other	2.51**	1.84**	1.36	3.84**
Place of upbringing				
Large city	1	1	1	1
Medium city	1.22	1.20	1.07	1.24
Small city	1.05	0.98	0.91	1.27
Countryside	1.25*	1.01	1.08	1.28
Mother's education				
No degree	1	1	1	1
Secondary school	0.60**	0.71*	0.96	0.44
Intermediate school	0.45**	0.56**	0.71	0.40
Upper secondary school	0.48**	0.58	0.61	0.92
Other	0.64*	0.91	0.84	0.33
Attends religious services				
Weekly	1	1	1	1
Monthly	0.93	0.96	0.89	2.62
Less frequently	0.65**	0.80	0.71*	1.56
Never	0.58**	0.91	0.68*	0.87

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. The regressions are bivariate and the results refer to the relative risks in comparison to the reference category, which is indicated with 1.

Concerning the influence of the women's own education on first births (Table 5.14), we notice that higher education has a negative effect on the entry into the motherhood. The finding is thus similar as the one for the mother's education, and further research is needed to understand the relation between the educational attainment of the mothers and their daughters. The spouse's education is negatively related to the first births, but even here the results are mostly statistically insignificant. Notice also that the careerists who do not have a spouse have a particularly low propensity to have their first births during the observation period.

Table 5.14: Relative risks of the transition to motherhood, the influence of education and spouse's education (bivariate regressions)

	All	Homemakers	Combiners	Careerists
Education				
Low	1	1	1	1
Medium	0.60**	0.63**	1.02	0.61
High	0.35**	0.41**	0.58**	0.69
Spouse's education				
Low	1	1	1	1
Medium	0.84	1.02	1.06	0.57
High	0.61**	0.68*	0.81	0.78
No spouse	0.38**	0.65	0.68*	0.17**

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. The regressions are bivariate and the results refer to the relative risks in comparison to the reference category, which is indicated with 1.

Table 5.15: Relative risks of the transition to motherhood, the influence of selected variables

	All		Homemakers		Combiners		Careerists	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Country of origin								
West Germany	1	1	1	1	1	1	1	1
East Germany	1.65**	1.61**	1.13	1.17	1.77**	1.72**	1.91	1.86
Other	2.16**	2.06**	1.65**	1.51**	1.28	1.32	4.17**	3.84**
Attends religious events								
Weekly	1	1	1	1	1	1	1	1
Monthly	0.94	0.87	1.03	1.00	0.96	0.96	2.42	1.30
Less frequently	0.65**	0.66**	0.81	0.84	0.70*	0.73	1.55	0.98
Never	0.56**	0.59**	0.96	0.99	0.64**	0.68*	0.78	0.54
Education								
Low	1	1	1	1	1	1	1	1
Medium	0.65**	0.61**	0.69**	0.64**	1.00	0.97	0.71	0.59
High	0.38**	0.38**	0.44**	0.42**	0.57**	0.57**	0.80	0.71
Spouse's education								
Low		1		1		1		1
Medium		1.02		1.22		1.10		0.66
High		0.88		0.97		1.03		0.80
No spouse		0.50**		0.73		0.84		0.18**
At risk		1400		402		659		339
Failures		1046		376		570		100
-Log likelihood		6934		1937		3283		3281
				1931				555
								541

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. The regression results refer to the relative risks in comparison to the reference category, which is indicated with 1.

Two multiple regression analysis were run (Table 5.15): One including the country of origin, attendance on religious events and education, and the other one including even spouse's education. In the first model we notice that for all women, as well as for the homemakers and

combiners the statistically significant results on the positive influence of East German and immigrant background decrease. For the careerists, in turn, the influence of immigrant background has an even stronger influence. As for the attendance to religious services, the negative effect of the rare attendance to religious services becomes weaker among the homemakers, and suggests that religious attendance discriminates between the different women only among the combiners and the careerists. The results concerning the influence of education are relatively unchanged. In the second model where also the spouses education is included we notice a further decrease in the effect of the country of origin, as well as the influence of religious service attendance for the careerists.

5.3.4 Determinants of second birth

For the second births the process time starts from the month of the first birth. Only those women who had their first birth before the age of 33 are included. As in the case of first births, the women are censored at the age of 35. The problem here is that there were totally only 959 women at risk, of who 362 were homemakers, 541 were combiners and 56 were careerists. Consequently, most of the results were statistically insignificant even for the bivariate regressions, and it was difficult to make any comparisons between the different groups. Therefore, only the results for the bivariate regressions are shown, and no model for multiple variables was calculated.

The bivariate regressions (Table 5.16) suggest that the East German women experience lower propensity of second birth most notably so among the careerists. The positive influence of immigration background from the first birth regressions holds for the careerists, but not for the other groups. The place of upbringing other than a large city as well as mother's higher education have a positive influence on second birth propensity among the combiners, but not among the two other groups. Further, among all three groups the women who visit religious events only seldom or never experience lower fertility than women who visit services weekly. Interestingly, the influence of own medium and higher education is positive for the combiners, and own high education likewise has a positive effect among the homemakers and the careerists. Finally, the education of the spouse has a positive influence on the second birth propensity among all groups, particularly among the careerists, but those women who do not have a spouse have a particularly low probability to have their second child, most notably among the careerists.

Table 5.16: Relative risks of the propensity of second birth, the influence of the characteristics of the women

	All	Homemakers	Combiners	Careerists
Country of origin				
West Germany	1	1	1	1
East Germany	0.53**	0.76	0.54**	0.31
Other	1.15	1.04	0.97	1.85
Place of upbringing				
Large city	1	1	1	1
Medium city	0.85	0.90	0.86	0.59
Small city	1.14	0.97	1.29	0.62
Countryside	1.07	0.88	1.22	0.63
Mother's education				
No degree	1	1	1	1
Secondary school	0.86	0.79	1.31	0.71
Intermediate school	0.81	0.87	1.39	0.41
Upper secondary school	0.97	1.08	1.42	1.30
Other	0.68	0.51*	1.06	0.77
Attends religious services				
Weekly	1	1	1	1
Monthly	0.69*	0.71	0.71	0.71
Less frequently	0.58**	0.54**	0.63*	0.58
Never	0.36**	0.48**	0.29**	0.59
Education				
Low	1	1	1	1
Medium	0.87	0.86	1.40	0.85
High	0.87	1.07	1.54	1.38
Spouse's education				
Low	1	1	1	1
Medium	1.12	1.19	1.30	0.51
High	1.37*	1.32	1.67*	1.93
No spouse	0.64*	0.64	0.83	0.00

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. The regressions are bivariate and the results refer to the relative risks in comparison to the reference category, which is indicated with 1.

5.4 DISCUSSION

The aim of this chapter was to study childbearing in Germany and approach the topic from the perspective that was outlined in the theoretical framework in chapter 4. The review of previous research on preferences showed that German women indeed have heterogeneous preferences, even though it was not possible to establish the size of the different preference groups. The discussion on family policy, in turn, suggested that the family policy is biased towards the homemaking strategy at the expense of the combination and career strategies. The overview of the research on the influence of the household's resources on employment, in turn, gave some

suggestions on how the relationship between household's own resources and the career strategies might look like in the German context. Even though the empirical analysis did not contain any information on preferences or family policy, the review of the previous research nevertheless indicated that the assumptions made on the theoretical framework were appropriate.

As to the empirical investigation, data from the SOEP was employed to study the women from the 1965-1972 cohorts. In the first step of the analysis women were divided into three different categories based on their labor market behavior between ages 18-35. The results indicate that 24% of the women are homemakers, 48% combiners and 28% careerists. The sample size was however small and the classification was based on yearly employment data which allowed multiple statuses and which for many individuals was collected retrospectively. Despite these shortcomings related to the data, the findings on the existence of the three substantially large groups suggest that there is a large variation between the women when it comes to the long term employment patterns.

In the second step childbearing within the different career strategy groups was investigated. Significant variations between the groups could be observed both when it comes to the levels and timing of fertility. The homemakers start their childbearing at early ages and are the least likely to be childless when reaching the age of 35. Moreover, a large share of them had already progressed to third or higher parities, and their average fertility was only slightly below the replacement rate. The careerists who represent the other extreme group, were still to a large degree childless, and those of them who had had children were mainly at parity one or two, which meant that the total fertility of this group was extremely low. The combiners were positioned somewhere between these two groups, starting their childbearing later than the homemakers but earlier than the careerists. They also have entered the motherhood to a larger extent than the careerists, but are having smaller families than the homemakers.

The third step of the analysis was to find out what kind of characteristics the women belonging to the different groups possess. Even here some traces of a possible polarization were found. In this respect the most notable finding is that a large share of the homemakers has low education, and only very few of them are highly educated, whereas for the careerists it is the other way around. On the other hand, also many combiners were highly educated, and a relatively large share of homemakers, combiners and careerists has a medium level education, which means

that the association between the educational attainment and career strategy choices is not straightforward.

The fourth and final step was to study the determinants of the transitions to motherhood and second parity by running Cox proportional hazards regression. As to the first births and the statistically significant results, women in all groups behave relatively similarly, that is, the direction of the impact of the different independent variables was the same. When it comes to the homogeneity of the three groups, immigrant background had a remarkably strong positive effect among the careerists. The statistically insignificant results in turn suggest that both the direction of the effect as well as the group homogeneity in the responses varies. Particularly three findings stand out: Firstly, the place of upbringing (bivariate results only) does not seem to be an important predictor of the first birth propensity among the homemakers and combiners, but for all careerists who grew up somewhere else than in a large city the fertility rates were higher. Secondly, the attendance to religious services does not help to predict the transition to motherhood that strongly among the homemakers, but among the combiners and careerists religious service attendance clearly matters more. Finally, the absence of a spouse has a very strong negative effect among the careerists.

As to the propensity of the second births, the (bivariate) findings were mainly statistically insignificant. The statistically insignificant results however suggest that the direction of the impact more often than when it comes to first births varies between the three groups of women (most notably the results for the place of upbringing and mother's education). Moreover, some variation between the groups when it comes to the within-group homogeneity was observed.

CHAPTER 6

WOMEN'S CAREER STRATEGY CHOICES

IN THE UK

The dynamics of career strategy choices in liberal welfare regimes were in chapter 4 suggested to be very different from those in the conservative welfare states. The only similarity between these two types of countries was claimed to be the income tax system, which in both clusters supports the male breadwinner organization of the family and thus encourages homemaking. When it comes to the other family policy instruments it was stated that the liberal regimes differ from the conservative states most notably in that in the liberal regimes, firstly, the availability of the privately provided child care is good and secondly, the leaves in connection to childbearing are short. Due to the market based supply of child care and the insufficient parenting leaves it was suggested that the importance of household's own resources is crucial in the liberal context. Even though the mechanisms behind career strategy choices in the liberal countries were assumed to be different from those in the conservative states, the relative share of women who choose the different strategy groups was claimed to be quite similar. The main reason for the fertility differences between the countries were, in turn, assumed to be the higher fertility of the careerists in the liberal countries.

The UK is often considered to be the foremost European representative of the liberal regime type and therefore the career strategy choices in this chapter are studied in the British context. Even though the UK deviates from other liberal welfare regimes in that the British income taxation does not support one-earner families (see section 6.2.2), the organization of the family policy nevertheless suggests that the decisions about the career strategy are made to a large extent in the manner described above. In this chapter (1) the relative share of the women belonging to the different groups, (2) the patterns of childbearing within the groups, (3) the characteristics of the women belonging to the different groups and (4) determinants of fertility within the groups are studied. The chapter is organized similarly as the previous one: After a

short description of fertility, family formation and female labor market participation, the preferences, family policy and household's own resources are discussed. Thereafter, employing the data from the British Cohort Study 1970, the division of women into different career strategy groups is made, and the patterns and determinants of childbearing within the groups are discussed.

6.1 FERTILITY, FAMILY FORMATION AND FEMALE EMPLOYMENT

In this section the patterns of fertility, family formation and female labor force participation in the UK are briefly reviewed. For a more profound review on fertility and family formation, Sigle-Rushton (2008) is recommended, and the readers who are interested in the considerable within-country differences in the tempo and quantum of fertility are advised to Tromans et al. (2008).

6.1.1 Patterns of fertility

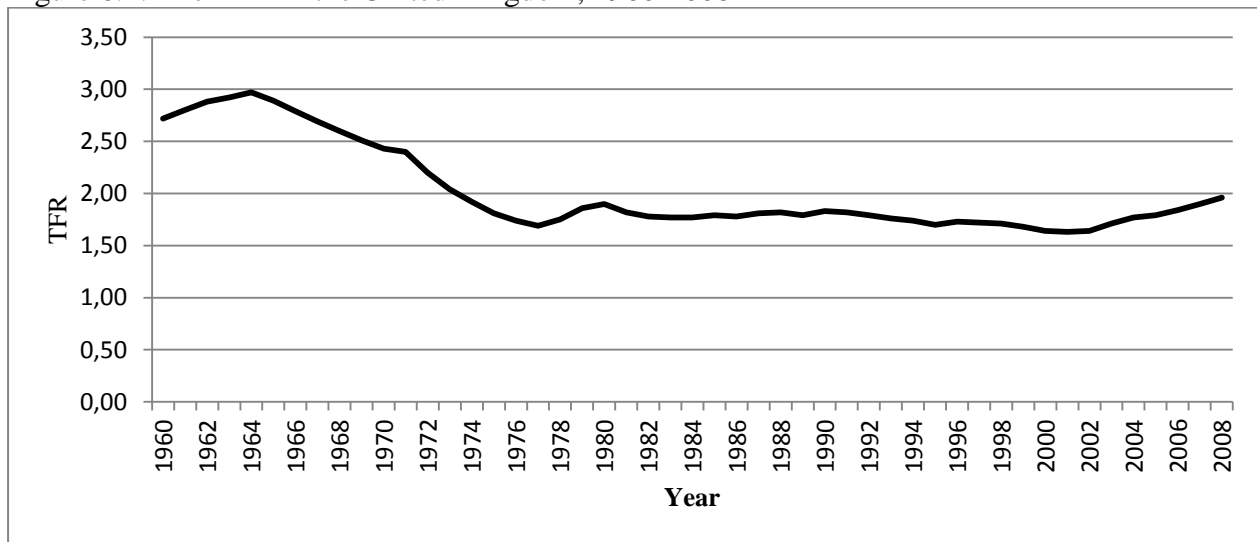
The TFR in the UK declined radically from the mid-1960s to the end-1970s and reached the low level of 1.69 in 1977 (Figure 6.1). It is noteworthy that whereas the TFR at the peak of the East and West German baby booms was approximately 2.5, the British baby boom had its peak at a considerably higher level, at almost 3.0. Thus, there were differences between the countries already before the TFRs declined to sub-replacement levels. The differences have remained throughout the observation period: As was discussed in the previous chapter, the West German fertility rate remained below 1.5 after the fertility decline, whereas the British TFR has fluctuated between the all-time low of 1.63 (in 2001) and 1.96 (2008⁴⁵).

As in Germany, the decline in fertility in the UK was accompanied with a steady increase in the MAB, although there even in this respect are differences between the countries and, at present, the British women have their children earlier than their German counterparts (VID et al. 2006, VID and IIASA 2010). As to the postponement of childbearing in the UK, according to the estimates for England and Wales the MAB was 26.5 in 1977, but three decades later (in 2008) it was three years higher, 29.5 (ONS 2010a). The changes in the timing of fertility can be observed in detail when the age-specific fertility rates are examined (Figure 6.2). After the baby boom the ASFRs for women in the age group of 20-24 and 25-29 declined until the beginning of the 21st

⁴⁵ During the past decade the British fertility has showed signs of a continuous upturn: During the period 2001-2008 the TFR increased with 0.33 units. According to Jefferies (2008), the changing timing of the births might be a possible explanation to this trend. Indeed, the MAB for England and Wales increased from 29.2 in 2001 to only 29.5 in 2005 and has not changed thereafter (ONS 2010a). Tromans et al. (2009) in turn point out that 65% of the increase in the number of births can be explained by increases in the number of children born to immigrant women.

century. During the same period the ASFRs for the women in age groups of 30-34, 35-39 and 40-44 have increased. Interestingly, from the beginning of the 1990s the ASFRs for the 30-34 years old women have been higher than the ASFRs for the women aged 20-24 years and from the beginning of the 21st century also higher than for the women aged 25-29 years. During the past decade, however, the ASFRs for the women aged 20-24 and 25-29 have been slightly increasing, which suggests that the postponement of childbearing has come to its end. In addition to these overall changes, the Figure 6.2 illustrates the relatively high (Darroch et al. 2001) and stable level of teen fertility in the UK.

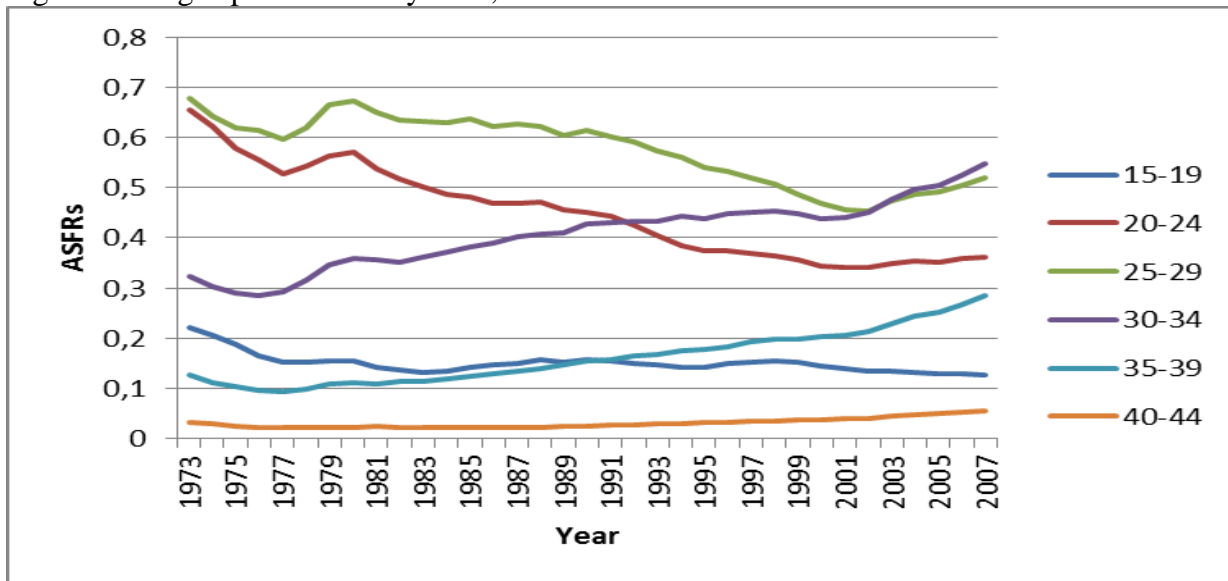
Figure 6.1: The TFR in the United Kingdom, 1960-2008



Source: OECD (2010a).

Finally, when it comes to the birth-order specific fertility, the data for England and Wales for the 1955-cohort shows that 16% of the women remained childless, 13% had only one child, 41% had two children, 19% had three children and 11% four or more children (ONS 2010a). Thus, as in East and West Germany, the two child family has been the norm in the UK. However, the British women differ considerably from their East and West German counterparts in that the share of women who have only one child is significantly lower in the UK.

Figure 6.2: Age-specific fertility rates, 1973-2007



Source: Eurostat (2010).

6.1.2 The changing familial context of childbearing

The trends in family formation in the UK in 1965-2005 are described in Table 6.1. Cohabitation has increased notably during the period: When in 1975 only 11% of all women were cohabiting, in 2005 the corresponding number was 29%. It is especially the share of the cohabiting never-married women which has increased during the decades (Murphy 2000; Haskey 2001) and since the beginning of the 1990s it has been more common that the first marriage is preceded with cohabitation than that the couples are getting married without cohabiting at first (Haskey 1999).

The number of extra-marital births has increased simultaneously with the rise in cohabitation. In 1965 only 7.3% of the births were extra-marital but in 2005 as many as 42.9% of the children were born outside marriage. Thus, the extramarital births are, as cohabitation, more common in the UK than in western Germany but more rare than in eastern Germany. Another interesting difference between the UK and Germany is that larger shares of cohabiting couples in the UK have children (Kiernan 2004). Notice, though, that the patterns of childbearing by marital status vary considerably by age: The younger mothers are more likely to give birth to a child when they are cohabiting or non-partnered, whereas the older women are more likely to be married at the time of the birth (Kiernan and Smith 2003).

In addition to the above discussed increases in extra-marital births, the increases in cohabitation have been accompanied with decreases in the marriage rate and an upturn in the age

of first marriage. While an average woman in the 1970s married at her early 20s, in the first decade of the 21st century the average age at first marriage approached 30. During the same period the crude marriage rate declined from 7.7 to 5.2.⁴⁶ Divorces, in turn, became more common: In 1965 the crude divorce rate was only 0.7, but forty years later already 2.6. The number of divorces with children has, however, declined: In 1975 in as many as 61.3% of the divorces the couple had children, but in 2005 this was true for 53.1% of the couples.

Table 6.1: Indicators of family formation in the UK, 1965-2005

	(1) Percentage of women cohabiting (GB) ¹	(2) Extra- marital births (UK)	(3) Crude marriage rate (UK)	(4) Age at first marriage for women (England & Wales)	(5) Crude divorce rate (UK)	(6) Children in divorces ² (England and Wales)
1965	-	7.3	7.8	22.5 ^a	0.7	-
1975	11 ^c	9.0	7.7	22.8 ^b	2.1	61.3
1985	16	18.9	7.0	24.1 ^d	2.8	55.5
1995	25	33.5	5.6	26.8	2.9	55.2
2000	30	39.5	5.2	28.2	2.6	54.4
2005	29	42.9	5.2	29.5	2.6	53.1

Notes: ¹Refers to the un-married women aged 18-49. ²Refers to the percentage of divorced couples who had one or more children below the age of 16, ^a1966, ^b1976, ^c1979, ^d1986, ^e1996.

Sources: Column (1): ONS (2009b). Column (2): Eurostat (2010). Column (3): Eurostat (2010). Column (4): ONS (2010b). Column (5): Eurostat (2010). Column (6): ONS (2010b).

6.1.3 Female labor force participation

Female labor force participation in the UK increased markedly after the Second World War, mostly due to the increases in the number of women who work part-time (Burchell et al. 1997). More recently, from 1984 to 2004, the participation has increased with approximately eight percentage points, from 62.5% to 70.6% (Table 6.2). Full-time and part-time participation rates have during the period increased with three and five percentage points respectively and, as in Germany, part-time work is relatively common accounting 28.5 percentage points of the total participation rates. Notice also that although female employment rates in the past have been much

⁴⁶ As an interesting detail it can be mentioned that as many as 40.2% of the childless women who belong to the 1956-1960 cohorts has never married (Portanti and Whitworth 2009).

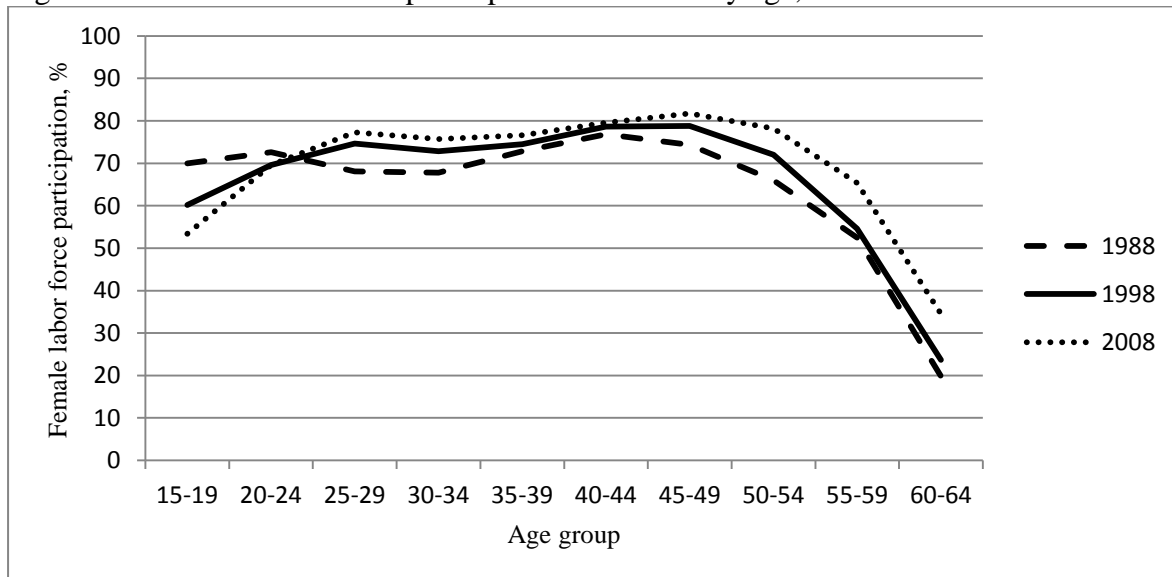
higher in the UK than in West Germany (but lower than in East Germany), due to the changes in the female employment in Germany these gaps have narrowed.

Table 6.2: Patterns of female labor force participation (%), 1984-2004

	1984	1994	2004
Part-time	25.8	28.0	28.5
Full-time	36.7	39.9	42.1
Total	62.5	67.9	70.6

Source: OECD (2010b).

Figure 6.3: Female labor force participation in the UK by age, 1988-2008



Source: OECD (2010b).

In Figure 6.3 the labor market participation by age groups in 1988, 1998 and 2008 is shown. In general, the age-patterns of participation and the changes over time are quite similar in the UK and in Germany. In 1988 the participation rates in the UK for women in the age groups of 25-29 and 30-34 were lower in comparison to the younger women and the women in their late 30s, 40s and early 50s. The participation rates in 1998 were higher than in 1988 at all ages (except for the age groups of 15-19 and 20-24), but the increases have been most significant for the age groups of 25-29 and 30-34, which signalizes about an increasing participation of mothers. Finally, in 2008 the employment patterns by age follow a similar pattern as in 1998, but the level

of participation is in general higher in 2008 and the largest increases can be observed for the women older than 50 years of age.

The association between childbearing and employment is explored in Table 6.3 where the FLFP for women aged 25-54 is shown by the number of children and the age of the youngest child. In general applies that the higher the number of children and the younger the youngest child, the lower the participation rate. To take an example, the participation of the childless women is about 10 percentage points higher than the participation of the mothers with one child below six years of age. The difference between childless women and mothers with three children of which at least one is below six years of age is, in turn, over 40 percentage points. If we then compare the participation of the British mothers with the participation of the German mothers, we notice that the differences are largest for the mothers with one child or two children, whereas the differences between the mothers with three or more children are relatively small.

Table 6.3: Employment of mothers (%), 2005

	Childless	One child	Two children	Three or more
All ages	82.7	75.3	70.9	49.7
-6	-	72.3	61.5	41.5
6-11	-	74.0	77.0	60.6
12+	-	78.5	78.2	60.5

Source: Eurostat (2010).

Notes: Refers to the women aged 25-54 and the age of the youngest child.

Finally, it is noteworthy that several micro-level studies on women's labor market participation evidence about considerable heterogeneity (Macran et al. 1996; Charles and Harris 2007; Kan 2007; Connolly and Gregory 2010; Anyadike-Danes and McVicar 2010). Aassve et al. (2007), for example, identify as many as nine different paths the women choose concerning the childbearing, union formation and work. At the one extreme are the 8.7% of women who start working at age of 18 and experience no union or children until the age of 30. At the other extreme are the 4.2% of women who form their first union relatively early, but whose union is dissolved when the first child is born and who thereafter leave the employment for approximately six years, then form a new partnership within which the woman's second child is born.

6.2 PREFERENCES, FAMILY POLICY AND OWN RESOURCES

In this section, firstly, previous research on preferences, which evidences about preference heterogeneity and only partial correspondence of the preferences and behavior, is reviewed. Secondly, family policy is discussed in order to show how the different career strategies are encouraged and enforced. Finally, previous research on the relationship between household's own resources and employment patterns is summarized.

6.2.1 Preferences for childbearing and employment

The evidence on joint preferences⁴⁷ for childbearing and employment in Britain suggests that, as in the German case, the assumption about preference heterogeneity made in the theoretical framework is reasonable. To review some of the findings, Hakim (2003b:248) finds that 14% of the white female population between ages of 20-59 are home-centered, 71% adaptive and 15% work-centered. Almost analogous results are obtained by Vitali et al. (2009) who show that 12% of the British women are home-centered, 71% adaptive and 17 % work-centered.

The measures on the *couples'* preferred working arrangements when the children are under six years of age show that 21.3% of the couples would prefer a full-time dual earner family, 41.8% an arrangement where the father works full-time and the mother part-time, 13.3% prefer the man to work and the woman to be inactive, and 23.6% of the couples would prefer some other organization (OECD 2001b:136). Interestingly, the share of couples who prefer the father to work and the mother to be inactive is similar than what the above reviewed results by Hakim and Vital et al. showed to be the share of the home-centered women. Likewise, the share of couples who prefer the full-time dual earner family is quite similar to the share of the work-centered women. A tentative conclusion would therefore be that the home-centered women in the UK are a small minority consisting of about 10-15% of women, the adaptive women a large majority of around 70% of women and the work-centered women a group of 15-25% of the female population.

According to Hakim the UK is one of the few countries that have reached the new scenario in which preferences become the main determinants of behavior (e.g. Hakim 2003a:357), and based on the preference theory we should therefore expect the career strategy choices in the UK to correspond to the life style preferences of the women. However, the above

⁴⁷ For preferences (intentions) regarding the total number of children and the number of children by parity, see Berrington (2004).

reviewed studies do not support this conclusion. Also, McRae (1993) finds that pregnant women's work intentions do not match the realized outcome. For example work in private sector and limited access to the work-life reconciliatory practices in the work place reduce the likelihood that women realize their intentions of returning to work. In another study McRae (2003a) finds evidence which suggests that for instance husband's attitudes towards their wives employment influences women's choices. Kan (2007), in turn, finds support for a mutual association between preferences and behavior.

6.2.2 The institutional context of career strategy choices

In chapter 5 we saw how the German government has encouraged the family to take care of its members (the principle of subsidiarity) and only slowly has started to develop policies that promote work-life balance. In the UK, in turn, the logic of the welfare regime is to guarantee the families the freedom to decide how they want to organize the care of the family members. In other words, the combination between work and family has been seen as a private matter that should be resolved within the family. This ideology shows itself as a disinterest of the state in interfering with the family dimension, especially when it comes to the provision of the day care services (Lewis and Campbell 2007). To put it differently, none of the career choices are to any large extent supported by the state and hence the individual's own resources become decisive.

As to the income tax, the unit of taxation has since 1990 been the individual meaning that, unlike in Germany, the system does not provide extensive support for the one earner couples. The structure of the income taxation gives, however, some incentives for the second earner to work part-time with short hours (Sainsbury 1999; Dingeldey 2001). In this respect the UK is an exception from the in the theoretical framework made claim that in the liberal welfare states the homemaking strategy would be promoted through taxation. Though, it needs to be recognized that the tax rates in the UK are in general lower than in Germany and that the child allowances are equally large irrespective of the family income (e.g. Kurjenoja 2003) and thus contribute disproportionately largely to the disposable income of the low income families. This is likely to give the partnered home-centered women some freedom to choose the homemaking strategy and, in combination with the other social policy instruments, also makes the homemaking strategy appealing to some of the adaptive women.

Also the incentive structure created by the organization of the maternal/parental leaves and child care depends highly on the household income. When it comes to the maternity leave

with the right to return to the same employment after the leave, it was introduced already in 1976 with 11 weeks leave before the child birth and 29 weeks after. The leave was, however, conditional to the previous employment. In 1987, for example, two years of full-time employment (16+ hours a week) or 5 years of part-time employment (8-15 hours a week) for the same employer into the 15th week before the childbirth were required to qualify. The compensation for the leave was poor: Six weeks with 90 % of the wage for those who qualified and an additional flat-rate benefit for 12 weeks. For those who did not qualify but nevertheless had worked at least 26 weeks into the 15th week before the childbirth could receive a flat rate payment for 18 weeks. They did not, however, have the right to return to the same employment after the leave. In other words, many women did not qualify and for many of those who did a large part of the leave was unpaid.

During the years the regulations have changed towards a more generous direction. The time-rights have been extended in 1994, 2000, 2003 and 2007. In 1994 a leave of 14 weeks became available for all women, in 2000 the statutory leave was extended to 18 weeks, in 2003 the statutory leave was prolonged to 26 weeks and 26 additional weeks became available for those who had been working 26 weeks until the 14th week before the childbirth for the same employer. Finally, the statutory leave was extended to 52 weeks in 2007. In addition to the maternity leave regulations, parental leave of 13 weeks for each parent became available in 1999. The leave could be taken until the child reached the age of 5 and one year of continuous employment for the same employer was required in order to qualify.

During the whole period the compensation for the leaves has remained low and to a large part conditioned to the previous employment. For instance, for the maternity leave in 2003 the compensation of 90% of the wage was still paid during six weeks only and was conditioned to previous employment (for a review of the leave regulations, see Waldfogel 1998; Gregg et al. 2007; Zabel 2009).

To put it differently, the maternity leave in the UK has supported the combination of work and family by encouraging the mothers to take only relatively short leaves in connection to the childbearing. This might be optimal for the work-centered women who aim for the career strategy, whereas the adaptive women would probably like to combine work and family by taking longer leaves. As the women have the right to return to the same employment only after the short maternity leave and as the compensation for the leave is poor, long absences from the labor

market are difficult. Thus, the adaptive women have three alternatives: They can either choose the career strategy with only short absences from work *or* they can combine work and family with part-time work *or* if they have a well-earning partner, stay at home as long as they desire and hope to get employment after the long absence from the labor market.

When it comes to the child care system in the UK, the public provision of care has been relatively humble and the working parents have needed to rely heavily on the informal care (provided by the family members and friends) or on the care provided by the market (Randall 1995). For example, in 1988 only approximately 2 percentages of children under three years of age could rely on public provision of child care. For older children up to the school age (that is, age of 5) the provision was higher (35-40%). Nevertheless, a comparison with the other European countries shows that for the both age groups the availability of publicly provided child care services in the UK has been quite limited (Joshi and Davies 1992:566). During the past two decades the initiatives to develop the child care system have been numerous. The most important suggestions are the National Childcare Strategy which was introduced in 1998. Considering the issues such as the emphasis of the child care policy on the disadvantaged groups and the minor attention paid to the under three year old children it is, however, questionable how far the policies have actually helped the mothers in work and family reconciliation (Randall 1996; Rake 2001; Lewis 2003, Penn and Randall 2005).

The availability of market based child care is significantly better, but such services are relatively expensive⁴⁸, especially when the children are very young (Ward et al. 1996). For example in 2004, for a dual-earner couple whose income is 167% of the average and who have two of their children in full-time child care, the net costs of the care are approximately 1/3 of the net family income, that is, significantly above the EU and OECD average. For a sole-parent family with earnings of 67 % of the average the costs are significantly lower but still 14 % of the income (OECD 2010a). All in all then, the market based child care can help the adaptive and work-centered women who afford the prices to realize their desired strategies. At the same time,

⁴⁸ The government encourages the enrollment in private day care by supporting the demand on child care in form of tax credits. The Working Families Tax Credit from 2000, for example, included a childcare credit for 70% of the childcare costs up to a certain limit for those who qualified (Blundell and Hoynes 2004). The problem here is that means-testing is based on the family income and even though it has created incentives for single mothers' employment, it also contains a disincentive for the married mothers with working husbands (Rake 2001; Blundell et al. 2000).

the high costs might mean that for many adaptive women the most rational choice is to choose the homemaking strategy, that is, when the earned income together with the high costs for child care means only very small increases in the disposable income. This might be the case especially for the low educated women.

To sum up, the work-centered women have good possibilities to realize the career strategy with children in case they can rely on informal care or afford the privately provided child care. The situation is more problematic for the adaptive women because the short leaves are not optimal for them. As the long absences from employment might be difficult to realize, it can be assumed that some of the adaptive women choose the career strategy. However, a large majority of the adaptive women presumably manages to realize the combination strategy by working part-time. Finally, due to the low income tax percentage the partnered home-centered women are able to choose the homemaking strategy, whereas many of the adaptive women choose this strategy due to the low marginal income given the high costs of the child day care.

6.2.3 Household's own resources and career strategies

In the theoretical framework outlined in chapter 4 the household's own resources in the liberal countries were claimed to be crucial for women's possibilities to choose the career strategy according to their initial preferences. Previous research confirms this and shows that education, income and the possibilities to use informal day care have similar impact in the UK and in Germany. To review some of the findings on the relationship between education, income and working patterns, Aassve et al. (2006) find that high education leads to a later entry into the labor market. Elliott et al. (2001) in turn show that not only the level but also the type of the qualifications influence the return to the labor market after the childbearing. Further, Connolly and Gregory (2010) show that higher education decreases the probability to work part-time.

It is also noteworthy that a woman's education is correlated with her marital status and the return to employment after the childbearing: Kiernan and Smith (2003) found that married mothers had the highest education and non-partnered mothers the lowest. A partner, in turn, increases the probability of a return to a part-time employment after the child birth (Elliott et al. 2001). Moreover, partner's characteristics can influence women's career strategy choices. Dex et al. (1998), for example, found that a highly educated partner increases the probability that a woman stays at home longer periods after she has given birth to her first child.

An increasing number of studies suggest that there is a polarization of women when it comes to the performance in the labor market. According to Dex et al. (1998) the highly educated women with high income return to work more rapidly after the first child birth, whereas women with low education and income are more likely to delay their return. At the same time, the low-skilled women have their children earlier, whereas the more skilled women enter motherhood later (Rendall et al 2009). Moreover, a larger share of the highly educated women remains childless or at first parity, whereas parity progressions to second and higher order births are higher among the highly educated (Rendall and Smallwood 2003). Noteworthy is even that the income and second birth risks are related in a U-shaped manner: The women with the highest and the women with the lowest income have the highest propensity of a second child (Kreyenfeld and Zabel 2005). The polarization is not exceptional in international comparisons, but it appears to be exceptionally strong in Britain in comparison to the other countries (Ekert-Jaffé et al. 2002).

Due to the good availability of the relatively expensive child care, income and education are even associated with the propensity to use the care. Woodland et al. (2002/2004) report that the households (in England) with the highest income are not only more likely to use the child care, but also find it easier than the other income groups to meet the costs of the child care and moreover, more often than the low income families found the local affordability of the care good. Among those who want to use child care during the past year but who had not, lone parents, individuals who live in “workless” households, low income families and families who live in deprived areas are overrepresented.

The use of the informal care among the working mothers in the UK is quite common. When the mothers were asked to point out the most important child care related reasons that enabled them to work, 14% of mothers concluded that the help from the relatives was the most important thing, 1% said friends’ help was crucial and 6% told that partner’s help with childcare was important. This can be contrasted with the 10% of the women who said that childcare fits with the working hours, the 18% who gave the good quality of child care as a reason and the 11% who said that the reliable/free/cheap child care was of importance. Remarkably, it was much more common for the women with no qualifications to state that the help of the relatives and the reliable/free/cheap childcare enabled them to go out to work, whereas the well educated women were to a significantly larger extent to claim that the child care that fits the working hours and the good quality child care enabled them to work (Woodland et al. 2002/2004:201ff).

6.3 CAREER STRATEGIES AND FERTILITY: EMPIRICAL FINDINGS

This investigation uses data from the 1970 British Cohort Study (BCS70) in order to examine the career strategies in the UK. The BCS70 is a longitudinal survey which follows individuals born during a particular week in April 1970 and collects data over a large variety of different subjects at certain points in these individuals' lives beginning from the time of the birth. Retrospective employment histories with monthly precision were collected when the cohort members reached the age of 29/30 and thereafter at the ages of 34/35 and 38/39. The data from these sweeps were employed to construct both the employment and fertility histories. Given the relatively long period of time between the interviews the answers are likely to be subjected to recall-bias. Another problem with the data is that the drop-outs are more common among the persons in the disadvantaged groups. Individual weights are not available, but the drop-outs in the British cohort studies are not likely to bias the results to any large extent (Nathan 1999).

6.3.1 Classification of women into the different career strategy categories

Even though it would have been possible to construct employment histories for the women until the date of the latest interview at age of 38/39, to increase the comparability of the results with those obtained for Germany the women are under observation from the month they reach the age of 18 until they reach the age of 35. In the BCS70 the respondents were asked to report all those activity periods which lasted at least one month. Although it was possible to construct unbroken employment histories for the whole period for the majority of the women, some women needed to be excluded from the analysis due to large gaps or/and inconsistencies. The distinction between the women who belong to the different career strategy categories was made based on the amount of time spent in four main activity statuses: full-time employment, part-time employment, in education and inactivity. The last category includes women who have been inactive for several different reasons, such as unemployment, care responsibilities at home and/or temporarily or permanent sickness.

When it comes to the childbearing there was data on pregnancies and only those pregnancies that ended with a live birth were included. Some women needed to be excluded from the analysis due to inconsistencies in the fertility histories or pregnancies which ended with multiple births. All in all, there were 3986 women who participated in each of the three latest sweeps of the BCS70. Of these women 280 were excluded due to the above mentioned reasons.

The same classification criteria as in the German case were applied here: Those women with an interruption of a maximum of one year in continuous full-time employment/education were classified as careerists. Women who had been inactive at least 72 months were classified as homemakers and those women who did not belong to either of these groups but for whom there was enough data to make the classification were classified as combiners.

Table 6.4: Lifetime career strategy categories and fertility, cohort 1970

	All women	Homemakers	Combiners	Careerists
Number in population, %	100	19	51	30
Number of children, %				
0	28	6	16	63
1	23	16	26	22
2	36	43	47	13
3	10	26	9	1
4+	2	9	1	0
Average fertility	1.35	2.18	1.53	0.53

One particular problem with the employment data in the BCS70 is the documentation of maternity leaves. In the surveys that were conducted at ages of 29/30 and 34/35 the respondents were asked what “best describes” their economic activity. The question included several different response alternatives, but “maternity leave” was not one of them. Neither were there any guiding lines on how maternity leave should be coded and according to Cooksey et al. (2009) many mothers on maternity leave reported that they were working. At the age of 38/39, in turn, those on paid maternity leave were automatically coded according to their usual activity (full-time or part-time employment). Consequently, many employment careers that look continuous are in fact disrupted with one or more maternity leaves whose lengths are unknown. The incompleteness of the data at this point is a problem when it comes to the classification of the women into the different groups and it is not possible to overcome this difficulty. On the other hand, the interruptions due to maternity leave have not been very long before the year 2003 as the

maximum length of the maternity leave has been so short and it is therefore likely that the problems related to the coding of the maternity leaves do not influence the results decisively.

The relative share of the women who belong to the different career strategy groups, the share of women at different parities among the groups, as well as the average fertility within each group and the relative contribution of the three groups to the total average fertility are shown in Table 6.4. As can be read from the Table, 28% of the British women are still childless, 23% are at first, 36% at second, 10% at third and 2% at fourth or higher parity. The total average fertility is estimated to 1.35. According to the official statistics, of the women belonging to the 1970-cohort 25% are childless at age of 35, 20% are at first, 34% are at second, 14% at third and 7% at fourth or higher parity. The total level of fertility for the cohort is 1.56 (ONS 2010a). Thus, the results of the current study overestimate the total level of childlessness as well as the share of the women who have one and two children. These overestimations are, however, not larger than three percentage points. The data also underestimates the share of the women who have three and four or more children with four percentage points. In total these misestimations result to an underestimation of the total level of fertility with 0.21 units. The differences between the results of the current study and the official statistics can probably, at least partly, be explained by the overrepresentation of the more advantaged groups (due to the drop-outs) among whom childlessness and small families are more common (see Table 6.5).

As in Germany, even in the UK the women are clustered into three different groups which all are substantially large. As many as 19% of the women are homemakers, 51% combiners and 30% careerists. There are also large differences in fertility between the groups and the overall tendencies are similar to those found in the German case.

To start the description with the level of childlessness, a significantly lower share of the homemakers (6%) and combiners (16%) are childless in comparison to the careerists of whom as many as 63% have not yet entered motherhood. Those combiners and careerists who have children have relatively small families, whereas larger families are quite common among the homemakers. Only 16% of the homemakers are at first parity, but same is true for 26% and 22% of the combiners and careerists respectively. Further, 43% of the homemakers are at second parity, but 47% of the combiners and 13% of the careerists are at this stage of the family formation. As many as 26% of the homemakers, in turn, are at third parity and 9% at fourth or

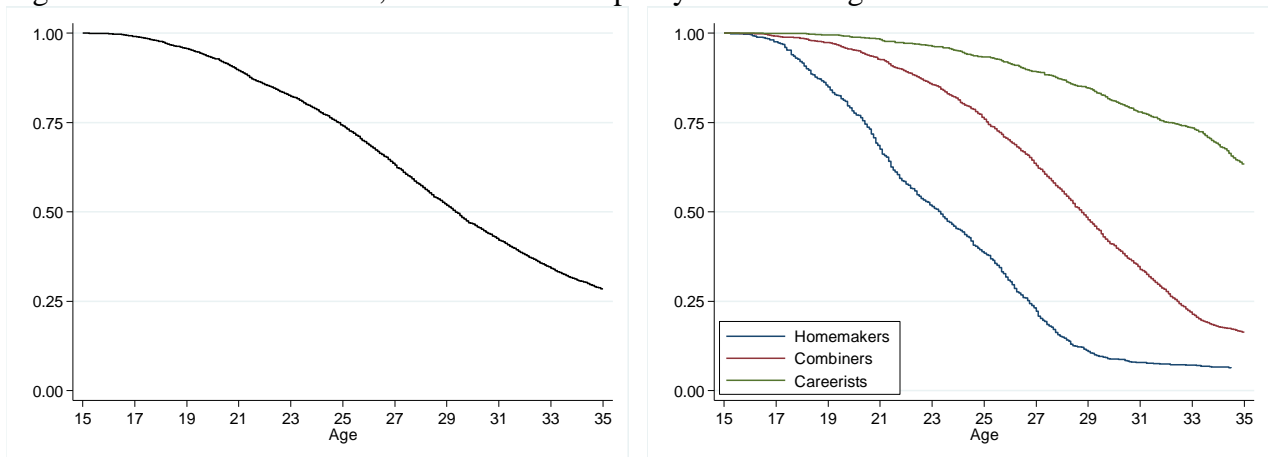
higher parity. For combiners, the share of women at these parities is 9% and 1% respectively. Finally, of the careerists only 1% of the women are at third parity and none at fourth or higher.

Due to the relatively low level of childlessness combined with the large number of women at higher parities the homemakers experience an average fertility of 2.18 children/woman. The careerists in turn experience a very low level of fertility, 0.53, which is due to the high share of childlessness. The combiners are positioned in between with an average fertility of 1.53. Thus, as in Germany, the homemakers are the only group that has been able to reproduce itself and the group's contribution to the total fertility (31%) is larger than the relative number of the homemakers. The combiners also contribute somewhat more than their share of the female population (58 %), but the careerists contribute significantly less (12%) than their relative share. At different parities, we notice that 67 % of the childless women are careerists, whereas at the other extreme, 73 % of the women with 4+ children are homemakers (Table 6.5).

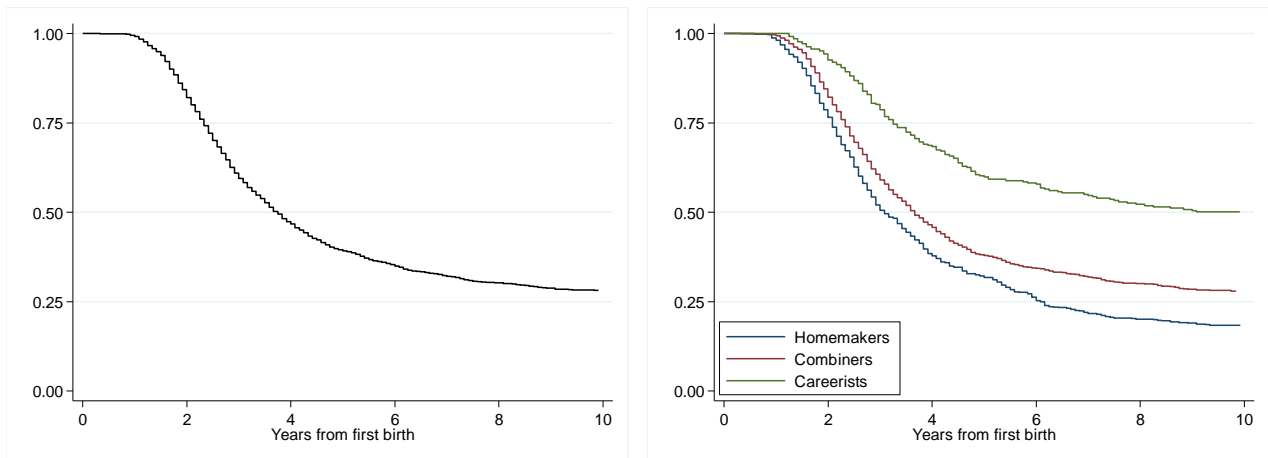
Table 6.5: Contribution to fertility by the women belonging to the different groups

	All	Homemakers	Combiners	Careerists
0	100	4	29	67
1	100	13	59	28
2	100	23	66	11
3	100	49	47	4
4+	100	73	24	3
Average fertility (%)	100	31	58	12
Contribution in units	1.35	0.41	0.78	0.16

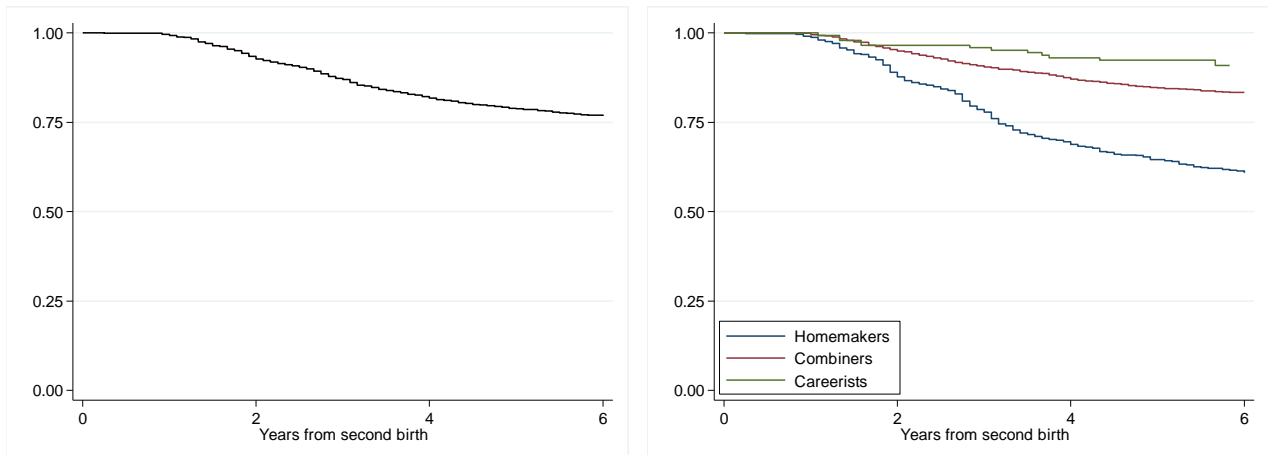
Figure 6.4: Transition to first, second and third parity before the age of 35



Transition to motherhood by age: All women, and women by career strategy



Transition to second parity in years from first birth: All women, and women by career strategy



Transition to third parity in years from second birth: All women, and women by career strategy

As to the timing of the births, the Kaplan-Meier estimates reveal approximately the same pattern as in the German case. For the first births (Figure 6.3) we see that the homemakers enter the motherhood sooner than the combiners, who in turn enter the motherhood sooner than the careerists. Notice also that in a similar manner as in Germany, the women who have chosen the homemaking strategy are the ones who most often have given birth to their first child in their teens, whereas practically none of the careerists have done so. This is in accordance with the evidence from previous British studies which suggest that giving birth to the first child as a teenager has a negative influence on both the educational attainment and labor force attachment but that the teenage mothers are also a selective group whose characteristics influence the future education and labor market participation negatively (Chevalier and Viitanen 2003).

For the second births we notice that both the homemakers and combiners have their second child in a somewhat similar speed. Even for the careerists the speed of the transition is analogous to the two other groups, although the number of careerists who have their second child during the observation period is significantly lower. For the third births, in turn, the combiners and careerists are experience similar transition rates. This is likely to be due to the fact that the women are censored at the age of 35, which means that many of those women who had their first or second birth at the early 30s have not yet had time to have their third birth.

6.3.2 Characteristics of the women

As to the characteristics of the women, the BCS70 provides rich information on a broad variety of topics. Here, four different aspects are considered: attitudes and values, health, economic situation and division of labor at home. Table 6.6 shows the women's answers concerning some questions on attitudes and values. The results reveal that a larger share of the homemakers (30%) than of the combiners (16%) and of the careerists (13%) agrees with the statement that a pre-school child is likely to suffer if the mother works. At the same time as many as 42% of the homemakers, 62% of the combiners and 68% of the careerists disagree with the statement. Even though the results suggest that women with more conservative attitudes are somewhat more likely to choose the homemaking strategy, it is also possible that it is actually the work-choices after childbearing that have influenced the women's opinions, given that the answers were collected when the women were relatively old.

The answers to the question on "if it is alright for people to have children without being married" does not discriminate between the women as much as the question on mother's

employment. In all groups a large majority of the women agrees on that it is acceptable for people to have children without being married: 75-80% of the women agree with the statement, and only 8-10% disagree. In other words, the value change that is claimed to be related to the second demographic transition (see section 3.1.1) appears to be advanced among all women irrespective of the chosen lifestyle. Finally, as to the questions related to religion, a lower share of the homemakers (50%) than of the combiners (59%) and the careerists (61%) were raised according to a certain religion. A look at the own religious practice in turn suggests that the practice of religion has declined over the generations, especially among the careerists: Only 19% of the homemakers, 22% of the combiners and 14% of the careerists practice some religion.

Table 6.6: Descriptive findings on attitudes at the age of 29/30 and religion at the age of 34/35

	All	Homemakers	Combiners	Careerists
A pre-school child is likely to suffer if his or her mother works?¹				
Agree	18	30	16	13
Neither agree or disagree	22	28	22	19
Disagree	60	42	62	68
It is alright for people to have children without being married?¹				
Agree	78	75	78	80
Neither agree or disagree	13	15	13	12
Disagree	9	10	9	8
Was raised according to a particular religion?²				
Yes	58	50	59	61
No	42	50	41	39
Practices religion now?³				
Yes	19	19	22	14
No	81	81	78	86

Notes: The columns for each question add up to 100. (1) The respondents could either strongly agree, agree, neither agree or disagree, disagree or strongly disagree with the statements that were presented. Here, the categories “strongly agree” and “agree” are combined to “agree”, and likewise the categories “strongly disagree” and “disagree” are treated together in “disagree”. (2) The wording of the question: “Now I would like to ask you some questions about religion. Thinking first of your childhood, were you raised according to any particular religion?” Response alternatives: Yes, no, don’t know. (3) The wording of the question: “Do you actively practice any religion now?” Response alternatives: Yes, no, don’t know.

In Table 6.7 the answers to the questions concerning long-term illnesses, disabilities or infirmities as well as self-assessment of health at the age of 34/35 during the past 12 months are shown. The results indicate that the homemakers in general have poorer health in comparison to the women in the other groups. First of all, the homemakers to a larger extent have a long standing illness, disability or infirmity (36%) in comparison to the combiners (25%) and the

careerists (26%). Moreover, only 22% of the homemakers told that they found their health had been excellent during the past year, the comparable number of the combiners and careerists being 35% and 39% respectively. In a similar manner, 9% of the homemakers assessed their health to be poor and 4% very poor, whereas only 4% of the combiners and careerists had experienced poor health and only 1% had experienced very poor health. The findings suggest that, as already discussed in the previous chapter, some of the homemakers experience long absences from work because of poor health, and not because of their choices made based on the preferences and structural constraints.

Table 6.7: Descriptive findings on health

	All	Homemakers	Combiners	Careerists
Long-standing illness, disability or infirmity, %¹				
Yes	27	36	25	26
No	73	64	75	74
Self-assessment of health during the past 12 months, %²				
Excellent	34	22	35	39
Good	45	46	46	44
Fair	15	19	15	12
Poor	5	9	4	4
Very poor	2	4	1	1

Notes: The columns for each characteristic add up to 100. (1) The wording of the question: “Do you have any long-standing illness, disability or infirmity? By long-standing I mean anything that has troubled you over a period of time, or that is likely to affect you over a period of time?”. Response alternatives: Yes, no. (2) The wording of the question: “Please think back over the last 12 months about how your health has been. Compared to people of your own age, would you say that your health has on the whole been...”. Response alternatives: Excellent, good, fair, poor or very poor.

Concerning the economic situation of the women at the age of 34/35 (Table 6.8), the first observation that can be made is that a large share of the homemakers has no education (17%), whereas the same is true for only 3-4% of the combiners and careerists. At the same time, 15% of the homemakers, 38% of the combiners and 49% of the careerists have a degree. Thus, as in the German case, the lower the education, the more likely it is that the woman has chosen the homemaking strategy and likewise, the higher the education, the more likely that the woman has chosen the career strategy. Notice, however, that there nevertheless is a substantial amount of women who have chosen the homemaking strategy but who have a high education, and that there likewise is a substantially large group of combiners and careerists with a quite low education.

Table 6.8: Descriptive findings on the economic situation at the age of 34/35

	All women	Homemakers	Combiners	Careerists
Education, %				
None	6	17	4	3
CSE	14	21	14	9
O-level or equivalent	33	40	34	28
A-level or equivalent	10	8	10	11
Degree	30	13	32	39
Higher degree	6	2	6	10
Marital status, %¹				
Married	55	52	63	43
Remarried	4	6	4	2
Never married, cohabiting	13	12	11	18
Other, cohabiting	5	4	4	5
Never married, living alone	16	16	10	25
Other, living alone	8	11	7	7
Age current partner left education²				
14-16	56	68	56	49
17-18	19	15	19	20
19+	22	11	23	27

Notes: The columns for each characteristic add up to 100. (1) “Married”, and “remarried” refers to persons who are married and cohabiting with their spouse, “other, cohabiting” refers to widowed, legally separated and divorced persons who are cohabiting; “other, living alone” refers to those married, remarried, widowed, legally separated and divorced persons who are not cohabiting. (2) Refers to the partner with whom the respondent is cohabiting at the moment.

When it comes to the marital status, the BCS70 includes data on marital history and on the current spouse, but there is no information on the characteristics of the partners a woman has had between the interview dates. Hence, only the information on the marital status at the age of 34/35 is included in the analysis. As can be read from the Table, the combiners are the most likely to be married (67%) followed by the homemakers (58%) and the careerists (45%). If we then take a look at those women who are widowed, legally separated, divorced or still married but not cohabiting (the group “others”), we notice that in each career strategy group 11-15% of the women belong to this group of women. Thus, 78% of the combiners have been or are married, whereas this is true for 73% of the homemakers and 57% of the careerists. If we then take a look at cohabitation, we notice that it is most common among the careerists: 18% of the careerists have never been married but are cohabiting at the moment, which can be contrasted

with the 11-12% of the homemakers and combiners. Finally, 25% of the careerists have never been married and are currently living alone, whereas a substantially lower share of the homemakers (16%) and the combiners (11%) belong to this group. A possible interpretation of these trends is that as with the childbearing, the careerists are the slowest in forming long term relationships.

The information on the age the current partner left the education shows that the homemakers have the least educated spouses: 68% of the homemakers with a partner had a spouse who left the education at the age of 14-16, whereas this is true for 56% of the partnered combiners and 49% of the partnered careerists. At the same time, the careerists and combiners have the most educated spouses: 27% of the partnered careerists and 23% of the partnered combiners have a spouse who left the education at the age of 19+, compared to the 11% of the partnered homemakers. In other words, the results give a strong indication about marital homogamy concerning education.

Table 6.9: Descriptive findings on the division of household work at age of 34/35

	All women	Homemakers	Combiners	Careerists
Who prepares and cooks the main meal in the family, %				
I do most of it	65	78	69	48
My partner does most of it	10	4	9	18
We share more or less equally	24	17	22	33
Some else does it	0	0	0	0
Who looks after children in the family, %				
I do most of it	59	63	63	32
My partner does most of it	1	1	1	5
We share more or less equally	39	36	36	59
Some else does it	1	0	0	4

Notes: The columns for each question add up to 100. Wording of the question: In your family, who does each of these things most of the time? Preparing and cooking the main meal; generally being with and looking after children.

The results for the division of household work for the women who live with a partner are shown in Table 6.9. In general, the division of household work is more equal among the combiners and especially among the careerists in comparison to the homemakers. For example, when the women were asked who would most often cook the main meal in the family, 78% of the homemakers, 69% of the combiners and only 48% of the careerists told it was their responsibility. Among the careerists it was relatively common that the partner took care of the cooking (18%), in comparison to the homemakers (4%) and the combiners (9%). Also, the

careerists (33%) and the combiners (22%) were more likely to share the activity equally than the homemakers (17%). A similar kind of pattern is observed for the women with children when it comes to childcare: 63% of the homemakers and combiners with children told that they had the main responsibility for the child care, whereas only 32% of the careerists gave the same answer. Also, only 1% of the partners of the homemakers and combiners took the main responsibility, the corresponding number being 5% for the careerists. Further, the careerists were the most likely to share the child care equally with their spouse (59%) in comparison to the homemakers and combiners (36%). Based on this information only, it is naturally not possible to say whether the more equal division of the household work load among the careerists (and to a certain extent among the combiners) is a partial cause or the consequence of the career strategy and fertility choices.

6.3.3 Determinants of first birth

As in the previous chapter, the Cox proportional hazard model is employed when the determinants of childbearing are studied. Also the process time is defined similarly, that is, from the time the individual reached the age of 15 until the 419th living month. However, unlike in the German case, women who have given birth to twins or triplets are completely excluded from the analysis. At first, bivariate regressions were run for the variables discussed above. The results concerning the attitudes and values are shown in Table 6.10. Firstly, even though for all women the disagreement with the statement “a pre-school child is likely to suffer if his or her mother works” influences first births negatively, for careerists and combiners the disagreement has a positive influence. A probable explanation is that the women have, as discussed above, adjusted their answers based on whether they have children or not, and on how they have organized their working patterns after the child birth (the combiners and careerists who have had children, but still work, disagree). Consequently, the variable is excluded from all further analysis. Secondly, as to the question on if “it is alright for people to have children without being married”, the results show, somewhat surprisingly, that disagreement influences the propensity of first birth negatively. The effect is especially large among the homemakers. The result for the careerists, though statistically insignificant, indicates that the values do not influence the first birth propensity to any substantial degree. Thirdly, the influence of religion shows similar pattern independently of whether the religious upbringing or own religious practice is considered. Of the homemakers, those whose parents did not raise them according to a particular religion are more

likely to have had their first child than those homemakers who were raised according to a religion (which contrasts the value change theory and the findings of the positive influence of religion). On the other hand, religious upbringing has the expected positive relationship among the careerists. Likewise, a practice of religion influences the first births negatively among the homemakers and positively among the careerists. Notice here that, even though the variables which measure religiosity in the UK dataset are not strictly comparable to the variables in the German dataset, in Germany the homemakers who attended religious services weekly had the highest fertility, whereas the careerists who attended religious services relatively seldom had a higher fertility, i.e., the influence of religiosity for homemakers and the careerists appears to be the opposite in the UK in comparison to Germany.

Table 6.10: Relative risks of the transition to motherhood, the influence of attitudes and religion

	All	Homemakers	Combiners	Careerists
A pre-school child is likely to suffer if his or her mother works?				
Agree	1	1	1	1
Neither agree or disagree	0.86*	1.06	0.90	1.20
Disagree	0.89*	0.96	1.16*	2.25**
It is alright for people to have children without being married?				
Agree	1	1	1	1
Neither agree or disagree	1.04	0.93	0.92	1.06
Disagree	0.85*	0.54**	0.78**	0.98
Was raised according to a particular religion?				
Yes	1	1	1	1
No	1.06	1.36**	0.98	0.75**
Practices religion now?				
Yes	1	1	1	1
No	0.87**	1.36**	1.03	0.65**

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. The regressions are bivariate and the results refer to the relative risks in comparison to the reference category, which is indicated with 1.

The results concerning women's health (Table 6.11) indicate that the women with long-standing illness, disability or infirmity have lower first birth fertility compared to the women without such problems. The self-assessment of health during the past 12 months, in turn, shows that especially the homemakers with the assessment of very poor health have a lower probability to have had their first child than those with excellent health. Thus, as was discussed above, the childlessness among the homemakers is indeed related to poor health. This appears to be even to

some extent true for the combiners. The somewhat different results for the careerists concerning the self-assessment of health do not reach statistical significance.

Table 6.11: Relative risks of the transition to motherhood, the influence of health

	All	Homemakers	Combiners	Careerists
Long-standing illness, disability or infirmity				
Yes	1	1	1	1
No	1.14**	1.27**	1.31**	1.24
Self-assessment of health during the past 12 months				
Excellent	1	1	1	1
Good	1.14**	1.03	1.08	0.91
Fair	1.12	1.00	0.92	0.81
Poor	1.00	0.97	0.58**	0.95
Very poor	0.85	0.40**	0.65	0.97

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. The regressions are bivariate and the results refer to the relative risks in comparison to the reference category, which is indicated with 1.

Concerning the education and partner's education (Table 6.12), the statistically significant results are similar to the ones obtained for Germany: The higher the education, the lower the fertility, and likewise, the higher the education of the partner, the lower the fertility. Further, for the marital status at the age of 34/35 we notice that never married cohabiting women as well as never married women living alone have lower propensity to enter into the motherhood than the married women. Yet, as to the never married women who live alone, it is interesting that the effect is larger for the careerists than for the combiners and homemakers, which can be contrasted with the particularly low risk of the German careerists without spouse to enter the motherhood.

It is not possible to include the division of child care tasks into the regressions that aim to study the first birth propensity, and therefore only the question on the division of cooking responsibilities was studied. The results for all women show that when the partner does most of the cooking, or when the spouses share more or less equally, the propensity to have the first child is lower. This surprising result could be interpreted to mean that in families which are more non-traditional, the fertility is lower. Due to the mostly statistically insignificant results among the career strategy groups it is however not possible to say whether there are some differences between the different groups of women.

Table 6.12: Relative risks of the transition to motherhood, the influence of economic situation

	All	Homemakers	Combiners	Careerists
Education (at the age of 34/35)				
None	1	1	1	1
CSE	0.83*	0.91	1.02	1.11
O-level of equivalent	0.69**	0.87	0.96	0.91
A-level or equivalent	0.49**	0.61**	0.78	0.81
Degree	0.42**	0.58**	0.60**	1.00
Higher degree	0.30**	0.33**	0.45**	0.79
Marital status at the age of 34/35				
Married	1	1	1	1
Remarried	1.21*	1.29	1.10	1.03
Never married, cohabiting	0.48**	1.06	0.61**	0.23**
Other, cohabiting	0.97	2.58**	1.17	0.88
Never married, living alone	0.26**	0.68**	0.26**	0.11**
Other, living alone	1.04	1.21	1.42**	0.57**
Age current partner left education				
14-16	1	1	1	1
17-18	0.81**	0.79	0.84*	0.96
19+	0.61**	0.60**	0.63**	0.82

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. The regressions are bivariate and the results refer to the relative risks in comparison to the reference category, which is indicated with 1.

Finally, several of the variables that were studied above in the bivariate regressions are included in the two multiple regression models (Table 6.14). The question “a pre-school child is likely to suffer if his or her mother works” was not included as the bivariate results suggested that the causality goes from having children to the attitudes. The indicator on religious upbringing was excluded as it gave similar results as the indicator on woman’s practice of religion. For similar reasons, only the question on long term illnesses, disabilities or infirmities was integrated as an indicator for health. Due to the mostly statistically insignificant results, the question on the division of household work load was excluded. Two models were run. In the first model only women’s opinions, health, and education are included. The results are relatively similar to those obtained in the bivariate regressions, though there are even some important differences. Firstly, for all women the negative influence of religious practice becomes larger. For the homemakers, in turn, the statistically significant positive effect of religious practice decreases, and becomes non-significant. For the combiners, the small statistically insignificant positive effect found in the bivariate regressions becomes negative and significant. Secondly, as to the influence of health on first birth fertility, the negative statistically significant effect is now found even for the careerists.

Table 6.13: Relative risks of the transition to motherhood, the influence of the division of household work

	All	Homemakers	Combiners	Careerists
Who prepares and cooks the main meal in the family				
I do most of it	1	1	1	1
My partner does most of it	0.57**	0.74	0.69**	0.97
We share more or less equally	0.75**	1.04	0.93	0.91

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. The regression results refer to the relative risks in comparison to the reference category, which is indicated with 1.

In the second model also the current marital status and the current partner's education were included. This inclusion did not markedly change the effect of the opinions, changed somewhat the effect of the religion and health, and influenced the statistical significance of the findings. As to the education, the negative effect becomes more pronounced at the lowest educational levels, whereas for those women who have a degree or higher degree, the effect is less pronounced when controlling for the marital status and partners education. Notice also that for the careerists the influence of own education becomes positive. A final interesting observation is that although still remaining negative, the influence of the partner's education is now less pronounced when controlled with the other variables.

Table 6.14: Relative risks of the transition to motherhood, the influence of selected variables

	All		Homemakers		Combiners		Careerists	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
It is alright for people to have children without being married?								
Agree	1	1	1	1	1	1	1	1
Neither agree or disagree	1.02	0.95	0.88	0.85	0.95	0.90	1.01	0.94
Disagree	0.79**	0.77**	0.58**	0.60**	0.77**	0.75**	0.89	0.83
Practices religion now?								
Yes	1	1	1	1	1	1	1	1
No	0.73**	0.80**	1.13	1.09	0.88*	0.91	0.63	0.73*
Long-standing illness, disability or infirmity								
Yes	1	1	1	1	1	1	1	1
No	1.17**	1.10*	1.36**	1.36**	1.31**	1.27**	1.30*	1.19
Education (at 34/35)								
None	1	1	1	1	1	1	1	1
CSE	0.80**	0.71**	0.89	0.79	0.98	0.84	1.03	1.37
O-level of equivalent	0.66**	0.59**	0.84	0.76*	0.93	0.79	0.87	1.13
A-level or equivalent	0.47**	0.43**	0.63**	0.59*	0.76	0.66**	0.76	0.91
Degree	0.39**	0.39**	0.57**	0.54**	0.57**	0.59**	0.90	1.21
Higher degree	0.28**	0.31**	0.31**	0.35**	0.43**	0.49**	0.73	1.10
Marital status at the age of 34/35								
Married		1		1		1		1
Remarried		1.12		1.19		1.01		1.13
Never married, cohabiting		0.48**		0.93		0.59**		0.23**
Other, cohabiting		0.91		1.98**		1.13		0.91
Never married, living alone		0.24**		0.58**		0.25**		0.10**
Other, living alone		0.93		1.02		1.29*		0.52**
Age current partner left education								
14-16		1		1		1		1
17-18		0.85**		0.83		0.87*		0.94
19+		0.76**		0.69*		0.73**		0.53
At risk		3706		703		1895		1108
Failures		2651		659		1586		406
-Log likelihood		20301		20032		3756		3736
						10879		10767
								2749
								2627

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. In model (1) the marital status and the age current partner left the education are not included, but they are introduced in the regression equation in mode (2). All regression results refer to the relative risks in comparison to the reference category, which is indicated with 1.

6.3.4 Determinants of second birth

In the study on the determinants of the second birth, only the women who had their first birth before reaching the age of 33 are included in the risk set. Compared to the study on the first births, we can now observe a change in the directional influence of some variables. For example,

women who disagree with the statement “it is alright for people to have children without being married” are now, contrary to the first births, more likely to have a child than those women who agree. For each group of women a positive relationship can be found, but it reaches statistical significance only for the combiners. As to the questions on religion, the positive effect of the homemakers’ non-religious upbringing and own religious practice can no longer be found. For the careerists, in turn, non-religious upbringing is positively influencing the second births, contrary to the negative effect for the first births. Due to the mostly statistically insignificant results, it is not possible to draw conclusions on the possible differences between the three different groups of women.

Table 6.15: Relative risks of the propensity of the second birth, the influence of attitudes and religion

	All	Homemakers	Combiners	Careerists
It is alright for people to have children without being married?				
Agree	1	1	1	1
Neither agree or disagree	1.17*	1.28*	1.10	1.08
Disagree	1.26**	1.14	1.31*	1.22
Was raised according to a particular religion?				
Yes	1	1	1	1
No	1.00	0.93	0.90	1.46**
Practices religion now?				
Yes	1	1	1	1
No	0.83**	0.99	0.76**	0.91

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. The regressions are bivariate and the results refer to the relative risks in comparison to the reference category, which is indicated with 1.

As to the influence of health, there is some indication that poor health is related to lower propensity of second births. The results are, however, mostly statistically insignificant. For the economic situation, in turn, we can observe that the women’s own education influences the second births mostly negatively for the group “all women”. This is contrary to the in several other studies found positive influence, and is most likely to be explained by the postponement of childbearing by the highly educated mothers combined with the early censoring of the women. Notice however that the influence of having a higher degree is positive for the homemakers and careerists.

When it comes to the marital status, the women who belong to any other category than to “married” have lower second birth fertility than the women who are married. This might not only be an indication of the negative influence of cohabitation and lack of a partner, but also suggests that stable marriages are better for second births. Even if the direction of the effect is the same, there are some differences between the groups when it comes to the magnitude of the effect. For instance, as for the first births and in a similar manner as in Germany, the influence of having never married and now being cohabiting is much more extreme for the careerists than for the homemakers. Finally, as to the education of the partner, we notice that the negative sign for the first births has become positive, but only for women whose partners have been in education at least 19 years. Notice also, that the effect is slightly larger for the homemakers than for the combiners and careerists.

Table 6.16: Relative risks of the propensity of the second birth, the influence of health

	All	Homemakers	Combiners	Careerists
Long-standing illness, disability or infirmity				
Yes	1	1	1	1
No	1.08	1.00	1.14	1.31
Self-assessment of health during the past 12 months				
Excellent	1	1	1	1
Good	0.98	0.92	0.96	0.93
Fair	0.90	0.79	0.85	1.07
Poor	0.67**	0.74	0.48**	0.43
Very poor	0.79	0.81	0.66	0.33

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. The regressions are bivariate and the results refer to the relative risks in comparison to the reference category, which is indicated with 1.

Concerning the division of the household work, the results still suggest that more equal sharing of the household work and care work is related to lower propensity of childbearing. The result contradicts many of the findings from the previous research on gender equality at home, but it is also possible that the negative effect is related to the timing of the births, that is, the more equal couples are likely to have their children later. However, it is also possible that the unequal sharing is a consequence of the couple having more children.

Table 6.17: Relative risks of the propensity of the second birth, the influence of economic situation

	All	Homemakers	Combiners	Careerists
Education (at 34/35)				
None	1	1	1	1
CSE	0.82*	1.00	0.76	0.89
O-level of equivalent	0.88	1.09	0.88	0.70
A-level or equivalent	0.79*	0.73	0.92	0.66
Degree	0.96	1.20	1.07	0.95
Higher degree	1.00	3.50**	1.00	1.26
Marital status at the age of 34/35				
Married	1	1	1	1
Remarried	0.75*	0.67*	0.72*	0.85
Never married, cohabiting	0.69**	0.61**	0.70**	0.40*
Other, cohabiting	0.73**	0.82	0.77	0.67
Never married, living alone	0.37**	0.36**	0.35**	0.14
Other, living alone	0.62**	0.89	0.58**	0.07**
Age current partner left education				
14-16	1	1	1	1
17-18	0.92	1.11	0.94	0.78
19+	1.36**	1.63**	1.39**	1.45

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. The regressions are bivariate and the results refer to the relative risks in comparison to the reference category, which is indicated with 1.

Table 6.18: Relative risks of the propensity of the second birth, the influence of household work

	All	Homemakers	Combiners	Careerists
Who prepares and cooks the main meal in the family				
I do most of it	1	1	1	1
My partner does most of it	0.75**	0.91	0.85	0.72
We share more or less equally	0.81**	1.03	0.85*	0.66*
Who looks after children in the family				
I do most of it	1	1	1	1
My partner does most of it	0.92	0.78	1.93	1.01
We share more or less equally	0.79**	0.96	0.81**	0.82
Some else does it	0.58	1.30	0.51	0.87

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. The regressions are bivariate, and all results refer to the relative risks in comparison to the reference category, which is indicated with 1.

The multiple regression analysis was run in a similar manner as in the case of first births: The first model includes only opinions, religion and woman's own education, but the second model is complemented with information on marital status and partner's education. In both models, the effects of the variables are largely the same as in the bivariate regressions, and in case the effect or direction of the effect changes, the results also become (or were from the beginning) statistically insignificant, not allowing any strong conclusions to be drawn. There are, however, two exceptions: The woman's own education and partner's education. When the

partner's education is introduced in the regression equation, the influence of the woman's own education becomes weaker, and so does the effect of the partner's education.

Table 6.19: Relative risks of the propensity of the second birth, the influence of selected variables

	All		Homemakers		Combiners		Careerists	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
It is alright for people to have children without being married?								
Agree	1	1	1	1	1	1	1	1
Neither agree or disagree	1.14	1.08	1.31*	1.18	1.05	1.01	1.07	1.03
Disagree	1.20*	1.09	1.13	0.93	1.20	1.11	1.18	1.15
Was raised according to a particular religion?								
Yes	1	1	1	1	1	1	1	1
No	0.87*	0.92	1.03	1.05	0.83*	0.90	0.93	0.97
Education (at 34/35)								
None	1	1	1	1	1	1	1	1
CSE	0.82	0.79*	1.02	1.04	0.76	0.70*	0.95	1.17
O-level of equivalent	0.88	0.83*	1.09	1.03	0.88	0.82	0.69	0.87
A-level or equivalent	0.77*	0.74*	0.74	0.79	0.88	0.83	0.67	0.88
Degree	0.93	0.82*	1.23	1.13	1.03	0.90	0.94	1.09
Higher degree	0.99	0.80	3.66**	2.65**	0.98	0.81	1.27	1.23
Marital status at the age of 34/35								
Married		1		1		1		1
Remarried		0.79*		0.65*		0.79		0.91
Never married, cohabiting		0.69**		0.62**		0.71**		0.37*
Other, cohabiting		0.74**		0.83		0.81		0.69
Never married, living alone		0.38**		0.40**		0.35**		0.15**
Other, living alone		0.64**		0.96		0.60**		0.08**
Age current partner left education								
14-16		1		1		1		1
17-18		0.90		1.11		0.89		0.75
19+		1.29**		1.50*		1.24*		1.38
At risk	2424		653		1478		293	
Failures	1791		549		1080		162	
-Log likelihood	12948	12875	3196	3165	7266	7228	852	823

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. In model (1) the marital status and the age current partner left the education are not included, but they are introduced in the regression equation in mode (2). All regression results refer to the relative risks in comparison to the reference category, which is indicated with 1.

6.4 DISCUSSION

In this chapter childbearing in the UK was studied by employing the data from the BCS70. The results show that 19% of the women can be classified as homemakers, 51% as combiners and

30% as careerists, which means that the size of the different groups is similar in the UK and Germany. As the original data did not include any weights and as the drop-outs bias the data towards the more advantaged groups, it is possible that the share of the careerists and combiners is somewhat overestimated at the expense of the share of the homemakers. There were even some additional difficulties with the data, but these problems are not likely to change the central result of the study.

The three groups of women were found to differ from each other when it comes to the tempo and quantum of fertility. As in the German case, the homemakers enter the motherhood earliest, are the least likely to remain childless and progress often to the higher parities ending thus up with a high total average fertility. Among the careerists, in turn, the share of the childless women is the highest and the number of the women who progress to higher parities the lowest, which means that the average fertility is extremely low. The combiners are placed somewhere between these two extremes. Despite these overall similarities with the German women, there are even some significant differences between the countries. All three groups of women, for instance, have higher average fertility in the UK than in Germany.

As to the central characteristics of the women belonging to the different groups, even in Britain the education is found to be the most important discriminating factor: The homemakers are the least and the careerists the most educated group. The data also suggests that there might be some differences in the values and attitudes of the women belonging to the different groups, but more research would need to be conducted on this area to draw any firm conclusions. Nevertheless, based on the results of this study, the differences appear to be surprisingly small.

Finally, the study on the determinants of childbearing in the UK suggests that there are some differences in the direction of the impact and the homogeneity of the groups when it comes to the women belonging to the different career strategy groups. Most notably, for first births the impact of religiosity and religious upbringing is to an opposite direction among the homemakers and careerists. Moreover, when marital status and the age current partner left the education were introduced to the equation, the impact of higher education became in general positive for the careerists, but remains negative for the homemakers and the combiners (even though the results are statistically insignificant for the careerists). The results concerning the homogeneity of the groups in turn show that, for instance, when the women were asked about the question on whether it is alright to have children without being married, the differences among the careerists

in comparison to the reference category were smallest, and biggest among the homemakers. Finally, as in Germany, the negative effect of not having a spouse is particularly pronounced among the careerists. As for the second births, many differences between the groups emerge both in the bivariate and multiple regressions, but many of these results are statistically insignificant. Some of the most interesting findings are that, as for first births and in Germany, the negative effect of not having a spouse is still particularly strong among the careerists. Contrary to Germany, however, the positive influence of partner's education is strongest among the homemakers. Of interest is also that the positive influence of having a higher degree is particularly strong among homemakers, whereas a similar strong effect in Germany could not be established.

All in all then, the results for the UK indicate that, as in Germany, women are heterogeneous in their work-life choices. Moreover, as for the relative size of the three groups, family size, timing of the births and characteristics of the women, many similar tendencies between the countries are detected. Yet, there are even some important differences between the countries. For example, the fertility rate for each group is higher in the UK in comparison to Germany, which suggests that the overall fertility differences are not simply related to the differences in the relative size of the groups. Further, there are even some interesting similarities and differences in the determinants of the first and second births. Most interesting is perhaps that for the careerists in both countries not having a spouse/living alone is particularly strongly and negatively related to having children. Yet, when a spouse is found, the positive influence of spouse's higher education for the second births is particularly important for the homemakers in the UK, and for the careerists in Germany. These differences indicate that some determinants of childbearing are universal, but other determinants are more dependent on the context.

CHAPTER 7

WOMEN'S CAREER STRATEGY CHOICES

IN FINLAND⁴⁹

Unlike in the conservative and liberal welfare states the social policy in the social democratic countries is not biased towards the homemaking strategy. Instead, the publicly provided relatively inexpensive child care together with the possibilities to take long leaves in connection to the childbearing indicates that the governmental support is concentrated on the combination and career strategies. For these reasons it was in chapter 4 assumed that the share of the homemakers is likely to be lower in the social democratic welfare states in comparison to the conservative and liberal welfare states, and likewise it was assumed that the fertility of the homemakers in the social democratic countries is lower. It was also suggested that many of the homemakers will choose the combination strategy, but that the adaptive and work-centered women will choose according to their preferences. As a consequence of the generous support for the combination and career strategies, in turn, the level of fertility among the women who choose these strategies is assumed to be high, which in turn leads to the overall high fertility. Finally, given the universalistic nature of the support it was assumed that the selection of women based on their education and income would not be as pronounced as in the liberal and conservative welfare states.

In this chapter women's career strategy choices are studied in the Finnish context. The key components of the Finnish family policy (the for long individualized tax system, the generous time rights and compensation in connection to the childbirth and the good availability of cheap, publicly provided childcare) are typical for the social democratic countries. However, Finland differs from the other social democratic countries (exclusive Norway) in that after the

⁴⁹ A revised and shortened version of this chapter was published in *Finnish Yearbook of Population Research* 2013 and can be accessed at the homepage of the Family Federation of Finland: http://www.vaestoliitto.fi/tieto_ja_tutkimus/vaestontutkimuslaitos/julkaisut/finnish_yearbook_of_population_r/finnish-yearbook-of-population-r4/

parental leave the parents have a possibility to take a compensated leave until the youngest child reaches the age of three. Thus, the Finnish model supports all career strategies into a certain extent, which makes the country an interesting study object. As in the previous two chapters, (1) the relative share of the women belonging to the different groups, (2) the patterns of childbearing within these groups, (3) the characteristics of the women belonging to the different groups and (4) determinants of first and second births are investigated. After the background information on fertility, family formation, female labor force participation, preferences, family policy and household's own resources, the study questions are answered by employing Finnish register data (Statistics Finland 2011a).

7.1 FERTILITY, FAMILY FORMATION AND FEMALE EMPLOYMENT

The general trends in fertility, family formation and female labor force participation in Finland will be discussed below. For a more profound review on the Finnish fertility trends, Vikat (2002), Ruokolainen and Notkola (2007) as well as Andersson et al. (2009) are recommended. Pitkänen and Jalovaara (2007) provide an informative summary of the trends in family formation and for an overview of the female labor force participation, see Haataja (2005).

7.1.1 Patterns of fertility

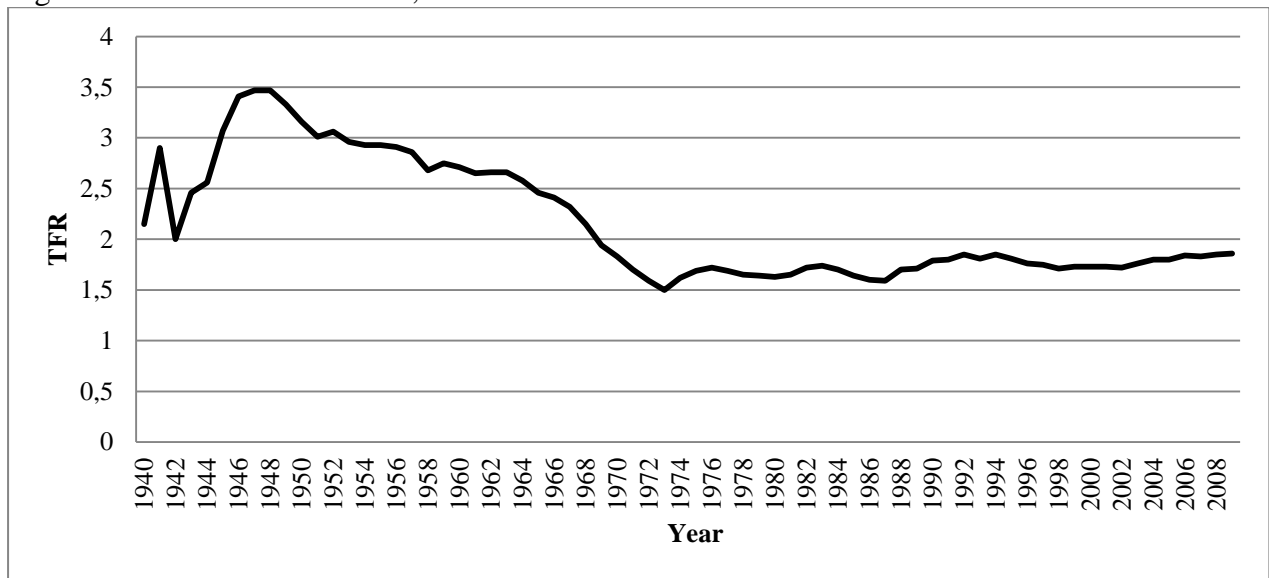
The patterns of period fertility in Finland⁵⁰ are somewhat different from those in Germany and the UK. As was discussed in the previous chapters, in these countries the peak of the baby boom occurred in the beginning of the 1960s. In Finland, in turn, the after war baby boom took place earlier and had its peak in the end-1940s when the TFR was as high as 3.47, which means that Finland experienced the highest baby boom TFR of the three countries that are studied. After the peak the TFR in Finland decreased until 1973 when also the all-time low of 1.5 was reached. Thereafter the TFR has fluctuated between 1.5 and 1.86, and has thus been well above the (western) German levels and quite similar to the TFR in the UK. Notice also that, as in the UK, the TFR in Finland has increased during the first decade of the 21st century (Figure 7.1.).

Despite the early timing of the baby boom and the fertility decline that followed, there was an ongoing long term decline in the MAB which lasted until 1971 whereafter the MAB has gradually increased (Gissler 2003). In 1973 the MAB was 26.8, that is, at the same levels than in West Germany, but higher than in the UK. Up to the present (2008), the MAB has climbed to a

⁵⁰ As in western Germany and the UK, even in Finland the regional patterns of childbearing vary (Kulu et al. 2007; Kulu and Boyle 2009).

very high level of 30.1 (Eurostat 2010). The age-specific fertility rates in Figure 7.2 illustrate the trends in fertility postponement in detail: Fertility rates for women aged 30-34 and 35-39 have significantly increased during the past decades, when at the same time the fertility for the women aged 20-24 has declined. The rates for the age group of 25-29, in turn, have showed a considerable fluctuation. Finally, the ASFRs for the women aged 15-19, 40-44 and 45-49 have remained relatively stable during the past 20 years.

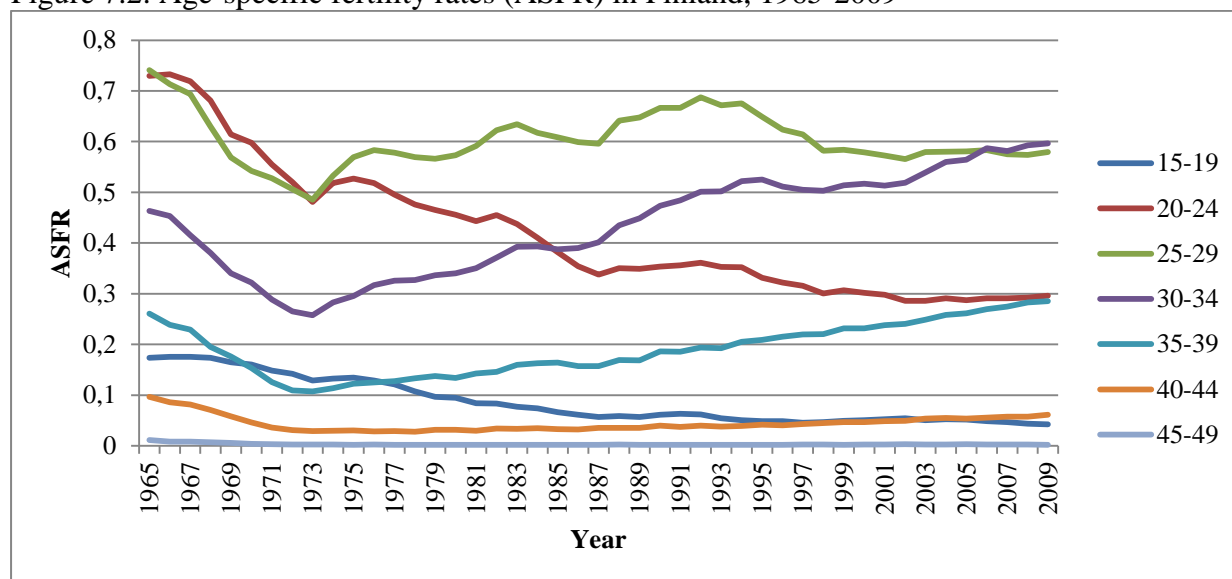
Figure 7.1: The TFR in Finland, 1940-2009



Source: Statistics Finland (2010a).

Finally, when it comes to the fertility patterns by birth order, 17% of the women in 1955-1959 cohorts remained childless, 17% had only one child, 37% had two children, 20% three and 9% four or more children (Statistics Finland 2010b). In other words, Finland differs from West Germany in that the share of the women who have only one child is higher in Germany, whereas the share of the women who have three or more children is much higher in Finland. A comparison between Finland and the UK, in turn, shows that the share of the women at the different parities is relatively similar.

Figure 7.2: Age-specific fertility rates (ASFR) in Finland, 1965-2009



Source: Eurostat (2011).

7.1.2 The changing familial context of childbearing

The trends in family formation in Finland bear more similarities with the situation in the UK than with the situation in Germany; the second demographic transition-related behavior appears to be slightly more advanced in the UK than in Finland, whereas Finland is well ahead the western part of Germany. To start the review with cohabitation, the increases in the consensual union formation started in the 1970s (Finnäs 1995; Pitkänen and Jalovaara 2007) and continued during the following decades. In 1985, for example, 12.8% of all the persons living in a union were cohabiting, but in 2005 the share had increased to 27.4% (Table 7.1). As was seen in the German and British cases, simultaneously with the cohabitation also the number of extra-marital births has grown, the age at first marriage increased, the propensity to marry decreased and the propensity to divorce increased.

In 1965 only 4.6% of the children were born outside the marriage, but in 2005 as many as 39.2% of the newborn children were extra-marital⁵¹. The crude marriage rate, in turn, has decreased from 7.9 in 1965 to 5.6 in 2005, and during the same period the mean age of women at first marriage has increased from 23.4 to 28.0 (2005). As an interesting detail can be mentioned

⁵¹ Interestingly, the timing of the births differs significantly between the married and cohabiting couples: Cohabiting couples do not usually have children before the age of 30, whereas the couples who are (or eventually get) married have their children often already in their early 20s (Kontula 2009).

that from the mid-1990s the MAB₁ has been higher than the mean age at first marriage (Statistics Finland 2011b).

Finally, the propensity of divorce, measured with the crude divorce rate, has increased from 1.0 to 2.6 during 1965-2005. According to Pitkänen and Jalovaara (2007), the members of the younger marriage cohorts are more likely to experience divorce than the older ones and the increasing trend has not stopped yet. Despite of the increases in the divorce rates, stepfamilies are not very common in Finland: Although the share of the stepfamilies (of all families with children) has grown during the observation period, in 2005 only 8.8% of all families with children were stepfamilies.

Table 7.1: Indicators of family formation in Finland, 1965-2005

	(1) Cohabitation	(2) Children outside marriage	(3) Crude marriage rate	(4) Mean age of women at first marriage	(5) Crude Divorce Rate	(6) Stepfamilies as a proportion of families with children (%)
1965	-	4.6	7.9	23.4	1.0	-
1975	-	10.2	6.7	23.4	2.0	-
1985	12.8	16.4	5.3	25.1	1.8	-
1995	21.0	33.1	4.7	27.0	2.7	6.6
2000	24.8	39.2	5.1	28.0	2.7	7.7
2005	27.4	40.4	5.6	-	2.6	8.8

Notes: (1) Refers to cohabiting persons aged 15-64 as a percentage of all persons living in a union. (2) Refers to the number of children born outside marriage as a percentage of all births.

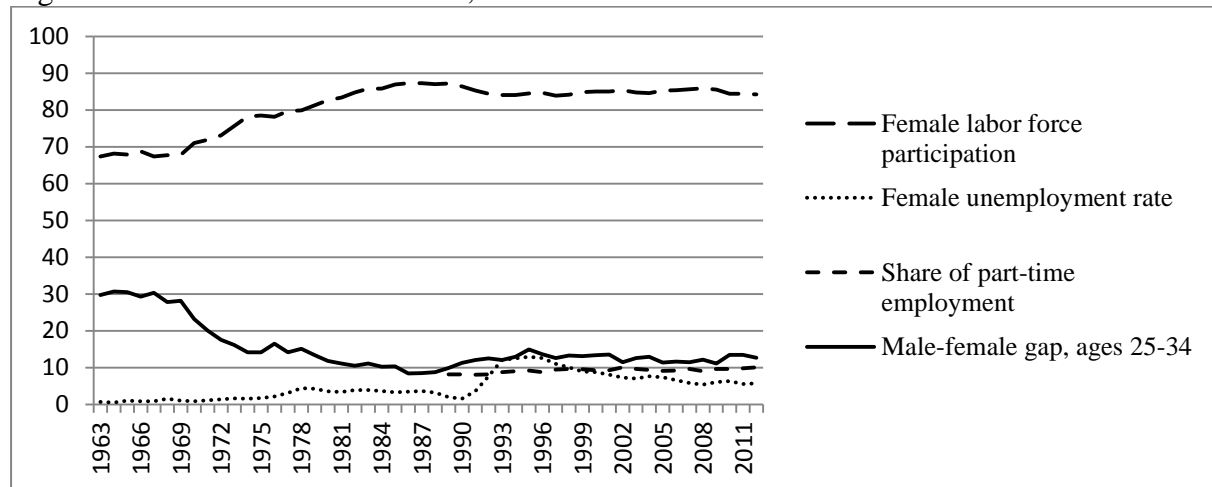
Sources: Column (1): Miettinen (2009). Column (2): Eurostat (2010). Column (3): Eurostat (2010). Column (4): Council of Europe (2005:60). Column (5): Eurostat (2010). Column (6): Statistics Finland (2010c).

7.1.3 Female labor force participation

The egalitarian model of both the man and woman working full-time in agriculture survived the rapid transformation from farming to the service based society; the male breadwinner model has never had a strong position in Finland. Also, the female part-time work ideology was never rooted in the Finnish culture (Pfau-Effinger 2004). Consequently, already from the 1960s the Finnish female labor force participation has been exceptionally high, above or around 60% (OECD 1999:41). During the past 20 decades when many changes in the share of the women working outside the home has taken place in Germany and the UK, the labor market status for

Finnish women has remained relatively stable. For example, as can be read from Figure 7.3, in 1990 the FLFP was approximately the same as in 2012. During the same period, the share of the part-time work has likewise remained relatively stable and low, approximately 10% of the total. In other words, part-time work is less common in Finland than in Germany and the UK. It is also noteworthy that whereas part-time work in Germany and the UK is often a way for the mothers to combine work and family, in Finland it is more likely that the childless women work part-time. For example in 2002 the share of the childless women who worked part-time was 20%, whereas the corresponding number for the mothers was 14% (Haataja 2005:85ff). Further, notice that female unemployment rate increased radically in the beginning of the 1990s as a consequence of the recession.

Figure 7.3: Labor market indicators, 1963-2012



Source: OECD (2013b).

Notes: Data on female labor force participation, unemployment rate and part-time employment is for age group 25-54.

Table 7.2: Employment of women aged 25-54 in 2005 by the number and age of children, %

Age of the youngest child	Childless	One child	Two children	Three or more
All ages	80.9	79.8	81.1	65.4
-6	-	68.9	65.0	51.8
6-11	-	80.6	89.0	81.3
12+	-	86.7	92.2	88.7

Source: Eurostat (2010).

Having children does not as strongly as in Germany and the UK influence women's labor market careers in Finland. As can be read from Table 7.2 where the employment rates by the number of children and the age of the youngest child are shown, women with children older than six years of age have higher participation rates than the childless women, whereas the mothers with one or two children below six years of age have participation rates which are somewhat lower than those of the childless women.

7.2 PREFERENCES, FAMILY POLICY AND OWN RESOURCES

As in the two previous chapters, this section provides a discussion on women's preferences, Finnish family policy and the importance of household's own resources for women's employment patterns.

7.2.1 Preferences for childbearing and employment

According to author's knowledge there are no studies which explore the lifestyle preferences of Finnish women by using the preference theory as framework. Several studies have, though, investigated the general values of the female population. In OECD (2001b:136) the couples' preferred employment patterns when the children are under six years of age were studied. The results show that 80.3% of the Finnish couples find the full-time dual earner model to be the best alternative, and differ thus significantly from the German and British couples who to a lesser extent preferred this option. The alternative man full-time/woman part-time received a relative humble support, only 8.6% of the couples preferred this alternative, whereas this arrangement was much more popular in the UK and Germany. Likewise, the support for the sole earner family where the wife is at home when man is working was relatively low, 10.2%.

The results from the ISSP 2002, in turn, show that 13% of the Finnish mothers found that a mother of child(ren) under school age should be in full-time work, 44% found part-time work to be the best solution and 43% the homemaking. If these numbers are interpreted as preferences we can state that even though the Finnish women prefer full-time work in a larger extent than the German and British women, the part-time alternative is less popular in Finland. Surprisingly, the preference for homemaking is at the similar levels as in the UK and thus higher than in Germany (Hakovirta and Salin 2006).

The studies on values, although they do not measure preferences directly, evidence about heterogeneity among the population. In the Finnish family barometer from 1998, women and

men aged 30-45 were asked about their opinion on the man's and woman's principal responsibility⁵² to go to work when it comes to securing the family economy. Of the women only 8.4% found that the man has much more responsibility than the woman, 16.9% found that the man has somewhat more responsibility, 74% of the women found that the man and the woman have equally much responsibility and only below 1% found that the woman has somewhat more or much more responsibility. At the same time, however, when the respondents were asked about the man's and woman's principal responsibility to take care of the home, only below 1% of the women answered that the man has more responsibility, 51.8% answered that man and the woman have equally much responsibility, 39.3% thinks that the woman has somewhat more responsibility and 8.0% that the woman has much more responsibility (Reuna 1998: Appendix Tables 3 and 4). Similar results were obtained in the gender equality barometer 2008 where the women aged 15-74 were asked to comment the claim that men have the primary responsibility of the family maintenance/support: 40% of the women strongly disagreed, 39% somewhat disagreed, 15% somewhat agreed and 6% strongly agreed (Nieminen 2008:22).

7.2.2 The institutional context of career strategy choices

Two of the biggest parties in Finland, the National Coalition Party and the Centre party have traditionally supported the home care of small children, whereas the Green League, Social Democratic Party, Left Alliance and the Swedish People's Party of Finland have more leaned towards the development of public services to families (Nygård 2007). A compromise between these two views has led to a family policy where emphasis is on the parents' right to choose between home care and institutional care. Indeed, both of these choices are supported by the government with either money (home care or care at private child care facilities) or services (public child care). The freedom of choice is however limited only to the parents with children under three years of age, and the support for families with older children is concentrated on the provision of child care services (e.g. Leira 2002). In other words, the combination and career strategies are generously supported, yet at the same time those women who have more than one child receive support for homemaking strategy as well (that is, if the interval between the births is shorter than three years).

In the German and British cases we saw how the tax and transfer system was either biased towards the male breadwinner families, or at least enabled the parents to choose this family form

⁵² That is, their values and who they think should in the first hand be responsible.

in case they so desired. In Finland, the tax rate is in general high (e.g. Kurjenoja 2003), the individual taxation of couples income is applied since 1976, and the many deductions based for example on children or on the spouse were conclusively abolished in 1994 (Haataja and Pylkkänen 2009). All in all, the support for one earner couple families is non-existent in the present tax system.

As for the maternal, paternal, parental and care leaves, it is appropriate to concentrate on the changes that took place after the mid-1980s. In 1987, the maternity leave in Finland was 105 days (four months) long. During the maternity leave, the father was entitled to a paternity leave of two weeks. The maternity leave was followed by a parental leave of 158 days (six months). In case the father took paternity leave during the maternity leave, the parental leave days were reduced accordingly. In 1991-1992 the length of the parental leave was prolonged with two weeks, and the length of the paternity leave with three weeks, of which only two weeks reduced the length of the parental leave. Though, already in 1993 it was agreed that the total length of the parental leave would be 158 days, the length of the paternity leave three weeks and that the paternity leave would no longer reduce the length of the parental leave. Thereafter, the organization of the leave system has remained relatively similar until 2003 when it became possible to work part-time and receive 50% of the parental leave compensation (in case both of the parents worked 50% and shared the parental leave) and when the so called bonus-leave for fathers was implemented. This means that in case the father would take the two last weeks of the parental leave, he would receive two additional weeks of leave (Haataja 2007). In 2010 the length of the bonus-leave was extended with two weeks (Kela 2009). However, the father's take of all parental leave days is still below 2% (Haataja 2009). The compensation for the leaves is in Finland determined as a percentage of the wage income and different percentages apply for different income classes. For those who are not entitled to the compensation based on their wage (e.g. students and unemployed parents) there is a flat-rate compensation (Hämäläinen 2005).

After the parental leave one of the parents has the possibility to stay at home to take care of the child(ren) until the youngest child turns into three. In order to understand the function of the leave, it must be discussed together with the development of the public provision of child care. Concerning the optimal child care arrangements, as already mentioned above, there have for long been two opposing viewpoints. On the one side it is claimed that the mothers' possibilities to choose to stay at home to take care of their children should be supported. On the other side it is

said that the mothers' right to work should be supported. In the Child Day Care Act from 1973 the argument about the mothers' right to work won, and the Act speeded up the development of the publicly provided day care by requiring the municipalities to provide day care. Those originally against the Act and in support of the compensation for home care accepted the Act on the condition that a home care leave would also be on government's agenda in near future. However, already from the 1970s some municipalities had paid compensation for those parents who stayed at home with their children and by the 1980, after the governmental involvement, the compensation had in many municipalities become a practice. The Home Care Allowance Act which outlined the parent's right to stay at home with a flat rate compensation until the youngest child would turn into three passed in 1985 and came into effect in 1990. In legislation the parent's right to continue in the same employed after the home care leave was guaranteed. In practice, then, the changes in the legislation guaranteed a subjective right for care for the children under three: The municipalities had to organize day care for those who required it, but the parents could also choose to stay at home⁵³ (Välimäki and Rauhala 2000; Anttonen 2003). Although the basic home care allowance (HCA) is a flat-rate compensation, the size of the total HCA depends on the number of siblings (as the so called siblings-bonus is paid), and on the income (families with low income receive an additional payment). The netto HCA has constituted a very varying share of a two-child one earner family's disposable income. In 1991-1993 the share varied between 25-29 %, but declined thereafter to 17 % in 1996, and thereafter increased somewhat to 19 % in 1999 (Hiilamo 2000).

In addition to the national HCA, many municipalities have decided to pay the so called Municipal Home Care Allowance (MHCA) for those families who do not use the day care services provided by the municipality. The size and conditions of receiving the allowance can be decided by the municipalities, and in 2007 when almost half of the Finnish population lived in municipalities where the MHCA was paid. The average allowance/family was 136e/month, varying between 67-252e (Miettinen 2008).

Notice that the care leave is extremely popular among the parents. When Salmi and Lammi-Taskula (2002) asked the Finnish women and men about their ideas on different family

⁵³ From 1997 it has also been possible to receive government support in case the children are taken care of in a private child care facility. Though, the privately provided child care is not very popular in Finland, although its amount has increased during the years: In 2005 only 4.5 % of the children aged 1-6 in day care were in privately provided child care paid by the parents (Sauli and Häkkinen 2007:181).

policies, only below 20 persons of over 3000 were willing to abolish the leave. Also the take up rates have been high: In 1993, the HCA was paid for 69% of all children under three. Thereafter, the share declined, and between 1996 and 2006 the share has varied between 51-56% (Miettunen 2008:28). According to Takala's (2000:30) findings, of those mothers who stay on care leave, 44% are staying 25-27 months in the leave, 30% are staying 13-24 months in the leave and 27% 1-12 months.⁵⁴ The enrollment rates in publicly provided day care reflect the popularity of the different leaves. In 1997-2005 the share of the children under one year of age in child care (either public or private) has decreased from 1.8% to 1.3%. For the children with one years of age, the number has been somewhat under 30%, for the two year aged children increased from 39.8% to 46.4% and for the three year aged increased from 53.7% to 63% (Sauli and Häkkinen 2007:180). Thus, even though there has been a slight increase during the years, a considerably large amount of children are taken care of at home.

To summarize, due to the HCA the home-centered women have some possibilities to opt for the homemaking strategy that is, in case they have relatively many children and plan the timing of the births to match with the requirements of the care leave (this is a clear difference to Germany, where the tax support is independent of the age of the children). As the different leaves give the mothers the possibility to take leave in connection to the childbearing, but at the same time the legal right for day care is provided for all children, the adaptive and work-centered women have good possibilities to choose according to their wishes..

7.2.3 Household's own resources and career strategies

As we saw in the previous chapters, the German mothers face the difficulty of finding adequate care for their children, which was claimed to restrict their choices to re-enter the labor market after the child birth. In the UK, in turn, the problem was not so much related to the availability of the day care, but rather to the affordability of it, so it could be assumed that the re-entrance was highly dependent on the income. Finland differs from Germany and the UK in that the public provision of the relatively inexpensive child care is vast and it was therefore assumed that the household's own resources would not be as relevant for the career strategy choices in the social democratic welfare states in comparison to the liberal and conservative countries. Yet, previous research shows that even in Finland the division between those who return to the labor market

⁵⁴ Some claim that the home care leave has transformed Finland into a typical homemaker society (e.g. Anttonen ja Sointu 2006), whereas others (e.g. Salmi 2000) emphasize the temporary nature of the homemaker period.

relatively soon after the birth of the child, and those who stay at home a longer time is based on income and on the position at the labor market. Lammi-Taskula (2004) finds that mothers who already had a work place before the child birth were more likely to return to the labor market instead of taking care leave. Moreover, the share of the pre-school mothers with low education who stay at home to take care of the household is higher than the share of the mothers with high education (Haataja 2005). The research about the take of the leaves, in turn, shows that the mothers with higher education or/and high income are less likely to stay (at all or longer periods) on home care leave in comparison to the mothers with low education or low income (Takala 2000; Salmi et al. 2009). In other words, mothers with high education and income are returning to work more rapidly. Lammi-Taskula (2008) in turn finds that the fathers whose spouse had a good position in the labor market were more likely to take out at least some parental leave. Likewise, Takala (2005) and Hämäläinen and Takala (2007) show that fathers with highly educated spouse are more likely to take parental leave. On the other hand, Kosonen (2011) finds that the negative effect of the municipal supplements on mother's labor force participation is stronger among the highly educated women.

It is also noteworthy that the social status relates to the marital status. Individuals from the lower social classes with low education have been the forerunners of the permanent cohabitation in Finland (Finnäs 1995). Even at present, both higher female/male education and higher female/male income is positively related to the propensity of the cohabitating couples to marry (Mäenpää 2009). Also, it is more common for the lone mothers than for the partnered mothers to take home care allowance (Haataja 2010:26f).

Finally, the by the theoretical framework assumed minor importance of household's own resources when it comes to the care provided by relatives and friends receives support from Takala's (2000:48) study: Only 2% of the children under school age are primarily taken care of by another relative than the mother or the father.

7.3 CAREER STRATEGIES AND FERTILITY: EMPIRICAL FINDINGS

The data employed in the study comes from the Finnish *Palapeli* which is a longitudinal dataset combining data on couples, children, families and living conditions from the different administrative registers. All individuals who have received a personal identification number and who have been permanently resident in Finland are included in the dataset. For the purposes of this investigation, Statistics Finland (2011a) provided a 90% extract of the women born in

January 1969. For these women different types of data on family formation, employment and income were provided for the years 1987-2003 (that is, from the month the individuals reached the age of 18 = 1/1969 until the last month of their 35th living year = 12/2003). The data on fertility included also births that occurred before the 18th birthday.

To include only those women who have been permanently resident in Finland, all women for whom the information on the combined indicator for months in employment and unemployment was missing were excluded from the analysis. In addition, women who had adopted children, or had experienced a registered stillbirth or multiple births were excluded. In a handful of cases there were some inconsistencies in the date of the childbearing and even these women were excluded. The original extract included totally 2696 women, and after the exclusions 2243 women were left. Given the nature of the exclusions, the data used in the study is nevertheless highly representative of the Finnish women belonging to the 1969-cohort.

7.3.1 Classification of women into the different career strategy categories

As in the previous chapter, the women are classified into the different career strategy categories based on the information about their activity from the month they reached the age of 18 until the last month of their 35th living year. The data contains information on the number of months a year the woman spent in employment and unemployment, the number of months a year she spent in unemployment and about the date (year and month) she received her highest educational degree. Moreover, there is information on her main activity during the last week of the year. These indicators are for the most part reliable, but there are even several drawbacks. For example: It is impossible to distinguish between women working full-time and part-time. During the years there have been some changes in the way in which the number of months in unemployment have been calculated. Further, for some women and for some years the number of months in employment and unemployment equaled to zero, even though the women were employed during the last week of the year and their taxable income was very high. Moreover, women in maternity/parental leave are in general counted as employed in case they have an employment contract (women in care leave are in general calculated as neither employed nor unemployed). When it comes to the education, there is no information on the date the education started or the actual months spent in education. This is problematic for example in those cases a person has enrolled in education but has not earned a degree.

The women were classified into the different groups in several steps. At first, for each year I calculated the number of months in employment by subtracting the number of months in unemployment from the combined indicator for the number of months in employment and unemployment. Thereafter, I assumed that when the activity in the end of the year was “employed” or “student” and the highest education was attained after the year in question, the woman had been in education during the whole year⁵⁵. During the year the highest education was attained the number of months in education was assumed to equal to the month the educational degree was attained. Further, I assumed that those women for whom no months in employment, unemployment or in education were recorded had nevertheless been active during the whole year in case their activity in the end of the year was “employed” or “student”. Based on this information and on the information on the total number of months in unemployment, the classification of the women into the different groups was made.

Table 7.3: Lifetime career strategy categories and fertility, cohort 1969

	All women	Homemakers	Combiners	Careerists
Number in population, %	100	28	50	21
Number of children, %				
0	27	20	25	43
1	18	15	18	19
2	35	32	38	29
3	14	19	14	8
4+	6	14	4	1
Average fertility	1.58	1.99	1.56	1.05

⁵⁵ In the register those women who are working along their studies are classified as employed rather than as students. It was necessary to conditional the months in education to the activity status in the end of the year as there, for example, are women who attained high school degree as their highest degree at the age of 30+, and it would have been unreasonable to assume that these women were studying full-time since the age of 18.

In Table 7.3 the results of the classification, combined with the information on fertility, are shown⁵⁶. According to the findings, 28% of the Finnish women are homemakers, 50% are combiners and 21 % are careerists. As the current data does not properly take part-time work and the months in maternal/parental leave into consideration, it is likely that some women who in reality have been part-time working or who have been in long parental leave are now classified as careerists meaning that the actual share of the careerists is likely to be smaller. The observed polarization and the low share of the careerists fit into the theoretical framework, whereas the high share of the homemakers (in comparison to Germany and the UK) is rather surprising. One possible explanation to the finding is that especially the young women with low education suffered from unemployment due to the recession in the beginning of the 1990s (Myrskylä 2010), which might have influenced even their long term labor market careers.

The ranking of the groups based on their total fertility follows the same pattern as in Germany and in the UK. The Finnish homemakers are experiencing average fertility of 1.99 children/women, meaning that it is the only group which is able to reproduce itself. The Finnish combiners, in turn, are experiencing total fertility of 1.56 which is almost the same as the average fertility for all women. Finally, the average fertility of the careerists is as low as 1.05. If we then take a look at how the women within the groups are divided when it comes to the parity, we notice that in a similar manner as in Germany and in the UK the homemakers are having the lowest level of childlessness (20%) followed by the combiners (25%) and the careerists (43%). The relatively low share of childless women among the Finnish careerists is in accordance with the theoretical framework. Notice though that it is probably to some extent even underestimated given that some combiners are wrongly classified as careerists (see the discussion above). However, the share of the childless women among the homemakers is so large in comparison to the childlessness among the German and British homemakers that it must be further examined.

Of the Finnish childless homemakers, approximately 30% had at least once been registered as “pensioner” in the end of the year, which might indicate about physical or psychological problems. Similarly, 70% of the childless homemakers had at last six times been

⁵⁶ The good overall representativeness of the data can be illustrated with a comparison with the data on cohort fertility which shows that the differences with cohort fertility and fertility of the women in the sample are relatively small. By the age of 35 the cohort fertility for the women born in 1969 was 1.57, approximately 28 % of the women were childless, 18 % at first parity, 33 % at second parity, 15 % at third parity and 6 % at fourth-or-higher parity (own calculations based on data from Human Fertility Database 2011).

registered as either “unemployed” or “pensioner” in the end of the year. It is likely that women who are experiencing physical or psychological problems are not willing or able to have children, and that women who experience unemployment might not feel economically secure enough to have children. In any case, the large share of the childless homemakers suggests that long-term unemployment and being a pensioner is strongly correlated with childlessness. The result is also consistent with those obtained by Vikat (2004), who in his study employed an extract from the same dataset, and found that women who were inactive in the end of the year are experiencing lower risks of entering into the motherhood. Moreover, according to Vikat’s study, women aged 31-44 who were unemployed in the end of the year had a somewhat lower risk of entering into the motherhood, although the number of months in unemployment did not have an effect.

To continue the discussion on the family size, as in Germany and the UK, the homemakers are having the largest families and the careerists the smallest. In particular, the case of the homemakers demonstrates that despite the high share of childlessness it is possible to reach replacement fertility in case enough many women are progressing to the higher parities. The share of women at second parity varies from 15% among the homemakers to 18% among the combiners and 18% among the careerists. The share of women at second parity, in turn, is 32% among the homemakers, 38% among the combiners and 29% among the careerists. The differences between the groups become more pronounced at higher parities: 19% of the homemakers, 14% of the combiners and 8 % of the careerists were at third parity and 14% of the homemakers, 4% of the combiners and 1% of the careerists at fourth-or-higher parity.

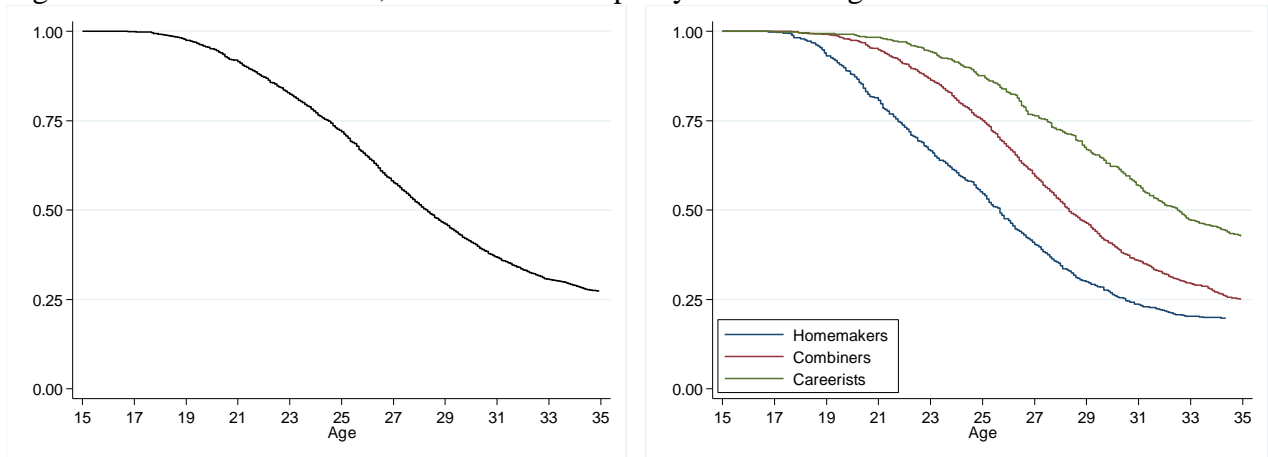
Table 7.4: Contribution to fertility by the women belonging to the different groups

	All	Homemakers	Combiners	Careerists
0	100	20	46	33
1	100	25	52	24
2	100	26	56	18
3	100	38	50	12
4+	100	63	35	3
Average fertility (%)	100	36	50	14
Contribution in units	1.58	0.56	0.78	1.05

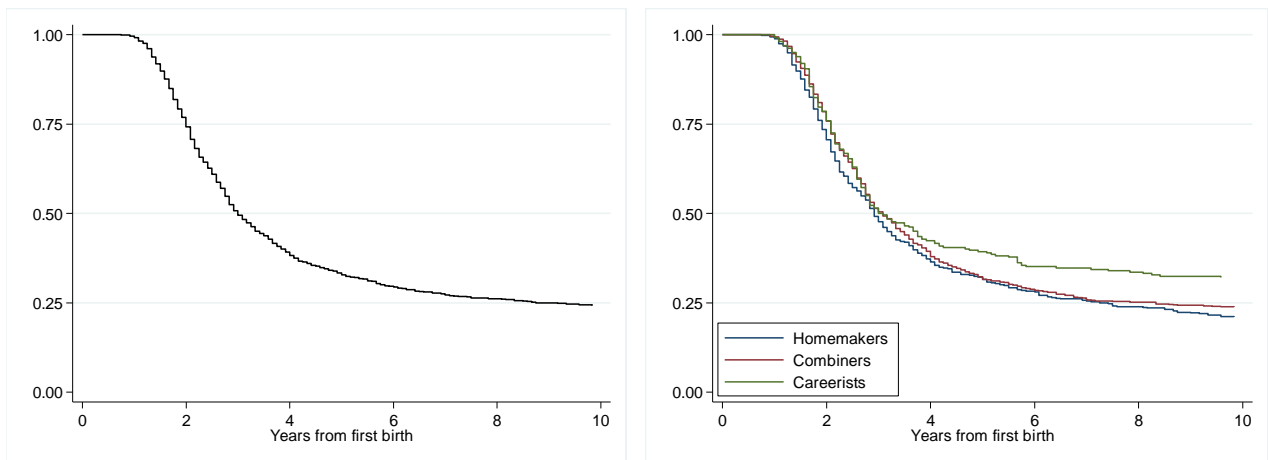
In Table 7.4 the contribution of the different groups to the total fertility is shown. As can be read from the Table, the homemakers are contributing to the total share of the women at lower parities less than is their total share of the population, whereas their contribution increases with parity. To take an example, only 20% of all the childless women are homemakers, whereas as many as 63% of the women at four-or-higher parity are homemakers. This means that the homemakers are, much thanks to the large share of women at higher parities, contributing to the total fertility with 36% which is somewhat more than their total share of the population. For combiners, the contribution is more in balance with their share of the population. They are contributing exactly with the same power to the total fertility as is their total share in the population, and at the parities 0-3 their contribution deviates at maximum with six percentage points from their total contribution. Noteworthy is, however, that the combiners contribute with only 35% to the total share of the women at fourth-or-higher parity. Finally, the contribution of the careerists decreases with parity. Of all the childless women, 33% are careerists and at the other end, only 3% of all the women at fourth-or-higher parities are careerists. All in all, the careerists are contributing with 14 % to the total average fertility, which is somewhat less than their total share of the population.

The timing of the births between the women belonging to the different groups varies in a similar manner as in the UK and Germany, but the differences between the groups are not as large. The patterns of the transition to the first births is quite similar among the homemakers, combiners and careerists, although the combiners and careerists start their childbearing at a later age. As to the second births, during the first four years from the last births the patterns are almost identical among the women belonging to the three groups, and even thereafter the pattern continues as identical for the homemakers and combiners, whereas considerably many careerists survive as having only one child. For the third births the patterns of childbearing are quite similar for the combiners and the careerists.

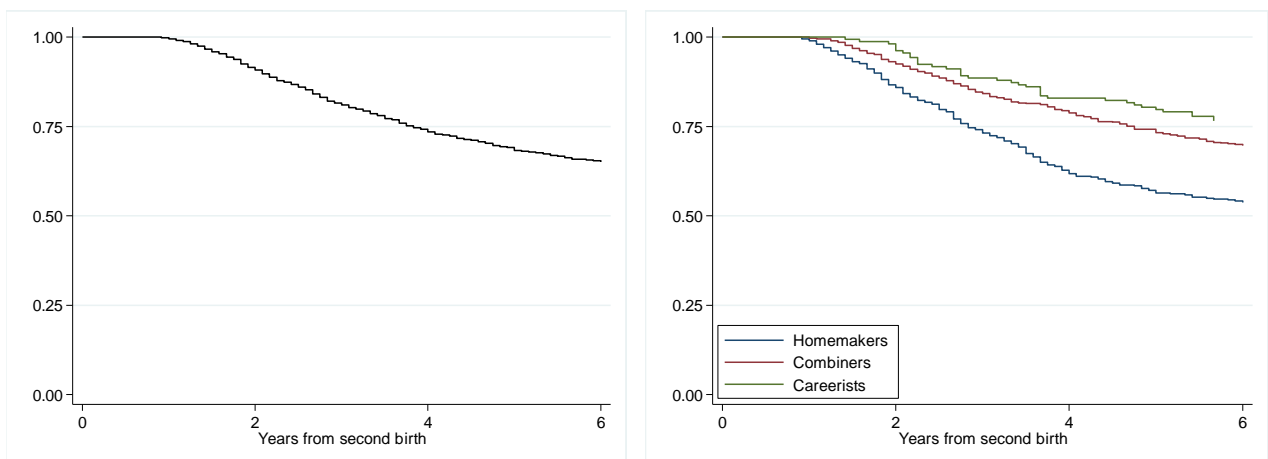
Figure 7.4: Transition to first, second and third parity before the age of 35



Transition to motherhood by age: All women, and women by career strategy



Transition to second parity in years from first birth: All women, and women by career strategy



Transition to third parity in years from second birth: All women, and women by career strategy

7.3.2 Characteristics of the women

As the Finnish data comes from the official registers, there is no information on the characteristics of the women such as the education of their mother and place of upbringing as in the German case, or opinions and religiosity as in the British case. Instead, there is data on the highest educational attainment and field, as well as on family status, income and different social benefits. If we at first take a look at the education (Table 7.5) we notice the same pattern as in Germany and the UK. A relatively large share of the homemakers (26%) is without education, whereas the same is true for only 8% of the combiners and 6% of the careerists. Also, the share of the college educated homemakers is extremely low (2%), whereas 23% of the combiners and 37% of the careerists have college education. In other words, even in Finland the women with no or low education are often ending up realizing either the homemaking or combination strategy, whereas the women with college education are frequently realizing the combination or career strategy.

When it comes to the educational field, women with some educations are overrepresented among one or two of the career strategy groups. For example, 1% of the homemakers, 7% of the combiners and 6% of the careerists have education in teaching and educational sciences. A possible explanation to the finding could be that this type of education leads to a secure employment in the public sector with higher flexibility in the working arrangements. A similar argument can be made also for the women educated in health and welfare (e.g. Hoem et al. 2006a). Yet, as many as 17% of the homemakers have education in health and welfare in comparison to 23% of the combiners and 17% of the careerists.

A relatively similar share of the women, 3% of the homemakers, 6% of the combiners and 7% of the careerists, is educated in humanities and arts. As to the education in social sciences and business, we notice that 18% of the homemakers 26% of the combiners and 33% of the careerists are having this type of education. Further, 8% of the homemakers, 7% of the combiners and 12% of the careerists have education in natural sciences or technology. No substantial differences concerning the education in agriculture and forestry can be found. Finally, 17% of the homemakers, 14% of the combiners and 12% of the careerists have education in services. An additional analysis (not shown) indicates that within all educational fields the homemakers are in general having lower education than the combiners and careerists.

Table 7.5: Descriptive findings on educational attainment and educational field at the age of 34

	All	Homemakers	Combiners	Careerists
Educational attainment, %				
No education	13	26	8	6
General education (upper secondary level)	6	8	6	5
Upper secondary level	31	41	30	23
Lowest level, tertiary	29	22	33	29
College	20	3	23	37
Educational field, %				
Teacher education and educational sciences	5	1	7	6
Health and welfare	20	17	23	17
Humanities and arts	5	3	6	7
Social sciences and business	25	18	26	33
Natural sciences and technology	9	8	7	12
Agriculture and forestry	2	2	2	3
Services	14	17	14	12

Notes: The columns for educational attainment add up to 100. As for the educational field, categories "no education" and "general upper secondary education" from "educational attainment" do not really have any particular field. Thus, the columns for educational field add up to 100 once these two categories are included into the calculations.

Concerning the income, the Finnish data included yearly information on the taxable income, HCA, maternal/parental benefits and unemployment benefits. Following Vikat (2004), all the benefits were subtracted from the taxable income to approximate the earnings of the women. Using the consumer price index, all values were transformed into 2003 years values and a division of women into the different income groups was made as follows: All women with any income below 14000e/year were classified as having low income, women with income between 14100e-24400e were classified as having medium income and all women with income higher than 24500e were classified as having high income. In Table 7.6 the income during the year the women reached the age of 34 year is shown. As can be expected, a majority of the homemakers is having either no (18%) or low income (53%), the share of homemakers with medium income being 23% and high income only 5%. At the other extreme are the careerists, of whom none has been without income during the year, and of whom only 14% is having low income, but 34% medium income and 51% high income. As to the combiners, the largest share of them (41%) is having medium income, but as many as 29% high income and 27% low income, only 3% being without income.

Based on the information on the amount of the received HCA during the year a variable indicating whether a woman has ever received HCA was constructed. As can be read from the Table 7.6, 77% of the homemakers, 66% of the combiners and 48% of the careerists have received HCA at least once during the observation period. This can be contrasted with the

number of women with children in each group. The comparison shows that the share of the homemakers with children is quite similar to the number of homemakers who have received HCA, meaning that almost all homemakers with children have received HCA at least once. When it comes to the combiners and careerists we notice that quite a large share of the mothers in these two career strategy groups have not (yet) received HCA. This can, however, also be a result of the women having had their child(ren) so late in the observation period that they have not yet been entitled to the HCA.

Table 7.6: Descriptive findings on income at the age of 34 and if received HCA, %

	All	Homemakers	Combiners	Careerists
Income at 34, %				
No income	7	18	3	0
Low	32	53	27	14
Medium	34	23	41	34
High	27	5	29	51
Ever received HCA, %				
Yes	65	77	66	48
No	35	23	34	52

Notes: The columns for “income at 34” and “ever received HCA” add up to 100.

The information on the activity status at the end of the year at the age of 34 shows the expected results: Of all women as many as 77% are in employment, but of the homemakers only 48% are employed in comparison to 85% of the combiners and 97% of the careerists. Also, in comparison to the two other groups of women, a quite large share of the homemakers is unemployed; 21% of the homemakers contrasted to 5% of the combiners and 1% of the careerists. The high rate of unemployment among the homemakers might be an indication of the homemakers’ difficulties to re-enter the labor market after long inactive periods. Another interpretation is that for many homemakers the long absences from employment are related to unemployment and to the difficulties to establish themselves in the labor market in the first place. The relatively large share of the homemakers in education (8% of the homemakers, 4% of the combiners and 1% of the careerists) in turn suggests that many of the homemakers are trying to gain additional qualifications after long absences from the labor market. Another possible interpretation is that some homemakers choose to build their family first and only thereafter are interested in entering in education. Finally, the share of inactive women is largest among the homemakers. As already discussed above, many homemakers receive pension (6%) whereas

practically none of the combiners and careerists do so. Likewise, 16% of the homemakers were classified into the category “other” in comparison to 7% of the combiners and 1% of the careerists.

As to the family status, the overview at the age of 34 shows that the largest share of the women in all groups is married with children. The most significant differences between the groups are the number of women without any family and the share of lone mothers. As many as 21% of the careerists do not belong to any family, whereas this is true for only 12% of the homemakers and 11% of the combiners. Moreover, a relatively large share of the careerists does not belong to any family type with children: 7% of the careerists are married without children (in comparison to 3% of the homemakers and 4% of the combiners), and 14% cohabit without children (in comparison to 4% of the homemakers and 9% of the combiners). Finally, as many as 22% of the homemakers are lone mothers, whereas only 9% of the combiners and 7% of the careerists belong to this family type.

Table 7.7.: Descriptive findings on activity status and family status at the age of 34, %

	All	Homemakers	Combiners	Careerists
Activity status at 34, %				
Employed	77	48	85	97
Unemployed	9	21	5	1
In education	5	8	4	1
Pension	2	6	0	0
Other	8	16	7	1
Family status at 34, %				
No family	14	12	11	21
Married, no children	4	3	4	7
Married with children	45	43	49	40
Lone mother	12	22	9	7
Cohabiting couple with common children	13	13	15	10
Cohabiting couple with no common children	2	2	2	1
Cohabiting couple without children	8	4	9	14

Notes: The columns for activity and family status add up to 100.

7.3.3 Determinants of first birth

The results from the bivariate regressions concerning first birth fertility and education are shown in Table 7.8. In general, the higher the educational level, the less likely it is that the woman has entered into motherhood before the age of 35. Another interesting observation is that the negative effect does not increase linearly with the increases in education: The women with general upper secondary level education have lower propensity of first birth than the women with upper secondary level education towards practical occupational qualifications, and the women with

lowest level tertiary education (the somewhat deviating results for the careerists do not reach statistical significance). Further, we notice that also among the homemakers the women with higher education have lower propensity of first births, which might indicate that some of these homemakers have not chosen the career strategy according to their preferences, but because of health reasons or involuntary unemployment.

Table 7.8: Relative risks of the transition to motherhood, the influence of education

	All		Homemakers		Combiners		Careerists	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Educational attainment								
No education	1	1	1	1	1	1	1	1
General education (upper secondary level)	0.56**	0.56**	0.57**	0.57**	0.58**	0.58**	0.96	0.96
Upper secondary level	0.78**	0.94	0.82	1.54	0.90	1.06	0.84	0.76
Lowest level, tertiary	0.63**	0.74*	0.69**	1.22	0.77	0.86	0.78	0.74
College	0.49**	0.59**	0.50*	0.79	0.70**	0.79	0.63	0.62
Educational field								
Teacher education and educational sciences	1	1	1	1	1	1	1	1
Health and welfare	1.23	0.94	1.06	0.63	1.09	0.94	1.29	1.16
Humanities and arts	0.70*	0.62**	0.45	0.28*	0.68	0.63*	0.95	0.96
Social sciences and business	1.00	0.84	0.88	0.54	1.01	0.93	1.05	0.98
Natural sciences and technology	0.95	0.73*	0.81	0.43	0.92	0.79	1.10	1.03
Agriculture and forestry	0.88	0.65*	0.69	0.41	0.90	0.73	1.01	0.93
Services	1.25	0.86	1.14	0.59	1.00	0.80	1.44	1.25

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. Model (1) refers to a bivariate regression which was conducted separately for educational attainment and educational field. Model (2) refers to an analysis where both educational attainment and educational field were included in the regression. The regression results refer to the relative risks in comparison to the reference category, which is indicated with 1.

The results from the bivariate regression analyses on the influence of educational field on the entrance into motherhood are mostly statistically insignificant. When both the educational attainment and educational field are entered into the regression (column 2), some of the results for the influence of educational attainment lose their significance. For the group “all women” we can nevertheless observe that when controlled for educational field the negative effect of educational attainment decreases somewhat. For the educational field, in turn, some of the results become statistically significant in the joint regression. The general impression is that women with education in teaching and educational sciences have the highest propensity of first births. Interestingly, the negative effect of education in humanities and arts is especially large for the homemakers, which could indicate that some women with this type of education are for example artists, who have difficulties in establishing themselves at the labor market and hence the long

absences from the employment. On the other hand, for the careerists with education in health and welfare, and services the entry into motherhood was more likely than for the women in the reference category.

Table 7.9.: Relative risks of the transition to motherhood, the influence of income, activity and family status

	All	Homemakers	Combiners	Careerists
Income				
No/low	1	1	1	1
Medium	1.79**	1.84**	2.37**	2.82**
High	2.00**	2.10	2.81**	3.65**
Activity status				
Employed	1	1	1	1
Unemployed	1.00	0.80*	0.72**	0.22
In education	0.36**	0.32**	0.35*	0.38**
Inactive	0.66**	0.47**	0.49*	0.00
Family status at 34				
Married	1	1	1	1
Cohabiting	0.56**	0.88	0.53**	0.36**

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. As for the activity status, “inactive” refers to “pensioners” and the category “others outside the labor force”. “Married”=“married, no children” and “married, with children”. “Cohabiting”=“cohabiting couple with common children”, “cohabiting couple with no common children” and “cohabiting couple without children”. The regressions are bivariate and the results refer to the relative risks in comparison to the reference category, which is indicated with 1.

As to the income and activity status, they were included as time-varying. The women were assumed to be in education and without income before they reached their 18th birthday. Thereafter, income and activity status of the year t is introduced as an independent variable for the possible births occurring in year t+1. Due to the low number of cases in certain categories for certain groups of women, the activity statuses “retired” and “other inactive” were grouped together and likewise, the categories “no income” and “low income” were combined. As to the family type, the categories “married, no children” and “married, with children” were combined in one group only (“married”) and likewise, the “cohabiting couples with common children” and “cohabiting couples with no children” were combined to one group of “cohabiting”. All the other groups were included in the regressions as a one single group “others”.

The regression results for income show that in all groups women with higher income, in general, have higher first birth fertility. The effect is especially pronounced among the combiners and careerists. The positive impact of income is relatively logical in the Finnish context: The

compensation for the maternal and parental leaves is calculated as a percentage of the income, and moreover, there are incentives for the women to have their children after they have established their position in the labor market so that they after the leaves have an employment to return to. The weaker result for the homemakers might suggest that these considerations are not as important for the homemakers.

As to the activity status, unemployed women have somewhat lower first birth fertility than the employed women, the inactive women have even lower fertility and the women in education have the lowest first birth fertility risk. The negative effect of unemployment and inactivity is particularly pronounced among the careerists, but the results are statistically insignificant. Finally, concerning the family status at the age of 34, we notice that cohabiting women have lower transition rates into motherhood than the married women. This applies to all groups of women, but the effect is somewhat less pronounced among the homemakers (though statistically insignificant), followed by the combiners and careerists.

The results for the multiple regression analysis are shown in Table 7.10. In the first model, the educational attainment, income and activity status were included, and in the second model also the marital status was entered into the investigation. If we compare the results from the first model with the bivariate regressions, we notice that when more variables are included, the negative effect of the education decreases somewhat. Likewise, the effect of income becomes smaller, but the overall positive influence nevertheless stands, as does the differences between the different groups of women. As to the activity status, the most notable change is that for the group “all women” the influence of unemployment now becomes positive in comparison to being in employment. Also, the negative effect of the unemployment and “in education” tends to decrease.

In the second model we notice that for the group “all women” the negative influence of education increases when the family status is controlled for. The same appears to be true also, in general, for the women in the three different groups, yet these results do not reach statistical significance. Finally, the effect of income also becomes somewhat smaller, but only for the combiners and careerists with high income.

Table 7.10: Relative risks of the transition to motherhood, the influence of selected variables

	All		Homemakers		Combiners		Careerists	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Educational attainment								
No education	1	1	1	1	1	1	1	1
General education (upper secondary level)	0.63**	0.61**	0.64	0.65*	0.77	0.70	0.86	0.84
Upper secondary level	0.81**	0.77**	0.85	0.83	1.06	0.98	0.89	0.87
Lowest level, tertiary	0.67**	0.60**	0.76*	0.73*	0.94	0.81	0.82	0.68
College	0.58**	0.48**	0.62	0.57*	1.00	0.76	0.77	0.59
Income								
No/low	1	1	1	1	1	1	1	1
Medium	1.52**	1.53**	1.43**	1.43**	1.93**	1.89**	2.37**	2.37**
High	1.97**	1.96**	1.75	1.68	2.38**	2.22**	3.22**	3.36**
Activity status								
Employed	1	1	1	1	1	1	1	1
Unemployed	1.21*	1.29**	0.87	0.91	0.97	1.05	0.33	0.39
In education	0.50**	0.51**	0.39**	0.40**	0.51**	0.53**	0.74	0.79
Inactive	0.84	0.88	0.54**	0.57**	0.83	0.83	0.00	0.00
Family status at 34								
Married		1		1		1		1
Cohabiting		0.51**		0.80		0.51**		0.33**
At risk								
		2243		637		1129		477
Failures								
		1633		512		847		274
-Log Likelihood								
		11620		11469		2952		2943
						5409		5317
								1565
								1496

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. As for the activity status, “inactive” refers to “pensioners” and the category “others outside the labor force”. “Married”=“married, no children” and “married, with children”. “Cohabiting”=“cohabiting couple with common children”, “cohabiting couple with no common children” and “cohabiting couple without children”. The regression results refer to the relative risks in comparison to the reference category, which is indicated with 1.

7.3.4 Determinants of second birth

The results from the analysis of the determinants of the second births differ somewhat from those obtained for the first births. To start with the influence of the educational level, it is now, contrary to the first births but in accordance with the previous studies, found to have a positive impact on childbearing, except for the careerists. Moreover, the positive effect is particularly strong among the homemakers. (Notice here that in the German sample the clearest positive effect of education was found among the combiners, and that in the UK homemakers with degree or higher degree, together with the careerists with higher degree, were the ones with the highest probability to proceed to second births.) As to the educational field the findings suggest, as in case of first births, that when contrasted with women with education in teaching and educational sciences,

women with educational qualifications from some other field experience lower fertility. The results, however, are mostly statistically insignificant except for the homemakers and it is thus not possible to say anything about the possible differences between the women who belong to the different groups. A regression for both the level and field of education (model 2) produces statistically significant results for the homemakers and the group “all women” only. These findings show that the positive influence of educational attainment among the homemakers is even more pronounced when controlled with the educational field. Moreover, among the careerists (but not among the other groups) an education in agriculture and forestry increases the likelihood of the second child. The results are statistically insignificant, but suggest nevertheless that it is possible that many of these women work at home where problems with role compatibility are less severe, even though the work would be on full-time basis.

Table 7.11: Relative risks of the propensity of the second birth, the influence of education

	All		Homemakers		Combiners		Careerists	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Educational attainment								
No education	1	1	1	1	1	1	1	1
General education (upper secondary level)	1.02	1.02	1.27	1.28	0.83	0.83	0.95	0.95
Upper secondary level	1.21*	1.57*	1.29*	2.58	1.15	1.47	1.09	1.20
Lowest level, tertiary	1.19	1.56*	1.45**	3.39*	1.17	1.45	0.82	0.94
College	1.17	1.43*	2.29**	3.36**	1.14	1.34	0.97	1.03
Educational field								
Teacher education and educational sciences	1	1	1	1	1	1	1	1
Health and welfare	0.95	0.88	0.50	0.57	0.96	0.90	0.95	0.95
Humanities and arts	0.79	0.77	0.36*	0.43	0.87	0.84	0.92	0.92
Social sciences and business	0.76*	0.71*	0.33**	0.35	0.85	0.79	0.81	0.85
Natural sciences and technology	0.73	0.69*	0.38*	0.49	0.72	0.68	0.88	0.83
Agriculture and forestry	1.15	1.06	0.71	0.90	0.87	0.79	1.94	1.86
Services	0.78	0.71*	0.38**	0.49	0.75	0.68	0.98	0.90

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. Model (1) refers to a bivariate regression which was conducted separately for educational attainment and educational field. Model (2) refers to an analysis where both educational attainment and educational field were included in the regression. The regression results refer to the relative risks in comparison to the reference category, which is indicated with 1.

Table 7.12.: Relative risks of the propensity of the second birth, the influence of income and family status

	All	Homemakers	Combiners	Careerists
Income at first birth				
No/low	1	1	1	1
Medium	1.07	1.54**	1.02	0.99
High	0.82	3.11**	0.82	0.77
Family status at 34				
Married	1	1	1	1
Cohabiting	0.68**	0.86	0.62**	0.57**

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. “Married”=“married, no children” and “married, with children”. “Cohabiting”=“cohabiting couple with common children”, “cohabiting couple with no common children” and “cohabiting couple without children”. The regressions are bivariate and the results refer to the relative risks in comparison to the reference category, which is indicated with 1.

Table 7.13: Relative risks of the propensity of the second birth, the influence of selected variables

	All		Homemakers		Combiners		Careerists	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Educational attainment								
No education	1	1	1	1	1	1	1	1
General education (upper secondary level)	1.04	1.03	1.19	1.27	0.82	0.85	0.99	0.99
Upper secondary level	1.21*	1.15	1.25	1.17	1.15	1.20	1.09	1.09
Lowest level, tertiary	1.20*	1.07	1.37*	1.27	1.18	1.14	0.86	0.77
College	1.26*	1.06	2.10**	1.77*	1.22	1.10	1.08	0.93
Income								
No/low	1	1	1	1	1	1	1	1
Medium	1.05	1.00	1.47**	1.39*	1.02	1.03	1.00	0.89
High	0.78*	0.74**	2.87**	2.41*	0.79	0.77	0.77	0.71
Family status at 34								
Married		1		1		1		1
Cohabiting		0.67**		0.94		0.60**		0.56**
At risk								
		1554		508		795		251
Failures								
		1237		414		643		180
-Log Likelihood								
		8367		8320		2317		2305
						3908		3884
								905
								890

Notes: p-values smaller than 0.05 and 0.01 are indicated with one and two stars respectively. “Married”=“married, no children” and “married, with children”. “Cohabiting”=“cohabiting couple with common children”, “cohabiting couple with no common children” and “cohabiting couple without children”. The regression results refer to the relative risks in comparison to the reference category, which is indicated with 1.

As to the influence of income, high income at first birth appears to be negatively related to the second birth propensity among the group of “all women”, as well as among the combiners and careerists. The result is, however, not statistically significant. For the homemakers, high income at first birth is nevertheless positively related to the second births. It is tempting to propose that the homemakers with high income at first birth are partnered to men with higher

income, and hence the positive income effect. Finally, as to the family status, the results show that cohabitation influences second births negatively.

The results of the multiple regression analysis are shown in Table 7.13. The first model includes only educational attainment and income, and the second model includes in addition the family status. The results for the combiners and careerists do not reach statistical significance (except for the lower risk of cohabiting women to have children) and are hence not discussed here. For the group “all women” and the homemakers, in turn, the comparison of the two models shows that when the family status at the age of 34 is included in the regression, the positive influence of education weakens and becomes insignificant. In other words, the finding suggests that the positive influence of education and income might to a certain degree be a result of the spouse’s characteristics.

7.4 DISCUSSION

As in chapters 5 and 6, the review of previous research on family policy and household’s resources gave some suggestions on how Finnish women might choose their career strategies. However, there is no previous research on Finnish women’s actual preferences, and nothing can thus be concluded about the preference heterogeneity of Finnish women. The studies on women’s values and couples’ preferences indicate, though, that even Finnish women are likely to differ in their lifestyle preferences.

The empirical analysis conducted here employed an extract from the Finnish register data, which contained information for women born in 1969. The investigation procedures, as well as the results, were in essence similar to the ones obtained for Germany and the UK. There are some peculiarities with the Finnish case, however. As to the first research question, the assumption on career strategy heterogeneity is supported by the findings (28% of the Finnish women are homemakers, 50% are combiners, and 21% are careerists), but contrary to the expectations, the share of homemakers is large in comparison to Germany and the UK. On the other hand, the relative size of the careerists is well in accordance with the expectations. When it comes to the second research question on the quantum and tempo of childbearing, we noticed that exceptionally many Finnish homemakers remained childless, a finding that requires more research. As for the third research question, the correlation between education and career strategy groups showed a pattern that could be expected based on the results in Germany and the UK, but

which nevertheless contradicts the expectations according to which education and income should not have as decisive impact in the Finnish case. In addition, it was concluded that women with the lowest income are concentrated among homemakers, whereas women with the highest income tend to choose the combination or career strategy.

Finally, as for the fourth question on the determinants of childbearing, the statistically significant results for the first births suggest that the impact of the different variables is in general to the same direction among all groups. However, the statistically insignificant findings for the regression analysis with educational attainment and educational field show that there might be some important differences between the groups, most notably when it comes to the health and welfare, and services education, which appeared to have positive influence on first births among the careerists but negative effect among the homemakers and combiners. As to the question on how homogeneous the group of women who have chosen the same career strategy is when it comes to the determinants of their choices, there are some differences, most notably in the case of income and marital status. For income, the differences in comparison to the reference category are particularly large between the combiners and careerists. A possible explanation is that as an employment contract at the time of maternal leave guarantees a return to the same employment after the leave, there are particularly large incentives for the combiners and careerists to establish a good position (i.e. high income) in labor market before having children. Further, the negative effect of cohabitation is particularly pronounced among the careerists.

For second births we notice that the direction of the impact in several cases is different. For example, the influence of higher educational qualifications is positive only for homemakers and combiners, education in agriculture and forestry among the careerists (but not among the other groups) increases the likelihood of second child, and higher income at first birth has a positive influence among the homemakers, but negative among the careerists and the combiners. As to the homogeneity between the different groups, the combiners and careerists are relatively homogeneous when it comes to the influence of education and income, but very heterogeneous when it comes to the influence of family status. For the homemakers it is the other way around.

CHAPTER 8

DISCUSSION AND CONCLUSION

The comprehensive aim of the study was to increase understanding of the cross-country differences in the level of fertility in developed countries. The description of the fertility by birth order in chapter 2 set the stage for the study, and the review of the previous research in chapter 3 showed the complexity of the issue. The theoretical framework which was sketched in chapter 4 worked as a map in chapters 5, 6, and 7, which were devoted to an application of the theory in the German, British, and Finnish contexts. Even though each of the country chapters provided a partial answer to the study questions that were presented in section 1.1, the exhaustive comparative discussion was postponed to section 8.1 in this final chapter. In addition to the comparative discussion on the results, the methodological problems of the country studies, the alternative causal explanations to the findings, as well as the implications of the current investigation to the future research are discussed in this concluding chapter in section 8.2. Finally, section 8.3 ends the chapter and the thesis by commenting on the possibilities governments have to increase the fertility rate with family policy.

8.1 COMPARATIVE DISCUSSION ON THE FINDINGS

In this section the most essential findings of the country studies are recapitulated and compared. Before the comparative discussion it is, however, helpful to briefly summarize the data and method that were employed in each country chapter (see Table 8.1). For all countries longitudinal data on women born around 1970 was used to ease the comparability of the results between the countries. For Germany, the data was from SOEP 1984-2007 for the 1965-1972 cohorts, for the UK the data was from the different sweeps of the British Cohort Study 1970, and for Finland register data on women born in 1969 was used. The Finnish register data is highly representative, but the German and British data suffered, for instance, from survey attrition and non-response. In the German case the problems could at least to some extent be corrected by employing the individual weights that were available. In the British case the disadvantaged groups were underrepresented, but no weights were available to improve the representativeness.

For all women who were included, the employment histories were constructed from the month (or in the German case from the year) the women reached the age of 18 until they reached the age of 35. For Germany and the UK the data on activity status was collected retrospectively, which means that recall-bias might have influenced the results. For Finland there was information on the number of months in employment and unemployment, on the month and year of earning the highest educational degree as well as on the activity status at the end of the year. For each country there were several problems related to the data, the most important of them being the following: In Germany the yearly data included multiple statuses, in the UK the documentation of the maternity leaves varied from sweep to sweep and the mothers who in reality were on leave could have been recorded as employed. In the Finnish data, in turn, there was no information on the nature of the employment (part-time or full-time) and on the number of months in education and moreover, many women on maternal or parental leave were recorded as employed.

Table 8.1: Overview of the employed data

	Germany	United Kingdom	Finland
Data	Survey: SOEP 1984-2007	Survey: BCS70	Register: 90% sample of women born in January 1969
Cohorts (n in parenthesis)	West Germany: 1965-1972 East Germany: 1970-1972 (1400)	1970 (3706)	1969 (2243)
Representativeness	Households with e.g. low income, female head or experienced separation from partner are underrepresented. Individual weights available and applied.	Women from the disadvantaged groups are underrepresented, no individual weights available.	Good
Activity data	Yearly (retrospective)	Monthly (retrospective)	Data on the number of months in employment and unemployment during the year combined with data on the activity status at the end of the year, and on the date the highest educational degree was attained.

To demonstrate the representativeness of the data, statistics on childbearing among the German, British, and Finnish women is shown in Table 8.2. The number **in bold** refers to the results from the current study, and the number in parenthesis is from the official estimates on the

cumulative cohort fertility. As can be read from the table, in the Finnish case the results of the current study are well in line with official estimates. In the British case, the employed data underestimates, due to the underrepresentation of the disadvantaged groups, the share of the women at higher parities and overestimates the number of women at lower parities, which leads to an underestimation of the total average fertility by 0.21 units. It should be highlighted that according to the official estimates the cumulative fertility as well as the share of the women at different parities is quite similar in the UK and in Finland. There are no estimates on the number of German women at different parities; therefore we must content ourselves with an underestimation of the average German cohort fertility by 0.03 units in the current study, which still suggests that the overall representativeness is relatively good.

Table 8.2: Comparison of the sample and population fertility

	Germany	United Kingdom	Finland
Share of women at parity i, %			
0	29	28 (25)	27 (28)
1	32	23 (20)	18 (18)
2	29	36 (34)	35 (33)
3	8	10 (14)	14 (15)
4+	2	2 (7)	6 (6)
Average fertility	1.23 (1.26)	1.35 (1.56)	1.58 (1.57)

Notes: The number **in bold** refers to the results from the current study, and the number in parenthesis is from the official estimates on the cumulative cohort fertility. Thus, for Finland calculations based on the sample gave an average fertility of 1.58, whereas the cumulative cohort fertility rate for the same cohort until the age of 35 was 1.57. The rows concerning the number of children show how large a share of the women (%) were at the indicated parity.

Source: The data for Finland and Germany is from Human Fertility Database (2011). For the UK, the data comes from ONS (2010a). For Germany, the average of the West German cumulative cohort fertility for cohorts 1965-1972 is shown. The age definition used in the official statistics is completed age.

It must be emphasized that the cohorts born around 1970 have not yet reached the end of their childbearing years; therefore it is not possible to say at which stage of family formation the cohorts are, that is, how many children they could expect to have in the future. However, for each country there are estimates for the parity distribution of the women belonging to the cohorts that already have reached the end of their childbearing years (for Germany, see Statistisches

Bundesamt 2008:56; for the UK, see ONS 2010a; for Finland, see Statistics Finland 2010b)⁵⁷. In general, the level of childlessness is less widespread among the older cohorts. Moreover, a higher share of the women in older cohorts has 3+ children. The comparison between the cohorts suggests that we can expect some changes in the parity structure of the cohorts observed in the study, and that the results might be partly related to the timing of the births (see section 8.2.1). Keeping these difficulties in mind we can now proceed to the comparative discussion on the results.

8.1.1 The relative size of the career strategy groups

The first research question was two-fold: (1a) What is the share of the women belonging to the different career strategy groups within one country, and (1b) how does the relative share of the homemakers, combiners, and careerists vary between the countries? According to the theoretical framework, none of the country clusters allowed all women to choose according to their preferences given the different constraints related to the family policy and household's own resources. It was assumed that in the conservative and liberal countries, some of the adaptive women would decide against their initial preferences and choose the homemaking strategy or career strategy. For the social democratic countries, in turn, it was assumed that some of the home-centered women would need to choose (the combination strategy) against their wishes. In the case that the relative number of women with home-centered, adaptive, and work-centered preferences would be the same across the welfare state types, this would mean that the distribution of the women into the different career strategy groups would be similar in the conservative and the liberal countries, whereas the share of the homemakers and careerists in the social democratic countries would be lower (and consequently the share of the combiners higher) in comparison to these two clusters.

The review of previous research on preferences, family policy, and household's own resources suggested that women in each country differ in their preferences (or at least in their values/attitudes as in the Finnish case), that the family policy either encourages or discourages certain career strategies, and that the household's own resources influence women's decisions.

⁵⁷ For Germany the estimates for the 1952-1961 cohorts at age of 45-54 show that 19% of the women were childless, 31% had one child, 50% had two children and 19% had 3+ children. For the England and Wales, of the women belonging to the cohort of 1962, 20% were childless at the age of 45 and 13% were at first, 37% at second, 20% at third and 10% at fourth or higher parity. Of the Finnish women at ages of 50-54 (in 2009), 17% were childless, 17% at first, 37% at second, 20% at third, and 9% at fourth or higher parity.

Thus, in these respects the assumptions made in the theoretical framework appear reasonable. The data employed in the study did not contain information on preferences and it was therefore assumed that the women would have roughly similar preferences across the countries and that the cross-country differences in the size of the career strategy groups would be based on other factors. In other words, the share of the women who choose the different career strategy groups was expected to be equally large in Germany and the UK, and further, it was expected that Finland would differ from these two countries by a lower share of the homemakers and careerists.

As already described in the country chapters, the classification of the women into the different groups was made in the following way: All women who had been inactive for altogether at least six years were classified as homemakers. Those women who had been continuously either working full-time or enrolled in education were classified as careerists (a maximum of altogether one year of inactivity or part-time work was allowed). All other women (women who have had relative long absences from work and/or who had been working part-time for longer periods) were classified as combiners.

Table 8.3: Relative share (%) of the different groups in Germany, the UK and Finland

	Homemakers	Combiners	Careerists
Germany	24	48	28
United Kingdom	19	51	30
Finland	28	50	21

In Table 8.3 the share of the women belonging to the different career strategy groups is shown once more (24% of the German women are homemakers, 48% combiners and 28% careerists. In the United Kingdom, 19% are homemakers, 51% combiners and 30% careerists. Finally, 28% of the Finnish women are homemakers, 50% combiners and 21% careerists). The first conclusion that can be drawn from the results is that in all three countries there is a large polarization among the women based on their long-term behavior in the labor market. This in itself is an interesting descriptive finding as it is only seldom that women's labor market participation is studied comparatively over a longer time span.

The second conclusion relates to the evaluation of the findings against the theoretical framework. As assumed, the share of women in each group is quite similar in Germany and the UK: The relative share of the homemakers between these two countries differs by five percentage

points, the share of the combiners by three percentage points, and the share of the careerists by only two percentage points. Considering that women from disadvantaged groups, many of whom are likely to be homemakers (see discussion in 8.1.3), are underrepresented in the British data, it is possible that the real differences are even smaller. Likewise in accordance with the theoretical framework is the low share of the careerists in Finland: The share of the careerists in Finland is seven percentage points lower than in Germany and nine percentage points lower than in the UK. Notice that the number of the Finnish careerists is probably overestimated due to the problems related to the data, and that the differences between the countries are thus likely to remain even though the German and British data would overestimate the share of the careerists.

Although the theoretical framework is relatively helpful when trying to understand the above discussed cross-country differences in women's long term employment decisions, the large share of the homemakers in Finland does not fit with the framework. Contrary to the expectations, the share of homemakers in Finland is the largest in the three countries studied. There are several possible reasons for this finding and more research on the issue is needed. One possibility is that the lack of part-time opportunities in Finland pushes many adaptive women to homemaking. Another explanation would be that the organization of the social security system allows exits from the labor market more easily than in Germany and the UK (as discussed in chapter 7.3.1, approximately 30% of Finnish homemakers had at least once been registered as pensioner in the end of the year). In any case, the large share of childless homemakers in comparison to Germany and the UK suggests that strong preferences for family life are not behind the result.

8.1.2 Patterns of childbearing

The second study question was as follows: (2a) How do the patterns of childbearing (timing, level) vary on the one hand between women belonging to the different groups within one country and, (2b) on the other hand between the different groups between the countries? In chapter 4 it was argued that as the homemaking strategy in the liberal and conservative states is promoted by the social policy, the homemakers in these countries would have equally high fertility, whereas the fertility of the homemakers in the social democratic welfare states due to the lack of support would be lower. Further, because the career strategy with children would be difficult to realize in the conservative countries (given the poor availability of the child care), it was assumed that the level of childlessness among the careerists in this country cluster would be higher than in the two

other regime types. The family policy in the social democratic countries and high household income combined with the availability of private child care in the liberal countries, in turn, were assumed to enable a career strategy with children. Thus, it was assumed that many of the careerists in the liberal and social democratic countries would have children, but that their family sizes would be relatively small. No detailed assumptions were made about the fertility of the combiners (except that in all countries it would be relatively high, that is, lower than the fertility of the homemakers and higher than the fertility of the careerists) or about the timing of the childbearing. All in all, in the case that the desired family sizes are similar across the countries, we would expect the fertility of the homemakers to be similar in Germany and the UK, whereas the fertility of the homemakers in Finland should be lower than in these two countries. Also, we would expect to find lower fertility (higher degree of childlessness) among the careerists in Germany in comparison to the careerists in the UK and Finland.

The results on the number of children are once again shown in Tables 8.4-8.9 and the results concerning the timing of the births (Kaplan-Meier survival curves) in Figure 8.1. As already discussed in the country chapters, in each country (though to a lesser extent in Finland) there is a strong polarization between the groups when it comes to both the level and timing of fertility. The homemakers have the highest average fertility and the careerists the lowest. Also, the homemakers progress more frequently to higher parities (3+) whereas the careerists often remain childless or have small families. In addition, the homemakers enter motherhood much earlier than the careerists. Both when it comes to the level and timing of fertility the combiners are found somewhere between these two extremes. As to the relative contribution of the different groups to the total fertility until the age of 35, the homemakers contribute more, the combiners almost equally much and the careerists less than is their relative share of the population. The behavior of the combiners is, however, of particular importance given that their share of the population is so large.

To take a look at the findings in more detail, **we start with the fertility of the homemakers** (Tables 8.4 and 8.5), which was 1.99 in Germany, 2.18 in the UK, and 1.99 in Finland. Thus, the results do not support the assumption that the fertility of the homemakers would be equally high in Germany and the UK, and that the fertility in Finland would be lower. The difference of 0.19 units in average fertility between the German and the British homemakers is a result of the British women more often progressing to the second and third parity, whereas

the German homemakers to a larger extent remained at first parity. A possible explanation for this finding is that as the British homemakers enter motherhood at earlier ages in comparison to their German counterparts (Figure 8.1), they have more time to have their second and third births during the time span of the study. Notice also that the interval between the first and second births appears to be shorter in the UK. Explanations related to the timing of the births and the length of the interval between the births cannot be completely ruled out, although it is important to remember that even the German homemakers, in general, have their children relatively early and are thus exposed to the second birth risks for a relatively long time before reaching the age of 35. Another possible explanation is that the many homemakers in the UK have preferences for larger families, whereas the preferences for smaller families are more outspread among German women. It is true that the studies on childbearing preferences of German and British women suggest that British women quite often have a desire for larger families whereas the one-child family ideal is more common in Germany (see e.g. Goldstein et al. 2003:486). It is nevertheless questionable whether these general findings can be applied to the selective group of homemakers.

A further finding that runs counter to expectations is the equally high fertility of the Finnish and German homemakers. The similarity is due to, on the one hand, the higher share of childlessness among the Finnish women and, on the other hand, the larger number of Finnish women progressing to higher parities. As in the case for fertility differences between British and German homemakers, it is possible that the earlier timing of homemakers' first births in Finland and the shorter interval between the births might provide a partial answer to the differences. Notice however that in case the level of childlessness in Finland would be the same as in Germany and the UK, the fertility of the Finnish homemakers would be considerably higher than in Germany, and reach the levels obtained in the UK. Thus, depending on which perspective is taken on the matter, it is either the high levels of childlessness and higher parity births among the Finnish homemakers, or the relatively low level of German homemakers' fertility that require an explanation. Even though the share of childless women among the Finnish homemakers is quite remarkable, at the same time it is interesting that although the social policy does not support the homemakers in Finland to a similar extent as in Germany and the UK, the share of the homemakers with large families (4+) is higher in Finland. On the other hand, it is strange that although German social policy is supportive of male breadwinner families, the fertility of the

German homemakers is at the same levels as in Finland (and would be lower without the high share of Finnish childless homemakers), and even lower than in the UK.

Table 8.4: Childbearing among the homemakers: Percentage of homemakers with 0-4+ children and homemakers' average fertility in Germany, the UK, and Finland

	Germany	United Kingdom	Finland
Number of children			
0	8	6	20
1	23	16	15
2	39	43	32
3	22	26	19
4+	8	9	14
Average fertility	1.99	2.18	1.99

Table 8.5: The contribution of the homemakers to the overall fertility in Germany, the UK, and Finland

	Germany	United Kingdom	Finland
Contribution by birth order, (%)			
0	7	4	20
1	18	13	25
2	33	23	26
3	65	49	38
4+	82	73	63
Average fertility (%)	39	31	36
Average fertility (units)	0.48	0.41	0.56

Notes: "Contribution by birth order" for example at birth order 0 refers to the number of childless women who are homemakers in each country. "Average fertility (%)" tells how large share of the average fertility is due to the homemakers, e.g. 39% for Germany means that 39% of the average fertility in Germany can be explained by the contribution of the homemakers. "Average fertility (units)" in turn refers to how large share of the average fertility in units is produced by the homemakers.

Finally, some interesting observations concerning the contribution of the homemakers to the overall fertility can be made (Table 8.5). Firstly, in each country a disproportionately large share of the women at fourth-and-higher parities are homemakers. This suggests that women in general do not often have 4+ children without longer breaks from the labor market. This is true even in Finland where the combination of family and work is promoted by the social policy. However, even though a disproportionately high number of homemakers contribute to the higher parity births in Finland, the combination of large families with work appears to be more difficult in Germany and the UK. Secondly, in all three countries the homemakers contributed to the total level of fertility more than was their share of the population, meaning that despite of their relatively small share of the population the importance of the homemakers for the total fertility is vast.

When it comes to the combiners, no particular assumptions about their fertility was put forward in the theoretical framework, except that in all countries it would be relatively high. The findings of the current study show that the average level of fertility for the combiners is almost the same in the UK (1.53) and in Finland (1.56), whereas the fertility of the German combiners is significantly lower (1.38). Despite the similarity between the Finnish and British combiners in this respect, the share of combiners at different parities is very different in these two countries. In Finland, a larger share of combiners is childless (25%). Moreover, only a few Finnish combiners are at first parity (18%) in comparison to their British (26%) counterparts, and the British women are also more often at second parity. However, the number of Finnish women at higher parities (3+) is higher than in the UK. Germany differs from these countries most notably in that a larger share of the German combiners is still at first parity.

As to timing of the births, the combiners in all three countries have their first child somewhat later than the homemakers. However, the transition to second births is almost identical between the homemakers and combiners in Finland during the entire observation period. This is to a certain extent true even for the UK, although larger differences start to occur after about four years from the first birth. In Germany, the transition to second parity also proceeds at a similar speed during the first four years after the first birth, but thereafter the differences grow relatively large.

These results concerning the combiners' fertility could be neatly explained by the cross-country differences in the social policy: As the combination of work and family is easier in the UK and Finland, combiners have higher fertility in these countries than in Germany, where many of the combiners have only one child. However, the high share of childless combiners in Finland does not fit into this explanation. Moreover, it is possible that some of the combiners at higher parities are in fact homemakers, that is, they experience longer absences from work, but these absences are not yet long enough to be detectable during the observation period. However, the high share of the combiners with only one child in Germany in comparison to the UK and Finland is likely to require a different kind of explanation.

Table 8.6: Childbearing among the combiners: Percentage of combiners with 0-4+ children and combiners' average fertility in Germany, the UK, and Finland

	Germany	United Kingdom	Finland
Number of children			
0	15	16	25
1	41	26	18
2	37	47	38
3	6	9	14
4+	1	1	4
Average fertility	1.38	1.53	1.56

Table 8.7: The contribution of the combiners to the overall fertility in Germany, the UK, and Finland

	Germany	United Kingdom	Finland
Contribution by birth order, (%)			
0	24	29	46
1	62	59	52
2	62	66	56
3	35	47	50
4+	18	24	35
Average fertility (%)	53	58	50
Average fertility (units)	0.66	0.78	0.78

Notes: See Table 8.5

Given that the combiners are the largest group in each of the three countries studied, they also have the largest impact on total average fertility as well as on the distribution of women at different parities. Interestingly, the contribution of the Finnish combiners to the total average fertility as well as at parities 0-3 roughly equals their share of the population. Only at the fourth- and-higher parities do the Finnish combiners contribute considerably less than is their share. In Germany and the UK, the combiners' share of childless women is 24% and 29%, indicating a large underrepresentation. At parities 1-2 the combiners are in turn overrepresented, whereas at parities 3-4+ the combiners are again underrepresented (except in the UK at third parity).

Finally, **concerning the careerists** it was assumed that their fertility would be lowest in Germany, mostly due to the large number of them that remain childless. The careerists in the UK and Finland, in turn, were expected to have higher fertility because of a lower level of childlessness which is in turn related to the better possibilities to combine children and career. The results (Table 8.8) show that the fertility among the German careerists is indeed the lowest, only 0.32, whereas the fertility of the careerists in the UK (0.53) and Finland (1.05) is higher. According to expectations, childlessness among the careerists is highest in Germany: As many as 73% of the careerists are still childless at the age of 35. In the UK and Finland, "only" 63% and

43% of the careerists are childless. In general, those German careerists who have children remain at first parity (23%) and only seldom (5%) have two children. In the UK and Finland, a large share of the careerists are at first (22% in the UK, 19% in Finland) or second parity (13% in the UK and 29% in Finland), and some even at third or fourth-and-higher parity. In addition to the explanations given in the theoretical framework, the timing of fertility is likely to have influenced these results: The careerists entered into motherhood later than the women belonging to the other groups (Figure 8.1). Further, the high share of the Finnish and British women at higher parities might be due to the fact that the women on parenting leave in these countries were on some occasions registered as employed and consequently as careerists, even though they in reality are combiners.

Table 8.8: Childbearing among the careerists: Percentage of careerists with 0-4+ children and careerists' average fertility in Germany, the UK, and Finland

	Germany	United Kingdom	Finland
Number of children			
0	73	63	43
1	23	22	19
2	5	13	29
3	0	1	8
4+	0	0	1
Average fertility	0.32	0.53	1.05

Table 8.9: The contribution of the careerists to the overall fertility in Germany, the UK, and Finland

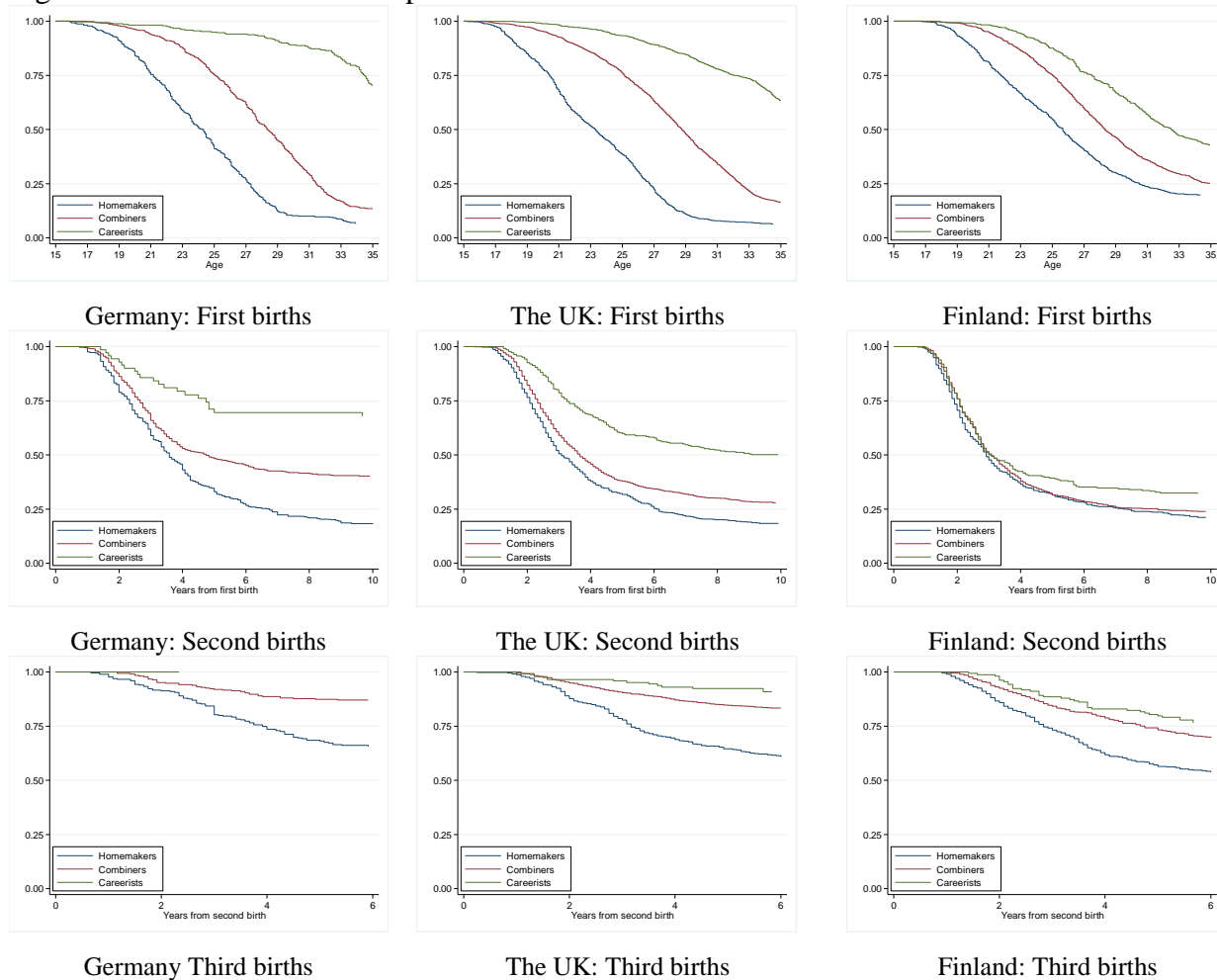
	Germany	United Kingdom	Finland
Contribution by birth order, (%)			
0	69	67	33
1	20	28	24
2	4	11	18
3	0	4	12
4+	0	3	3
Average fertility (%)	7	12	14
Average fertility (units)	0.09	0.16	0.22

Notes: See Table 8.5

As to the contribution of this group to the overall fertility, we notice that in Germany 69% of childless women are careerists. The number is similar in the UK, 67%. In other words, in these two countries childlessness is best described as a phenomenon among those women who are working or studying without longer interruptions. In Finland, however, the situation is different:

Of all the childless women only 33% are careerists, which means that the careerists are only slightly overrepresented among the childless women. As to the contribution at higher parities, the German careerists contributed only with 20% to the total number of first births and with 4% to the total number of second births, and did not contribute at all to the higher number births. In the UK and Finland, in turn, the contribution of the careerists at different parities is more substantial.

Figure 8.1: Overview of the Kaplan-Meier curves



8.1.3 Characteristics of the women

The third study question was the following: (3a) What are the typical characteristics of the homemakers, combiners, and careerists, and (3b) what are the differences and similarities between the countries in this respect? Not many assumptions concerning the characteristics of the women were made in the theoretical framework. The only prediction that was put forward was

that the women in the liberal countries would be more differentiated based on income in comparison to the women in the conservative and social democratic countries.

The data employed in the country chapters concerning the characteristics of women varied from country to country, which naturally makes comparison between countries difficult. Indeed, the only variable which was measured for all countries was educational attainment. As repeated in Table 8.10, the homemakers had in general the lowest education in all countries, whereas the combiners and especially the careerists had the highest education. Given the differences in the educational systems, it is difficult to say whether, for example, the British women are more differentiated based on their educational qualifications than the Finnish women.

Despite the strong correlation with education and career strategy choices, the relationship between preferences and choices remains unclear. It is possible that women who have home-centered preferences choose low education in the first place because it better matches their preferences; that the adaptive women choose higher education because it better enables them to realize their adaptive preferences; and that the work-centered women choose higher education more often because it allows them a better position in the labor market. Another explanation for these differences is that women with low education do not have large incentives to enter the labor force for a long time after childbearing because of low alternative income and that they therefore end up as homemakers; that women with higher education have more incentives to enter the labor force, but they can nevertheless take a short break after the childbearing (combiners and careerists); or that they completely avoid childbearing as they feel that childbearing would negatively influence their career (careerists). Likewise it is possible that women with low education have more difficulties to enter the labor market after childbirth than women with higher education, and hence the long inactive months. Or, given that the information on education referred to the highest educational attainment, it is also possible that the data hides some important differences about the relationship between childbearing and education: It is possible that the homemakers gave birth to their child before they entered higher education, or even when in education, and because of the childbirth did not have time, money, or energy to continue with their studies, which in turn led to low income and difficulties in getting job. Likewise it is also possible that the women with highest education postpone their births in order to finish their studies and establish their position in the labor market, and have children after they were censored in this study. All in all, further study on the relationship between preferences, education,

and career strategies is necessary to understand the correlation between education and career strategies found in this study.

Table 8.10: Educational qualifications in the different groups in the three countries, %

	All	Homemakers	Combiners	Careerists
Germany: Education				
Low	12	29	8	6
Medium	61	61	63	58
High	27	10	29	36
UK: Education				
None	6	17	4	3
CSE	14	21	14	9
O-level of equivalent	33	40	34	28
A-level or equivalent	10	8	10	11
Degree	30	13	32	39
Higher degree	6	2	6	10
Finland: Educational attainment				
No education	13	26	8	6
General education (upper secondary level)	6	8	6	5
Upper secondary level	31	41	30	23
Lowest level, tertiary	29	22	33	29
College	20	3	23	37

Notes: The columns add up to 100. For further information on the indicators, see chapters 5, 6 and 7.

In addition to educational attainment, it is possible to compare the tendencies in religiosity and the educational qualification of the current partner between Germany and the UK. As to religiosity (Table 8.10), in both countries the careerists seem to be the least religious group, but the differences between the three groups are small. In other words, religious women do not self-select into only one particular career strategy. Concerning the educational qualifications of the partner (Table 8.11), both in Germany and the UK a larger share of the homemakers have a partner with low education than the combiners and careerists, whereas the partners of the careerists often have high education. However, despite these tendencies a significant share of the women in each group has a partner with low, medium and high education. Thus, spousal education does not completely determine the career strategy, even though it is possible that it has some influence. Unfortunately the categories concerning the spouse's education are not comparable between Germany and the UK, and it is thus not possible to draw any conclusion if the educational qualifications of the partner are more important in Germany or in the UK.

Table 8.11: Religiosity in Germany and the UK, %

	All	Homemakers	Combiners	Careerists
Germany:				
Attends religious events				
Weekly	7	12	7	5
Monthly	9	8	11	5
Less frequently	39	36	37	44
Never	45	45	45	46
UK:				
Practices religion now?				
Yes	19	19	22	14
No	81	81	78	86

Notes: The columns add up to 100. For further information on the indicators, see chapters 5 and 6.

Table 8.12: Spousal education in Germany and the UK, %

	All	Homemakers	Combiners	Careerists
Germany:				
Spouse's education				
No spouse	31	23	28	42
Low	8	12	8	5
Medium	53	58	52	51
High	38	30	40	44
UK: Age current partner left education				
14-16	56	68	56	49
17-18	19	15	19	20
19+	22	11	23	27

Notes: The columns add up to 100. For further information on the indicators, see chapters 5 and 6.

Further, it was possible to compare the marital status of the women between Finland and the UK (Table 8.12). The first conclusion from the comparison is that at the age of 34/35, marriage is somewhat more common among the women in the UK, and in both countries the combiners are the group with the largest share of married women. However, in the UK the careerists are much less likely to be married than both homemakers and combiners, whereas in Finland the differences between the groups are not large. As to cohabitation, it is in general slightly more common in Finland. In the UK cohabitation is most common among the careerists whereas in Finland an equally large share of the combiners and careerists cohabit. The differences between the countries and groups are however relatively small.

Table 8.13: Family status in the UK and Finland, %

	All	Homemakers	Combiners	Careerists
UK:				
Marital status at 34/35				
Married	55	52	63	43
Remarried	4	6	4	2
Never married, cohabiting	13	12	11	18
Other, cohabiting	5	4	4	5
Never married, living alone	16	16	10	25
Other, living alone	8	11	7	7
Finland:				
Family status at 34				
No family	14	12	11	21
Married, no children	4	3	4	7
Married with children	45	43	49	40
Lone mother	12	22	9	7
Cohabiting couple with common children	13	13	15	10
Cohabiting couple with no common children	2	2	2	1
Cohabiting couple without children	8	4	9	14

Notes: The columns add up to 100. For further information, see chapters 6 and 7.

As to the other characteristics that were studied, the general picture detected in each country was that in some cases there are some important differences between the different groups of women when it comes to their characteristics, but that in other cases the differences were more or less non-existent. Moreover, a strong polarization could not be detected concerning any of the studied characteristics. In Germany a relatively large share of the homemakers are immigrants, and the homemakers have less educated mothers than the combiners and careerists, but no larger differences between the place of upbringing were observed (except for the fact that a relatively large share of the homemakers and careerists come from the countryside). In the UK women in the different groups were remarkably similar when their attitudes concerning extra-marital births were asked. Further, the homemakers were the least likely to have had a religious upbringing, and were also the group with the most health-problems. The division of household work and care work is more equal among the careerists and less equal among the homemakers. Finally, in Finland we saw that women with education in some particular fields were overrepresented among one or two of the career strategy groups. Additionally, a larger share of the careerists had high income in comparison to the combiners and particularly the homemakers. Moreover,

homemakers were the group who had most often taken HCA and the careerists the group which had least often benefited from the HCA. Finally, at the age of 34, a relatively large share of the homemakers was unemployed, in education, in pension, or otherwise inactive in the labor market in comparison to the combiners and the careerists.

In sum, some of the differences between the groups of women (e.g. differences in income, the uptake of HCA, division of household work) can be explained by the chosen career strategy or fertility. Some variables in turn seem to be highly correlated with the career strategies (e.g. own education, mother's education, immigration background, spouse's education, problems with health, religious upbringing), and it is likely that some of these factors also influence the preferences or decisions about the different career strategies. Finally, many factors do not seem to be that important at all (e.g. current religiosity, marital status, attitudes towards extra-marital births, place of upbringing). All in all the results suggest that there is no simple way of predicting which women choose which strategy, and that more studies need to be conducted on the interaction between several different variables.

8.1.4 Determinants of childbearing

The fourth study question was the following: (4a) What are the central determinants of fertility within the groups, that is, what kind of differences and similarities can we detect, on the one hand, between the groups within one country and, (4b) on the other hand, between the different groups between the countries? In the theoretical framework some suggestions about the central determinants of fertility among the different groups of women were made, and variables such as household income, direct costs of childbearing, and fertility preferences were pointed out as significant. The assumptions that were put forward in chapter four proved nevertheless to be difficult to test with the data that was employed in the country studies. The data did not include many of the preferred indicators, for some of the indicators whose value varies over time there was information only at the date(s) of the interview, and in the most cases the indicator values were not comparable between the countries. Moreover, the fact that the cohorts were observed only until they reached the age of 35 means that the relative risks obtained from the regression analysis refer both to the timing and level of fertility. To avoid further confusion the analysis of the determinants of third births was not conducted.

The regression analysis of the determinants of the first and second birth risks did not allow for a direct test of the theory, but it was nevertheless possible to investigate whether there

would be differences between the different groups when it comes to the direction of the impact and the homogeneity of the groups in their responses to the different independent variables. Many of the results were statistically insignificant, particularly for the second order. Consequently, most of the findings remain highly tentative. However, the general picture that emerges from the regressions is that in many occasions the influence of an independent variable is in a different direction between the groups of women, and that in some occasions some of the groups show more differences to the reference category. The limited amount of variables which were studied, and the fact that the datasets did not include many of the same or even similar variables for all three countries, makes the comparison between the countries somewhat difficult.

As for the **first births** and the statistically significant results, it can be concluded that the direction of the impact was mostly the same in Germany and Finland. In the UK, the impact of religiosity and religious upbringing was found to be to in the opposite direction among the homemakers and careerists in the bivariate regressions. However, if the statistically insignificant results are looked at, more cases where the direction varies between the different groups is found. For example, in Germany the place of upbringing appears to be more important determinant for the entry into motherhood among the careerists than in the other groups of women. In Finland, education in health, welfare, or services has a positive impact on first births among the careerists, but a negative impact among the other groups. In the UK in turn the impact of higher education became positive for the careerists when marital status and the age current partner left the education were introduced to the equation, but remained negative for the homemakers and the combiners.

Concerning the homogeneity of the different groups, in all countries some important differences between the different groups were found. In Germany the positive influence of immigrant background was particularly strong among the careerists. (Likewise the place of upbringing appeared to discriminate among the careerists more than among the other groups, the careerists and combiners were particularly heterogeneous when it comes to the influence of the attendance in religious services and the absence of a spouse in turn had a very pronounced negative effect among the careerists – but all these results were statistically insignificant). In the UK, the careerists are more homogeneous in the impact of the attitudes towards extramarital childbearing (statistically significant only in the bivariate regressions) and the negative effect of not having a spouse is likewise particularly pronounced among the careerists. Finally, in Finland

the differences in comparison to the reference group were particularly pronounced among the combiners and careerists when it came to the influence of income, and among careerists when it came to the influence of cohabitation. Thus, the results clearly suggest that the influence of the independent variables on fertility often, but not in all cases, depend on the chosen career strategy. However, it is difficult to draw any substantial interpretations of these differences and similarities between the countries. A careful conclusion would be that in all countries the careerists often behave differently in comparison to the homemakers and combiners, and are also a more heterogeneous group than the other two. Further, there were some indications that influence varies depending on the country: In Germany, religiosity had a positive influence on first births among the homemakers and negative influence among the careerists, whereas in the UK religiosity was positively related to first births among the careerists but negatively among the homemakers. Such findings suggest that the women who choose the different career strategies might be differently influenced in their choices by attitudinal factors such as religiosity, and that more research needs to be done concerning the determinants of work-family preferences across the countries.

As for **second births**, only very few of the results were statistically significant and moreover, the early right censoring of the women means that the methodological problems were larger in the study of the second births. Consequently, it does not make sense to discuss these relatively uncertain results to any length here, or to speculate about their possible implications. It is sufficient to note that the results for the second birth give basically the same picture as the results for the first births, that is, the direction of the impact and the homogeneity of the different groups varies in all countries.

Naturally, the findings are only tentative, and the only thing that can be concluded for certain is that as important differences and similarities between the different groups emerge across countries, future studies should take a more careful look at how the different independent variables influence the childbearing decisions of women who have chosen different types of career strategies. Many improvements when it comes to the use of the regression technique, observation period, and the number as well as the quality of the variables that were included in the regression need to be made before it is possible to draw firm conclusions about the determinants of fertility. A regrettable shortcoming of the data is that it was not possible to

conduct reliable analysis on third birth propensities as it is possible that the differences are easier to see at the higher birth orders.

8.2 ALTERNATIVE EXPLANATIONS AND IMPLICATIONS FOR RESEARCH

In the previous sections, the central results of the country studies were recapitulated and discussed. In this section the reliability of these results is evaluated by first asking if and how the methodological problems have influenced the findings. Secondly, some alternative causal explanations to the results are discussed. Finally, the implications of the current study for the research on childbearing are discussed.

8.2.1 Methodological problems

Throughout the country chapters it has been clear that the empirical investigations suffer from some methodological problems. To start with the quality of the data, it cannot be ruled out that the several difficulties related to the employed datasets (see discussion above) would not have influenced the results. Further, as the type of the activity data on which the classification of the women was based on was of different nature in each country, the comparability of the results is far from perfect. Consequently, it is doubtful whether the findings can be trusted in detail and more research with better data is needed to be able to draw more reliable and precise conclusions. Yet, in each country the trends in polarization when it comes to the career strategies, the number and timing of the births, and some of the characteristics of the women (e.g. education) are so clear that it should be safe to conclude that the female career strategies are heterogeneous in all the countries studied.

Despite the convincing evidence on polarization, it is possible that the current study has overestimated or underestimated the extent of the divergence among the female population due to the employed operationalization. The employed operationalizations of the different groups were arbitrary: The homemakers were distinguished from the combiners in that they had been inactive for at least six years, and the combiners in turn were distinguished from the careerists in that they had been absent from full-time work or studies for more than one year. Such operationalization bears at least two important advantages for the purposes of this study: (a) In a preliminary investigation it makes sense to draw coarse limits to see whether the arguments that were put forward in the theoretical chapter were true to any significant extent, that is, to see if it for all the countries included in the study was possible to distinguish different groups which differed

substantially from each other and whose size likewise was enough large to be considered as important. (b) The second reason justifying the arbitrary operationalizations is that the same limits could now be applied to each country, which made the comparison of the results between the countries easier. As the preliminary evidence presented in this study points towards a divergence and shows that it is possible to find substantially large groups in each country, future studies should concentrate on improving the operationalizations. For instance, it would be desirable to take the sequencing of the events into account to be better able to understand women's lifestyle choices. A more sophisticated classification might show that there are more differences between countries or that for some (or all) countries it is meaningful to distinguish between more than three groups.

A related problem is the relationship between childbearing and employment. It is well known that a large majority of women take at least a short break from employment in connection to the childbearing. Consequently, the more children a woman has, the more numerous these breaks may be. Thus, if the time absent from the labor market is directly dependent only on the number of children, the different career strategy choices are nothing more than a measure of how many children a woman has (which would naturally explain the strong correlation between fertility and the different career strategy groups found in the current study). If this were the case, the findings of the current study are less interesting, considering that there already is strong evidence on women choosing to remain at different parities. Several of the obtained results do not, however, support this interpretation. For instance, many of the combiners and homemakers (especially in Finland) are childless, which suggests that other reasons than childbearing determine behavior in the labor market. In a similar manner, women with one or two children are found in each group, which means that for some women having two children correlates with continuous labor market/educational careers, whereas for others it correlates with long periods of inactivity. Even though it is likely that some changes occur in the share of the women belonging to the different groups as women get older, there nevertheless appears to be real differences in the actual level of participation which do not depend only on how many children the woman has given birth to.

Finally, it is possible that the observed career strategy heterogeneity is a result of the different timing of the births, meaning that even though women start their childbearing at different times, the women's career strategies will eventually converge. However, the Kaplan-

Meier curves clearly show that a large share of those careerists who have had children entered motherhood before the age of 30. In a similar manner, many of the combiners enter motherhood in their late 20s and early 30s, and yet their labor market performance is very different from that of the careerists. Further, a future convergence would mean that all women need to choose the homemaking strategy, which is not a reasonable assumption. On the other hand, it is possible that some of the similarities and differences that were found between the countries are depending on the different timing of the births and to rule out the possible effect of the timing of the births, it would be important to follow the women throughout their fecund years.

8.2.2 Alternative causal explanations

In addition to the methodological problems it is useful to discuss the relation between the empirical evidence and the causality claims that were made in chapter 4. Many of the causal paths that were claimed to exist between the variables in the theoretical framework could not be proven and the connection between the results and the theory remains empirically weak. The causal relation between preferences and behavior could not be established. The overview of previous research concerning preference heterogeneity in Germany and the UK (and Finland) suggested that women indeed differ in their preferences. Therefore it is reasonable to believe that women in the employed datasets do so. Though the datasets that were chosen for this study did not include any data on the actual preferences of the women and consequently, based on the presented empirical evidence it is impossible to say anything about the relationship between preferences and behavior, some traces of this relation could be seen in the German and the British data. Consequently, more research is needed to establish the postulated link between preferences and behavior. The same is also true when it comes to the relation between family policy and different career strategy choices. Based on the review of the family policy in the countries that were studied, it was possible to make suggestions on which career strategy or strategies the social policy supports and how women with differing preferences would choose. The statistical analysis however did not include any indicators for family policy. As a result, the causal influence of the preferences and family policy on the career strategy choices and fertility remains without proof, and the findings of the current study are thus open for other explanations than the one given in chapter 4.

Some of the theories that were discussed in chapter 3 include either direct predictions of heterogeneity in female behavior, or it would be possible to derive predictions about such

heterogeneity. Therefore, it is useful to take a look at the findings of the current study in the light of the theoretical frameworks reviewed in chapter 3. To recapitulate briefly, the supporters of the value change-theory (see 3.1.1) claim that the values people possess lead to a self-selection of individuals into different living arrangements. Likewise, economic theory (see 3.1.2) with all its derivations predicts heterogeneity as the households' budget constraints vary and as the rational/possible choice of (partnered) women when it comes to activity in the labor market therefore varies between the households. In the role incompatibility and gender equity theories (see 3.1.3 and 3.1.4), role incompatibility leads to a large share of childless women and likewise to a large share of mothers who in connection to childbirth remain inactive for a longer time (e.g. Rindfuss et al. 2003:419). In the preference theory (see 3.1.5), heterogeneity in behavior is expected as a direct consequence of the preference heterogeneity. Despite the coarse overall predictions about heterogeneity in behavior, none of these theories develop the argument about consequences of heterogeneous behavior to the overall fertility in detail, and it is therefore difficult to gauge exact predictions based on these theories. Yet, many of the results of the current study seem to fit with predictions that can be derived from these theories meaning that they are challenging the causal explanation put forward in the theoretical framework in chapter 4. For example, the fact that educational level correlates with the different career strategy categories appears to fit neatly with the arguments made by the value change theorists (the new mind set is more outspread among the highly educated) and by economists (individuals with different education are having different household income). Likewise, the equally large group of careerists in the UK and in Germany, but higher fertility among UK careerists fits the gender equity/role incompatibility theories (who present the UK as a country with high role incompatibility due to its support for a various family forms instead of only supporting the male breadwinner organization of the family, e.g. Brewster and Rindfuss 2000:284). The size of each career group, in turn, fits roughly with the by preference theory predicted size of the different preference groups. In other words, at first look the findings of the current study appear to give support to each of these theories.

A second look reveals that many of the findings do not fit perfectly to the patterns that are predicted. For example, using the value change theory, it is difficult to explain why so many homemakers with low education and many children cohabit, that is, follow the traditional fertility model but yet choose non-traditional living arrangements. Further, from the economic theory

point of view it is not clear why so many highly educated women choose two different types of careers. For the supporters of the role compatibility theory, the equally large share of the homemakers and combiners in the UK and Germany is difficult to explain, as the UK in these theories is seen as an example of a country with a higher degree of role incompatibility. The same is true for the Finnish case: Why do so many women who have the right to have their children in day care and who can make use of relatively generous parental leave arrangements choose to remain outside the labor market for such a long time? Finally, the correlation between educational attainment and career strategy choices which was found in each country seems to counter the assumption that preferences are the main determinants of behavior in the countries which have reached the new scenario. All in all, then, the causal forces behind the results remain open to alternative explanations and further development of both the theories discussed above as well as of the theoretical framework put forward in chapter 4 is needed in order to be able to understand the results.

8.2.3 Implications for research

Above, different improvements to the method of the studies which use the framework outlined in chapter 4 were suggested. In addition to the improvements in the investigation methodology, the studies that use the current framework need to concentrate on developing the framework itself. After this preliminary analysis more emphasis should be given to the specification of preference formation. The discussion on previous research on fertility in chapter 3 showed that the study on fertility deals with a large number of independent variables which also represent a large variety of completely different subjects from the number of own siblings and the sex of the previous children to the educational field and postmodern values. Any framework that aims to explain the variation in fertility needs to combine all of these elements in a meaningful manner. The theory employed in the current study lacks the integration of these and many other variables, but also provides a convenient way to include many of these variables, namely as explanatory to the preference formation. For example, it is possible that variables such as parents' religiosity influence the joint preferences of the women. Moreover, many of the arguments made by the supporters of the value change- theory on the relation between values and family formation are likely to prove helpful when discussing the preference formation.

Another way to improve the theoretical framework is to specify the causal paths between the different variables in a more detailed manner. For instance, issues such as the possible

influence of the preferences on educational choices as well as changes in the joint preferences during the life course have to be sorted out. Likewise, more specific predictions concerning the influence of the family policy on the strategy choices need to be made by, for example, discussing profoundly how the tax- and transfers system creates different incentives for women at different income levels and in different family situations. To specify the theory it is necessary to translate it into a mathematical model, which allows for better predictions and more precise conclusions.

In addition to these improvements regarding the theoretical framework, it is appropriate to consider the implications of the current research for the future studies on fertility. Most importantly, the empirical findings show that (irrespective of the causal forces behind the results) more attention should be given to the heterogeneity in female behavior and the consequences of that heterogeneity to the overall fertility. As pointed out by McDonald (2000a:2), fertility in the contemporary western societies is not low due to the decisions made by all, but only by some women. At present the concentration of fertility research lies on investigations of the characteristics (e.g. marital status, education, income) of the women/couples who make certain fertility decisions. These studies enable several different statements about the characteristics of the women who are more likely to enter motherhood, progress to higher parities, remain at certain parities, etc. In other words, we know who the women are who make certain kind of fertility decisions. Yet the number of these women and the importance of their choices for the overall fertility is seldom reflected upon. For example: There is robust evidence that (at the individual level) inactivity positively influences the propensity of childbearing. However, the portion of the inactive female population and their importance to overall fertility has not been studied. It is clear that the theorizing should concentrate on the majority of the women given that their choices weigh heavily when it comes to the consequences of a given action. However, this study shows that the concentration on the majority should not occur at the expense of ignoring the minority groups whose decisions might be extremely important for overall fertility. To put it differently, in order to understand the complete picture, it is necessary to concentrate on all women, not only on the large majority; it is not enough to know who the women are who are making the decisions due to which the fertility is low, we also need to know how many there are.

As to the relationship between female labor force participation, fertility, and replacement fertility, it is self-evident that there will always be women who do not have children because of

infecundity. Likewise, there will always be women who are childfree by choice, or have only one child. In order for a country to reach the replacement fertility of 2.1, to replace the “child deficit” caused by childless women, it is necessary for some women to have more than two children. The results of the study show that women can participate almost continuously in the labor market and still have children. Moreover, the results for Finland suggest that when family policy is generous the fertility of the working women can be relatively high. However, even in Finland a large share of those women who have given birth to 4+ children are inactive for longer periods of time. Therefore it is important to ask if replacement rate and continuous female labor force participation (with only short breaks) of all women is a realistic scenario.

Further, in the previous chapters we saw that the high period TFR in the social democratic welfare states such as Finland is often interpreted as a sign of success for the generous family policies/reconciliation policies. The findings of this study support this claim as the fertility among the Finnish combiners and careerists is relatively high in comparison to British and German women. Yet, the large number of Finnish homemakers suggests that despite the generous family policy not all women are integrated in the labor market, but that similarly to Germany where the family policy does not as easily allow reconciliation between work and family, there is a group of women who remain inactive for several years and whose contribution to the overall fertility is vast. This information should be integrated to the future thinking of the relationship between the FLFP and childbearing.

Finally, it is important to understand that the different paths that women have taken so far are likely to influence their future choices. Or as put by Hobcraft (2006), it is important to concentrate on processes instead of single events. At present, the concentration lies on investigating the impact of certain variables at certain parities, yet the very different past experiences of the women for whom the variable value is measured are easily forgotten. As the regression results suggested, the influence of the variables might be different when the women have been experiencing different kind of employment histories.

8.3 CONCLUSION: FAMILY POLICY AND FERTILITY

Up to this point the central results of the current study have been discussed by answering the research questions. A considerable space has also been devoted to the methodological problems related to the research, to the possible causal explanations of the findings, and to the implications of the current study for future research. To summarize the current study in one sentence, *the study*

adds to the increasing number of investigations which present evidence about heterogeneity in women's choices concerning employment and fertility, and in accordance with these studies suggest that future research should concentrate on the consequences of this heterogeneity for fertility more eagerly than what has so far been the case. The purpose of this final section is to extend the discussion to the practical consequences of the study, that is, to the question of how the worried governments (see chapter 1) can increase the fertility rates.⁵⁸ According to the argument presented in this study, governments can influence fertility mainly in three different ways: By influencing the initial preferences of the women, by influencing the share of women who choose different career strategies, and by influencing fertility within each career strategy group. Depending on how initial preferences are formed, it might be difficult and in the short term inefficient for governments to try to influence preferences. In addition, in case the preferences are related to factors such as religiosity, government intervention would be immoral. Hence, a more promising channel for governmental impact is to try to influence the choices women make concerning career strategies and fertility within the career strategy groups. In this respect, the argument that is put forward here joins with the many gendered welfare state scholars and demographers who during the past two decades have claimed that the right kind of family policy is important if not decisive for high fertility. This argument is different in that it emphasizes the heterogeneity in women's work/family preferences and work/family choices, and thus the range of the possibilities that the governments have at hand.

For example, if the German government would decide to increase incentives for the homemaking strategy (e.g. by decreasing the tax rate for the male breadwinner families, increasing child allowances, and even by directly compensating homemakers for staying at home), that might increase either the number of women who choose this strategy or the fertility among these women or both. Consequently, policy measures would have a positive impact on the total level of fertility. This strategy is, however, likely to be rather inefficient: An increase in the homemakers' fertility to the quite unrealistic level of 3.8, *ceteris paribus*, would be required in order the total average fertility to increase to the same levels as in Finland (that is, if we compare

⁵⁸ There is no agreement on whether governments should try to increase fertility at all, if and to what extent increases in fertility can solve the problems related to population aging and population decline, what the goal for the fertility policies should be, and how a wide variety of different issues from equity to practical policy costs should be considered (these and related issues in connection to fertility and gender equality policies are discussed for example by Neyer 2011; Oláh 2011; Philipov 2011; and Toulemon 2011).

the German cohort fertility at the age of 34 to the Finnish cohort fertility at the same age). Also, increased incentives for homemaking are likely to bring forth several developments which are not desirable from the perspective of the individual or the society (for instance, decreases in the female labor force participation, dependence of the homemakers on their husbands), which speaks against the strategy.

Another possibility to increase fertility is to abolish the incentives for homemaking and increase role compatibility (e.g. by introducing individual taxation, increasing the availability and accessibility of child daycare, and by creating parental leave system which fits the needs of working mothers). As a consequence the fertility of the combiners and careerists would probably increase, as would the share of the combiners, which would influence fertility into a positive direction. At the same time it is likely that the number of the homemakers as well as their fertility would decrease, which in turn would influence fertility in a negative manner. At best, the changes in family policy could be so generous that they would increase the number and fertility of the combiners and of the careerists so extensively that the decreases in the number of homemakers and their fertility would be replaced and exceeded, which would lead to an increase in the total fertility. At worst, the decreases in fertility caused by the declining number of the homemakers and their fertility could not be replaced by the higher share and fertility of the combiners and careerists, which might mean only small increases in fertility or even leave the overall fertility unaffected. On the other hand, the increases in role compatibility policies, unlike the incentives for homemaking, increase female labor force participation and women's independence and thus have positive side effects.

Finally, as already discussed above, given that some women are childless by choice or because of infecundity, it is necessary for some women to have more than two children if replacement fertility is the goal. However, it is uncertain whether role compatibility policies can really increase the fertility of working women to such a large extent that it would compensate for childlessness and fertility of women having only one child. Therefore, one alternative for the German government could be to keep the current incentives for homemaking, but to combine them with improved role compatibility and in that way support all three career strategies.

All in all, the examples above give some idea of how and why the changes in family policies could influence fertility and suggest that governments, before implementing any policies, should carefully consider how planned social policy changes are likely to affect different women

and their childbearing and thus overall fertility. Moreover, it should be acknowledged that there is no straightforward answer concerning the course of action that should be taken to increase the fertility, but that there are rather many paths, and that worried governments thus have many options to choose from. Each of the above discussed scenarios have different advantages and disadvantages which reach beyond the childbearing aspect. Altogether this means that in case it is crucial to increase fertility according to the government, it is necessary to ask how the fertility *should* be increased, instead of asking only how the fertility *can* be increased. Several aspects, such as the overall family ideology of the welfare state, gender equity, goals at other sectors (for example female labor force participation) and the direct costs of the policies need to be taken into consideration and weighed against each other.

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