Economic Consequences of Family Dissolution

Comparing Germany and the United States since the 1980s, and Married and Cohabiting Parents in Germany

Dissertation zur Erlangung des akademischen Grades Dr. rer. pol. der
Wirtschafts- und Sozialwissenschaftlichen Fakultät der Universität Potsdam

Anke Radenacker

Berlin, Oktober 2015

(Leicht überarbeitete Fassung, Stand November 2016)

OVERVIEW OF CONTENTS

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1   *Introduction*

The very thought of separation and divorce evoke negative feelings in most people. Separations are considered as exhausting events that are associated with emotional and psychological stress. They are usually accompanied by changes of social ties and networks. In addition to psychological strain, union dissolution can bring enormous economic turmoil. The majority of family households hit by separation or divorce faces at least some period of economic strain. The economic shortages are usually caused by losing the partner's income, losses of own income, or due to high costs incurred by the legal divorce process or moving. It is a widely accepted fact that women experience higher income losses than men upon separation and divorce. The extent of this difference between men and women, as well as the level of income losses, might well has changed over the past decades.

Since the 1960s a multitude of demographic and social developments have taken place in Western democracies. Starting with the educational expansion, a rising number of women entered the labor force and women's economic independence increased significantly. Gender roles were changing greatly and the male breadwinner model started to lose ground – the golden age of marriage was over. Since then, family living arrangements have become more diverse, there are fewer marriages, more separations and divorces, and accordingly there are also more people than ever before who experience the dissolution of their family. On the labor market people have increasingly been confronted with a rise in temporary employment,

mostly pursued by women, and an increase in labor turnover especially for low-skilled workers. Also, welfare states and policies have changed greatly over the past decades, mostly characterized by retrenchments in terms of government spending or in terms of restricted access to certain benefits. In the area of family policies, however, a lot of countries have simultaneously expanded provisions and transfers for families over the past decades. How this conglomerate of societal developments of the past decades has affected the economic consequences of family dissolution is at the center of this dissertation.

Another fundamental development of the past decades is the steady increase of nonmarital unions with children. While unmarried cohabitation first increased as a post-marital living arrangement of older divorcees (Kiernan, 2002), it subsequently became accepted for couples living together before marriage, and is now even widely accepted for families with children. Increasing numbers of children grow up with parents who are not married to each other. In 2010, these families made up almost 9% of families with children in Germany, almost double the 1998 level (BMFSFJ, 2012b). In many northern and western European countries this share is even higher (Sobotka & Toulemon, 2008:121ff.). Comparatively little is known about the financial situations of these families when they break up.

The dissertation aims to link welfare state change over time and within-country institutional variation with the actual income situation of households. Bringing together the macro analysis of policy variation and household income changes on the micro-level, this dissertation analyses the economic consequences of family dissolution in different institutional settings. It focuses on two important aspects. First, the main research question is whether economic consequences following separation and divorce in families with children have changed between the 1980s and the 2000s in Germany and the United States. The

second important aspect of the dissertation regards the differences in dissolution outcomes between married and cohabiting parents in Germany. The analyses are based on the German Socio-economic Panel (GSOEP) and the US American Panel Study of Income Dynamics (PSID), two of the longest-running panel surveys worldwide. The analytic strategy used to estimate the effects of family dissolution is a difference-in-difference approach combined with a matching technique.

The findings show that the expansion of family policies in Germany over time has not been accompanied by substantially decreasing income losses for mothers. Though income losses have slightly decreased over time, they have become more persistent during the years following family dissolution. The impact of the German welfare state has been quite stable since the 1980s. American mothers' income losses usually took place on a slightly lower level than those of German mothers, but only during the 1980s were their losses clearly lower than those of German mothers. If American mothers managed to recover from income losses they usually did by private efforts and less through the support of the welfare state. For fathers, the general finding of previous studies that they do not have to suffer income losses, or if at all only moderate ones, can be confirmed. Though German fathers have not gained as much income over time compared to the 1980s, they still have not experienced average income losses during the 2000s. For American fathers, the time trend is quite different. After having experienced income gains during the 1980s, too, they have started to increasingly experience income losses during the 1990s and 2000s.

Another finding is that the institutional variation between married and cohabiting parents within Germany did not completely alter the relationship between mothers and fathers regarding the outcomes of family dissolution. The unequal economic consequences for fathers and mothers that are usually found for married couples remain for cohabiting couples in

Germany. However, the findings show that there is a smaller gender gap between cohabiting fathers and mothers compared to their married counterparts. This smaller gender gap comes mostly at the expense of cohabiting fathers and only slightly benefits cohabiting mothers.

Motivation

There are at least three interconnected reasons, or actually facts, why it is interesting and important to study the economic consequences of family dissolution for mothers and fathers. First, separated or single mothers are still among the economically most vulnerable groups of the population. In Germany, the poverty rate of single parents is more than three times as high as that of two-parent families (Statistisches Bundesamt, 2015:14). And in the US, the welfare dependence of single mothers has ever since been a policy concern. Second, gender roles have changed greatly, both for women and men. Fathers are becoming more and more involved in active parenting so that child custody arrangements have changed and the challenges to combine work and family have increased for fathers, too. Still, men and fathers are often excluded from research on the (in)compatibility of work and family life. And third, more general, gender equality should be at the top of the public agenda. Employment behavior and poverty are still among the areas where gender inequality becomes most visible. The consequences of family dissolution show quite plainly the level of gender inequality in a society. They show how independent or rather how dependent individuals are on state support, on previous partners or on their social networks. So the necessity of empirical studies that take a look at the changing economic consequences of family dissolution over time and by marital status in order to comply with public interest is obvious.

The countries put to test are Germany and the United States. These countries represent two different regimes of welfare states which makes differences in income losses following

family dissolution between Germany and the US expectable. Germany represents the *conservative* regime type, the US stand for the *liberal* regime type (Esping-Andersen, 1990; 1999). Both countries are usually described as ideal types of their respective welfare state regime which makes them particularly suitable for a comparison. The German welfare state aims at securing incomes of those who are hit by adverse events. Replacement rates are high so that extreme income losses can be avoided. The US American welfare state in contrast only offers minimum support in such situations so that the need for self-sufficiency and private means of support is high. It is an ongoing debate whether the availability of social insurance with high replacement rates, like unemployment insurance in case of job loss or alimony payments and welfare transfers in case of divorce, suppresses counter-mobility behavior. Or whether a high level of welfare state support prevents poverty and helps people to help themselves.

It is assumed that the implications of welfare state change for individual households will become most visible when people are in need of support. This is usually the case when adverse events occur that put households at risk of losing income or becoming poor. The indicators of success of the welfare state used here are on the one hand poverty prevention, and on the other hand the buffering of income losses through the welfare state. Based on the insurance logic, welfare states can be assumed to react differently on adverse events. Accordingly, the insurance function covering the respective risk should be a main criterion for the evaluation of whether the welfare state attains its goals.

However, institutional regulations do not only differ *between* countries, but also *within* countries. Concentrating on Germany only, another important question that the dissertation is going to answer is about the differences in economic consequences of family dissolution by marital status. Based on the differing institutional regulations governing this event for married

vs. cohabiting parents, similar questions as for the German-US comparison can be asked. Do fewer family benefits and thus fewer incentives for an asymmetric division of labor between mothers and fathers, as is the case for cohabiting parents in Germany, lead to more economic independence or to more welfare state dependence?

Next to the comparison of regime types, the comparison over time is the more important aspect of the dissertation. The major aim is to track policy changes over time and to link them to income trajectories surrounding family dissolution over time. Welfare state change can well be described on the macro level in terms of changes in expenditures or the introduction or cutting of benefits. But it is equally important to not lose sight of the individuals for whom these policies are designed in order to assess whether the policies are actually successful. It is exactly this nexus that Goodin, Headey, Muffels, and Dirven (1999) addressed in their study and which this dissertation will pick up to expand by the chronological dimension.

Also, the dissertation provides micro-level empirical evidence for macro-level claims that especially concentrate on Germany and the US. For the US, Hacker (2006) claims a "great risk shift" from public to private provision regarding a range of risks like job loss, health problems, retirement, or family-related events. For Germany the literature on welfare state change describes developments like retrenchment, especially in pension insurance, on the one hand, but also an expansion of welfare state measures when it comes to the family sphere (Bleses & Seeleib-Kaiser, 2004; Alber, 2003). These claims will be put to an empirical test in order to assess its validity regarding family dissolution.

To validate the claims empirically, households and individuals need to be followed for several years to see how their income situation develops after family dissolution and over time. Panel data provide the best basis for identifying the causal effects of family dissolution on a number of economic outcomes. Also with panel data, the short- and longer-term income

changes can be taken into account. Thus, it can be shown whether and how fast households recover from their initial income losses or poverty experience or whether adverse events still leave their mark after several years.

Panel data have another advantage, particularly for the event of family dissolution. In the past, analyses of this kind have often been less meaningful due to data limitations. On a yearly basis, the number of events of separation and divorce are rare events in surveys. As panel studies contain more and more waves over the years, it allows the researcher to pool the events to arrive at a sufficiently high number of events. Thus, it becomes possible not only to get meaningful results but it also enables a comparison of the economic consequences over time or by subgroups of the population.

Chapter Overview and Research Questions

The remainder of the introduction gives a short overview of the following chapters and outlines the research questions of the empirical Chapters 4 and 5. After this introduction chapter, the dissertation continues with a chapter that provides the background for the empirical chapters. The first part of *Chapter 2* first reviews the literature on welfare state change more generally and its potential impact on economic outcomes of family dissolution. Second, it reviews empirical studies on the consequences of separation and divorce for affected households. The second part of Chapter 2 provides the institutional framework governing family dissolution in Germany and the United States. It both considers policies that are laid to support separating families such as alimony and child support, as well as policies that provide support to families with children in general. In doing so, it also takes a critical look at such social policies that create disadvantageous positions for mothers in the first place like long parental leave regulations. This part of Chapter 2 additionally reviews the

institutional variation within Germany for married and cohabiting parents separately. It shows

the different institutional regulations for these two groups of parents and their possible impact

on the consequences of family dissolution.

After the background chapter, the following *Chapter 3* starts with presenting the analytic

strategy and the datasets that were used for the analyses. Then the key concepts of the

analyses such as family dissolution and the various income measures are described as well as

their measurement. Finally, the last part of the chapter describes how the analysis datasets

were compiled in order to apply the difference-in-difference matching design.

The first of the two empirical chapters, *Chapter 4*, is devoted to the analysis of the

changing economic consequences of family dissolution over time for mothers and fathers in

Germany and the United States. It interprets changing income trajectories in light of the social

policy changes described in Chapter 2. Therefore, it decomposes income change into

individual and state sources of income change. The analyses are to show how much of the

income recovery is achieved by individual behavior and how much the welfare state

contributes to income recovery. The results show to what extent time trends in the economic

consequences can be attributed to increases or reductions in the welfare state effect. Next to

relative income changes, Chapter 4 analyses the risk of suffering large income drops of at

least 50% of previous income and the risk of entering poverty following family dissolution.

Chapter 5 zooms in on Germany. Its focus is on differences in economic consequences

following family dissolution between married and cohabiting parents. The idea behind this

comparison is rooted in the long male breadwinner history of the German welfare state.

Germany has long been focusing on marriage and a traditional division of labor as the

preferred family form for children to grow up in. Therefore, Germany's social system shows

features of privileging married couple families over cohabiting couple families when it comes

to the eligibility for selected family-related benefits. Such benefits favor a traditional division of labor between husband and wife which is argued to put married women and mothers at special risk of suffering severe income losses upon family dissolution. Unfortunately, for this chapter the time perspective has to be given up at the cost of the differentiation by marital status.

The dissertation closes with the concluding *Chapter 6* in which the main results are summarized and their implications are discussed.

2   *Background*

This background chapter serves two purposes. One is the review of the current state of research in the field of welfare state research and in the field of divorce or separation research. The review of previous studies will reveal the research gaps that are to be closed with this dissertation. The second purpose of this chapter is to give a detailed overview of the institutional regulations governing family dissolution. Both the literature review and the institutional regulations section are structured in such a way that first, the change over time in Germany and the United States is in the focus, and second, the comparison between married and cohabiting parents in Germany.

2.1 Current State of Research

The following sections first review the literature on the emergence of new social risks and related welfare state change, and afterwards the literature on economic consequences of separation and divorce for affected households. More precisely, the first part focuses on literature on welfare state change over time and its possible influence on economic consequences of family dissolution. It is accompanied by literature on the emergence of new social risks and welfare state reactions to their emergence to frame the time perspective that is going to be applied.

The second part consists of literature on the economic consequences of separation and divorce for the affected households. This part considers mainly studies that have applied longitudinal analyses with panel data. Cross-sectional findings about divorcees or single parents are reviewed only scarcely.

The Emergence of New Social Risks

Out of a conglomerate of socio-economic changes *new social risks* emerged to which modern welfare states had to react. The concept of new social risks mainly comprises two key areas of risk emergence. One is the challenge of balancing work and family life and the other one is related to labor market risks (Bonoli, 2005; Taylor-Gooby, 2004; Esping-Andersen, 1999). Risks associated with the labor market include long-term unemployment, being an unskilled or low-skilled worker or being among the working poor, and subsequently having insufficient social security coverage.

Risks associated with work-family balance include being a single parent, usually a single mother, and having child and elderly care obligations (Bonoli, 2005; Taylor-Gooby, 2004). Care work, which was traditionally provided by women, has to be externalized now. When child or elderly care availability is scarce, very expensive, or of low quality working parents might be forced to decrease working hours or refrain from working at all. This can create situations of financial distress. Especially in families in which there is no traditional division of labor as in single-parent and dual-earner families, these risks can occur.

Family dissolution has always been prevalent and it has always been related to economic turmoil for the affected household. Insofar, separation and divorce are no *new* risks in the sense that they haven't occurred in the past. However, increasing divorce and separation rates combined with decreasing remarriage and repartnering have led to an increase in phases of

single parenthood. In large parts of the world single parenthood is known to be the most volatile of all family forms. While the challenge of how to reconcile work and family life concerns all families, the associated disadvantages become most apparent among single-mother families. Today the main path into single parenthood is still through union dissolution while partner's death as another path has lost its importance. Having children outside of partnerships as a third path into single motherhood has increased but it is still a rather rare event.

Government programs or social insurance against old risks like unemployment, illness, old age, or widowhood exist in all modern welfare states. In the male breadwinner world of the past, these insurances were introduced to compensate for the incapacity of the male breadwinner to generate income for himself and for dependent household members. Family dissolution, however, has been and still is mainly a private risk. Some sort of security or rather solidarity aspects are implemented in support systems like alimony and child support. And although these regulations are legally binding, potential recipients cannot enforce a legitimate claim when the liable party just cannot meet the obligations. This is where old and new social risks differ entirely: the prospect of individual risks being covered collectively.

New Social Risks and Welfare State Adjustment?

It is debated whether Western welfare states appropriately adjusted their social security systems to the challenges that new social risks posed. Findings are mixed depending on the welfare state. The Nordic countries are found to have successfully adapted while continental and southern European countries are said to have failed to account for the changing nature of social risks (cf. Bonoli, 2007).

The debate on welfare state change however, is dominated by views on changes regarding old risks. Regarding these risks, welfare state change of the past decades has often been described as retrenchment or "risk shift" (Hacker, 2006), as "dismantling the welfare state" or "resilience" (Pierson, 1994). Others suspect an "Americanization" of continental European welfare states (Walker, 1999; Alber, 2006; Starke, Obinger, & Castles, 2008). And yet others envision welfare state change less fatalistic as a development towards an "enabling state" (Gilbert, 2002; Alber, 2003) or a "social investment state" (Giddens, 1998), or towards "work-conditioned public support" (Blank, 2010). Whatever label is used, regarding old risks the change is characterized by public cutbacks and increasing private provisions. However, in terms of family policies, which are closely connected to new social risks, it can be argued that European welfare states have seen an expansion of social policies, or in case of the German welfare state a "dual transformation" (Bleses & Seeleib-Kaiser, 2004; Seeleib-Kaiser, 2002) or possibly even a "paradigm shift" (Alber, 2003). These are however, no scenarios that were ever proposed for the US.

Whether these macro-level claims on changes over time also hold when subjected to empirical tests has not yet been shown. Claims or tests of welfare state change often rest on the analysis of social expenditure data or other aggregated indicators such as measures of income inequality, poverty, or income replacement rates (Alber, 2006; Starke et al., 2008), or on a combination of both the analysis of expenditure data and of reforms or policies (Pierson, 1996; Alber, 2003). Only few studies so far combine the macro and micro levels of welfare states in the way as Goodin et al. (1999) do it. The authors successfully combine the two levels of analysis and research areas and analyze poverty, social and income instability and inequality among others as indicators of quality of welfare states. They show vividly how countries differ regarding the incidence and duration of poverty and interpret the differences

as the consequence of differing welfare state regimes. The dissertation follows their idea and extends their approach by, among other things, adding the comparison over time to the comparison of different welfare regimes.

Individuals and households hit by separation and divorce

The following review covers several aspects of dissolution outcomes on the level of the individual which have emerged from the literature. First, the literature has shown that women experience much higher relative income losses upon union dissolution than men. Second, it has been shown that there are country differences in dissolution outcomes. Several studies provide evidence that institutional differences both have an impact on the severity of financial strain for women as well as on the gender gap in dissolution outcomes in a country. Third, only recently studies focus on the changing economic consequences of separation and divorce over time. Literature of this kind will be described more detailed because this is where the dissertation ties in.

There is a large body of research that concentrates on the outcomes of households or household members hit by certain life events. Some studies deal with economic consequences of union dissolution in terms of poverty as the outcome of interest (Bane & Ellwood, 1986; Dewilde, 2003; Finnie, 1993; Giesselmann & Goebel, 2013; Jenkins, 2008; Kohler, Ehlert, Grell, Heisig, Radenacker, & Wörz, 2012; Vandecasteele, 2010; 2011). Others engage in analyzing income changes more general and thus also include households that do not face poverty but who face income losses or even income gains following separation and divorce (Andreß, Borgloh, Bröckel, Giesselmann, & Hummelsheim, 2006; Burkhauser, Duncan, Hauser, & Berntsen, 1990; 1991; DiPrete & McManus, 2000; Poortman, 2000; Weiss, 1984). The following sections will review these two strands of literature together. And also the

empirical chapters of the dissertation will engage in both ways of measuring economic consequences: poverty entry and relative income changes for family households after separation and divorce.

Economic Consequences of Union Dissolution and Gender

The literature finds unanimously that separation and divorce is among the economically most harmful life events for women and children. The finding that women lose (much) more income than men upon separation and divorce is probably among the most confirmed (see McKeever and Wolfinger (2001) for an US overview, and Andreß et al. (2006) for an international overview). Previous research found several reasons for more severe economic consequences among women. First, one of the main reasons for women's high income losses and poverty is the fact that they usually take care of the children after family dissolution. Caring for children often inhibits women's employment and thus results in a double financial burden next to the loss of partners' earnings. Second, women's employment opportunities following family dissolution are further limited due to their lower labor force attachment during marriage and thus lower human capital. This again can be the result of the division of labor during marriage, partly evoked by lower wages for women than for men, insufficient or low-quality child care supply, and family policies incentivizing a certain gender role behavior. Third, after family dissolution the disadvantage is reinforced through inadequate post-dissolution transfers between ex-partners which serves as another reason for unequal financial burdens for men and women after separation and divorce (Case, Lin, & McLanahan, 2003; Espenshade, 1979; Forsa, 2002; Grall, 2009; OECD, 2014; Smock & Manning, 1997).

Ways to recover from income losses have been studied as soon as reasonable numbers of panel data waves became available. Remarriage and (re-)employment are the most applied

strategies to increase household income. Many authors found that poverty rates of divorced women improved only slightly or not all when they did not remarry (e.g. Duncan & Hoffman, 1985b; see Holden & Smock, 1991 for an overview). And still today, studies find that repartnering can be a more promising strategy than earnings increases (Jansen, Mortelmans, & Snoeckx, 2009; Bröckel & Andreß, 2015). Accordingly, another way to enhance household income is through increasing individual earnings by increasing work hours, re-entering the labor force, changing to a higher paid job, or negotiating a higher salary. However, findings suggest only moderate increases in employment among European women who separated (van Damme, Kalmijn, & Uunk, 2009). And at the same time, increased employment *transitions* do not necessarily lead to increased earnings (Raz-Yurovich, 2013).

The economic consequences for men after union dissolution are a rather neglected topic. Men have often been shown to gain income in terms of equivalent household income or at least to lose only little. More recent studies, however, argue that also men experience relative income losses (DiPrete & McManus, 2000), face a decreased economic status (McManus & DiPrete, 2001), or have an increased risk of unemployment (Covizzi, 2008), downward mobility and disability (Kalmijn, 2005). Whether as a cause or consequence, men's life satisfaction is likewise more negatively affected by separation than that of women (Andreß & Bröckel, 2007a). Among men, the variation of results between gains and losses following separation depends much more than for women on whether income is adjusted for household size or not (DiPrete & McManus, 2000: 366). Also, there are certain groups of men who are prone to experience income losses upon union dissolution. In the US, for example, it is those men who contributed less than 60% to total household income before separation, and fathers who contributed up to 80% to total household income when private support payments towards children are considered (McManus & DiPrete, 2001). Of course, the finding that women lose

much more income should not conceal the fact that men suffer economic strain, too. However, these groups of men make up for only smaller parts of separated men; the vast majority still experiences relative income gains, even if they have custody for children (McManus & DiPrete, 2001: 263).

Country Differences in Dissolution Outcomes

While these gendered patterns and coping mechanisms can be found more or less in every country, selected studies have also shown variations in economic outcomes depending on the country, that is the institutional setting people live in (Andreß et al., 2006; Dewilde, 2003; Uunk, 2004; van Damme et al., 2009). Comparisons of several European countries have shown that income-related policies mitigate the negative economic consequences for women better than employment-related policies (Uunk, 2004). At the same time it has been shown that employment-supporting policies like the availability of child care encourage the employment of women while income support through allowances for single parents inhibit female employment (van Damme et al., 2009). Seen together, these findings suggest that employment-supporting policies, though encouraging employment, do not necessarily lead to an improved income situation for separated women.

A more comprehensive look at welfare regimes instead of selected policies offers the study by Andreß et al. (2006). The authors focus on a selection of countries, each representing one of four models of family support. They find that the higher the economic autonomy of women the smaller is the gender gap in dissolution outcomes. But more important, they find that in countries with a gendered division of labor prevalent, like in Germany, even economically autonomous women have much higher income losses than men. For German

women, it also takes much longer to recover from income losses than for Swedish, British, Belgian, and Italian women.

Next to a large body of single-country studies and European-comparative studies, there is also a large interest in comparing Germany and the United States. First, due to the early existence of panel data in these countries, and second because Germany and the US are paragons of two very different welfare regimes, these countries have served as popular example countries for early cross-national panel analyses on union dissolution and other life course events (Burkhauser et al., 1990; 1991; DiPrete, 2002; DiPrete & McManus, 2000; McManus & DiPrete, 2000). The comparison of the two countries has shown that the German welfare state, despite certain welfare and family benefit arrangements, did not protect women from experiencing high income losses upon separation (DiPrete & McManus, 2000; Burkhauser et al., 1991) and that the gender gap in dissolution outcomes was at least as high as in the US (Burkhauser et al., 1990).

Economic consequences of family dissolution over time

The assessment of whether economic consequences of family dissolution have changed over time calls for research that utilizes the potential of panel data. However, only few panel surveys have been running long enough to engage in comparisons over time. A way to circumvent this shortcoming is to use different surveys to reveal trends (e.g. McKeever & Wolfinger, 2001). Such meta-analyses of previous research are problematic because varying target groups, income concepts, and time frames impede the comparability of results between studies over time. Accordingly, previous studies have shown that the magnitude of the economic consequences of marital dissolution varies greatly by the definition of economic well-being (Aassve, Betti, Mazzuco, & Mencarini, 2007), and that the equivalence scale used

to adjust income for the household composition is of importance, too (Schmaus & Bould, 2011; Jarvis & Jenkins, 1999). McKeever and Wolfinger (2001) combine own analyses with a review of previous results in order to assess changing economic consequences over time. They compare their findings to previous studies and find smaller relative losses than comparable studies before them. They attribute the improved financial situation of women after union dissolution to changes in educational attainment and employment behavior of women over time.

Another approach to a comparison over time is taken by Smock (1993). The author uses two shorter panel datasets to analyze changes over time for two cohorts of separating couples. One covers the period between the late 1960s until the late 1970s, and the second period ranges from the late 1970s until the late 1980s. She does not find considerable changes in the economic consequences of marital disruption among young women in the US. Though the labor force experience of separating women has increased during this time, and women's economic independence in general, economic outcomes of separation have not changed significantly. However, generalizability of results is limited since the sample of women is quite selective. The sample consists of women who marry (mean age 19) and get divorced (mean age 24) at relatively young ages. Both cohorts of women were probably among the more disadvantaged in society and not among those who benefitted from the overall growing economic independence of women. Essentially, Smock attributes the minor post-disruption improvements over time to the positive effect of coresidence with parents after separation on income and the cohort increase in coresidence over time (p. 366).

More recent studies cover periods up into the late 1990s. Bradbury and Katz (2002) define their results as "the average changes five years after a marriage dissolves for families in which the widowed, separated, or divorced head has not remarried in that time span" (p.

48). With this unusual operationalization they find that income mobility for women losing a husband, also through death, has improved between the 1970s and 80s but deteriorated between the 1980s and 90s. This is because fewer women losing husbands in the 1990s have the labor market attributes of the upwardly mobile. Since their results are descriptive they can only attribute the changes over time to changes in the composition of households losing husbands over time. McKernan and Ratcliffe (2005) focus on poverty entry and find that the likelihood of entering poverty due to shifting from a two-adult to a female-headed household has decreased between the late 1980s and the late 1990s. Both studies hold compositional changes of the affected households responsible for the changes over time.

From European countries there are, to my knowledge, only two studies that take on a comparative perspective over time, one is on the UK (Jenkins, 2008) and the other one is on Germany (Bröckel & Andreß, 2015). Jenkins' (2008) research design comes closest to the one chosen for this dissertation. The author uses BHPS data covering the period 1991 until 2004 which is long enough to split it into two periods in order to analyze changes over time. He studies couples with and without children separately, and he analyzes immediate and longer-term income changes. Jenkins finds that relative income losses have become less severe for mothers after 1997, decreasing from a loss of 30% to a loss of 12% of equivalent household income. He argues that the most likely explanation for this are increases in mothers' labor force participation rates and changes to the social security benefit system at that time. This is one of the very few studies that consider the welfare state as having an impact on the change over time at all.

Very recently, Bröckel and Andreß (2015) have updated their own analyses on the economic consequences of divorce in Germany (Andreß, Borgloh, Güllner, & Wilking, 2003; Andreß & Bröckel, 2007b), and now also engage in a comparison of these consequences over

time. They restrict their analyses to the separation of marital unions and use a different research design so that comparability with the results here is still not perfectly given. Comparing separations before and after the year 2000, they find that relative income changes following separation have been quite stable over time. There is only little aggravation for men regarding equivalent household labor incomes and post-tax household labor incomes (men's median gains have decreased over time), and virtually no changes for women in neither of the five income concepts they employ.[1] However, their results have to be interpreted cautiously when it comes to the identification of causal effects. Their research design cannot account for economic developments that have taken place in the overall population and thus in households that were not facing a separation. This limitation is solved with the design applied in this dissertation.

Taken together, previous studies have contributed a wealth of knowledge on family dissolution and welfare state change. However, there are still aspects that need further investigation. First, the combination of micro and macro level research with regard to the change over time both in economic consequences of events as well as social policies is under-researched. Second, as a special case to this, the combined micro-macro perspective needs to be applied to the event of family dissolution specifically and the social policies related to this event. This is to find out whether affected groups fare better because the welfare state they live in has successfully adapted over time to cover new social risks. Third, the literature on

---

[1] In addition, Bröckel and Andreß (2015) identify subgroups of the population for whom the probability of income loss has significantly changed over time. These can be drawn on to compare with my results, however with caution because due to the dichotomization of income loss one cannot qualify the extent of the loss. Overall, the probability of losing income is even lower now for men than before which means that fewer men experience losses but those who do have higher losses than before. For women, the risk of losing income has remained stable at about 75% over time. Women with children who are gainfully employed after separation and who lived in a male main earner household before separation face an increased risk of losing income in the 2000s compared to before (from 70.7% to 90.1%). Among the selected subgroups, only women who lived in dual earner couples before, are gainfully employed after separation and do not live together with minor children see their risk of income loss decrease over time from 89.3% to 61.8%). They also confirm for the 2000s that having a new partner still comes along with the lowest probability of income loss, both for women and men.

changing economic consequences over time suggests that, at least in the US, the UK and Germany, the economic consequences of family dissolution have not become worse over time. These studies, especially those on poverty entry, often limit their analyses to a short observation window of only a few years. Thus, we do not completely understand the dynamic or persistence of economic consequences. That is, we do not know enough about how income recovery following family dissolution has likewise changed over time.

Economic consequences for married vs. cohabiting couples

Most of the recent research on economic consequences of separation includes both cohabiting unions and married couples. But, relative to the very large body of research on separation and divorce, studies with an explicit distinction between these two relationship forms are scarce, and so far none exist for Germany. Existing studies on other countries than Germany find mixed results. The majority finds that, on average, married men are better off than cohabiting men, and cohabiting women are better off than married women after separation (Avellar & Smock, 2005; De Regt, Mortelmans, & Marynissen, 2013; McManus & DiPrete, 2001; Manting & Bouman, 2006). Jarvis and Jenkins (1999) instead find little variation by marital status for women in the UK. However, among men it is those who cohabited who lose net income while married men gain. Avellar and Smock (2005) attribute diverging income losses by marital status found in US American couples to the diverging income levels of married and cohabiting couples that exist already before union dissolution. Manting and Bouman (2006) attribute the differences in income losses in the Netherlands to differences in the presence of children and repartnering behavior between married and cohabiting women.

Furthermore, to date only few studies have recognized the salience of (unmarried) couples *with children* as a family form of special interest in the relationship dissolution literature. As previous studies have shown, the presence of children is crucial for the employment behavior and career prospects of women in general. While mothers have a higher potential to increase employment after separation due to their lower labor force attachment compared to fathers and compared to women and men without children, their role as caregivers decreases their actual chances to do so. Although on average women in many European countries increase the number of hours worked following separation, it has also been shown that children have a negative effect on post-separation employment behavior of women (van Damme et al., 2009). Andreß and Bröckel (2007b) show that about half of German mothers do not change their employment behavior. Another third increases their hours worked and the remaining 13% of mothers decrease their hours (Andreß & Bröckel, 2007b:214). Among men (the authors do not differentiate between men and fathers) they find more stability: the vast majority of about 80% do not change their employment behavior. Of the remaining men a slight majority decreases their employment; the others increase their hours. None of the mentioned studies however consider the marital status for post-separation employment behavior. The only one such study for the United States finds that cohabiting mothers and fathers experience higher relative increases in earnings than married mothers and fathers (Avellar & Smock, 2005).

Another possibility to increase household income arises from repartnering. While men and women without children are more likely to repartner than those who have children, the gender difference in repartnering behavior is less pronounced in Germany (Jaschinski, 2011). Again, only for the United States are results available that differentiate by marital status. Wu and Schimmele (2005) find for second unions that former cohabiters repartner faster than the

divorced, but for this analysis they do not further differentiate by gender. For another analysis they do not differentiate by marital status but instead find that women who repartner exceed or at least come closest to regaining their pre-dissolution income level.

In terms of effectiveness, De Regt et al. (2013) find in Belgium that both strategies, to increase working hours and to repartner, have a stronger impact on married women than on cohabiting women. By contrast, men gain from increasing working hours but not from repartnering, independent of their marital status. In the Netherlands, repartnering is similarly effective for cohabiting and married women, and among men it also serves as a strategy for cohabiting men (Manting & Bouman, 2006). Jansen et al. (2009) find in their study on selected European countries that the benefits of repartnering even exceed the benefits of increasing one's labor supply for women, especially those with children.

2.2 Institutional Regulations governing Family Dissolution

2.2.1 Changing regulations in Germany and the United States

The institutional regulations governing family dissolution are divided into two main areas of regulations. The first set of regulations describes those that are directly related to family dissolution which are divorce law, alimony and child support. The second set of regulations includes policies that are not directly addressed at separating families but that support families with children in general such as child benefits, tax credits for children, child care, or parental leave.

Germany

Germany is known as the paragon of the conservative welfare regime, which differs from the liberal welfare regime by its higher generosity of cash transfers and from the social

democratic welfare regime by the derivation of social entitlements from employment instead of citizenship (Esping-Andersen, 1999:32-72). The latter has important consequences for family dissolutions in male breadwinner households. As social entitlements derive from employment rather than citizenship, and as male-breadwinner households are, by definition, characterized by female non-employment, the welfare of women derives from being in a family. This *familialism,* as Esping-Andersen (1999:43-46) terms it, is an intended element of the conservative welfare state. It has its roots in the catholic conservative subsidiarity principle, and is still vivid in conservative efforts to restore traditional family values. Consequently, many German policies provide specific advantages for traditional married male breadwinner families.

Divorce Law, Alimony, Child Support

Since 1977, the German divorce[2] law provides for no-fault divorce (Martiny & Schwab, 2002). Couples get divorced on the ground of irretrievable breakdown of their marriage. This is demonstrated by living apart for at least one year. However, if one party does not agree with getting divorced, up to three years of separation will be necessary to prove the breakdown. A no-fault divorce law has no impact on amounts or durations of alimony and child support payments.

There are at least three different kinds of alimony between ex-partners: alimony during the time of separation but before the legal divorce (*Trennungsunterhalt*), alimony after divorce has been granted (*Ehegattenunterhalt*), and alimony during three years after childbirth for the parent taking care of the child (*Betreuungsunterhalt*). This last kind of alimony is the

---

2 The term "divorce" is used throughout the dissertation for divorces of legally formalized marriages only. Family dissolution refers to the separation of couples with children, regardless of their formal marital status.

only one that can be claimed by both married and never married parents who go through separation.

Alimony during the period of spatial separation before divorce serves the purpose of providing the same standard of living as during the marriage (Hummelsheim, 2009:58). This period of usually one year is supposed to prevent overhasty divorces and serves as a period for reconciliation. Therefore, ex-partners have to guarantee a certain standard of living for the economically weaker spouse which means that amounts to be paid are usually higher during this period than after divorce. After divorce has been granted, ex-spouses are in principle expected to provide for themselves. If one of the partners faces specific disadvantages caused by the marriage, for example by the fact of having cared for children for several years, that person is entitled to continued alimony. In the German male breadwinner context, this is often the case. Women leave the labor market at childbirth, and the insufficient supply with child care and long parental leaves make it difficult or unattractive for them to reenter the labor market. In legal practice this means that residential mothers are usually not expected to take up employment until the child enters school (Hummelsheim, 2009:58). With children at primary school age, mothers are usually expected to be part-time employed.

A special kind of alimony for parents is alimony for the caretaking of children during the first three years after childbirth. During this time, the caretaking parent is not expected to be employed. Already since 1969, this alimony is also available to unmarried parents, and in 1992 it was aligned to the duration for married parents and thus expanded from one to three years. In 1997 the three-year threshold was relaxed so that it can be claimed beyond three years if its denial would otherwise mean undue hardship (Peschel-Gutzeit, 2008:123).

The amount of alimony to be paid depends on the incomes of both ex-partners. As a rule of thumb, the partner with the higher income has to pay 3/7 times the difference between the

partners' incomes to the partner with the lower income. During the observation period of this analysis, few changes were made in the regulations of alimony. In 1986 the possibilities of a prolongation of alimony were cut back slightly, although these possibilities have not been taken up very often in practice (Peschel-Gutzeit, 2008:19). And in 2001, another method to calculate alimony has been abandoned.

More important changes occurred in 2008 (Peschel-Gutzeit, 2008), which however do not have an impact on the results because the observation period ends around that time. First, the rank order for receiving maintenance payments had been changed so that all children, those with the old and the new partner, are on the first rank. Then, after child support has been paid, there is not much alimony left to be paid to ex-partners. This often led to lower overall payments to the household of the ex-partner and children compared to before the reform. Second, self-responsibility after divorce has been further emphasized which means that work requirements have been increased for residential parents. However, legal practice suggests that the actual implementation has been rather limited so far (Peschel-Gutzeit, 2008). Altogether, policy changes that occurred during the observation period and which could affect the results were rather minor; either because of the financial magnitude of the change itself, or because of the small size of the affected group.

Other than spousal alimony, child support payments do not depend on the marital status of the parents. The amount of child support to be paid is determined only by the age of children, the income of the liable parent, and the total number of maintenance claimants. Currently, amounts range between €330 and €800 per child. Over time, amounts were steadily increased but only to the extent of an adjustment for inflation. The liable parent can keep a minimum income if the income is too low to pay the full child support. In such situations, or if the parent does not pay for other reasons, the state steps in by paying the standard amount

of child support for all children below age 12 for a maximum duration of six years (*Unterhaltsvorschuss*). During the observation period, the maximum length of entitlement of this payment was extended from three to six years in 1993. Low-income parents, however, cannot benefit from this payment because it is deducted from social security payments.

Support for Families: Taxes, Child Allowances, Child Care, Parental Leave

Alimony and child support come into play when families split up. Next to these regulations there are several other policies that have an impact on the well-being of families not only after the parental relationship ends: the German tax system, the system of public child benefits, the provision of public child care facilities, and parental leave policies. Moreover, apart from the financial aspect, these policies can influence the economic consequences of separation via their influence on the attachment to the labor force of parents and the human capital they accumulate during the relationship.

A specific characteristic of *taxation* for married couples in Germany is the so-called "splitting effect". The incomes of spouses are not taxed individually but jointly. Therefore, the two incomes are added, then divided by two and then taxed as if each spouse had earned exactly half of the total earnings. Due to the progressive tax rate, this can lead to a substantial reduction of tax dues for married couples. The tax advantage is zero when both partners contribute equally to the joint income, reaches its maximum for single breadwinner families, and increases with income and the progressivity of the tax rate. In 2006, the splitting effect for married single breadwinner couples with incomes around the 1st, 2nd and 3rd income quartile (€2,055, €14,439 and €48,629) was €0, €1,393 and €4,435 respectively.[3] These amounts get lost in case of a divorce and therefore reduce the amount to be distributed among the parties.

---

3 Own calculations based on a compilation of tax-rates by the German ministry of finance, which was made publicly available by http://steuervereinfachung.snrk.de/TarifgeschichteoF.pdf.

But more important, already during marriage it is a clear disincentive to work for low-income earners in couples with very unequal incomes.

Across time, tax rates were updated regularly. Typically these changes were adaptations to macroeconomic developments without much change in the general logic of the system. An exception, however, were the revised tax laws as of 1996, which brought an increase of the tax exempt amount, an increase of the minimum tax-rate, and a slight decrease of progression for small to moderate incomes (Wörz, 2011). Taken together this led to an increase of the splitting effect for moderately low incomes and to a decrease for high incomes.

Another transfer payment for families is the *child benefit*. It is a combination of a monthly payment, the child benefit (*Kindergeld*), and a tax exemption for dependent children. Both child benefit and the tax exemption for children were increased throughout the years. The child benefit was only increased to an extent that merely counterbalances the increased cost of living over the years. The most notable reform of the German child benefit system took place in 1996 when both, the child benefit *and* the tax exemption were substantially increased. However, since this reform, families receive *either* the child benefit *or* the tax exemption depending on whether they financially benefit more from one or the other. The history of tax exemptions for dependent children itself has had a number of turning points since its re-introduction in 1982 (there were no tax exemptions for children between 1975 and 1982). It started on a level as low as €220 per child, but increased constantly over the years, partly due to responses to changes in price levels, but primarily due to the larger reconstructions of 1986, 1996, 2000 and 2002. Since 2002 until the end of the observation period the tax exemption has been €5,808 per child.

Apart from monetary provisions like maintenance payments and child benefit there are also non-monetary or structural provisions like child care or parental leave regulations that

can have an impact on the employment behavior of parents both before and after separation. A high supply with *child care* facilities, that enables families to deviate from the male breadwinner model, is much more widespread in East Germany than in West Germany. Influenced by the conservative principle of subsidiarity, West German politicians used to promote families as the principal agent for child care instead of public child care facilities. The Kindergarten, which was extended after the 1960s, used to provide care only for children between ages 3 and 5, and for half a day only. All-day schools are still rare exemptions in Germany, and facilities for children below 3 years were virtually nonexistent until 2000. The former German Democratic Republic, on the other hand, has been engaged in promoting female labor force participation and the socialist education of children ever since. This led to an extensive construction of child care facilities for children of all ages, including infant care facilities, all-day kindergarten, and all-day schools. Particularly the infant care facilities and the all-day kindergartens have been largely maintained since reunification.

However, the provision of child care services in Germany has been changing since the late 1990s. In 1992, it was decided to guarantee a place in Kindergarten for half a day for every child between 3 and 5, which was more or less fully established by 1999. Later on, the legal claim for half a day was extended to full-day care. In addition, due to a new law in 2004, Germany has started to extend the provision of infant care facilities (for children below age 3) even further, and recently a legal claim for child care starting at age one was introduced.

The proportion of children above age three enrolled in child care is universally high at around 90% (Blome, Keck, & Alber, 2009:218). In 1990/91 in contrast it varied strongly between Western (69%) and Eastern (97%) federal states (Wörz, 2011:18). For children below age three the variation is still high, in 2002 the range was from single-digit rates in several Western federal states up to around 50% in some Eastern federal states. In addition,

these rates obscure the fact that in the East a higher proportion of children are in full-day care compared to the West (Blome et al., 2009:221).

Public child care is highly subsidized in Germany and compared to the US, the costs are quite low. Fees are graduated depending on parents' income and the number of children in day care. Based on SOEP data of 2005, costs for children above age three amounted to €130 per month on average for full-day care and €74 per month for half-day care (Fuchs-Rechlin, 2008:213).

Another example for the role of non-monetary family policies is *parental leave*. These regulations do not directly affect the economic situation after family dissolution. However, since generous leave policies are an incentive to leave the labor market for a longer time after childbirth, this policy design lowers the human capital of women and thus chances for re-entering the labor force after the leave (Ziefle, 2004; Boeckmann, Misra, & Budig, 2015). In combination with an insufficient provision of child care and a tax system that rewards the non-employment of women, policies like these reinforce the dominance of the male breadwinner model and the unfavorable position of mothers or women of childbearing age on the German labor market.

The German welfare state offers three years of parental leave. It was introduced as a prolonged maternity leave of six months in 1979 and was stepwise increased (Bothfeld, 2005). Since 1992 it amounts to 36 months. Since 1986 ten months of the leave period are paid (Wörz, 2011) and also fathers were now allowed to take leave. The payment was stable over time at €307 (DM600), however, the duration of paid leave was as well gradually increased over time to 24 months in 2000. Only in 2007 the system of parental leave was completely overhauled and transformed into an income-replacement based leave at a level of 67% (later 65%). At the same time the duration of the benefit was reduced to 12 months

including two partner months. As for the recent changes in maintenance law, however, these changes cannot have an impact on the results because the observation window ends at around that time.

United States

The United States are the paragon of a liberal welfare regime, which relies on the market as the main provider of welfare, and thus transfers the responsibility for economic security to each individual. In the liberal welfare regime, the state intervenes only if the market does not provide protection. It provides support only if the hardship is not self-induced, and only to those who do not have the means to get out of their situation by themselves. The characterization of the United States as a liberal welfare state implies that there is fairly little public support for economic hardship induced by a divorce. The following description of the policy framework of family dissolution by and large sustains this notion.

Divorce Law, Alimony, Child Support

The United States does not have a nation-wide *divorce law*. Instead, divorce is regulated at the state level. Since 1988 at the latest, states either operate on a combination of a fault and no-fault divorce system or use a pure no-fault system (American Bar Association, 1996: Chapter 8). Grounds for filing a fault divorce include adultery, physical and mental cruelty, drug abuse, and delinquency, and sometimes also insanity or impotency. A common basis for a no-fault divorce is that the parties have lived separately for a period of time, which however varies substantially between a minimum of two months (Kentucky) and a maximum of five years (Idaho).

Whether a fault or no-fault divorce is applied has economic consequences. In a fault divorce, the innocent party can claim *alimony* from the guilty party, while such a claim depends on various conditions in a no-fault divorce. In most states, the conditions of the payment of alimony are not regulated by law, and if there are such laws, they differ in contents. The criteria to be considered by a court when deciding whether to order alimony include the economic situation of each party, their respective earning capacities, their child care obligations, and the duration of the marriage. These circumstances are also used to determine the amount of the alimony, if any. Historically, alimony in the US was paid on a permanent basis, but during the observation period jurisdiction increasingly emphasized the self-responsibility of each partner by limiting the amount and duration of payments (McCoy, 2005).

Regarding *child support,* states either use the "percentage of income model" or the "income shares model" (American Bar Association, 1996: Chapter 10).[4] In both models the nonresident parent pays a state specific percentage of his or her income to the resident parent. The difference between the two models is that this percentage is fixed in the former model, while it increases with the combined income in the latter. This implies that the resident parent can increase the child support payments by increasing his or her income.

Although the regulations for child support are highly formalized, only approximately one half of parents actually make their child support payments (Grall, 2007). And it has been more or less like this since the 1980s. According to US Census Bureau Data, only about 35% to 40% of mothers received child support between 1981 and 2007. Only 56% to 63% actually had an award. And of those with an award 72% to 78% after all received payments (Grell, 2011: Table 1). Wisconsin is the only state that intervenes financially in case of neglecting of

---

4 Three states, Delaware, Hawaii, and Montana use the "Melson Formula", which subtracts a lump sum for minimal needs from each parent's income before applying the income share model.

one's duty to pay child support. In all other states only families applying for benefits from the "Temporary Assistance for Needy Families" program (TANF) do a subrogation of their maintenance claims to the administrative bodies who will then prosecute the parent's claim. However, as in Germany, the enforced payments are for the most part charged against welfare transfers so that the financial benefit for the claimants is small. Some states pass small amounts to the eligible parent as an incentive to comply with the authorities in enforcing the payments.

Policies to enforce child support payments were incrementally established during the 1980s, when a series of reforms (Omnibus Reconciliation Act of 1981, Child Support Enforcement Amendments of 1984, Family Support Act of 1988) superseded the high discretionary powers of the jurisdiction that existed before. The Family Support Act also introduced the obligation for local authorities to actively search the person who is required to pay support for the child, to chase arrears, and to apply sanctions to defaulters. In 1998, failure to pay child support has been installed as a felony with a subpoena to imprisonment of up to two years.

Support for Families: Taxes, Child Allowances, Child Care, Parental Leave

The US American *tax system* provides lower advantages to marriage than the German system. Although the US, like Germany, bases the calculation of the federal tax due on the average income of married couples, this does not necessarily induce a tax advantage to marriage. The reason is that the US tax law compensates for the splitting effect by shifting to a higher tax bracket. For married couples with roughly equal personal incomes this compensation leads to the so called "marriage penalty": married couples pay more total tax

than they would as two single persons. Likewise, single breadwinner households still benefit from the splitting effect, but at a lower level than their German counterparts (Grell, 2011).

The American system of *child benefits* is marked by the dominance of fiscal mechanisms on the one hand, and the provision of benefits primarily to the poor, on the other hand (see Grell, 2011). Specifically, the US have no general child benefit like the German *Kindergeld*. A direct cash-benefit is paid only for children living in poor families, and only in combination with strong incentives to search for a job. The fiscal mechanisms are the Earned Income Tax Credit (EITC), the Federal Child and Dependent Care Credit and, since 1998, the Child Tax Credit. The EITC provides benefits for employed households with low incomes by implementing negative tax rates, which means households below a certain income threshold actually get a tax refund. The rates of the credit are graded in a way that households with children profit most, without introducing an incentive to decrease own earnings. The Federal Child and Dependent Care Credit allows employed persons to deduct 20% to 35% of the costs for caring for children from the taxable income, which is particularly advantageous for high income families. Finally, the Child Tax Credit is an absolute tax deduction of $1,000 per child for families with an income below a threshold.

All programs described above were changed considerably during the observation period. The reforms of the direct cash benefits for the poor were perhaps the most notable reforms: The Family Support Act of 1988 implemented stronger enforcements of job seeking obligations for the beneficiaries; and the Welfare Reform of 1996 replaced the old "Aid to Families with Dependent Children" (AFDC) program with the "Temporary Assistance for Needy Families" (TANF) program, which brought further enforcement of job seeking obligations and a 60 month time limit of benefits (Blank, 2010). While the access to direct cash-benefits has been hampered across time, the fiscal mechanisms for supporting families

have been strengthened: The Tax Reform Act of 1986 restored the inflationary adjustment of the EITC which was previously abandoned in 1978, and several expansions of the EITC in the years between 1990 and 1993 brought further extensions of the system. As already said, the Child Tax Credit has been implemented in 1998, and is being paid to households with a tax-due below $1,000 since 2002. Although the Child and Dependent Care Credit was cut back slightly in 1988 by reducing the maximum age of children for which tax deductions can be made from 15 to 13, it can be said that the observation period has witnessed a shift towards stronger dependence of child benefits on employment. Whether this has actually improved the situation of families in need is difficult to evaluate.

Although the American system of child benefits strongly relies on employment of both parents, there is only little provision of public *child care* (Gornick & Meyers, 2005; Kamerman & Gatenio-Gabel, 2007). For the large majority of Americans there is neither a legal claim for a place in child care, nor any direct support for the financial burden of using child care facilities, nor any public quality control of the existing facilities. In all given shortness, child care in the United States is regulated by the market and is a matter of policy only for the addressees of social transfers, who may receive additional subsidies for caring facilities in some states.

In terms of *parental leave policies*, the US are an outsider. It is one of the few countries that do not offer federally mandated paid leave. However, there are programs on the federal level in some states, for example in California, though the program is "funded entirely through employee payroll deductions"(Network of Care, 2010), and there are some companies who offer paid leave but on a voluntary basis (Lovell, O'Neill, & Olsen, 2007). Since 1993, federal policy (Family and Medical Leave Act, FMLA) however provides 12 weeks of unpaid family leave per year to care for a family member with a serious health

condition, including the care of a new born child. Furthermore, it provides job guarantee (Pregnancy Discrimination Act) and continuation of health insurance (FMLA) for the time on leave.

2.2.2 Institutional Differences between Marriage and Cohabitation in Germany

As the previous paragraphs on Germany have already shown, the German welfare state supports marriage and the male breadwinner model (Sainsbury, 1999; Aisenbrey, Evertsson, & Grunow, 2009). There are privileges attached to marriage that are not available to unmarried couples. Moreover, formerly married couples are better protected against financial losses in the event of separation than the unmarried. The following discussion of the social policy framework refers mainly to differences that existed between the 1980s and the mid-2000s. During that time, the differential treatment of married and cohabiting couples was somewhat more pronounced during the 1980s than during the 2000s. However, progress in eliminating these differences has been slow so that they still persist.

As described above, the German taxation system taxes the average income of married couples instead of their individual incomes. Due to the progressivity of the tax rate this leads to a lower tax burden of married couples compared to individually taxed incomes. This can result in savings of up €8,000 in annual taxes for high income single-earner households compared to unmarried couples with the same incomes (Wörz, 2011). Thus, couples with a higher level of intra-household specialization can financially benefit from marriage. This supports a specialized division of labor and thus shapes post-separation economic outcomes.

Another direct financial advantage of marriage is provided by statutory health insurance, which grants free health insurance to the non-employed spouse via the employed spouse's insurance. There are also several regulations that have indirect financial advantages for those

who marry. In the event of bereavement and divorce, married individuals are according to the law better protected against income loss through widow(er)'s pensions and alimony. The more unequal the division of paid and unpaid work between two individuals, the higher the expected financial advantage from alimony and widow(er)'s pensions usually is. Both direct and indirect benefits support a specialized division of labor in married couples. Altogether, this promotes a selection into marriage of couples who tend to specialize in paid or unpaid work (Barg & Beblo, 2009; 2010).

Comparative research suggests that different institutional settings regarding marriage and cohabitation produce different outcomes for the division of labor in cohabiting vs. married couples. Studies on time use find at least partial evidence that differences between individuals from married and cohabiting couples are more pronounced in countries where the institutions of cohabitation and marriage differ more from each other and where cohabitation is less common and accepted (Domínguez-Folgueras, 2013; Bianchi, Lesnard, Nazio, & Raley, 2014). Though not stigmatized in Germany, cohabitation has a lower degree of institutionalization compared to marriage.

In addition to the differences between marriage and unmarried cohabitation during the relationship, there are also differing institutional settings when the couple breaks up (cf. Barg & Beblo, 2010). While there are no legal differences between cohabiting and married parents regarding child support[5], there are differences in the rules governing alimony to a former partner. As a rule of thumb, in married couples the economically weaker spouse gets 3/7 of the income difference between the spouses. Between unmarried cohabiting ex-partners there are no alimony obligations unless a child under the age of three has to be cared for (see also section 2.2.1 on Germany). In this case, an unmarried residential parent can claim the same

---

[5] The amount of support depends solely on the earning capacity of the nonresident parent and the age of the child; it currently ranges between €300 and €600 per child and month (Wörz, 2011).

amount of alimony as a formerly married residential parent.[6] Until 1992 unmarried residential parents were eligible for this kind of alimony only until the child's first birthday so that disadvantages were even bigger. After 1997, the 3-year rule was relaxed for cohabiting parents, too. After the child turns three, both separated and divorced parents are expected to provide for themselves if this does not cause undue hardship for the child. At age three residential parents are required to take up at least part-time employment, and full-time employment only at a much later age of the child (Willenbacher, 2010:372). In general, the possibilities of child care are considered in the decision for prolonged alimony payments which often leads to a prolongation for previously married mother who more often used to be non-employed before the child turned three.

As mentioned earlier, also non-monetary policies can have an impact on the economic situation after family dissolution. Joint *child custody*, for example, is known to be related to the quality of the contact between the child and the nonresident parent and consequently to the paying practice regarding child support (Proksch, 2002). The reform of child custody law, coming into effect in 1998, brought about considerable changes in distributing custodial rights and obligations among married and unmarried parents after separation. For the first time unmarried parents could decide to exercise joint custody, thus aligning children of cohabiting parents with those of married parents. For married parents, the default is joint custody now; only upon application will be decided about the possibility of sole custody. For unmarried parents, the default is still sole custody of the mother unless the parents sign a custody statement.

---

[6] Until 1992 unmarried residential parents were eligible for this kind of alimony only until the child's first birthday so that disadvantages were even bigger. After 1997, the 3-year rule was relaxed for cohabiting parents, too.

2.3 Research Questions

2.3.1 Research questions on changing economic consequences of family dissolution over time in Germany and the United States (Chapter 4)

How have the economic consequences of family dissolution for mothers in Germany changed over time? The German welfare state has seen a number of changes in its family policies in the past decades that can be interpreted as a development away from the male breadwinner model towards a dual earner model. Based on the policies supporting families and women's employment in general one can very well expect an improved situation for mothers following family dissolution. However, it is not clear whether the simultaneous shift from transfers to services, which means towards more personal responsibility of women, has actually improved the economic situation of mothers after family dissolution.

How have the economic consequences of family dissolution for mothers in the United States changed over time? The changes of social and family policies of the US American welfare state took and still take place on a whole different level. Policies are designed to prevent poverty only by promoting employment at any cost. Child care is regulated by the market which makes it very costly but not even high-quality. Accordingly, for the average of mothers experiencing the dissolution of their family, the situation might not have changed significantly over time. Solely the welfare reform of 1996, which limited welfare receipt to 60 months, might have had such an impact that even a deterioration of the economic consequences over time is possible.

How have the economic consequences of family dissolution changed for fathers in Germany over time? A shift away from the male breadwinner to the dual earner model would mean that for fathers in Germany income changes might have become more severe over time. A number of developments might have contributed to this. First, fathers are now in general

more involved in child care and subsequently more often exercise joint custody after separation. They might either pay more child support than during the 1980s, or have higher expenses due to shared parenting after family dissolution. Second, they might be confronted with the incompatibility of work and family life, too, and probably have to adjust their employment behavior accordingly after separation by reducing hours or changing to family-friendly jobs that are less well paid. And third, the loss of partner earnings could be more profound now than in the past decades as women are increasingly employed and increasingly so in full-time.

How have the economic consequences of family dissolution changed for fathers in the United States over time? Compared to German men, US American men have always experienced higher income losses or lower gains upon family dissolution. The main reason for this is that American women contribute a high share to total household income which gets lost upon separation. As for Germany, there are no plausible reasons to assume that this has changed again in the direction of more imbalances between the genders. Instead, US fathers are increasingly confronted with enforced child support payments, and with lower welfare state support since single men are not in the least a target group of support, especially not since the welfare reform.

2.3.2 Research questions on differences in the economic consequences of family dissolution between married and cohabiting parents in Germany (Chapter 5)

How do the economic consequences of family dissolution differ between married and cohabiting mothers in Germany? Since there are possibly several processes at work, the outcome is hard to predict. Cohabiting mothers contribute a higher share to total household income than married mothers. Therefore they might lose less in relative terms when they

separate. At the same time, cohabiting women have lower maintenance claims than married mothers since they have a very limited right to alimony from their ex-partners. In addition, child support payments have been observed to be lower between cohabiting ex-partners in Germany (Forsa, 2002). The finding of lower claims for private support might not be able to change the picture completely but it might attenuate the findings for cohabiting women. Altogether, the changes of these single components of the income composition during and after family dissolution complicate a prediction of changes in disposable income for married and cohabiting women.

How do the economic consequences of family dissolution differ between married and cohabiting fathers in Germany? For cohabiting and married fathers, the reverse may be expected. Fathers from formerly cohabiting couples contribute a lower proportion to household income than married fathers and accordingly would lose a higher share upon separation than married fathers. On the other hand, cohabiting fathers' income is only in exceptional cases reduced by alimony payments to the ex-partner while married men usually have to pay alimony, especially during the first year of official separation before a marriage can be divorced.

The following research questions regard strategies to recover from income losses. These strategies influence the outcomes of the more general research questions just stated above. Adjusting employment behavior and thus increasing individual earnings, and repartnering are the most often used strategies to cope with income losses. Note that for both mothers and fathers causality in terms of repartnering could run the other direction here. In such situations couples break up *because* there is a new partner in sight, possibly with better financial prospects. Similarly, since men on average experience gains in disposable household income, their employment and repartnering behavior is less interpreted as strategies to compensate for

income losses. Still, it gives insights into the sources of income changes around family dissolution among fathers.

How do changes in individual earnings differ between married and cohabiting mothers? Due to cohabiting mothers' overall higher labor force attachment they may be better able to increase hours or change to a better paid job in order to make up for income losses. But, the higher labor force attachment of cohabiting mothers limits their potential to increase working hours as a strategy to offset income losses more than for married mothers.

How do changes in individual earnings differ between married and cohabiting fathers? Cohabiting fathers' lower labor force attachment may hinder an increase of their working hours or the chance of being promoted more than for married fathers. At the same time however, their lower (full-time) employment rate offers room for increases in working hours and earnings while the vast majority of married fathers works full-time already.

How do changes in in the relationship status differ between married and cohabiting mothers? Also, cohabiting mothers might repartner faster than married mothers due to their less institutionalized previous relationship. For married couples, there are waiting periods until a divorce can be finalized. This might lead to married mothers refraining from entering a new relationship and could result in a lower rate of repartnering for married mothers. As repartnering would mitigate income losses, the economic necessity, or put differently, the economic advantage of moving in with a new partner might however be lower for cohabiting mothers and thus cohabiting mothers might actually show a lower rate of repartnering.

How do changes in in the relationship status differ between married and cohabiting fathers? The argument of a lower degree of institutionalization of cohabitation should hold for fathers as well and thus would lead to a lower rate of repartnering for cohabiting fathers. In contrast to women, men typically do not benefit financially from repartnering. At most,

cohabiting fathers could benefit more than married fathers as labor earnings are more equally distributed among cohabiting couples than among married couples, given that they repartner again with women who have similar gender role attitudes than the ones they separated from.

Another dimension of change comes into play when recalling that not only a single year after family dissolution is looked at but at several years. That means findings will probably differ between the year of family dissolution and the following three years. The research questions thus speak to the transient nature of findings in the aftermath of family dissolution. The sources of income change (welfare state, repartnering, individual earnings) are all subject to change between the year of separation and the following years. This and the fact that potential outcomes are hard to hypothesize for cohabiting mothers and fathers are the reason for the exploratively and descriptively formulated nature of the research questions.

3   *Data and Method*

Estimating the causal effect of family dissolution on outcomes like income and poverty is the main goal of the dissertation. The strategy used to estimate this effect is a difference-in-difference approach combined with coarsened exact matching (CEM) as the matching technique. This approach relies on the counterfactual model of causal inference which will be described in detail in section 3.1.

After explaining the analytic strategy, the used datasets are introduced in section 3.2. The analyses of the empirical chapters are based on German (GSOEP) and US American panel data (PSID). The GSOEP and the PSID are two of the longest-running panel surveys worldwide. In order to conduct comparative analyses with panel surveys from different countries, the Cross-National Equivalent File (CNEF) has been built (Frick, Jenkins, Lillard, Lipps, & Wooden, 2007). The CNEF provides variables that were harmonized across countries and over time to enable cross-national comparative research. Using similar concepts is especially necessary in the field of household income and its single components.

And finally, section 3.3 elaborates on the operationalization of the key concepts with the data at hand, specifically family dissolution and the economic outcome variables. Also, the structure of the analysis dataset will be described in that section.

3.1 Analyzing the Effects of Family Dissolution

The difference-in-difference approach used throughout the dissertation is based on the counterfactual model of causality to estimate the effects of events (Neyman, Iwaszkiewicz, & Kolodziejczyk, 1935; Rubin, 1974; Holland, 1986). For social science applications, Brüderl (2010) and Gangl (2010) give thorough descriptions of causal inference and applied methods on which the following paragraphs are mainly based.

The counterfactual model of causality proposes that an observed outcome Y is the direct and sole result of an event or condition X observed for individual i. To measure the effect of an event or condition X with $X=1$ on the outcome Y we would have to consider the same situation for individual i in which the event does not take place ($X=0$). In this situation we would observe another outcome Y. The difference between these two outcomes would be the individual effect of the event or condition for person i:

$$\Delta_i = Y_{i,t_0}^{X=1} - Y_{i,t_0}^{X=0} \tag{1}$$

In reality, however, one and the same person can only experience one of these situations and its outcome, all other outcomes are hypothetical. Either the person experiences a family dissolution at time t or the person does not. This so-called fundamental problem of causal inference inhibits the measurement of effects of events on the individual level. However, it is still possible to estimate the effect.

There are several ways to address this problem of never observing the real counterfactual. One way is to use experiments. In experiments study participants are randomly assigned to two study groups.[7] One study group is exposed to the condition $X=1$ or the so-called treatment, and the other group, the control group, is not exposed to it with $X=0$. The random

---

[7] Stimulus control assures the correct chronological order of events so that the event precedes the outcome. With family dissolution in a cross-sectional design one would measure say a low income of a divorced person but could not be sure that the low income is the consequence and not the cause.

assignment process assures that participants of the two study groups are at most only randomly different but not systematically. The difference in outcome Y between individuals i and j each from one of the two study groups can then be expressed as:

$$\Delta_i = Y_{i,t_0}^{X=1} - Y_{j,t_0}^{X=0} \qquad (2)$$

Clearly, couples cannot be assigned to two study groups – one in which couples (are forced to) break up and one in which the couples do not – and then observe their incomes following separation. Therefore, for research questions that cannot be simulated with experiments we have to rely on observational data.

With observational data, as in experiments, we would again compare individuals who (only) differ regarding the treatment X:

$$\Delta_i^B = Y_{i,t_0}^{X=1} - Y_{j,t_0}^{X=0} \qquad (3)$$

In non-experimental designs, this so-called *between-estimator* gives the true causal effect only if the assumption of unit homogeneity holds. However, since the assignment process is not random in observational data, it is most likely that the treatment and the control group differ in more characteristics than just the treatment. Specifically, it could be that events X "reflect naturally occurring assignment processes (…) that are socially structured, that reveal agents' choices, and that, in consequence, imply a correlation between treatment assignment and expected outcomes" (Gangl, 2010: 26). Regarding separation and divorce it has often been argued that in the US the wife's level of education has a negative effect on the divorce risk (Lyngstad & Jalovaara, 2010). Then women in the treatment group would have a per se lower income than the control group of women, even in absence of the event. A comparison of incomes of divorced and not divorced women as in Equation (2) would overestimate the actual effect of family dissolution on income. For now this problem of self-selection remains (but is solved later with CEM rendering the two groups comparable).

The problem of individual unobserved heterogeneity can be solved by using the so-called *within-estimator*. The *within-estimator* can be applied when panel data are at hand. With panel data the treatment effect can be estimated as the change in outcomes between two points in time of a person who is at risk of experiencing family dissolution in t_0 and experiences this event in t_1 :

$$\Delta_i^W = Y_{i,t_1}^{X=1} - Y_{i,t_0}^{X=0}. \tag{4}$$

$Y_{i,t_1}^{X=1}$ is the income of person i after a family dissolution and $Y_{i,t_0}^{X=0}$ is the income of the same person before the family dissolution. In a way, the pre-treatment observation then serves as the counterfactual to the post-treatment situation of that same individual. This means that the treatment and its counterfactual are very similar. This pretty much isolates the treatment effect because all time-constant factors cannot have led to the occurrence of the event. All individual-specific time-constant unobserved heterogeneity is canceled out, too.

The within-estimator is the basis of fixed-effects (FE) panel regressions which are commonly used for the estimation of causal effects with panel data. Take a regression model of the form

$$y_{i,t} = \beta_1(x_{i,t}) + \beta_2(z_i) + a_i + u_{i,t} \tag{5}$$

with $y_{i,t}$ as the outcome variable, $x_{i,t}$ as the time-varying covariates, and z_i as time-constant covariates. a_i and $u_{i,t}$ are decomposed error terms, a_i is the time-constant individual-specific error term and $u_{i,t}$ is an idiosyncratic error term that changes over individuals and time. The FE estimator is obtained after the within-transformation (or time-demeaning) of the data.[8] For this, the individual-specific mean of each variable over all available time points is subtracted from each variable at time t:

$$(y_{i,t} - \overline{y}_i) = \beta_1(x_{i,t} - \overline{x}_i) + \beta_2(z_i - \overline{z}_i) + (a_i - \overline{a}_i) + (u_{i,t} - \overline{u}_i) \tag{6}$$

---

[8] That is what the `fe` option in the Stata panel regression command `xtreg` does.

The time-constant covariates z_i and the time-constant error term a_i drop out of the equation. Accordingly, a fixed-effects model controls for all measured and unmeasured individual-specific time-constant covariates. But it also means that for time-constant covariates such as gender or race/ethnicity no coefficient can be estimated.

However, an income change between two time points might not only be the result of family dissolution. It could be biased by other income trends – trends that also affect the incomes of people who do not experience family dissolution. Such age and period effects can include for example recessions (period effect), or on the individual level promotions (age/maturation effect). Coming back to the notation of the within-estimator as in Equation (4), we can account for such confounders by comparing the income change of person i to the income change of person j. Person j is also at risk of family dissolution in t_0 but is not affected by a dissolution in year t_1, denoted by $X=0$ at both time points. This so-called difference-in-difference (DiD) estimator is expressed as:

$$DiD_{i,t_1} = (Y_{i,t_1}^{X=1} - Y_{i,t_0}^{X=0}) - (Y_{j,t_1}^{X=0} - Y_{j,t_0}^{X=0}). \tag{7}$$

The first set of brackets includes the within-estimator for person i as in Equation (4), the second set of brackets includes the within-estimator of person j who does not experience that event at time t_1 (and neither in any other year of the observation window). Thus, the DiD estimator accounts for income mobility of individuals who do *not* experience the event. Their general income mobility thus has to be discounted from the income changes of families who experience the event because separating families' total income change is not the mere result of the event but of other confounders. This is the main advantage of the DiD approach over fixed-effects panel regression. Using the example of family dissolution, the DiD estimator gives a measure of how much more the income of separating individuals changes than the

income of those who are not struck by family dissolution. It thus estimates the net income change that can be attributed solely to the event of family dissolution.

The problem that comes up again with the DiD estimator is that the treatment and the control group might differ considerably. To account for this, a control group consisting of individuals who are also at risk of family dissolution is built. This control group only includes couples with children as well who can potentially experience the dissolution of their family. To make the two groups comparable in terms of more relevant covariates than just couple status and whether a child is present a matching method is used. Matching produces statistical twins so that observations in the control group mirror the composition of the treatment group regarding selected covariates.

The following sections describe coarsened exact matching (CEM) as the matching method of choice (Iacus, King, & Porro, 2012; Blackwell, Iacus, King, & Porro, 2009; Iacus, King, & Porro, 2011). The main difference compared to exact matching is that CEM uses coarse categories of the matching variables. This means that continuous variables or variables with multiple categories are collapsed into variables with fewer categories, for example, age groups are used instead of exact age or income groups are used instead of exact income. As a result, one of the advantages of CEM is that fewer unmatched observations get lost due to not finding exact matches.

CEM is applied to the data in the following way (see Iacus et al., 2011: 350f.).[9] First, the pre-treatment observations of variables that might affect the probability of being treated and at the same time might affect the economic outcome are coarsened to a reasonable degree. Table 3.1 shows the variables that were used for the matching and their coarsened categories. For

---

[9] Stata offers the command `cem` by Blackwell et al. (2009).

VARIABLE	COARSENED CATEGORIES
Age	25-34, 35-44, 45-55 years
Gender	Female or Male
Number of Children in HH	1 Child or 2+ Children
Education	DE: No Voc. Training, Voc. Training, University
	US: Less than High School (HS), HS, More than HS
Weekly Working Hours	<30 hours or >30 hours
Year of Family Dissolution	DE: 1985-1990, 1991-1996, 1997-2002, 2003-2008
	US: 1981-1986, 1987-1990, 1991-1996, 1997-2005
Household Income	Quartiles of HH Income
Contribution to HH Labor Earnings	<30%, 30%-70%, >70%
Region	DE: West Germany or East Germany after 1990
Minority	DE: With or without migration background
	US: Black or non-Black

Table 3.1 Recoded Variables for Coarsened Exact Matching.

the analyses by marital status in Chapter 5, the matching procedure additionally includes the marital status with the two categories *married* and *not married*.

Next, these coarsened variables undergo exact matching. Therefore, every single combination of the coarsened variables builds a stratum in which the treated and untreated observations with their respective characteristic values are sorted into. In each stratum untreated observations are weighted according to the total number of treated observations. Usually there are more untreated than treated observations in a stratum so that the untreated observations receive a lower weight than the treated observations. Treated observations receive a weight of 1 and untreated observations receive a weight according the proportion of untreated to treated observations in each stratum. This weight attached to each observation is used for the analyses.

In the last step, strata with only treated or only untreated observations are discarded. For the then following analyses the original variables are used again, the coarsened variables are

only utilized for the matching. Because the analysis usually already uses survey weights these weights are multiplied by the matching weight.

The number of covariates used for the matching however, is limited. With CEM the trade-off between finer or coarser categories is either to lose a higher number of unmatched observations due to too fine variable categories, or to make the variables coarser and to find more matches but to end up with a treatment and control group that are maybe not as similar as necessary.

While CEM balances the two groups of treated and untreated observations, another adjustment procedure is applied to account for compositional changes over time. This procedure is supposed to balance the composition of the time periods used for the analysis of changes over time. The chosen method here is entropy balancing (EB) introduced by Hainmueller (2012).[10] Though he proposes the method for balancing treatment and control groups, it can also be used the way it is applied here (cf. DiNardo, Fortin, & Lemieux, 1996; Giesecke, Heisig, & Solga, 2015; Heisig, 2015).

The reference distribution is the composition of treated units averaged over the whole observation period for each of the two countries. The covariates that were balanced on are the same as used for CEM. The results in Chapters 4 and 5 are presented showing both the unadjusted as well as the composition-adjusted estimates. The composition-adjusted estimates are interpreted and discussed whenever they deviate clearly from the unadjusted estimates.

The idea of balancing the composition over time is to rule out compositional changes of the sample as a driver of changing economic consequences so that the remaining effect is purely the effect of welfare state change. However, if we want family policies to work as wanted then certain policies are to change the composition of the affected population. Take

---

[10] Stata offers the command `ebalance` by Hainmueller and Xu (2013).

for example policies to support the employment of mothers like child care expansion or a legal claim for a place in child care. If such a policy attains its goal it certainly changes the composition of mothers regarding their employment status, weekly working hours, or the financial contribution they make to total household income. This welfare state effect would be canceled out when accounting for a changed composition of women over time. We would ascribe the improvement or attenuation of economic consequences over time to a change in the composition instead of ascribing it to welfare state change. Consequently, the benefit of adjusting for the changing composition over time is questionable and the "true value" might lie somewhere between the composition-adjusted and the unadjusted estimate.

To finally estimate the mean income change, regression models are used. For the analyses in Chapter 5 dummy variables for the event year and for each of the following three years are included to estimate the yearly income change. Standard errors are clustered on the level of the primary sampling unit.

3.2 Datasets

The above described concepts call for panel data so I use two of the longest running panel datasets worldwide, the German Socio-Economic Panel Study (GSOEP) and the US American Panel Study of Income Dynamics (PSID). Both surveys date back to the 1980s and are currently still running. Long panels also allow analyzing changing economic consequences due to family dissolution over time. However, as the number of observations gets pretty small when choosing an event like family dissolution, yearly estimators cannot be provided. Only long panels then offer the chance to define meaningful periods of time and to pool observations into these periods.

GSOEP [11]

The GSOEP is a longitudinal household survey that started in 1984 with a nationally representative sample of about 12,000 respondents in almost 6,000 households. In 1990, after reunification, a sample of about 2,000 East German households with almost 4,500 respondents was drawn who are since then interviewed yearly as well. These samples build the core samples of the GSOEP. Several refresher and subpopulation samples were added in the years following reunification. Currently, the 31st survey wave of 2014 (covering the income year 2013) is made available for which about 24,000 respondents took part in the survey.

From the outset, the GSOEP was conceived of as a survey on well-being over the life course of the population measuring stability and change in living conditions. Respondents are asked a fairly stable set of core questions every year covering topics such as demographic events like childbirth, marriage, or divorce; education and employment; various sources of income; health; and also preferences, values and life satisfaction. Personal interviews are carried out with every household member age 16 and older so there are no proxy interviews for adult household members. Household-related questions on, for example, household income or children under age 16 are answered by the person who thinks to know best about the household's situation.

The SOEP follows every respondent who has ever participated in a SOEP survey. The original sample members are those who participated in the first survey wave in 1984. Afterwards new sample members are becoming part of the survey by birth or by moving into sample member households. When grown-up children or other household members move out of the household they are of course followed as well.

---

[11] This section on the GSOEP is based on Haisken-DeNew and Frick (2005) and Wagner, Frick, and Schupp (2007).

The samples that were used for the analyses in the empirical chapters are the subsamples A to F of the GSOEP. First, these are the samples of Germans (A) and immigrants to Germany from the five main immigration or guest worker countries (B) which started as the original GSOEP samples in 1984. Starting in 1990, a sample of East Germans (C) was added. In 1995, a post-1984 immigration sample (D) was added, and later on refresher samples of the general population in 1998 (E) and in 2000 (F). The waves used here are the 1984 to 2010 waves.

PSID [12]

The PSID is the longest-running panel study in the world. The first data were collected as early as 1968 and until now the PSID provides more than 38 waves of data spanning over 45 years.[13] This panel study started out as the Survey of Economic Opportunity (SEO) already in 1966 with the aim of evaluating President Lyndon B. Johnson's 'War on Poverty' programs. At that time, about 30,000 households were part of the study. Later on, it was decided to continue the study with a subsample of about 2,000 low-income households. The Survey Research Center (SRC) of the University of Michigan was commissioned to further carry out the study and successfully argued to add another 3,000 households in order to build a nationally representative sample of the US population. Together, the SEO and the SRC samples build the core samples of the PSID which contained about 18,000 individuals in almost 5,000 households at that time.

In later years, some additional samples were added. In 1990, the so-called Latino sample of about 2,000 households was introduced to include the three major post-1968 immigrant groups to the United States. However, the sample did not represent all immigrant groups and

---

[12] This section on the PSID is largely based on McGonagle, Schoeni, Sastry, and Freedman (2012).
[13] 2013 is the last publicly available wave (as of October 21, 2015).

was therefore, and for financial reasons, dropped again already in 1995. Another crucial decision was made when in 1997 the PSID changed from annual to biennial surveys to further contain the costs that have increased over time due to a natural growth of the sample population. In addition, some original sample member households from the SEO oversample of low-income families had to be dropped as well. Also in 1997, a new immigrant sample of about 500 households was added to the PISD which covers post-1968 immigration to the United States. Unfortunately, this sample was too small to allow for the analysis of immigrant subgroups. Only the PSID core samples were used. The waves that were used for the analyses range from 1980 to 2007.

As the first longitudinal household survey of the world – and as such a predecessor to the SOEP – some aspects of the PSID design differ from the design of the SOEP. Already since the early 1970s, the PSID conducts telephone interviews by default instead of face-to-face interviews in order to contain costs. Related to that, the household head answers questions about him- or herself, questions related to the household, and all questions on other household members. Since the late 1970s, information on wives/"wives" is as detailed as for the household head. Information on other family members is however rather limited. In couple households, the respondent is usually the male partner, in other household constellations it can also be a single female.

Another difference between the GSOEP and the PSID regards the following rules of survey participants. The GSOEP follows every respondent who has ever participated in a survey, no matter whether born into sampled households or moved in. The PSID instead follows only respondents who were part of the original sample in 1968, or offspring of these sample members. These respondents are followed when they leave the original sample household, whether to form a new household as a grown-up child or because of separation or

divorce. Respondents who moved into a PSID household at some point after 1968 are interviewed as long as they are part of that household but they are not followed when they leave the household. Related to that, they receive a cross-sectional weight for the year of participation but a longitudinal weight of zero when they leave the panel. These differences have implications for the construction of analysis weights and can lead to biases when comparing results for Germany and the United States. Therefore, I use "comparability optimized weights" provided by Kohler (2011) that assign a non-zero weight also to non-sample members in the PSID. These weights also account for differential attrition probabilities between the SOEP and the PSID and therefore replicate the staying probabilities for the PSID following the example of the GSOEP.

The PSID has comparatively high wave-to-wave response rates of usually above 95% (see Table 2 in McGonagle et al., 2012) although the interviewer-interviewee relationship is said to be lower in telephone interviews compared to face-to-face interviews. This is achieved, among other strategies, with financial incentives or by contacting the households in between surveys. This became especially important after the change from annual to biennial surveys (McGonagle, Couper, & Schoeni, 2009).

CNEF

Both datasets, the GSOEP and the PSID are part of the Cross-National Equivalent File (CNEF). The CNEF is a dataset in which the same or similar variables from several national panel datasets were combined in order to allow for cross-national comparisons (Frick et al., 2007). The biggest advantage is that it provides harmonized income variables. Income concepts usually differ considerably between countries and are therefore not easy to handle in cross-national comparisons. Also, some income concepts are just not available in one or the

other original dataset. On the other hand, the CNEF does not include all variables that are needed for the analyses, so that CNEF variables have to be combined with PSID and GSOEP variables.

3.3 Operationalization of Key Concepts

Event Variable: Family Dissolution

The event of interest is family dissolution. At risk of family dissolution are married or cohabiting couples living together with at least one child under the age of 15 in the same household. Family dissolution is defined as the separation of a married or unmarried couple with children. Hence, family dissolution occurs regardless of the legal marital status of the couple. According to this definition, neither separations of couples without children in the household, nor unions terminated by the death of a partner are considered as family dissolution.

Both data sets allow family dissolution to be operationalized in a comparable way. The GSOEP contains a variable indicating whether the respondent lives together with a partner in the same household and whether the partners are cohabiters or legal spouses. If this variable takes on the value for living with a partner in one year and not living with a partner in the following year it is used as an indication of a separation.[14] To detect repartnering after separation between two subsequent waves another variable is used. The partner ID variable carries a unique ID of the partner which changes between two waves in case a respondent has

---

[14] This procedure mistakenly counts starting to live apart together (LAT relationships) for example for job reasons – after already having lived together – as family dissolution since the variable refers to the household rather than the relationship. But among couples with children the incidence of this living arrangement should be negligible (Asendorpf, 2008).

a partner at both interviews but it is not the same partner. The above mentioned relationship variable would just show that there is partner.

For Chapter 5 only, a differentiation between cohabiting and married couples is needed. The distinction was made on the basis of the partner indicator mentioned above. Thus, cohabiting couples include couples with various legal marital statuses including those who never married, divorced people and widowed partners. Married respondents can only have one legal marital status; however, they can be married for the first time or can have re-married after a previous divorce or bereavement.

Likewise, the PSID contains information on whether there is a couple living in the household who is married or permanently cohabiting. If this variable identifies a respondent as being part of a couple in a given year, and denotes no couple living in that household in the following year, it is taken as an indication for family dissolution. Of course, also with the PSID only separations that take place in households with at least one child under the age of 15 fit the definition of family dissolution. The problem of missing a separation due to fast repartnering between two waves as described above in the GSOEP was solved by using a variable that indicates when somebody moved out of the family unit.

Bot German and US American samples were further restricted to respondents between age 25 and 55. This was done in order to isolate separation effects from events such as age-related illness or early retirement at the upper end of this age range (see also Andreß et al., 2006; Schwarze & Härpfer, 2000). At the lower end, income changes might be affected by just having left the parental household or by transitions from education or training to the labor market.

Some shortcomings of the operationalization however remain: First, the precise date of the family dissolution is unknown. In the GSOEP, there is an alternative variable that is

sometimes used for this purpose. They survey asks for changes in household and family situation since last interview and offers answer categories like birth of a child, death of a partner, a marriage, and also the separation from a partner. However, it is advised against using this variable due to the high recall error and overlapping periods of reference. For the PSID there would not be such a possibility to locate the event more precisely. As a result, the event is set to the year in which the respondent states not to live together with last year's partner anymore. In reality though, the separation might have already taken place at some point after the last year's survey. Then already the preceding year's income would be affected by the family dissolution. And second, in the PSID it is not possible to identify *unmarried* bereaved. For them, there is just the information that there is no partner anymore in the household. So, one has to assume a separation rather than the death of a partner.

Outcome Variables: Economic Concepts

The analyses in Chapters 4 and 5 utilize the following concepts to assess the economic consequences of family dissolution:

- individual earnings,

- pre- and post-government household income,

- large income drops of at least 50%,

- income poverty,

- and repartnering.

All income measures are adjusted for inflation using the Consumer Price Index and expressed in 2007 Euro or Dollar, respectively. Income measures on the household level are adjusted for household size and age composition using the OECD-modified scale. This equivalence scale assigns a weight of 1 to the household head, of 0.5 to each additional adult

and children age 15 or older, and of 0.3 to each child below age 15. All income variables refer to the calendar year preceding the survey year.

The income concepts *individual earnings* and *pre-government income* are used as delivered by the Cross-National Equivalence File, offering comparable definitions of the relevant income concepts. *Post-government income* is also taken from the CNEF and adjusted to account for outgoing support payments from the nonresident to the resident parent as will be described below. Entering *income poverty* and experiencing *large income drops of more than 50%* are concepts that are derived from post-government income. The concept of *repartnering* sticks out a bit at first but it is supposed to proxy the earnings' contribution of a new partner as a potential source of income. Also individual earnings can be viewed as an income source that can be utilized to compensate for lost income.

Individual Earnings. Individual labor earnings include wages and salary from all employment including training, self-employment income, and bonuses, overtime, and profit-sharing (Grabka, 2011). Changes in individual labor earnings can be viewed as a proxy for changes in the employment behavior as a strategy to recoup income losses due to family dissolution.

Pre-government Household Income. Pre-government household income includes the labor earnings of all household members, income from assets, private transfers including alimony and child support, and private retirement income. It is also referred to as household income *before* taxes and public transfers.

Post-government Household Income. Post-government household income additionally includes public transfers and public retirement income minus household taxes. It is also referred to as household income *after* taxes and public transfers, or disposable household

income. Showing both income concepts together, the difference between the two can be interpreted as a measure of welfare state support (DiPrete & McManus, 2000).

The two household income measures consider private transfers only on the income side but not on the expenditure side. This means that private transfers which include alimony and child support payments appear on the income-side of the resident parent but not on the expenses-side of the nonresident parent. I attempt to account for the costs that arise on the part of the nonresident parent and thus estimate more closely the concept of disposable income, to the extent that this is possible given the available data. Therefore, alimony and child support payments are subtracted from the nonresident parent's *post-government income* whenever a respondent mentioned these payments. This adjustment has also been made in previous studies (see e.g. Duncan & Hoffman, 1985a; Andreß et al., 2006). In the GSOEP, respondents are asked about the amounts of money they pay to their former partners, that is to divorced, not yet divorced and separated ex-partners. These payments are supposed to include alimony to their ex-partners and child support. The PSID likewise provides this information, even differentiating between alimony and child support, though starting only from 1985. These variables are used when subtracting private payments from resident parents' post-government income. I do this for both mothers and fathers – whoever is defined as the nonresident parent. However, only for fathers this adjustment makes a difference for their economic outcomes.

A problem that occurs with such payments is that only about 20% of person-years of nonresident fathers in the GSOEP have a report on the amount of support payments. For previously cohabiting fathers, this figure is even lower. Admittedly, it is even lower for nonresident mothers but as the number of nonresident mothers is very small anyway it does not have an impact on the results. Legally, only persons whose income is below a certain

threshold and parents who equally share physical custody are exempt from paying child support. But even if parents do not pay child support, spending time with their children still costs money. I attempt to account for such costs by assigning a child weight of 0.3[15] to every nonresident[16] parent household for whom there is no information on alimony and child support (see e.g. Bratberg & Tjotta, 2008; Schmaus & Bould, 2011). As a result, this does not reflect the observed situation of fathers. However, men are known to gain on average from separations in terms of disposable household income. By accounting for the costs of spending time with or taking care of children I can assess whether the finding of income gains still holds under this assumption. Since there is no information in the data on legal and physical custody or residence arrangements between parents, I use the term resident parent for the parent who lives together with the child; and nonresident parent for the other parent.[17]

Large income drops of at least 50%. This concept shows the risk of losing very large parts of post-government household income. It shows the proportion of households losing at least 50% of post-government household income.

Income poverty. The risk of entering relative income poverty is shown using both pre- and post-government household income. This allows to assess the likelihood of entering poverty before and after taxes and transfers, and thus to assess again how the welfare state buffers poverty entries. Poverty is defined as having less than 60% of median pre- or post-

---

[15] According to the OECD-modified scale, see page 61.

[16] There may be nonresident "parents" who are in fact not the biological parent and therefore do not have to pay alimony or child support. The sample of parents with children probably includes stepfamilies that are at risk of separation. This imprecision cannot be corrected for the whole observation period with GSOEP data. Only since 2001 can a child be assigned to its biological father (SOEP Group, 2013: 94). Before that, only mother-child relationships were unambiguous. Data for Germany show that in 2011 about 23% of cohabiting unions with children were stepfamilies, while less than 1% of married couple families were stepfamilies (Bundesinstitut für Bevölkerungsforschung, 2013). This means the assignment of child weights to separated stepfathers probably overestimates the financial burden, especially for cohabiting men.

[17] This dichotomy does not capture parents with equally shared residence. However, shared residence arrangements, that is, where the child lives with its mother half the time and with its father for the remaining half, are not very prevalent in Germany at an estimated 1% (Bjarnason & Arnarsson, 2011: 877).

government household income. The likelihood of entering poverty is only analyzed for households that have not been poor before family dissolution.

Repartnering. Changes in the relationship status following family dissolution will be examined as another strategy to cope with income losses rather than an outcome. The analysis of the repartnering behavior allows assessing the extent to which the changes in household income are the result of the changing composition of the household due to the presence of a new partner.

Operationalization of income changes following family dissolution

For the estimation of income changes following family dissolution the income variables *individual earnings*, *pre- and post-government household income* give relative changes between each year since the event or non-event year compared to the income situation before the event or non-event. Recalling the DiD estimator in equation (7), the relative change for treated individuals is expressed as

$$rel. \, \Delta_{t1} = \frac{Y_{i,t_1}^{X=1} - Y_{i,t_0}^{X=0}}{Y_{i,t_0}^{X=0}} \tag{8}$$

and for untreated individuals accordingly. The year t_0 indicates the average income of all available pre-event years from *t-1* back to *t-3*. Time t_1 can be substituted by every year since the event year. In chapter 4, the changes are estimated for year *t+0* and *t+2*. Chapter 5 shows changes for every year starting at family dissolution in *t+0* until *t+3*.

Mothers' individual earnings might start to increase from zero which would make a relative income change impossible to calculate. Therefore, earnings of zero were set to one. However, setting zero values to one in order to calculate percent changes still produced somewhat misleading results – an income change from €1 to €500 results in a 500% increase in earnings. In an attempt to reduce the impact of such observations, percent changes were

capped at 300% for measures of income. Alternative results show that increasing the upper limit to 500% or 1,000% increases the level of gains in earnings but the relationship between married and cohabiting mothers' earnings trajectories virtually remains the same.

The variables *poverty entry*, *large income drops* and *repartnering* give the relative change in the likelihood of being poor, having repartnered or having lost the majority of income. For poverty entry and repartnering the relative change is actually an absolute change since the risk of entering poverty was zero before the event for only non-poor households are part of this sub-analysis. Likewise for repartnering, by definition all individuals had a partner before family dissolution so results show the absolute proportion of households with a (new) partner. The poverty status and the relationship status are dummy variables indicating whether after family dissolution the respondent is poor or lives together with a (new) partner in the household, respectively. The risk of experiencing large income drops is again a relative change in this risk compared to the situation before the event because they could have lost large parts of their income also before family dissolution due to other risky events like unemployment. This variable also is a dummy variable with the values of 1 for having lost more than half of previous household income and 0 if the loss was below that threshold.

Operationalization of changes over historical time

Since the number of events in the dataset is far too small to estimate a figure for every calendar year, the events have to be pooled into time periods. The changes of economic consequences over time will be shown for four time periods. The sequences are assigned to the periods according to the year of event or non-event. The time periods are of similar length and comprise a similar number of events. For Germany the periods are 1985 to 1990, 1991 to 1996, 1997 to 2002, and 2003 to 2008. Additionally, it was tried to construct meaningful

periods according to relevant policy enactments as the idea is to broadly tie changes in economic consequences over time to institutional changes in the two countries. The first cut-off roughly marks German reunification. The period before reunification thus comprises to a large majority of family dissolutions that haven taken place in the former FRG. The second cut-off in the mid-1990s broadly marks the change towards the expansion of institutional child care that has taken place in the following years. The beginning of the 21st century, that is the cutoff point between the third and fourth time period, is not distinctively characterized by a single crucial reform.

For the United States the periods are 1981 to 1986, 1987 to 1991, 1992 to 1996, and 1997 to 2005. Family dissolution in the first period from 1981 to 1986 took place without any influence from the Family Support Act introduced in 1988. The first cutoff then is marked by this act which was supposed to increase child support payments between separated parents (see section 2.2). The next cutoff in 1992 is marked by the economic upswing after a recession rather than by key institutional changes. The change of the PSID from annual to biennial surveys starting in 1997 is used as another cut-off point. This means for periods after 1997, results on income changes can only be provided in two-year instead of yearly intervals. The institutional and equally important reason for this cut-off point is the welfare state reform of 1996 with its change from AFDC to TANF (see section 2.2).

Structure of the Analysis Dataset

The analysis dataset combines all relevant variables from CNEF, PSID, and GSOEP. Table 3.2 shows a fictive data extract for a GSOEP respondent who experiences the event of family dissolution. This person takes part in the survey for 16 years and experiences a family dissolution in 1998. The table also shows once more all the requirements that define family

Person ID	Year	Age	Kids 0-14	Partner	At Risk	Treated	Event Year	Years around event
2345	1994	31	1	1	1	.	.	.
2345	1995	32	2	1	1	1	1998	-3
2345	1996	33	2	1	1	1	1998	-2
2345	1997	34	2	1	1	1	1998	-1
2345	**1998**	35	0	0	0	1	1998	0
2345	1999	36	0	0	0	1	1998	1
2345	2000	37	0	0	0	1	1998	2
2345	2001	38	0	1	0	1	1998	3
2345	2002	39	1	1	1	0	2005	-3
2345	2003	40	1	1	1	0	2005	-2
2345	2004	41	1	1	1	0	2005	-1
2345	**2005**	42	1	1	1	0	2005	0
2345	2006	43	1	1	1	0	2005	1
2345	2007	44	1	1	1	0	2005	2
2345	2008	45	1	1	1	0	2005	3
2345	2009	46	1	1	1	.	.	.

Table 3.2 Fictive Data Extract of the Original Data Structure.

dissolution: age of the individual, number of children below age 15 in the household, and partner present.

To create an event-centered dataset, first respondents who experience family dissolution at time *t* are identified. Then a sequence of at least five up to seven years is placed around the event year *t*. For each respondent, whether treated or untreated, there are at least one up to three years of information before the event year, the event year, and three years after the event year.[18] Individuals can experience more than one family dissolution in the course of their life. Still, only the first observed family dissolution is used for the analyses.

For the control group, respondents are identified who are at risk of family dissolution according to our definition but who do not experience the event in any of seven years. Respondents in the control group usually contribute more than one sequence from their life course. Also per-se treated individuals can contribute sequences to the control group. Whenever a sequence does not include any of the pre- and post-dissolution years of treated

---

[18] About 80% of the respondents in the treatment group are observed for seven years.

individuals the sequence is used for the control group. The sequence from 1995 to 2001 is used for the treatment group while the years 2002 to 2008 are used as a sequence in the control group. The non-event year of the untreated individual would then be 2005. This year is used for the assignment to one of the four time periods. 2006 could be another non-event year with a sequence running from 2003 to 2009 if the necessary conditions for being at risk of family dissolution apply for the whole sequence. Finally, for the event-centered dataset, only the rows with the box around and the grey shaded rows in Table 3.2 are used.

4   *Germany & the United States over Time*

This chapter aims at answering the question whether changes in family policy and policies regulating the event of family dissolution are reflected in the economic consequences of family dissolution for the families concerned. The following section will first describe the incidence of the event and how the sample of individuals experiencing the dissolution of their family is constituted (section 4.1). The remainder of the chapter shows the economic consequences of family dissolution by gender and over time for each of the countries (section 4.2). The chapter closes with a summary of the findings (section 4.3).

4.1 Incidence of Family Dissolution

Although between about a third and one half of the married population in Germany and the US is hit by divorce during their life, it is still a rare event from a cross-sectional perspective. Figure 4.1 shows the incidence of family dissolution in the analysis dataset. It is the share of individuals experiencing the event of all respondents between ages 25 and 55 years living in consensual unions with children below age 15 in the household for German and US American women and men. First of all, the cross-national differences appear to be low. Since the event is restricted to a special group of individuals, large groups are omitted from the analysis that usually contribute to the difference between German and American divorce rates. The age restriction omits a high number of instable relationships below age 25
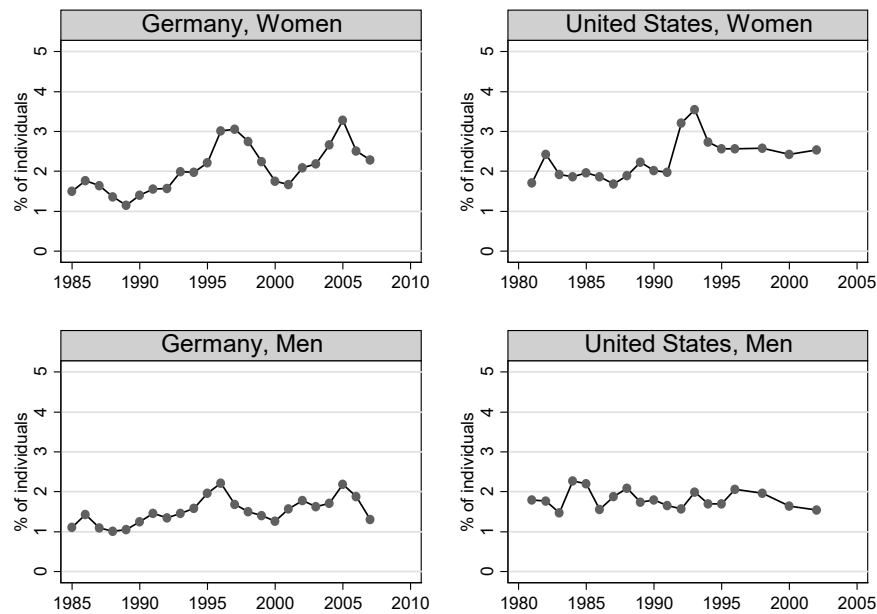
Figure 4.1 Mothers and Fathers – Incidence of Family Dissolution. Smoothed time series.
Germany and US. GSOEP 1984-2010, PSID 1980-2007.

which are much more common in the US than in Germany. The requirement of having children present in the household further equalizes the incidence between Germany and the US since couple relationships with joint children are more stable than those without.

The year-to-year variation appears to be quite high in both countries which follows from a small total number of observations. The incidence for German women shows a slight tendency to rise across time. The American incidence rate shows less fluctuation apart from the outliers in 1992 and 1993. Afterwards, the US rate settles at a higher level than before. The overall lower rates for men reflect the particular panel attrition for separating men who usually leave the family home (and address) and are therefore more difficult to re-contact and are more inclined to refuse to be interviewed as well.

| | GERMANY | | | |
| | WOMEN | | MEN | |
	With FD	Without FD	With FD	Without FD
Age	36.5	36.9	38.2	38.8
No Voc. Training, %	22.3	18.6	14.7	13.5
Migration Background, %	13.7	18.3	13.1	19.5
Married, %	66.8	93.9	72.1	94.0
No. of Children<15 in HH	1.6	1.7	1.6	1.7
Median HH Equiv. Income (2007 €)	17,355	18,867	17,525	18,617
Poor, %	36.3	6.8	9.1	7.3
N Sequences	652	31,091	468	30,981
N Sequences w/o match	73	12,853	43	13,602

| | UNITED STATES | | | |
| | WOMEN | | MEN | |
	With FD	Without FD	With FD	Without FD
Age	36.0	37.5	36.8	38.8
No High School, %	8.6	7.8	12.2	8.6
Black, %	20.0	9.0	16.1	9.0
Married, %	91.3	98.3	89.5	98.3
No. of Children<15 in HH	1.9	1.9	1.9	1.9
Median HH Equiv. Income (2007 $)	22,667	28,043	23,991	27,864
Poor, %	42.2	13.6	21.2	13.5
N Sequences	933	27,524	727	27,291
N Sequences w/o match	41	12,133	43	11,963

Table 4.1 Mothers and Fathers – Characteristics of Individuals with and without Family Dissolution (FD) in Year before Event, Germany and US. GSOEP 1984-2010, PSID 1980-2007.

In Germany, the differences between those who are hit by family dissolution and those who are not are lower than in the United States, as Table 4.1 shows. This means the event of family dissolution is less selective in Germany while in the US there are some groups of the population that are over-represented among the separated compared to the total population. Among those are Blacks, lower-educated men and low income households. In Germany, especially non-marital unions are over-represented among those experiencing a family dissolution. It is well-established that non-marital unions show less stability than married couples but from an economic perspective this is not necessarily connected with high income losses for women in Germany. Cohabiting unions differ greatly between Germany and the US. In Germany, there are more gender-egalitarian couples among those who cohabit (Barg &

Beblo, 2010). In the US cohabiting couples are often lower educated than married couples (Bumpass & Lu, 2000; Manning & Brown, 2006).

4.2 Average Income Changes

Figure 4.2 shows the relative income losses following family dissolution of German and American mothers over time. The lines represent pre- and post-government household income and the distance between them can to a certain extent be interpreted as the welfare state impact mitigating the losses. Arrows point to values estimated under the assumption that the composition of the group of mothers experiencing a family dissolution in each period would have been constant over time (see section 3.1 on entropy balancing). The upper panels show the economic consequences in the year of the family dissolution and the panels below two years later.

Both German and American mothers experience considerable losses in disposable household income of at least 30% in the year of family dissolution with on average slightly higher losses for German women than for their American counterparts. Over time, the relative losses of German women were reduced from about 50% in the 1980s to slightly less than 40% in the 2000s. The trend for American women on the other hand is a bit mixed. Between the early and late 1980s their relative losses decrease from 35% to 30% whereas during the early 1990s they increase again to almost 40%, and then to decrease again to about 35%. So after about 30 years, German and American women experience quite similar income losses.

Year of Family Break-Up

Two years after Family Break-Up
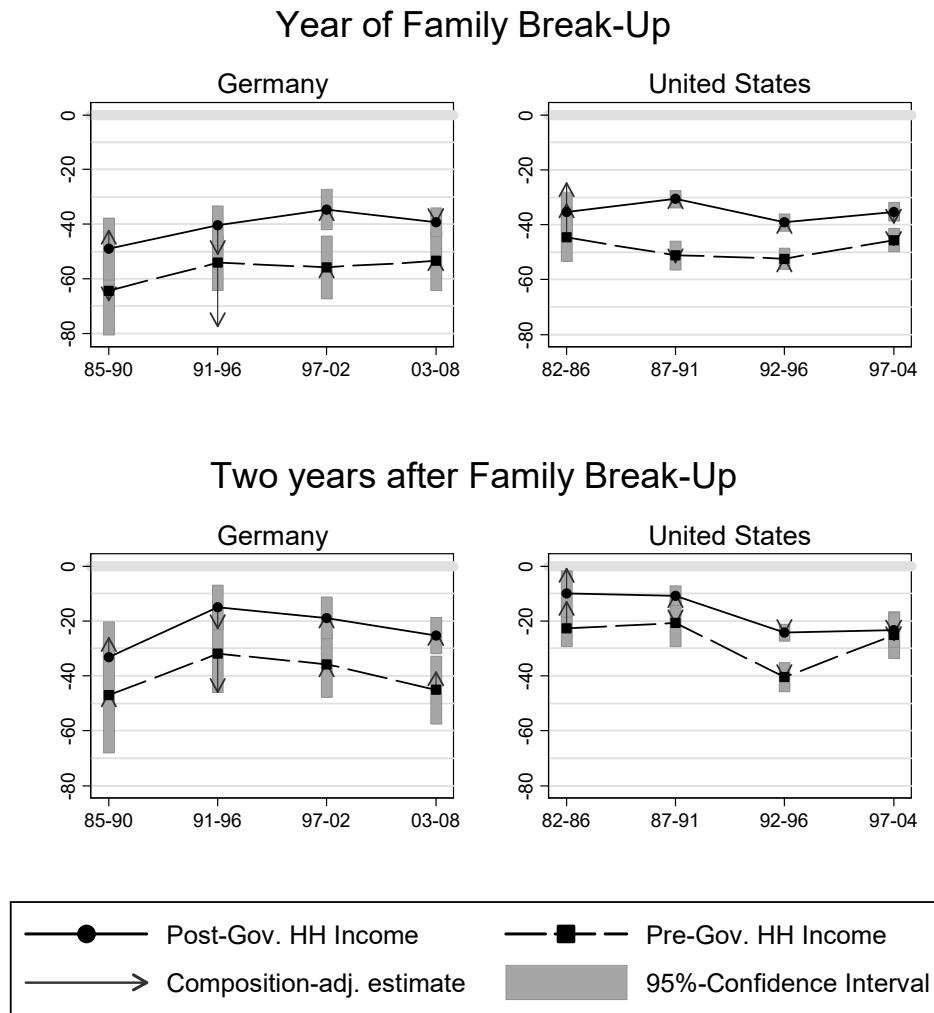
Figure 4.2 Mothers – Relative Pre- and Post-Government Income Changes in the Year of Family Dissolution, and two Years later, over Time. Germany and US. GSOEP 1984-2010, PSID 1980-2007.

The course of pre-government losses for women does not follow that of post-government losses consistently for neither German nor American women which points to changes in the impact of the welfare state over time. The improvements for German mothers between the second half of the 1980s and the first half of the 1990s just described result from a decrease in losses of pre-government income between the two periods. The composition-adjusted estimates suggest that the improvement results from the changing composition of those families separating in this post-reunification period. Women from the former GDR show a

completely different employment behavior with much higher contributions to total household income and thus probably lower relative income losses. At the same time, divorce rates in the GDR were on an all-time low in the beginning of the 1990s. So the composition of those who still divorced and separated in that period might have been very unusual.

Between the 1990s and the 2000s the size of pre-government income losses has not changed considerably. It seems that despite increases in overall female labor force participation, mothers still do not contribute considerably more to household income because of constantly low rates of full-time employment and high rates of part-time and marginal employment. In addition, the adverse employment situation in the new federal states and establishing possibilities to refrain from the labor market led to a decrease of full-time working mothers (Kreyenfeld & Geisler, 2006) and thus to a somewhat convergence in the labor force attachment of East and West German mothers. Accordingly the arrows in the upper left panel of Figure 4.2 point to actually much higher losses when a stable composition over time of those breaking up would be assumed. In sum, the relative income losses in the year of family dissolution have more or less stagnated for German mothers since the 1990s as has the welfare state support for these women.

For American mothers, pre-government income losses have even increased between the 1980s and mid-1990s. The reasons for that are probably to a lesser extent changing income ratios between woman and man within the household but rather changing patterns of employment *after* separation or of re-partnering. Given the rather stable or even positive trend in post-government income losses this, means that the support through the welfare state somewhat varied during this time. In the period 1987 to 1991 this starting trend of increasing pre-government income losses could be absorbed by increasing welfare state support which lifted mothers up to a level of about 30% income loss, the lowest level of loss over time. As

the narrowing between the two lines suggests, the impact of the welfare state decreased for American mothers over time. At the same time, pre-government income losses were not as high anymore as before the mid-1990s. Advocates of the welfare reform of 1996 would interpret the finding of lower pre-government losses as a sign of more individual responsibility and thus as a success of the reform.

A look at the lower panels of Figure 4.2 reveals some of the basic differences between the adjustment behavior of German and American mothers following family dissolution, and between both welfare states. First, German mothers do not recover as fast as American mothers. Second, as a cause or consequence for this the German welfare state provides more support to mothers hit by family dissolution lifting them to levels of loss comparable to American mothers. These two findings mirror closely the ideal typical income changes of the liberal American and the conservative German welfare state. The liberal dream comes true as American mothers face reduced pre-government income losses two years after the event. Also German mothers face reduced losses during the first two years following family dissolution, however to a clearly lower extent than American mothers and with consistently higher welfare state support. For German mothers the conservative nightmare becomes reality, especially in the most current period.

During the 1990s German women recovered considerably from their income losses within two years after family dissolution whereas in the 2000s the initial losses have become persistent again and the reason is to be seen in the persistence of pre-government income losses rather than decreasing welfare state support. However, this trend might not only be due to employment behavior but also due to relationship behavior as pre-government income is not only affected by individual earnings but also by partner earnings. For American mothers on the other hand, the most current period opens up a similarly unfavorable situation. Despite

private efforts to improve the financial situation of the household, as can be seen in the reduced losses of pre-government income comparable to the 1980s, income losses are again much higher than during the early 1990s because the welfare state does not buffer any of the loss that is still considerable two years after family dissolution. This trend adds to the picture of the American welfare state becoming even more 'Americanized'. As a result, two years after family dissolution, German and American mothers separating during the 2000s have to cope with about 25% of remaining income loss: without the support of the welfare state this loss would still amount to 45% for German mothers whereas American mothers cannot rely on much welfare state support in this period. This is in line with the cutbacks in state support in the course of the welfare reform of 1996 with the replacement of AFDC through TANF as described in chapter 2.2. The reform led to less transfers but to more individual efforts probably due to incentives like the increased EITC in 1997 or due to more pressure to fulfill the work requirements in order to receive TANF. Also, the time limit of 60 months of welfare receipt might already play a role two years after family dissolution. So mothers want to save up some months of transfers and thus welfare state support is low despite high remaining income losses.

To get beyond the averages just shown in Figure 4.2, the following Table 4.2 now shows what proportion of mothers actually experience a loss in partner earnings, how many of those experiencing losses receive increased public and/or private transfers, and how much of the income loss is actually replaced by these increased transfers. Private and public transfers were subsumed here and treated as government support for two reasons. First, private transfers mainly comprise of alimony and child support which are state-mandated and also enforced by the state. Second, only recently in 2010 it became possible in the SOEP to separate private child support payments from the child support paid by the state in advance to the resident

parent in cases where the nonresident parent is unable or unwilling to pay child support. Thus, private and public transfers cannot be separated completely from each other. A change in household size is a very complex process in terms of separating out the costs and benefits from being taxed differently. Some benefits get lost upon separation such as the splitting effect for married couples; others can be claimed instead such as the tax allowance for single parents. For example, the loss of partner earnings would be replaced to some extent by the fact that the resident parent claims the allowance for single parents. But as this would be complicated to numeralize household taxes are not accounted for in this step.

The two upper panels a) and b) of Table 4.2 show the percentage of mothers who face a loss in partner's earnings due to family dissolution. One would expect this figure to be even closer to 100% but due to repartnering to men with equal or even higher incomes separating mothers can reduce losses. This behavior becomes visible in comparing the year of family dissolution with two years later when the percentage of women with losses in partner earnings are constantly lower than in the year of event. Next to this rather general and expectable finding, the trends over time for German and US mothers point to several interesting aspects. The proportion of German mothers with declines in partner earnings in the year of family dissolution has increased over time as has the corresponding figure two years later. This suggests that over time fewer mothers have a new partner right away and also two years after separation women have repartnered less than before. This result adds to the earlier finding of an increasing persistence of income losses over time especially in the 2000s compared to before.

a) Mothers, year of family dissolution

	Germany				United States			
	86-91	92-96	97-02	03-08	82-86	87-91	92-96	97-04
Proportion with decline in partner earnings	88	94	93	92	94	94	95	95
Prop. with decline *and* increased P&PT	49	57	62	52	49	50	51	30
Median Replacement Rate*	.04	.06	.06	.06	.08	.10	.09	.02

b) Mothers, two years after family dissolution

	Germany				United States			
	86-91	92-96	97-02	03-08	82-86	87-91	92-96	97-04
Proportion with decline in partner earnings	74	79	78	89	83	82	89	82
Prop. with decline *and* increased P&PT	39	44	52	48	45	36	49	20
Median Replacement Rate*	.02	.03	.09	.10	.08	.09	.13	.01

c) Fathers, year of family dissolution

	Germany				United States			
	86-91	92-96	97-02	03-08	82-86	87-91	92-96	97-04
Proportion with decline in partner earnings	61	71	68	77	71	88	85	74
Prop. with decline *and* increased P&PT	17	16	14	12	7	8	11	4
Median Replacement Rate*	0	0	0	0	0	0	0	0

d) Fathers, two years after family dissolution

	Germany				United States			
	86-91	92-96	97-02	03-08	82-86	87-91	92-96	97-04
Proportion with decline in partner earnings	48	57	55	70	55	67	77	65
Prop. with decline *and* increased P&PT	7	15	18	11	8	6	10	6
Median Replacement Rate*	0	0	0	0	0	0	0	0

* Replacement of decline in partner earnings through increased public and private transfers in %.

Table 4.2 Mothers and Fathers – Incidence of Partner's Earnings Losses, Receipt of Public and Private Transfers (P&PT), and Median Replacement Rate. Germany and US. GSOEP 1984-2010, PSID 1980-2007.

As Figure 4.2 already suggested the welfare state impact for German mothers remained relatively stable over time while it decreased enormously for US mothers. The figures on increased transfer receipt in Table 4.2 corroborate this finding. In the period after the welfare reform only 30% of women who experienced losses of partner earnings see their losses mitigated through increased public and private transfers. Two years after family dissolution only 20% can rely on transfers from public or private sources. In the early 1990s, the period before the reform, this figure amounted to 50%.

The third figure in the table, the median replacement rate, is on such a low level that interpreting the single values would be overambitious. However, the numbers speak for themselves insofar as increased public and private transfers can by no means compensate for the loss of a male earner's wage, neither when having in mind that this is the lower bound of replacement since maintenance payments are often paid informally. Nevertheless, maintenance payments are an insecure source of income for the vast majority of women (see for Germany BMFSFJ, 2008).

In contrast to mothers, fathers' income changes are of quite a different nature. As for mothers, I first describe the average income changes of fathers as shown in Figure 4.3, and then return again to Table 4.2. Both German and American fathers on average attain relative gains in pre-government income instead of losses. The relative gain from not sharing earned income with other household members after separation more than compensates for the loss of tax benefits and economies of scale, and even of a second income from the partner. As men's labor force attachment, and thus individual earnings, usually does not change considerably due to separation, there is a more or less similar amount of income available but shared with fewer household members as compared to before separation.

Over time, the high pre-government income gains of German men decrease first of all until the turn of the millennium. This appears to be a reasonable finding against the background of increasing female employment and thus increasing shares of female income that get lost for men upon family dissolution. The subsequent increase again in the 2000s which amounts to a doubling from about 30% to about 60% of income gain is therefore

Year of Family Break-Up

Germany   United States

Two years after Family Break-Up

Germany   United States

Post-Gov. HH Income   Pre-Gov. HH Income

Composition-adj. estimate   95%-Confidence Interval
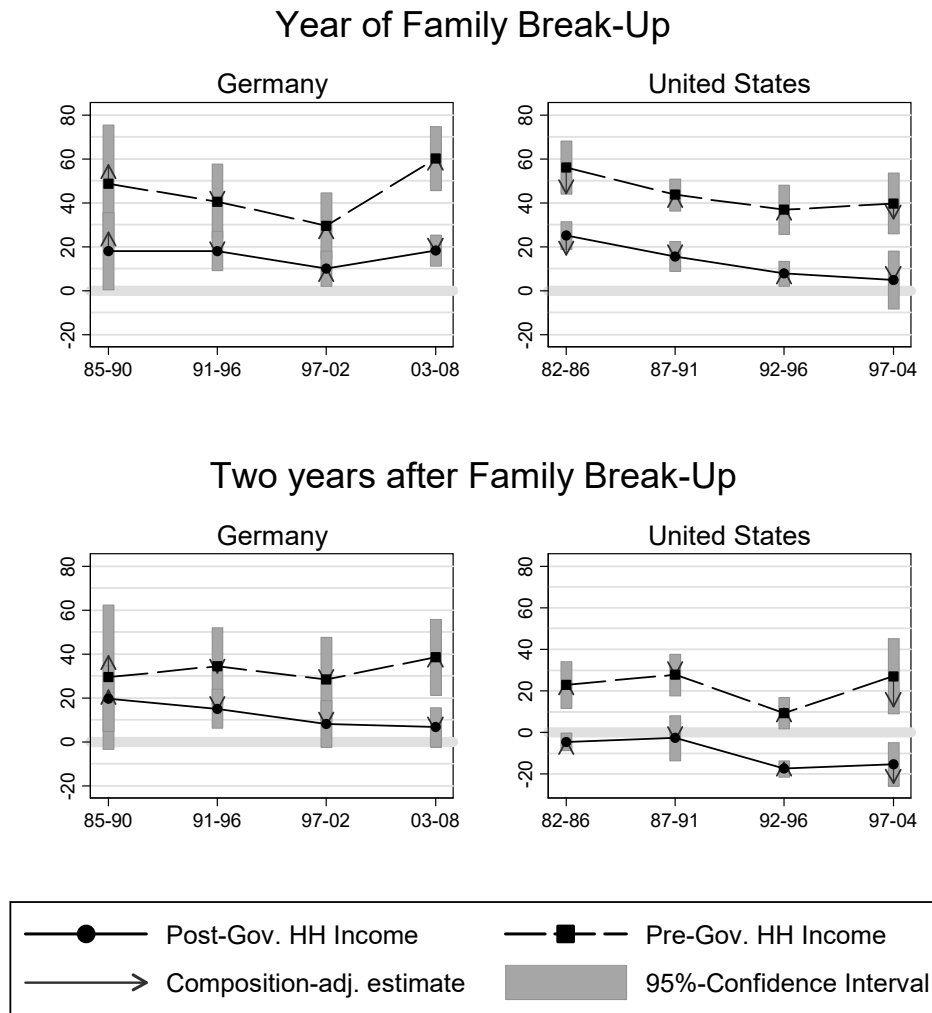
Figure 4.3 Fathers – Relative Pre- and Post-Government Income Changes in the Year of Family
Dissolution, and two Years later, over Time. Germany and US. GSOEP 1984-2010, PSID 1980-2007.

difficult to explain. As among women, also for men the propensity to repartner might have

strongly decreased in the 2000s compared to earlier periods.[19]

Another possible reason for increasing individual earnings of men in the 2000s could be

increasing costs of family dissolution. The enforcement of maintenance payments, especially

---

[19] On the policy level this could be supported by a change in eligibility criteria for welfare recipients due to the
Hartz reform of 2004. Since then, the household as a whole has to be in need for support instead of the
individual. If this is not the case, the individual in need for financial assistance, usually a woman is referred to
her partner for maintenance. This makes men as well as women refrain from moving in together because men
have to support dependent partners (and partner's children if present) and women become financially dependent
from new partners. Though the marriage market for separated fathers does not consist solely of women or
mothers in need it still might have had an impact on the relationship behavior of this group of men.

child support, has increased over time using more efficient ways to enforce a claim, for example through wage withholding. Also, the maintenance law has seen crucial changes in 2008 in Germany with a changing emphasis towards the financial support of a new family at the cost of the previous family. Since it is know that some men decrease their labor supply in order to avoid paying support payments to an ex-partner and children (Andreß et al., 2003), they could also behave in the opposite direction when maintenance obligations are loosened. However, since the group of men separating in 2008 is rather small within the group of those separating throughout the 2000s the expected impact should be smaller than what is seen in the figure.

For US fathers, the time trend of decreasing pre-government income gains runs into a very similar direction as for German fathers but with a continuing decrease in the most recent period of the late 90s and early 2000s. Overall, American fathers' relative income gains are even slightly higher than those of German fathers. This is somewhat unexpected given higher contributions of American mothers to total household income that gets lost upon family dissolution compared to German couples. As for German fathers, the reasons for this finding might lie in the employment or repartnering behavior of American men. Another reason could be the higher average number of children in American families. A higher relative increase would be the result of not having to share income anymore.[20] For both German and American fathers, adjusting for the possibly changing composition of separating fathers over time does not have a strong impact on the results in general. Only for German fathers in the early period of the 1980s and for American fathers in the most recent period.

---

[20] Imagine a male breadwinner family in Germany with one child and another such family in the US with two children. The household income is €5,000 in both cases. To arrive at the equivalent income, €5,000 is divided by 1.8 (1.0 adult + 0.5 adult + 0.3 child) in Germany and by 2.1 (1.0 adult + 0.5 adult + 0.3 child + 0.3 child) in the US. The change from a family household to a single person (father) household with the same total income of €5,000 (divided by 1.0 adult) would mean a higher relative increase for American fathers than for German fathers.

The immensely high gains in pre-government income of fathers however are reduced after taxes and social security contributions have been paid. Two years after family dissolution, this ultimately results in relative post-government income losses for American fathers while for German fathers income gains remain. According to the definition of post-government income used here, it is further reduced by alimony and child support payments so the gap between pre- and post-government income is additionally increased due to these payments. Since many fathers who would have to pay child support by definition do not state such payments for whatever reasons (they might pay informally because there is no judgment for support, they might pay irregularly or insufficiently or they might not pay at all) the most engaged variant of exercising custody is assumed so the results resemble a cost-intensive version of income changes for fathers with regard to child support.[21] Also, the judgment for support usually does not yet exist at separation but only at the legal divorce which might add to the reasons for inadequate mentioning of support payments.

While there is quite some variation in pre-government income changes of German fathers over time, their post-government income in the year of family dissolution remains quite stable at around 20% of income gain. It seems as if the welfare state reduces the income of fathers to certain levels, retaining more when pre-government income is high and less so when it is "lower", as for example in the period of 1997 to 2002. American fathers' post-government income losses follow the path of pre-government income losses quite consequently over time. However, the gap between pre- and post-government income losses appears too large for a liberal welfare regime. It probably results from the assumption of maximum involved fathers which leads to a considerable reduction of disposable household income. Also, the

---

[21] Cf. section 3.3 Operationalization of Key Concepts.

enforcement of child support payments through the state is pursued with some effort in the United States which might have added to the even increasing gap over time.

In the longer term, that is two years after family dissolution, fathers' income gains are further reduced as new partners move into the household or fathers reduce their labor supply, for example in order to avoid paying maintenance for former wives and children. This could in particular be true for men with incomes only slightly above a certain threshold which is allowed to be retained by the liable parent to cover personal needs. Excess income above this limit would go completely to the ex-wife and children with the result that (excess) employment does not pay off that much. Also it could be shown that men have a higher risk of becoming unemployed due to union dissolution (Kalmijn, 2005; Covizzi, 2008) which would also lower the longer-term income gains of fathers.

For American fathers two years following family dissolution, pre-government changes, though still positive, are not as stable over time as in the year of separation but instead vary between 10% and 30% of relative gain. However, after taxes and transfers they experience relative income losses which even increase over time starting in the first half of the 1990s and amounting to about 15% of income loss in the period of the late 1990s and 2000s. In contrast, German men do not have to cope with relative income losses at any point. At least, their pre-government income gain is further reduced, too, but to levels still higher than for American men and with only little variation over time ranging between 30% and 40% of relative pre-government income gain. Therefore, after taxes and transfers the income change in disposable household income is still positive two years after family dissolution but constantly declining over time towards about 5% gain in the period of 2003 to 2008.

Since men usually have to cope with only small relative income losses or none at all, the figures in panels c) and d) of Table 4.2 on page 78 have a different meaning compared to

those of mothers. Yet, they shed light on some interesting aspects of changes over time for fathers as well. First of all, it becomes apparent that German fathers increasingly lose income of a previous partner. The proportion with a loss of partner earnings rose from 61% in the 1980s to 77% in the 2000s. This mirrors the increasing labor force participation of mothers over time. However, that this does not become visible in the average income changes of fathers supports the fact of an increase in the female employment rate which was merely due to increasing part-time and marginal employment. This does not affect household income much when it gets lost upon separation. Though on a lower level, this pattern holds as well two years after family dissolution with a still surprisingly high value in the 2000s of 70% with a loss in partner earnings. Similar to mothers, this could be the result of lower repartnering rates of German fathers over time which would also be in line with the finding of an unusually high income gain in the most recent period as seen in Figure 4.3. As explained before, repartnering usually reduces equivalent household income of men, especially in a male breadwinner context.

As we have seen, the losses of partner earnings are on average not high enough to pose the risk of relatively losing equivalent income. Therefore the proportion of men with increases in public and private transfers should be interpreted cautiously. It might comprise of men who have custody of their children which accounts for about a tenth of single parents in Germany (not necessarily at separation). But also fathers who move in with a new partner and children might see an increase in transfers when more child benefit is received in this household than in the previous family. This would especially explain why some of these values are even

higher two years after family dissolution compared to the year of the event. Unsurprisingly, the median replacement rate is zero at all times.[22]

In the United States, the proportion of fathers who experience losses in partner earnings are on a higher level than among German fathers, reflecting the higher labor force participation of mothers. The variation in the proportion of fathers with household earnings losses follows more or less the US business cycle: when the conditions are favorable more women work and consequently more men lose their partner's labor earnings upon separation. Although the proportion of fathers with such losses is higher in the US than in Germany, fewer of them receive public and private transfers. In addition to the reasons for German fathers, there are less public transfers in general that single American men could claim. Subsequently, they do not see any of their household income loss replaced by such transfers.

Altogether, family dissolution does not seem to pose a risk in financial terms for the majority of fathers, not even under the extreme assumption of everyone exercising joint custody. Fathers with joint custody have to provide space, time and other necessities for their children in their homes as well, even in order to at least keep up a weekend relationship to their children. Also, when children live further away from the nonresident parent, high costs for commuting between two places can arise. Especially for low-income fathers this is often impossible to realize. In light of current developments fathers are probably going to be more involved in the lives of their children, not only after a family dissolution (Schier & Proske, 2010). Hence, the finding of high income gains among men might still overestimate their actual amount of disposable income, now and in the future possibly even more.

---

[22] The mean replacement rate on the other hand is higher than for women because the absolute amount of partner earnings losses is so low that even small increases in public and private transfers can offset a considerable share of the loss.

Another aspect that is often mentioned is the finding that though men do not suffer financially, they often suffer socially and psychologically (Amato, 2000). Conversely, findings for women suggest that women are better able than men to emotionally cope with family dissolution (ibid.), and that they are often quite satisfied with their situation despite immense income losses, because they feel economically independent from their former partners, especially when they are employed, and because they prefer the new situation to a relationship full of conflict (BMFSFJ, 2008).

4.3 Large Income Drops

What the averages just shown above are hiding is how large disposable income losses actually are and whether they lead into relative income poverty of the households concerned. About mothers we learned that less than half see their income increase through public and private transfers. And about fathers we now know that despite average income gains they do lose partner earnings in the majority of cases as well. While these losses must be rather low in relation to their own earnings this does not necessarily mean that no changes at all have occurred during the past four decades as the results especially for American men have already shown. Therefore, the following analyses will show the incidence of losing a large portion of household income. Large means at least 50% of equivalent post-government household income.

Figure 4.4 below shows the incidence of large post-government income losses, first of all again for mothers in Germany and the United States. As for average losses, an initial improvement was found for German mothers over time with a steady decline in the incidence of large losses between the 1980s and early 2000s from above 50% to around 35% and then a small increase again to 40% during the 2000s. This means that the reduction in average losses

Year of Family Break-Up

Two years after Family Break-Up

Figure 4.4 Mothers – Incidence of 50% Drops in Post-Government Income in the Year of Family Dissolution, and two Years later, over Time. Germany and US. GSOEP 1984-2010, PSID 1980-2007.

over time is at least to some extent the result of a reduction in the incidence of such large income losses in the year of separation. But it also means that the anew increase in the 2000s is the result of more women again experiencing such large income drops.

Large income losses occur at about similar rates of between 30% and 50% for American as well as for German mothers. The figures for American mothers show a strong decline in the incidence of large losses down to 30% in the late 1980s. This period is also the most favorable one in terms of post-government income losses. In that period the impact of the

welfare state was comparatively high so that the welfare state was even able to prevent some of these large income losses in the late 1980s.

Two years after the event, cross-national differences only stick out in the period of the late 1980s. Already during the early 1980s considerably fewer American mothers suffered large income drops in the second year after family dissolution compared to Germany in the mid-to-late 1980s where still almost half of the mothers suffered large losses. For German mothers the variation in the extent of income losses has decreased strongly at the turn of the decade from the 1980s to the 1990s, the distribution of income losses became more even at that time, possibly again due to reunification with less East German mothers suffering such high income drops. In the periods to follow, German and American mothers find themselves on similar levels of large losses of between 20% to 30%; however, with a slight tendency to increase again over time.

Summing up the intermediate results for mothers, in both Germany and the US initially positive trends have stagnated over time or have even been reversed again towards the 2000s. So far, it can be said that in both countries mothers have not seen an improved situation following family dissolution. For the United States, the propagated risk shift cannot completely be denied in the case of family dissolution. There is indeed a shift from public to private provision visible especially in the period after the welfare reform. As regards German mothers, the hesitant move of the welfare state away from the male breadwinner model has not yet resulted in economic alleviations for mothers who experience the dissolution of their family. The following results on the probability of poverty entry will further complement the findings of this chapter.

Next, we have a look at fathers to see to what extent they are affected by large income losses of 50% or more. Figure 4.5 shows as expected that high income losses are less of a

Year of Family Break-Up
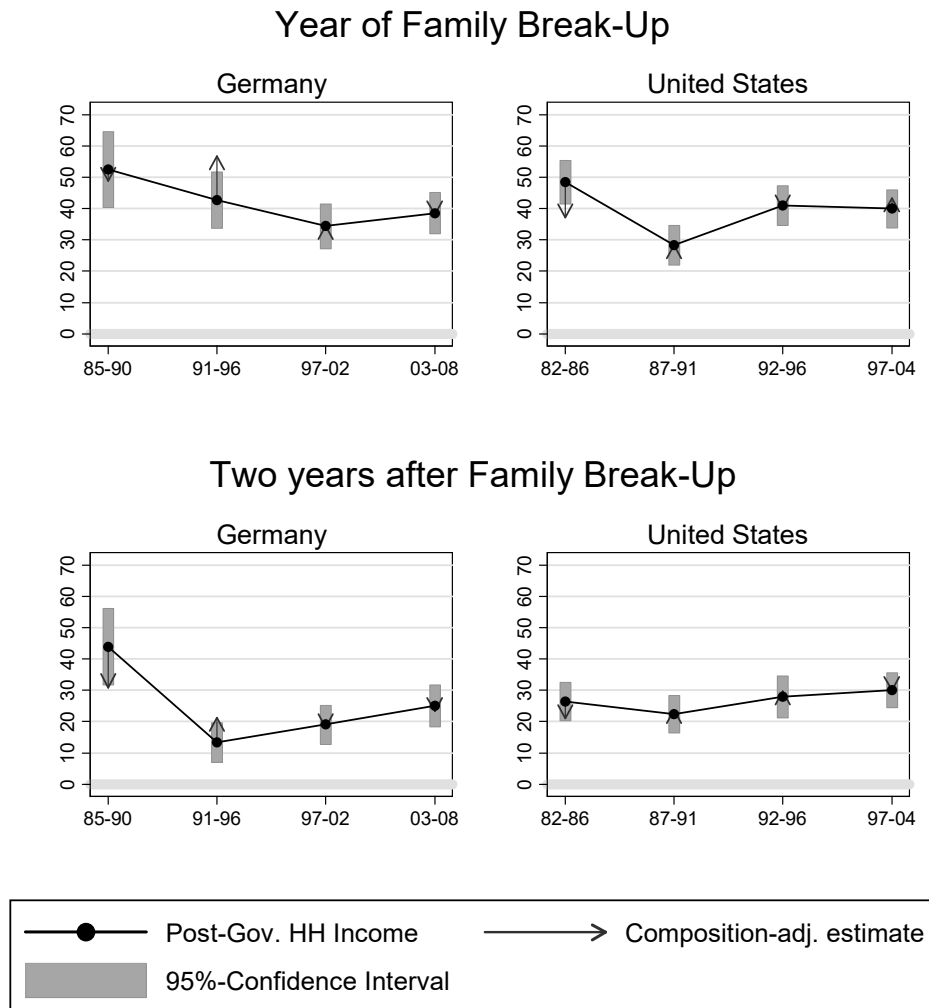

Two years after Family Break-Up
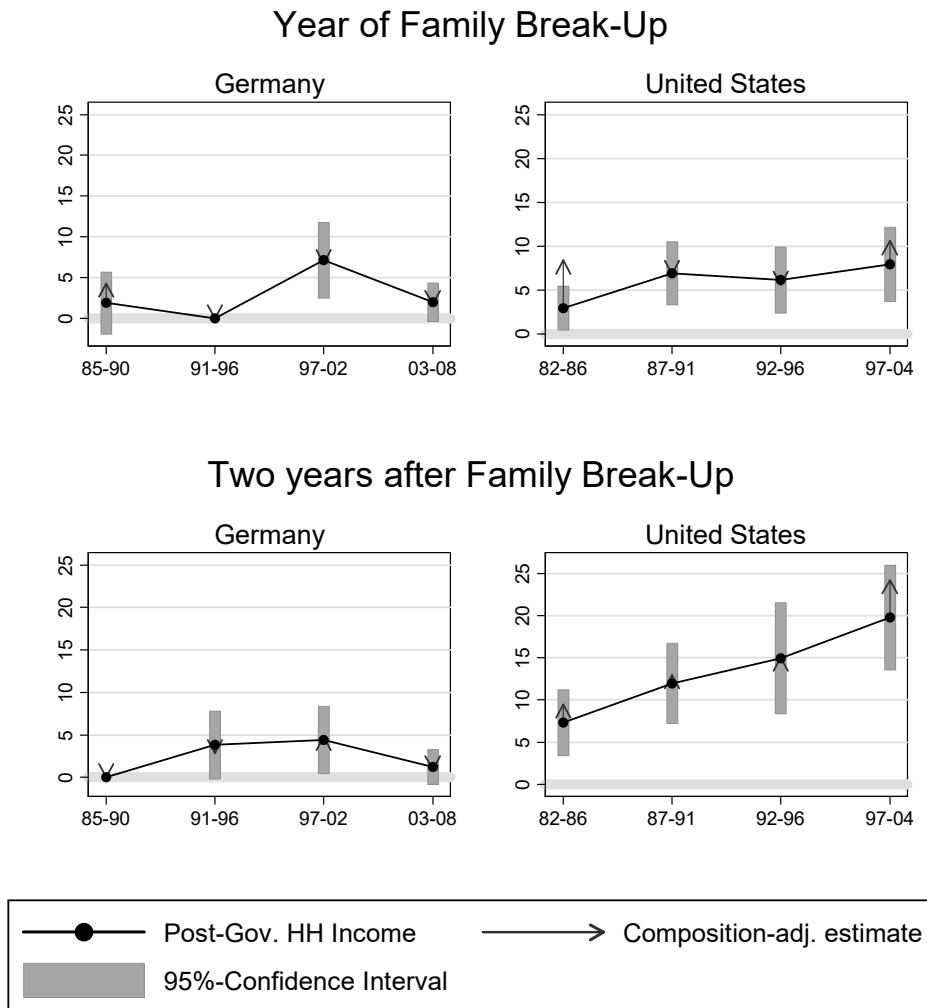
Figure 4.5 Fathers – Incidence of 50% Drops in Post-Government Income in the Year of Family Dissolution, and two Years later, over Time. Germany and US. GSOEP 1984-2010, PSID 1980-2007.

problem for fathers. The incidence of such losses is in most periods below 5% for German fathers. The earlier finding that German fathers increasingly lose partner earnings, too, does not lead to an increase in the incidence of high income losses among them.

For their US American counterparts, the incidence is altogether higher and clearly increasing over time. Two years after family dissolution this increase over time is even more pronounced and finalizes at 20% for the most current period. The reduction of average income gains over time as particularly seen in the longer-term effects for American fathers in Figure

4.3 is the result of a growing incidence of large income losses. Accordingly, for American fathers the variance of income losses has increased during the past decades which means the distribution of income losses has become more unequal among American fathers.

It is also possible that within two years after family dissolution other events occur that result in income losses, for example unemployment. Previous research has found a negative effect of union disruption on employment behavior and careers of men (Kalmijn, 2005; Covizzi, 2008).

4.4 Poverty Entry

This section finally presents results on the probability of becoming poor due to family dissolution. As can be expected from earlier findings, poverty will in general be a minor issue for fathers compared to mothers. However, in theory, among German mothers poverty should be largely prevented as well through the welfare state by mandating and enforcing support payments, giving legal advice in ordering alimony and child support, and supporting the employment of mothers with adequate child care supply, and finally by providing a minimum income scheme. Here the differences between German and American women might be more explicit than with average losses.

Mothers and fathers at risk of entering poverty are a special subsample of those who experience a family dissolution. By definition, only households that have not been poor before (at least one up to three years before the event) family dissolution can be at risk of becoming poor due to the event. The following Figure 4.6 shows the probability of mothers entering poverty before and after taxes and transfers, respectively. This is where actually large cross-national differences become visible. The hypothetical poverty entries of German mothers before taxes and transfers are alarming. However, the German welfare state is

Year of Family Break-Up

Two years after Family Break-Up

Figure 4.6 Mothers – Probability of Becoming Poor in the Year of Family Dissolution, and Being Poor two Years later, over Time. Germany and US. GSOEP 1984-2010, PSID 1980-2007.

successful in preventing poverty for those who have not already been poor before family dissolution. Between 45% and 60% of mothers enter poverty in terms of pre-government income while after taxes and transfers this applies to a maximum of 15% of mothers. Again, the increasingly negative long-term effects of family dissolution become visible: without support of the welfare state as measured here the probability of entering poverty increases over time and remains high also after two years following separation.

The results for American mothers in contrast are somehow peculiar. The risk of poverty entry is comparatively low, both before and after taxes and transfers. Also in some periods, in the year of family dissolution the risk of entering poverty is even higher after taxes and transfers. A possible explanation is that mothers in households that have not been poor for three years before family dissolution are not affected by poverty but instead are able to economically cope with the situation. One also have to keep in mind, that effects here are shown for mothers who experience the dissolution of their family compared to a matched control group of mothers who do not experience this event in a certain year. If both treatment and control group are households close to but above the poverty line then they are at a higher risk of poverty whether with or without the event. Living closer to the poverty line probably applies to more American than German families. Accordingly, the differences in poverty entry due to family dissolution between these two groups of American mothers would be small though the overall level of poverty is higher.

In the last step, the following Figure 4.7 shows the probability of entering poverty for fathers. Again cross-national differences become more pronounced here compared to average losses. While German fathers are being hit by poverty at a rate that fluctuates around zero, American fathers enter poverty at a rate of about 5% to 7% both in the year of family dissolution and two years later. Though also some German fathers do experience large household income losses of at least 50% this is not related to an increased risk of entering poverty. The large losses either occur among high income households that still do not slip into poverty, or they happen to households at the lower income distribution which are not in the population at risk of entering poverty because their household has already been poor before family dissolution.

Year of Family Break-Up
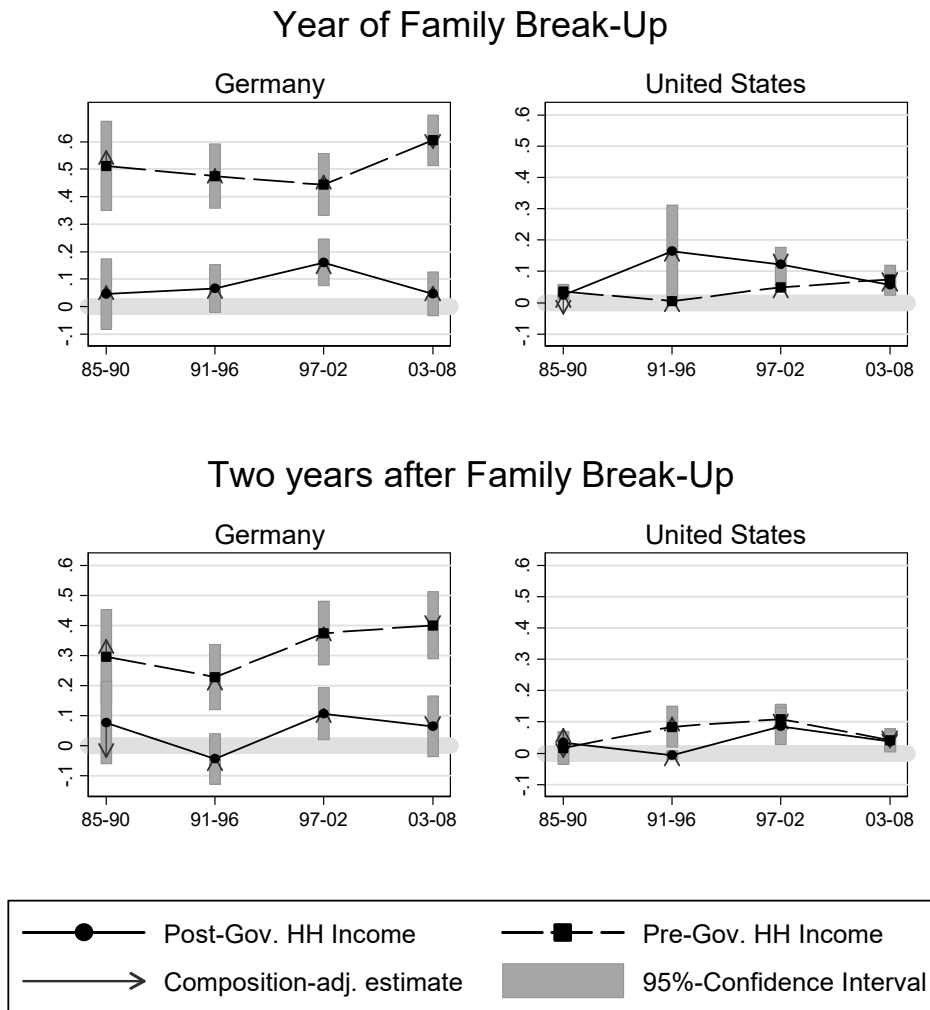

Two years after Family Break-Up
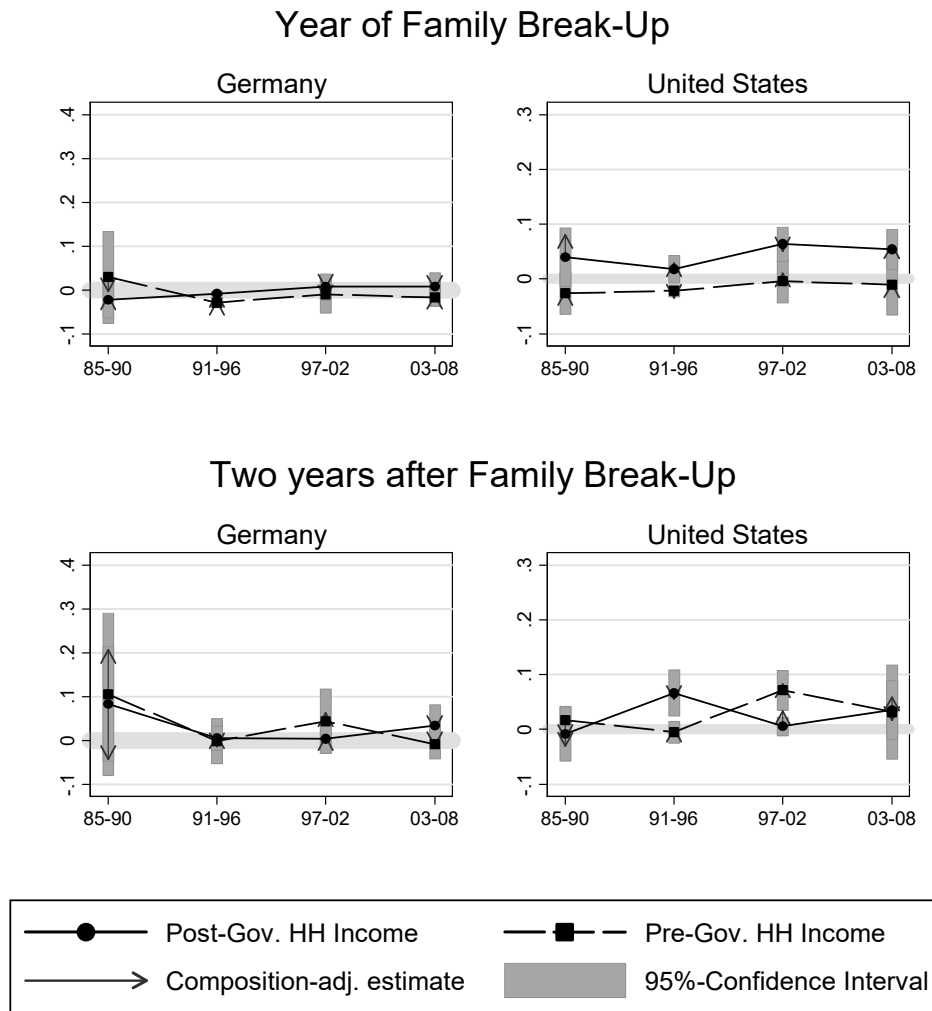
Figure 4.7 Fathers – Probability of Becoming Poor in the Year of Family Dissolution, and Being Poor two Years later, over Time. Germany and US. GSOEP 1984-2010, PSID 1980-2007.

In line with increases in large income drops over time among American fathers, the risk of entering poverty in the year of family dissolution also increased slightly over time. However, already two years after separation, the variation in the risk of entering poverty is so inconsistent that a certain time trend is not detectable. As for German fathers, there seems to be no clear and consistent relation between losing more than half of previous household income and the risk of entering poverty due to family dissolution.

4.5 Summary

The aim of this chapter was to track possible changes in the economic consequences of family dissolution for mothers and fathers over time, and to assess in how far these changes can be attributed to institutional changes of the welfare state. Since the conservative German welfare state expanded policies to support families and to improve especially the compatibility of work and family life more favourable terms for German mothers over time would have been conceivable. The liberal American welfare state mainly implemented and expanded policies to foster employment like the EITC in order to support low-income families. At the same time, the welfare reform with its change from AFDC to TANF was expected to have had a mixed impact on the financial situation of separated mothers. So both countries actually implemented measures to facilitate private efforts in order to enhance private incomes, with or without cutting public support, respectively.

German mothers saw a reduction of their pre-government income losses only between the 1980s until the mid-1990s. During the following periods the level of relative losses stagnated, no further improvement has taken place. The recovery of income losses between the year of family dissolution and two years later has even slowed down over time so that pre-government income losses have become more persistent over time. The welfare state constantly mitigated these losses over time but did not change this trend by adjusting the extent support over the past decades accordingly. The impact of the welfare state remained virtually stable over time. As mentioned above, the effort and success of the welfare state to promote private strategies to reduce income losses are difficult to assess. However, looking at changes in pre-government income losses it has to be concluded that its effort has not resulted in continuously reduced pre-government income losses over time.

American mothers' pre-government income losses have taken place on slightly lower levels than for German mothers; only during the 1980s American mothers saw clearly lower levels of loss than German mothers. Their pre-government income losses increased only slightly over time, with a recent reduction of income losses between the 1990s and the 2000s. Until the early 1990s, American mothers managed to recover largely from their income losses within two years after family dissolution, and largely so by private efforts. The welfare state further enhanced incomes but not as much as for German mothers. The impact of the welfare state was markedly reduced only in the most current period, the one following the 1996 welfare reform.

Altogether, the biggest cross-national differences can be seen during the 1980s when the liberal dream was still valid for American mothers. Although initial income losses in the year of family dissolution were high, they recovered from these losses almost completely within two years after the event. For German women at that time the conservative nightmare applied: income losses were high in the year of separation and were still high two years later although the welfare state mitigated a considerable share of the income loss. Over time, German and American mothers have somewhat converged in that they have both moved into the direction of the other. Income losses of German mothers have slightly decreased over time while those of American mothers have increased, especially two years after the event. For bot losses have become more persistent over time.

Compared to mothers, fathers do not have to suffer losses in terms of adjusted pre-government household income. Both German as well as American fathers experience positive income changes of between 10% and up to 60% in the year of family dissolution. The trend over time is consistently negative for American fathers but with 40% the income gain in still high in the most current period of 1997 to 2004. For German fathers the period of the 2000s

stands out. After a negative time trend between the 1980s until the early 2000s with decreasing income gains, the period 2003 to 2008 stands out when that trend is reversed strikingly.

In the years following family dissolution, these initial income gains are diminished for German fathers but still vary at a level of around 30% to 40% of income gains two years after the event. Even after taxes and transfers income gains are still positive but decreasing over time so that German fathers in the longer term do not benefit as much as during the 1980s and first half of the 1990s. For American fathers, initial income gains are diminished after taxes and transfers in the long run to such an extent that the income gain they experience in the year of event is even reversed into a relative loss of around 5% during the 1980s and even into relative losses of about 15% during the 1990s and 2000s. This is in line with findings of McManus and DiPrete (2001) who have questioned the general finding that men do not have to suffer in economic terms. They find instead that the economic impact of union dissolution is not at all uniform for men and that men have to accept declines in living standard as well mainly due to the loss of partner earnings which they suggest to be relevant in light of the increasing economic interdependence of couples.

5   *Married & Cohabiting Parents in Germany*

This chapter first provides evidence of whether the economic consequences of family dissolution for mothers and fathers in Germany differ by marital status. Second, it aims to assess in how far changes in individual labor earnings and repartnering contribute to the changes in disposable income of cohabiting and married fathers and mothers. This is the first study to present changes in household incomes after family dissolution separately for married and cohabiting parents in Germany.

There are three sources of potential differences in post-separation economic wellbeing between married and cohabiting parents. First, there is a selection into the two types of partnerships, for example for normative reasons or because of the prospect of financial or other advantages like the feeling of security. Real or perceived advantages might lead to a self-selection into marriage and thus "selection into specialization" of couples who expect to financially benefit from marriage and a traditional division of labor (Barg & Beblo, 2009; 2010).

Second, the institutional context of marriage and cohabitation itself shapes the division of labor within couples during the partnership which can have consequences for later economic wellbeing. Germany's institutional frameworks governing marriage and unmarried cohabitation create certain incentives for the division of labor between men and women in married and unmarried couples. There are several features attached to marriage that

incentivize an unequal division of labor between husbands and wives more than in cohabiting couples. In line with this, several studies have found that married couples show a more gendered and less egalitarian division of market and household labor than unmarried couples (Coltrane, 2000; Domínguez-Folgueras, 2013; Bianchi et al., 2014; Barg & Beblo, 2010). Even after family formation – which often leads to a more gendered division of labor within couples – cohabiting couples still exhibit a more symmetric division of labor compared to married ones (Wengler, Trappe, & Schmitt, 2008; Lois, 2008; Barg & Beblo, 2010). In Germany, cohabiting mothers have higher employment rates than married and single mothers, and their weekly working hours are higher as well (BMFSFJ, 2012a). The division of labor during the relationship can have consequences for economic wellbeing when the relationship dissolves.

The third source of potential differences are rules governing post-separation financial obligations of former partners. After family dissolution the regulations for partner alimony likewise differ for married and cohabiting parents. Unmarried ex-partners can only claim alimony from the other partner if they have to care for a child under the age of three. Divorcees can expect to receive payments of alimony for a much longer period, especially when an asymmetric intra-household division of paid and unpaid labor was pursued during marriage. When cohabitation is actually perceived as a more insecure institution compared to marriage then cohabiting partners, usually women, would have to provide privately for the economic risk of separation. Married women instead might see marriage as an insurance they can rely on in case of divorce. This rationale could again add to a particular division of labor between partners and might become visible in the economic outcomes of family dissolution in these two family forms. Altogether, the three sources of differences give reason to assume

differing economic consequences and especially differing post-separation strategies to cope with income changes among married and cohabiting parent families.

For the analysis of economic consequences, household income is decomposed into sources of income change: household income before and after taxes and transfers, which were already used in the previous chapter. In addition to that, individual earnings and repartnering as a proxy for potential partner earnings are taken into account as sources of income change.

5.1 Descriptives

In this chapter, the same operationalization of family dissolution is used as in the previous one. However, in the matching procedure, one more dimension has to be added to the matching which is the marital status. Accordingly, slightly more observations get lost due to missing information on the marital status in the pre-treatment year (209 observations), and due to not finding matching observations from each the treated and untreated group of observations (88 observations). Additionally, another 53 observations were dropped in an attempt to make the group of cohabiting individuals comparable with the group of married individuals. For this, married respondents with combinations of relevant covariates that have not been observed among cohabiting respondents were dropped from the analysis. The following sample description summarizes the characteristics of the remaining 819 treated observations, including those observations for which no matching control observation could be found. These unmatched observations have to be excluded as well from the DiD analysis.

The income changes are analyzed at four consecutive points in time after family dissolution. The previous chapter used sequences as well but only showed the results for year *t+0* and *t+2*. This was done in order to focus more on the changes over historical time instead of the income recovery following the event. Showing income trajectories for four time periods

would have been quite complex. In this chapter, however, the changes over time had to be given up so that the focus can be on income trajectories by marital status. In this chapter, for every year since family dissolution up until *t+3* the *relative* income change compared to the pre-dissolution income situation is presented.

Table 5.1 summarizes the characteristics of all respondents who are at risk of family dissolution in a given year. Figures refer to the year *before* the event or non-event year and give mean values unless stated otherwise.[23] A look at cohabiting and married mothers who separate in columns (2) and (4) shows that cohabiting mothers who do not separate, are on average more highly educated than married mothers who do not separate. Only 11.8% of not separating cohabiting mothers have less than a High School degree compared to 22.3% among married mothers. Also, their individual earnings are higher (almost €14,000 annual earnings compared to between €9,800 and €11,600), and household labor earnings are subsequently more equally distributed between the partners (contribution of 29.7% to household labor earnings compared to between 19.3% and 29.1%). Employment rates are pretty similar among mothers at about 80%. However, with 37.4% of all employed cohabiting mothers, they are more likely to be in full-time employment than other mothers (between 24.4% and 36.7%).

Comparing cohabiting with married fathers who do not separate in columns (6) and (8), the table shows that cohabiting fathers are more highly educated than married fathers. Only 10.6% of them have less than a High School degree compared to 16.6% of married fathers. Yet, cohabiting fathers exhibit a lower employment rate (91.4% vs. 97%), and are less likely to be employed full-time (88.6% vs. 95%). Also, their individual labor earnings are

---

[23] As mentioned, more men than women leave the survey due to household split-offs after family dissolution. Therefore, the number of observations and household characteristics of women, like the contribution to household labor earnings and household income, do not correspond with those of men.

	MOTHERS			
	MARRIED		COHABITING	
	(1)	(2)	(3)	(4)
	with FD	without FD	with FD	without FD
Age	36.3	37.1	35.6	35.8
Number of Children<15 in HH	1.7	1.7	1.5	1.4
Less than High School, %	20.5	22.3	22.5	11.8
Annual Individual Earnings (2007 €)	11,582	9,816	11,324	13,886
Annual Median HH Equiv. Income (2007 €)	16,027	16,608	15,792	16,739
Contribution to HH Labor Income, %	25.7	19.3	29.1	29.7
Employed*, %	84.0	82.6	81.7	79.9
thereof Employed Full-time, %	30.5	24.4	36.7	37.4
N Sequences	351	21,976	120	1,201

	FATHERS			
	MARRIED		COHABITING	
	(5)	(6)	(7)	(8)
	with FD	without FD	with FD	without FD
Age	38.2	39.0	36.8	36.9
Number of Children<15 in HH	1.6	1.7	1.3	1.4
Less than High School, %	11.9	16.6	16.5	10.6
Annual Individual Earnings (2007 €)	31,187	37,092	25,854	27,917
Annual Median HH Equiv. Income (2007 €)	16,065	16,397	15,684	16,128
Contribution to HH Labor Income, %	73.5	78.4	70.9	67.1
Employed*, %	94.8	97.0	89.9	91.4
thereof Employed Full-time, %	91.0	95.0	83.1	88.6
N Sequences	269	21,661	79	1,187

* Being employed includes regular and marginal employment, education and training, military and civilian service. The employment status refers to the time of the interview.

Table 5.1 Mothers and Fathers – Characteristics of Individuals with and without Family Dissolution (FD) in Year before Event, by Marital Status. Germany, GSOEP 1984-2010.

substantially lower than those of married fathers (about €28,000 vs. €37,000). This contributes to the more equal distribution of household labor earnings among cohabiting parents compared to married parents. As formulated in the research questions, this within-couple income distribution could result in lower relative losses for cohabiting mothers than for married mothers, and higher relative losses (or lower relative gains) for cohabiting fathers than for married fathers.

What Table 5.1 also shows is that those who experience family dissolution and those who do not differ regarding selected characteristics. Cohabiting mothers who separate have on

average much lower education levels than their control group, as the comparison of columns (3) and (4) shows. As just mentioned, only 11.8% of cohabiting mothers who do not separate have less than a High School degree while among those who do separate 22.5% have less than a High School degree. They also have much lower individual earnings than those who do not separate (€11,300 compared to €13,900). A look at married mothers in columns (1) and (2) instead shows somewhat the opposite. In column (1), 84% of married mothers who separate are employed of which 30.5% are employed full-time. Of mothers who stay married (column (2)) about 82.6% are employed and 24.4% of those who are employed are working full-time. Separating married mothers have higher individual earnings (€11,600 vs. €9,800) and thus contribute more to household labor earnings than married mothers who do not separate (25.7% vs. 19.3%). Thus, cohabiting and married mothers who separate are more similar than a comparison of mothers in the respective control groups, those who do not separate, would suggest.

This finding also holds for fathers. Cohabiting fathers who separate show even lower rates of full-time employment and a slightly lower employment rate, and are also lower educated than those who do not separate (see columns (7) and (8)). Married fathers who separate show as well slightly lower employment rates and household incomes than those who do not separate, despite a higher level of education (see columns (5) and (6)). The descriptive findings are in line with previous research that showed different determinants of union dissolution among cohabiting compared to married couples (Lois, 2008). These differences between the respective treatment and control groups indicate the necessity for a matching procedure to produce comparable groups of individuals. The matching takes care of this type of selection, namely the selection into family dissolution among cohabiting and married couples, respectively.

5.2 Average Income Changes

Figure 5.1 shows the estimated mean percent changes in equivalent pre- and post-government household income following family dissolution. Changes are shown separately for mothers (upper panels) and fathers (lower panels), and by marital status. Left panels show changes in pre-government income and right panels the changes in post-government income. The year *t-1* indicates the average income of all available pre-event years back to *t-3* (see section 3.3).

The upper left panel shows the relative changes in pre-government income for married and cohabiting mothers. In the year of family dissolution married mothers lose about half of the pre-government equivalent household income they had before family dissolution. Cohabiting mothers even lose about 65% of pre-dissolution income in the year of event. Though the confidence intervals around the estimates of cohabiting mothers are quite wide, the estimated loss is quite considerable. For cohabiting mothers, the results are only different from zero in the year of family dissolution and one year later.

An explanation for the differences in income losses in the year of separation between married and cohabiting mothers could be that they exhibit different employment reactions in response to family dissolution. It could be plausible that married women increase their working hours more than cohabiting women in the year of separation because before family dissolution they work full-time to a lower extent than cohabiting mothers. Also, they might move in with a new partner earlier than cohabiting women, which would also reduce their household income losses in the year of separation. The analyses of the changes in individual earnings and cohabitation status in section 5.3 will show whether such reactions are part of the explanation.

Women

Men
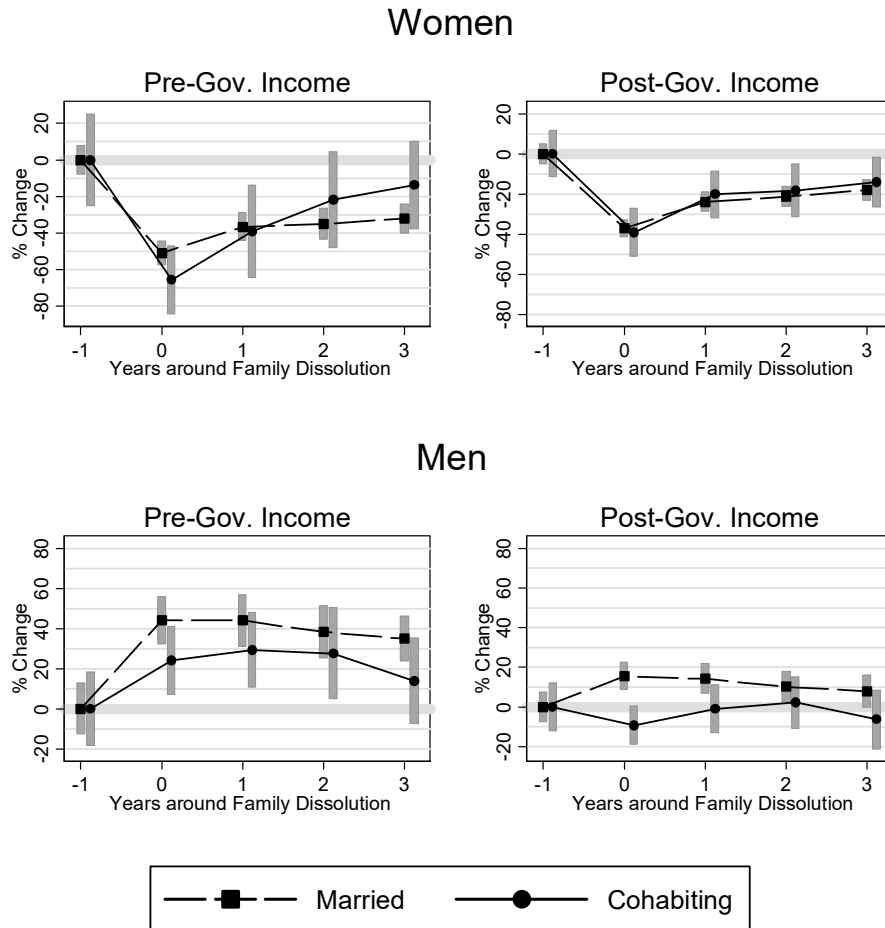
Note: Grey bars show the 95% confidence interval.

Figure 5.1 Mothers and Fathers – Relative Changes in Pre- and Post-Government Income following Family Dissolution, by Marital Status. Germany, GSOEP 1984-2010.

In the years following family dissolution, both married and cohabiting mothers' household incomes recover from the high initial loss. Cohabiting mothers almost reach their pre-dissolution income within three years. For them the remaining pre-government income gap amounts to only about 15%. Married mothers in fact recover most in the first year after family dissolution but afterwards their household income stagnates. After three years, married women find themselves with an adjusted pre-government household income that is still about 30% lower than the income they had before family dissolution. Taking the whole income

trajectory around family dissolution into account, it becomes apparent why a prediction of overall income changes is difficult. Depending on the income concept and on the time since family dissolution, the research question on differences in outcomes between cohabiting and married mothers has to be answered differentiated: Cohabiting women seem to experience high relative losses in the year of family dissolution but show a fast income recovery two and three years after family dissolution. Married mothers instead experience losses that are lower than those of cohabiting mothers but from which they do not recover very well. Especially after the second year following family dissolution the upward income trend has come to a halt.

Turning to post-government income changes for mothers, the upper right panel shows that the welfare state mitigates a considerable proportion of mothers' income loss through taxes and transfers. Mothers' income losses are especially strongly relieved in the year of family dissolution. Relative income losses are diminished to about 40% both for cohabiting and married mothers. This means in the year of family dissolution, cohabiting mothers receive more welfare state support than married mothers in relative terms. In the following years, the welfare state continuously mitigates pre-government losses to a remaining level of about 15% to 20% of post-government income loss for both married and cohabiting mothers. Thus, the welfare state equalizes the relative income losses of previously married and unmarried cohabiting mothers.

The lower panels of Figure 5.1 show the results for fathers. The difference between married and unmarried fathers' income changes are also quite substantial. Cohabiting fathers experience lower gains in pre-government income following union dissolution compared to married fathers. Nevertheless, they still experience considerable gains of between 15% and

30%. For both groups of fathers, the gain from not having to share income with a partner and children apparently more than compensates for the loss of partners' earnings.

Cohabiting fathers' income gains are not just lower they also diminish faster in the years following dissolution than for their married counterparts. This is presumably because unmarried fathers have lower employment rates and also lower full-time employment rates and thus less stable incomes. Another possibility is that they repartner earlier and thus again have to share their income with other household members. Both possibilities will be addressed in the following section 5.3 on post-separation coping behavior.

The lower right panel of Figure 5.1 shows that cohabiting fathers actually lose income following family dissolution when disposable household income is considered. However, compared to mothers these losses are rather small. Married fathers' high relative gains are reduced by taxes and support payments but they still experience income gains of up to 15% of equivalent household income. Recall that outgoing private transfers were simulated for the high proportion of fathers who did not report any alimony and child support payments. This means that even under the conservative assumption of shared residence of the child(ren), previously married fathers still experience income gains following family dissolution.

The way post-government household income of fathers was constructed here, it considers outgoing alimony and child support payments to female ex-partners. If none of these private transfers are considered and deducted from post-government income, both married and cohabiting fathers experience gains in disposable income following family dissolution as results not presented here show. Accounting for support payments thus makes a difference

when assessing the financial consequences of union dissolution for fathers, especially for cohabiting ones.[24]

5.3 Post-Separation Coping Strategies

After family dissolution has taken place, separated individuals typically try to adjust to their new economic situation. Changes in household income in the aftermath of family dissolution may result from changes in individual earnings or by moving in with a new partner to share income and expenses. This can also happen parallel to the loss of partner earnings in the year of family dissolution. The following paragraphs first describe changes in individual earnings, and second, changes in the relationship status for cohabiting mothers and fathers.

Figure 5.2 shows relative changes in mothers' and fathers' individual labor earnings around family dissolution.[25] Married mothers increase their labor immediately in the separation year by about 35%. In contrast, cohabiting mothers increase their earnings on average by less than 10% in the first two years. Their earnings are observed to increase substantially only in the second year after family dissolution.

However, mothers' percentage earnings increases should be interpreted with caution because even moderate absolute increases from a very low earnings level can lead to overstated relative increases.[26] Though Table 5.1 shows that married and cohabiting mothers

---

[24] Cohabiting fathers' financial burden is possibly overestimated because some of these men do not have to pay child support because they are more often than married fathers not the biological parent. Whether a father is the biological father of the child is reported in the SOEP only since 2001. Accordingly, the actual differences between married and cohabiting fathers are supposedly smaller.

[25] Figures 5.2 and 5.3 do not show confidence intervals because the intervals are very wide so that estimated changes are hard to read.

[26] Earnings of zero are set to one in order to calculate percent changes. This can still produce misleading results – an income change from €1 to €500 results in a 500% increase in income. Income changes are capped at 300%, see section 3.3 for more information.
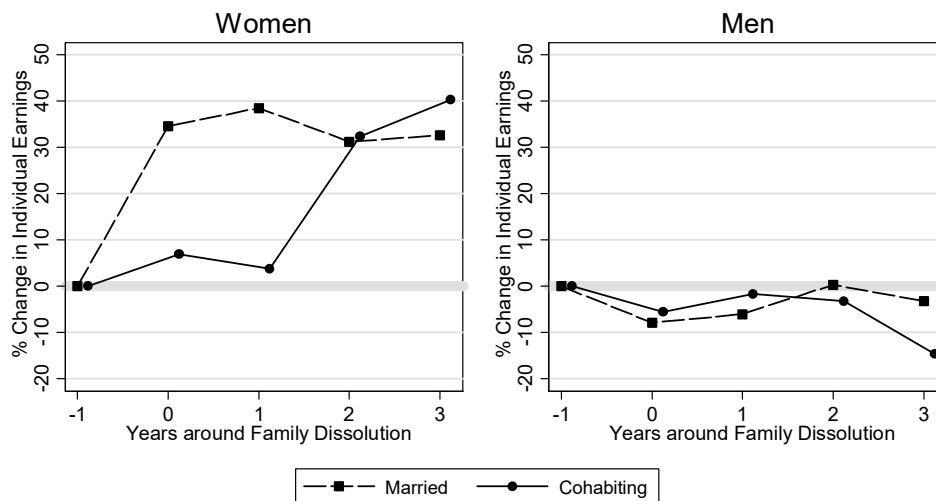
Figure 5.2 Mothers and Fathers – Relative Changes in Individual Earnings following Family Dissolution, by Marital Status. Germany, GSOEP 1984-2010.

who separate have very similar average earnings in the year before separation, among married mothers a higher proportion is part-time employed than among cohabiting mothers. Thus, their earnings increase is more likely to start from a lower level of earnings which could lead to an inflated percent increase in earnings for married mothers more than for cohabiting mothers.

When related to their respective changes in household incomes in Figure 5.1, results suggest that the income recovery experienced by married mother households can be attributed to some extent to their increased own earnings following family dissolution. Their earnings increases in the year of separation probably prevent them from experiencing income losses as high as those experienced by cohabiting mothers in the year of family dissolution.

In contrast, fathers tend to change their employment behavior to a lesser extent, and their employment behavior follows opposite trends compared to mothers. Both married and cohabiting fathers see their labor earnings decrease, especially in the year of family dissolution. Since men usually experience gains in adjusted income, there is no financial need though for earnings increases. Also, men often work full-time already before separation,

which means they have little room to increase hours and thus earnings. As cohabiting fathers have lower labor force attachment levels than married fathers, their decrease in earnings might also be a sign of less stable careers.

After considering changes in individual earnings as a way of compensating for income losses, the question remains how cohabiting mothers manage to recover from their losses as fast as shown in Figure 5.1 without increasing their own earnings considerably in the first years. Another potential source of income is a new partner in the household.

Figure 5.3 depicts the estimated change in the relationship status which is defined as the proportion of individuals with a partner following separation. While all the individuals examined here lost their partner upon separation, some had already repartnered by the subsequent survey wave. This is why the proportion with a new partner in the year of union dissolution does not completely reach zero. About 10% of married mothers and 5% of cohabiting mothers had already moved in with a new partner within approximately one year after separation. Consequently, the higher rate of repartnering among married mothers more strongly attenuates their income loss in the year of family dissolution compared to cohabiting mothers. It has also been shown previously that repartnering is more gainful for women than taking up employment which would add here to the finding of buffered income losses of married mothers in the year of family dissolution.

Cohabiting mothers' repartnering rate accelerates only later. Two years after separation, married and cohabiting mothers have repartnered to similar proportions. Around 30% are living together with a partner again. During the following year, cohabiting mothers increase the pace again so that in the third year almost 60% are repartnered. Thus, the repartnering behavior of cohabiting mothers cannot explain their early onset of income recovery as seen in Figure 5.1. All in all, a chronological mismatch remains between the fast and substantial
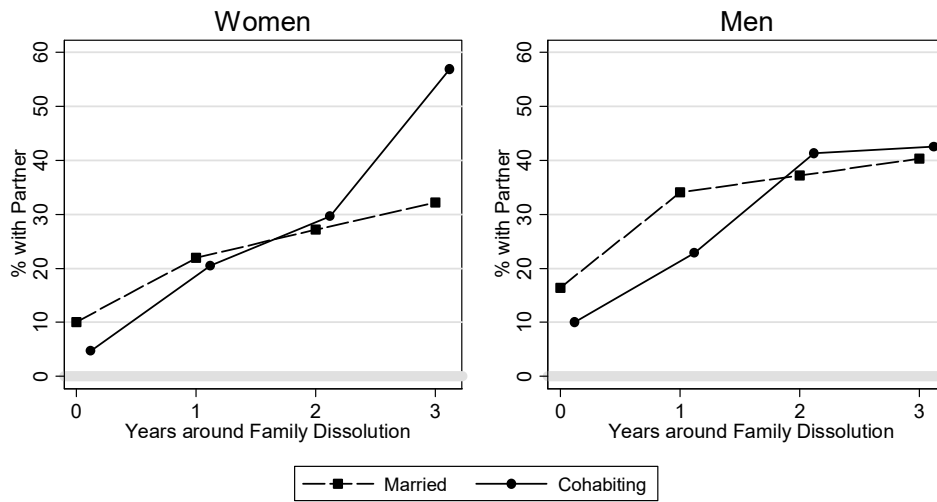
*Note: The year before family dissolution is not shown in the graph
because the proportion with partner is 100% by definition.*

Figure 5.3 Mothers and Fathers – Rate of Repartnering following Family Dissolution,
by Marital Status. Germany, GSOEP 1984-2010.

recovery of household income of cohabiting mothers and the rather late increase of individual earnings and repartnering of these mothers.

Fathers show a similar pattern of repartnering as mothers but on a slightly higher level. As was the case for mothers, fathers who were married before family dissolution repartner faster than cohabiting fathers. In the year of separation, around 17% of previously married fathers already live with a new partner while this applies to about 10% of cohabiting fathers. After three years following separation about 40% of both married and cohabiting fathers have moved in with a new partner. Since men's individual earnings do not change considerably, their earnings do not drive the household incomes changes as observed in Figure 5.1. It is rather the ongoing repartnering in the years after separation that increasingly diminishes adjusted household income in the aftermath of family dissolution.

5.4. Summary

The analyses provide evidence on whether economic wellbeing of mothers and fathers in Germany after family dissolution differs by marital status. The results also allow assessing in how far changes in individual labor earnings and repartnering contribute to the changes in disposable income of cohabiting and married fathers and mothers. This is the first account of the economic consequences of family dissolution with a clear focus on differences by marital status in Germany. Cohabiting unions with children are an increasing group and therefore of rising interest, but still a huge research gap exists when it comes to this familial living arrangement. These analyses add to the knowledge about cohabiting couples with children as a family form.

At first glance, the results on relative post-government income losses suggest that the differences are rather small between cohabiting and married mothers. The welfare state equalizes the differences in income losses between these two groups of mothers. However before taxes and transfers, the differences are much more pronounced. The findings show that cohabiting mothers suffer higher relative pre-government losses in the year of family dissolution. Previously married mothers repartner slightly faster, especially in the year of family dissolution, which, in combination with an immediate increase in labor earnings, seems to prevent them from experiencing the high initial losses that cohabiting mothers experience. On the other hand, cohabiting mothers recover much faster from income losses in the years following separation. Within three years, cohabiting mother households almost reach their pre-dissolution income level through private efforts.

Fathers who experience the dissolution of their family suffer much less income volatility than mothers, no matter whether they were previously married or not. Yet, cohabiting fathers experience lower gains in equivalent pre-government household income than married fathers.

After taxes and transfers they even suffer moderate losses in adjusted household income. In line with McManus and DiPrete (2001), separating men are a heterogeneous group as well, and increasingly so as more and more cohabiters are comprised in this group. Fathers' changing income in the aftermath of family dissolution seems to be related to their repartnering behavior rather than to changes in individual labor earnings, which have been shown to fluctuate only slightly following family dissolution.

The level of income changes fathers experience depend largely on assumptions about support payments to the ex-partner and children. Even when simulating equally shared child costs between parents, the finding of relative income gains or only moderate losses for fathers remains. The results for fathers serve as an attempt to more realistically reconsider the costs that arise in multi-local families where both parents are equally financially and socially involved in the lives of their children (Schier & Proske, 2010).

The unequal economic consequences of family dissolution for men and women that are usually found for married couples remain for cohabiting couples. The main reason for this is that children in these couples also usually remain with their mothers after family dissolution. Cohabiting mothers in Germany are as well confronted with limited (full-time) employment opportunities due to poor child care availability as well as irregular and incomplete child support payments. However, the findings also show that there actually is a smaller gender gap between cohabiting fathers and mothers compared to their married counterparts. This smaller gender gap comes mostly at the expense of cohabiting fathers and only slightly benefits cohabiting mothers.

The different sources of differences between married and cohabiting couples at the three stages of relationship formation and dissolution may all contribute to the differences in economic wellbeing after family dissolution between married and cohabiting mothers.

Nevertheless, it is still unclear whether unmarried mothers recover faster from their losses because they are forced to by a lack of institutionalization or because they are better able to, or both. It cannot be concluded from the findings that cohabiting mothers are more capable of coping with income losses than married mothers. But neither do the results suggest that marriage safeguards mothers better from experiencing severe income losses compared to cohabitation.

6   *Conclusion*

In the past decades, Western countries have witnessed a number of developments towards more gender equality in the society, more independence of women, more gender egalitarian relationships and division of labor. Life courses are not as rigid and standardized anymore as in the past; life events like marriage and the birth of children are not strictly connected to each other anymore, and the order of these events can vary without stigmatization of the individuals involved. Unmarried cohabitation and even unmarried childbearing are widespread nowadays. These social upheavals did not take place independent of political changes but were instead accompanied by a number of policies strengthening die rights of women and female employees, policies facilitating the compatibility of employment and family duties, and lately policies improving the rights of fathers as caregivers in addition to being breadwinners only.

Family dissolution, or separation and divorce in general, are events that are known in the literature for their extremely unequal economic consequences for women compared to men. However, in light of the societal changes of the past the following questions arose which build the base for this dissertation. First, given the political and societal changes in favor of female employment and more gender egalitarianism, the inevitable question is whether the negative economic consequences of family dissolution have accordingly diminished for German and US American mothers over time. Arguments in favor of an improved situation for mothers

can be reversely applied for fathers in these two countries. Whether, to what extent, and in which direction can changes in the economic consequences be observed for fathers over time? Partly evolving from answers to the first set of questions and the fact of increasing numbers of families in which parents are not married, another research question came up. More importantly, the analysis of policy change over time in Germany revealed differing institutional regulations by marital status of parents. Accordingly, the second set of questions asks for differing economic outcomes following family dissolution for married compared to cohabiting fathers and mothers with children in Germany.

The first set of questions is embedded in the literature on welfare state change over time. According to this literature, the predications in terms of adverse life events like family dissolution differ between Germany and the United States. For the US, several authors claim a shift from public to private provision calling the developments either a 'great risk shift' (Hacker, 2006) or as developments 'dismantling the welfare state' (Pierson, 1994). Analyses of the German welfare state change instead conclude with the result of a 'dual transformation' (Bleses & Seeleib-Kaiser, 2004) or a 'paradigm shift' (Alber, 2003). Both descriptions for Germany refer to cutbacks in policy fields regarding risks like unemployment and retirement on the one hand, and at the same time expansion in the area of family policies on the other. By answering the research questions, these policy analytical claims are put to an empirical test using the example of the economic consequences of family dissolution as one of the emerging risks of modern welfare states. Moreover, it is among the first accounts of the economic consequences of family dissolution over time for Germany.

The second topic – the differences between cohabiting and married parents – rests on the unequal legal treatment of parents depending on their marital status. Based on the assumption that cohabiting and married parents encounter incentives for an asymmetric division of labor

to different degrees, there is ample reason to assume that this will result in differing economic outcomes following family dissolution. Again, the relevance of the marital status for dissolution outcomes has never been examined for Germany.

In order to answer the research questions, a research design was developed that has never been used before for the analysis the economic consequences of family dissolution. Therefore, the world's two longest running panel datasets have been used to create an event-centered dataset that allowed the analysis of immediate and longer term income changes following family dissolution. Using a difference-in-difference matching design, the analyses can account for income changes that are not the sole consequence of family dissolution. Thus, the results can be interpreted as the pure effect of family dissolution on economic outcomes, net of changes in economic outcomes that happen to the overall population which is not affected by family dissolution but has otherwise similar characteristics as those hit by the event.

6.1 Key Findings

The dissertation confirmed main findings of previous research, especially regarding the gender differences in family dissolution outcomes. Mothers experience clearly higher relative income losses and consequently higher risks of poverty than fathers. This finding is universal, that is it holds for both countries, for all time periods observed, and for all measures of economic outcome that were employed. However, in light of the described institutional changes and changes in the employment behavior of mothers and fathers over time, it could not to be expected that this gap had completely vanished.

Another confirmation of previous findings can be made regarding the result of more welfare state intervention in Germany compared to the United States. At least in the way the welfare state effect is measured here, German mothers can expect more support of the welfare

state than US mothers. But also among fathers, more intervention of the welfare state is visible in Germany compared to the US which shows up in the higher reduction of household income after taxes and transfers have been taken into account.

Of course, the dissertation also revealed a number of novel findings. The following sections will synthesize the key findings of the dissertation and will incorporate them into the broader context of institutional variation within and between countries surrounding family dissolution.

Increasing persistence of income losses for German and American mothers over time. Though income losses have decreased slightly over time for German mothers, the results also showed an increasing persistence of these losses. German mothers do not recover from their losses as fast as before. This is remarkable as the welfare state buffer as it is measured here has been quite stable over time. Hence, the remaining variation of income losses over time stems from changes in pre-government income. However, since the mid-1990s the level of relative pre-government losses stagnated, no further improvement has taken place since then.

For American mothers the increasing persistence of income losses starting in the early 1990s can be attributed to two sources. First, in the first half of the 1990s, income recovery through individual efforts has decreased tremendously. Later, in the second half of the 1990s, after welfare reform, a decrease in the buffering effect of the welfare state has further slowed down the recovery path. The impact of the welfare state was markedly reduced in the period following the welfare reform. This meant even more individual responsibility for American mothers after the welfare reform. They might have reached the limit of helping themselves so that no more recovery through own efforts are visible in the period after the welfare reform.

These findings lead back to the main research questions of this dissertation: Do institutional and individual-level changes over time coincide in each of the two countries or not? And are macro-level claims regarding welfare state change confirmed or refuted by the micro-level empirical findings?

For Germany, the macro-level interpretations of a 'dual transformation' or 'paradigm shift' both forecast a shifting of resources from old risks like unemployment and retirement to new risks such as family dissolution. As she short review of relevant family policy change over time in Germany has shown, there are certainly signs of change towards more compatibility of work and family life, higher employment rates for women, for example through more access to services like child care, without cutting allowances or tax benefits.

As the results have shown we can indeed not confirm distinct income alleviations or improved income recovery following family dissolution over time for mothers in Germany. It is anyway debatable, how big of an improvement would be necessary to attest clearly improved economic consequences following family dissolutions. Of course, one could argue that the macro-level claim does not refer to certain life risks like family dissolution, or certain subgroups like separating mothers. But still, improvements should become visible for the average of a vulnerable subgroup of the population that is actually in need of welfare state support after facing a certain risk. And last, the slight decrease of relative income losses in the year of family dissolution over time can also be positively interpreted in light of otherwise weakened welfare state institutions like unemployment insurance and public pension schemes.

For US mothers, the suggested relationship between macro-level claims, evolving social and family policies, and outcomes on the individual level turned out to be different than for Germany. The macro-level claim was somewhat clearer. The literature suggested a 'risk

shift', retrenchment, and a 'dismantling' of the welfare state as a whole. Provisions for new social risks were of minor concern in these projections. Accordingly, the development of social and family policies was not very much in favor of individuals hit by new social risks like family dissolution. This was anyway not to be expected since the US welfare state usually only intervenes when the market is unable to provide coverage. As an example, single motherhood is rather addressed with programs to promote marriage than by promoting employment or affordable high-quality child care. So, the original question was whether American mothers can, in spite of lacking support, still manage to recover from income losses because low state support induces self-help, or whether they cannot.

The results for US American mothers have shown that, as for German mothers, income losses have become more persistent over time. This development started with a slight increase in pre-government losses combined with a very low recovery within two years. While before the welfare reform these losses were still buffered by the welfare state, only after the welfare reform, the weakening impact of the welfare state for US mothers becomes visible. At the same time however, relative losses and recovery behavior was again much more in favor of American women than before the welfare reform. Only these losses were not further buffered by the welfare state. Which one of the developments precedes the other – whether mothers (have to) intensify their private effort because there is no support to expect from the state, or whether the welfare state does not have to intervene because mothers recover from losses by themselves – cannot be decided from the results. It could also be interpreted that the welfare state still would buffer income losses when it was necessary but only then, otherwise there is no support. In any case, from the analyses it cannot be answered whether US mothers are better able to help themselves or whether they are just forced to given low state support.

For US mothers it is difficult to confirm or refute the claim for a risk shift. If the shift exclusively refers to a shift from public to private provision then I would confirm the risk shift hypothesis and the prediction that the US have become even more Americanized over time. On the other hand, it cannot be negated that the improved income recovery in the period after the welfare reform is not actually the result of the 'hidden welfare state', one that cannot be measured by the difference between pre-and post-government income. Activation policies or tax incentives to support employment are only some welfare state measures that are invisible in the welfare state measure used here.

Decreasing income gains for fathers in Germany and the United States over time. Both German and US American fathers face a deterioration of the economic consequences of family dissolution. After having decreased over time, German fathers' relative income changes are still positive both in the year of family dissolution and two years later. One reason for this is that German fathers increasingly experience the loss of partner earnings. Also among American fathers, income gains still prevail in the year of family dissolution. Two years later, however, they have been facing income losses already since the 1980s that have additionally increased considerably over time. This finding confirms previous research that challenged the general finding of men to be the winners of family dissolution (Kalmijn, 2005; McManus & DiPrete, 2001; Bröckel & Andreß, 2015).

Putting the results of fathers into their socio-political context appears somehow misplaced. Separating or single fathers have never been the target of social and family policies in neither of the two countries. Their economic consequences of family dissolution have never been shown to put the majority of them at risk of losing income or let alone at risk of poverty. Accordingly, separating fathers, who are to very large parts the nonresident parents after family dissolution, were never seen in the need for welfare state support. Instead,

including men in the analyses is more of a statement for the systematic inclusion of men in family sociology in general. But especially in the divorce literature, research often focuses on the situation of women and neglects the outcomes for men.

Considered together, the results for mothers and fathers suggest a slight narrowing of the gender gap in dissolution outcomes over time. Though mothers still experience higher losses than fathers, the gender gap in dissolution outcomes has at least shifted slightly over time. As the key findings above have already led to assume, the result of a smaller gender gap comes mostly at the cost of income declines for fathers and less so for the benefit of income improvements for mothers. For US parents, a decreasing gender gap can only be confirmed for the year of family dissolution. Two years after the event, both mothers and fathers experienced such increases of income loss that the gap was not reduced but just shifted to a higher level of loss. Whether a decreasing gender gap at the cost of higher losses for fathers is a positive development needs some further thoughts. That fathers would actually not really benefit from more gender equality was expectable though. It is no surprise that more gender equality would come at the cost of the economic situation of fathers, or men in general. Given that this development took place because fathers are now more involved in children's lives and this incurs costs (instead of foregone earnings) on their side, it still does not mean that this alleviates the financial situation of mothers. The financial burden would only be more equally distributed.

The welfare state equalizes the relative income losses of previously married and cohabiting mothers in Germany. The results for married and cohabiting mothers in Germany showed negligible differences between German cohabiting and married mothers in disposable income, but considerable differences in losses of income before taxes and transfers. The relative losses for married and cohabiting mothers are very similar, both in the

year of family dissolution and several years after the event. Both groups on average do not reach their pre-dissolution income level within three years following family dissolution. Having in mind the results for German women from the German–US comparison, the longer observation of income changes until three years following the event instead of two shows that, first, even in the third year after family dissolution there is still recovery of income losses going on, and second, that the pre-dissolution income level was still not reached.

A further look at changes in pre-government income shows that it is the impact of the welfare state that equalizes the differences in income losses between these two groups of mothers. Before taxes and transfers, the differences are much more pronounced. Cohabiting mothers suffer higher relative losses in the year of family dissolution. However, they recover much faster from these higher income losses in the years following separation. Within three years, cohabiting mother households reach a certain income level without much welfare state support. Already from the second year after the event their income level is not further enhanced through welfare state support. For married mothers on the other hand, pre-government income losses are more moderate. While losses are not as high in the year of event, married mothers have difficulties to recover from these losses. Without the income buffering of the welfare state, married mothers would, after three years, remain with relative income losses double as high as for cohabiting mothers.

Previously married mothers repartner slightly faster, especially in the year of family dissolution. This seems to prevent them from experiencing such high initial losses which cohabiting mothers experience, despite losing higher shares of partner income than cohabiting mothers. Married mothers also immediately increase their labor earnings. However, this estimate is probably overestimated due to the low earnings level married mothers start from which easily produces inflated results. Though their rate of repartnering seems low, it is

known that women economically benefit more from repartnering than from taking up or increasing their employment. The earnings increases of cohabiting mothers in contrast seem low in relative terms; however they might actually be higher than those of married mothers in absolute terms.

Cohabiting fathers fare worse than married fathers. Fathers in Germany who experience the dissolution of their family suffer much less income volatility than mothers, no matter whether they were previously married or not. Compared to mothers, differences between married and cohabiting fathers are visible in changes of income before as well as after taxes and transfers. The welfare state does not alter the difference between the two groups of fathers. With regard to both income concepts, cohabiting fathers fare worse than married fathers. Cohabiting fathers suffer moderate income losses of disposable income while married fathers experience moderate income gains. Having in mind that this income concept assumes a higher economic obligation than usual by assigning a weight of 0.3 for a child to the nonresident father household, it is striking that married men still experience income gains despite this assumption. Fathers' changing household income in the aftermath of family dissolution seems to be driven by their repartnering behavior rather than by changes in individual labor earnings, which have been shown to fluctuate only slightly following family dissolution.

Accounting for support payments is decisive for men's income changes. If none of these private transfers are considered and deducted from post-government income, both married and cohabiting fathers experience gains in disposable income following family dissolution. Accounting for support payments thus makes a difference when assessing the financial consequences of union dissolution for fathers, especially for cohabiting ones.

Another interesting finding of the comparison of married and cohabiting couples in Germany is the smaller gender gap in the economic consequences of family dissolution between cohabiting mothers and fathers compared to married ones. As for the German–US comparison, the smaller gap comes mostly at the cost of cohabiting fathers compared to married fathers, but also slightly for the benefit of cohabiting mothers compared to married mothers. The remaining gap is probably owed to fact that also in cohabiting couples, children usually stay in their mother's household, and also cohabiting mothers face limited (full-time) employment opportunities due to poor child care availability as well as irregular and incomplete child support payments.

As for the German–US comparison of mothers, also for the comparison of married and cohabiting mothers in Germany the same discussion about the boon and bane of welfare state support evolves: are cohabiting mothers better able to privately cope with income losses or are they forced to given the lower welfare state support they are facing? And no matter what the answer is, does this mean that cohabiting parents are more egalitarian than married parents?

6.2 Outlook and Challenges

The orientation towards family policies might have implied an improved situation for those hit by family dissolution. However, at the same time women – whether hit by adverse events or not and no matter whether as mothers or not - still represent a social risk group of their own, both in the United States and Germany. In the recent past, Germany has frequently been described as starting to move away from the male breadwinner model towards a dual earner model, at least in terms of policy change. In real terms, however, dual earners cannot for a long time yet be equated with equal earners in Germany. Increasing employment rates

for women and mothers did not automatically translate into more moderate economic consequences. It is known that the increase in the overall employment rates of women in Germany was the result of an increase in part-time and marginal employment. And obviously this kind of employment does not safeguard women from experiencing high income losses.

Based only on family policy changes in Germany of the last years, it is probably too early to expect visible changes in economic consequences for mothers. Especially if such policies operate in a way that impact decisions early in the family life course like the duration of career interruptions around child birth. If such decisions are starting to be made now, then the long-term consequences of these decisions will only become visible in future family dissolutions. Take as an example the changes of parental leave policies in 2007 and changes in maintenance payments in 2008. These are, among others, supposed to support the employment of mothers and to emphasize the personal responsibility of the partners after separation. In the long term this can change the division of labor within couples with children when the prospects for post-marital support are low. However, in the short term it penalizes marriages that were entered under totally different preconditions.

As part of the 2008 maintenance law reform in Germany, also some of the protective functions of marriage, namely the generous maintenance obligations towards ex-partners in terms of duration, have been curtailed. Although the discrepancy between maintenance claims and actual support payments has been high already before the reform, financial improvements for previously married mothers at least in terms of maintenance claims cannot be expected in the future. So the 2008 reform could have had more of a signaling effect rather than a direct financial impact. In light of such changes towards equality of marriage and cohabitation, differences in economic outcomes between married and cohabiting should become smaller in the long run.

The United States have had ever since a different view of social policy and public support. Citizens are encouraged to provide for themselves and this is enforced by providing as little public support as necessary. Support is granted rather indirectly through taxes than direct cash transfers. The state treats women as workers and breadwinners instead of housewives and caregivers. As a result, female labor force participation is higher, the share of fulltime working women is higher, and the gender wage gap is lower. Looking from the outside, the overall setup makes a much more gender-egalitarian impression than in Germany. However, also in the United States, protection usually works through the household. It is mostly the household itself that has to buffer income losses when one of the partners gets unemployed or sick, or bears a child. This makes it difficult for single persons or single parents to cope with individual risks, which becomes visible in the results for US mothers presented here.

Even if dual earners were equal earners in a strict sense, an equal distribution of the financial burden would still not be guaranteed. Imagine parents with equal earnings. After separation, one or more children live with the mother for whom the father does not or cannot pay child support. How can the economic consequences of family dissolution ever be uniformly distributed? This admittedly simplistic example highlights the sources of inequality that have to be addressed apart from making men's and women's life courses more alike by promoting fulltime employment of women and mothers. Child support payments have to be enforced, or fully reimbursed by the welfare state in cases when liable parents cannot or do not pay. And affordable and high-quality child care has to be available so that single parents can stay employed after family dissolution.

With regard to alimony and child support payments, the nexus between policies and the real world, between legal claims and their enforcement or legal practice, becomes most

visible. The analysis of policies reveals that in terms of alimony and child support, German parents have on average higher legal claims than parents in the United States. Often liable parents do not meet their obligations, eligible parents do not apply for maintenance orders, and sometimes even claims are not enforced by entitled parents. The reasons behind such behavior need more attention, too. But whatever the reasons, higher entitlements do not automatically lead to a better economic situation for affected households. This is the main argument for analyses of individual-level data as a complement to analyses of changes in policies or expenditures.

If corresponding data were available, the costs and spending side of household income should be investigated more thoroughly. By simulating potential costs that arise to nonresident parents, I attempted to approach this inadequacy. However, financial costs associated with e.g. moving (for an overview on separation and housing see Mulder, 2013:366ff.), or with the legal process of divorce cannot be considered. For women, this problem of not accounting for costs arises especially in the United States where childcare is not subsidized and thus very costly.

Also, non-economic costs and benefits were left aside for the purpose of this study. Income may be an important determinant of well-being, but it is not the only one. In this regard, a study for Germany shows that women's life satisfaction after separation decreases less than that of men and that this difference persists at least for two years (Andreß & Bröckel, 2007a).

Bibliography

Aassve, A., Betti, G., Mazzuco, S. & Mencarini, L. (2007). Marital disruption and economic well-being: a comparative analysis. *Journal of the Royal Statistical Society: Series A (Statistics in Society),* 170, 781-799.

Aisenbrey, S., Evertsson, M. & Grunow, D. (2009). Is There a Career Penalty for Mothers' Time Out? A Comparison of Germany, Sweden and the United States. *Social Forces,* 88, 573-605.

Alber, J. (2003) Recent Developments in the German Welfare State: Basic Continuity or a Paradigm Shift? In N. Gilbert & R. A. van Voorhis (Eds.), *Changing Patterns of Social Protection.* (pp. 9-73), New Brunswick: Transaction Publishers.

Alber, J. (2006). The European Social Model and the United States. *European Union Politics,* 7, 393-419.

Amato, P. R. (2000). The Consequences of Divorce for Adults and Children. *Journal of Marriage and the Family,* 62, 1269-1287.

American Bar Association (1996). *The ABA Guide to Family Law,* New York: Three Rivers Press.

Andreß, H.-J., Borgloh, B., Bröckel, M., Giesselmann, M. & Hummelsheim, D. (2006). The Economic Consequences of Partnership Dissolution - A Comparative Analysis of Panel Studies from Belgium, Germany, Great Britain, Italy, and Sweden. *European Sociological Review,* 22, 533-560.

Andreß, H.-J., Borgloh, B., Güllner, M. & Wilking, K. (2003). *Wenn aus Liebe rote Zahlen werden. Über die wirtschaftlichen Folgen von Trennung und Scheidung,* Wiesbaden: Westdeutscher Verlag.

Andreß, H.-J. & Bröckel, M. (2007a). Income and Life Satisfaction After Marital Disruption in Germany. *Journal of Marriage and Family,* 69, 500-512.

Andreß, H.-J. & Bröckel, M. (2007b). Marital disruption in Germany: Does the conservative welfare state care? Changes in material well-being and the effects of private and public transfers. *Schmollers Jahrbuch: Journal of Applied Social Science Studies,* 127, 193-226.

Asendorpf, J. B. (2008). Living Apart Together: Alters- und Kohortenabhängigkeit einer heterogenen Lebensform. *Kolner Zeitschrift Fur Soziologie Und Sozialpsychologie,* 60, 749 - 764.

Avellar, S. & Smock, P. J. (2005). The economic consequences of the dissolution of cohabiting unions. *Journal of Marriage and Family,* 67, 315-327.

Bane, M. J. & Ellwood, D. T. (1986). Slipping into and out of Poverty: The Dynamics of Spells. *The Journal of Human Resources,* 21, 1-23.

Barg, K. & Beblo, M. (2009). Does marriage pay more than cohabitation? *Journal of Economic Studies,* 36, 552-570.

Barg, K. & Beblo, M. (2010) Does "selection into specialization" explain the differences in time use between married and cohabiting couples? An emprirical application for Germany. Berlin: Berlin School of Economics and Law (HWR Berlin).

Bianchi, S., Lesnard, L., Nazio, T. & Raley, S. (2014). Gender and time allocation of cohabiting and married women and men in France, Italy, and the United States. *Demographic Research,* 31, 183-216.

Bjarnason, T. & Arnarsson, A. M. (2011). Joint Physical Custody and Communication with Parents: A Cross-National Study of Children in 36 Western Countries. *Journal of Comparative Family Studies,* 42, 871-890.

Blackwell, M., Iacus, S. M., King, G. & Porro, G. (2009). CEM: Coarsened Exact Matching in Stata. *Stata Journal,* 9, 524–546.

Blank, R. (2010) The New American Model of Work-Conditioned Public Support. In J. Alber & N. Gilbert (Eds.), *United in Diversity? Comparing Social Models in Europe and America.* (pp. 176-198), Oxford: Oxford University Press.

Bleses, P. & Seeleib-Kaiser, M. (2004). *The Dual Transformation of the German Welfare State,* Basingstoke, New York: Palgrave Macmillan.

Blome, A., Keck, W. & Alber, J. (2009). *Family and the Welfare State in Europe. Intergenerational Relations in Ageing Societies,* Cheltenham: Edward Elgar

BMFSFJ (2008) Alleinerziehende: Lebens- und Arbeitssituation sowie Lebenspläne. Berlin: BMFSFJ.

BMFSFJ (2012a) Ausgeübte Erwerbstätigkeit von Müttern. Erwerbstätigkeit, Erwerbsumfang und Erwerbsvolumen 2010. Berlin: Bundesministerium für Familien, Senioren, Frauen und Jugend [Family Ministry].

BMFSFJ (2012b) Familienreport 2011 - Leistungen, Wirkungen, Trends. Berlin: Bundesministerium für Familien, Senioren, Frauen und Jugend [Family Ministry].

Boeckmann, I., Misra, J. & Budig, M. J. (2015). Cultural and Institutional Factors Shaping Mothers' Employment and Working Hours in Postindustrial Countries. *Social Forces,* 93, 1301-1333.

Bonoli, G. (2005). The politics of the new social policies: providing coverage against new social risks in mature welfare states. *Policy & Politics,* 33, 431-449.

Bonoli, G. (2007). Time Matters: Postindustrialization, New Social Risks, and Welfare State Adaptation in Advanced Industrial Democracies. *Comparative Political Studies,* 40, 495-520.

Bothfeld, S. (2005). *Vom Erziehungsurlaub zur Elternzeit. Politisches Lernen im Reformprozess,* Frankfurt/Main: Campus.

Bratberg, E. & Tjotta, S. (2008). Income effects of divorce in families with dependent children. *Journal of Population Economics,* 21, 439-461.

Bröckel, M. & Andreß, H.-J. (2015). The Economic Consequences of Divorce in Germany: What Has Changed since the Turn of the Millennium? *Comparative Population Studies,* 40, 277-312.

Brüderl, J. (2010) Kausalanalyse mit Paneldaten. In C. Wolf & H. Best (Eds.), *Handbuch der sozialwissenschaftlichen Datenanalyse.* (pp. 963-994), Wiesbaden: VS Verlag für Sozialwissenschaften.

Bumpass, L. & Lu, H. H. (2000). Trends in cohabitation and implications for children's family contexts in the United States. *Population Studies-a Journal of Demography,* 54, 29-41.

Bundesinstitut für Bevölkerungsforschung (2013) Abbildung A_12_37a: Paare mit minderjährigen Kindern nach Herkunft der Kinder in Deutschland, West- und Ostdeutschland, 2011.

Burkhauser, R. V., Duncan, G. J., Hauser, R. & Berntsen, R. (1990). Economic Burdens of Marital Disruptions: A Comparison of the United States and the Federal Republic of Germany. *Review of Income and Wealth,* 36, 319-333.

Burkhauser, R. V., Duncan, G. J., Hauser, R. & Berntsen, R. (1991). Wife or Frau, Women Do Worse: A Comparison of Men and Women in the United States and Germany After Marital Dissolution. *Demography,* 28, 353-360.

Case, A. C., Lin, I. F. & McLanahan, S. S. (2003). Explaining trends in child support: Economic, demographic, and policy effects. *Demography,* 40, 171-189.

Coltrane, S. (2000). Research on Household Labor: Modeling and Measuring the Social Embeddedness of Routine Family Work. *Journal of Marriage and Family,* 62, 1208-1233.

Covizzi, I. (2008). Does Union Dissolution Lead to Unemployment? A Longitudinal Study of Health and Risk of Unemployment for Women and Men Undergoing Separation. *European Sociological Review,* 24, 347-361.

De Regt, S., Mortelmans, D. & Marynissen, T. (2013). Financial Consequences of Relationship Dissolution: A Longitudinal Comparison of Formerly Married and Unmarried Cohabiting Men and Women. *Sociology,* 47, 90-108.

Dewilde, C. (2003) The Financial Consequences of Relationship Dissolution for Women in Western Europe. In E. Ruspini & A. Dale (Eds.), *The Gender Dimension of Social Change. The Contribution of Dynamic Research to the Study of Women's Life Courses.* (pp. 81-110), Bristol: Policy Press.

DiNardo, J., Fortin, N. M. & Lemieux, T. (1996). Labor Market Institutions and the Distribution of Wages, 1973-1992: A Semiparametric Approach. *Econometrica,* 64, 1001-1044.

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

DiPrete, T. A. & McManus, P. A. (2000). Family Change, Employment Transitions, and the Welfare State: Household Income Dynamics in the United States and Germany. *American Sociological Review,* 65, 343-370.

Domínguez-Folgueras, M. (2013). Is Cohabitation More Egalitarian? The Division of Household Labor in Five European Countries. *Journal of Family Issues,* 34, 1623-1646.

Duncan, G. J. & Hoffman, S. D. (1985a) Economic Consequences of Marital Instability. In M. David & T. Smeeding (Eds.), *Horizontal Equity, Uncertainty, and Economic Well-Being.* (pp. 427 - 470): University of Chicago Press.

Duncan, G. J. & Hoffman, S. D. (1985b). A Reconsideration of the Economic Consequences of Marital Dissolution. *Demography,* 22, 485-497.

Espenshade, T. J. (1979). The Economic Consequences of Divorce *Journal of Marriage and the Family,* 41, 615-625.

Esping-Andersen, G. (1990). *The Three Worlds of Welfare Capitalism,* Cambridge: Polity Press.

Esping-Andersen, G. (1999). *Social Foundations of Postindustrial Economies,* Oxford: Oxford University Press.

Finnie, R. (1993). Women, men, and the economic consequences of divorce: Evidence from Canadian longitudinal data. *Canadian Review of Sociology/Revue canadienne de sociologie,* 30, 205-241.

Forsa (2002) Unterhaltszahlungen für minderjährige Kinder in Deutschland [Maintenance payments for minor children in Germany]. BMFSFJ.

Frick, J. R., Jenkins, S. P., Lillard, D. R., Lipps, O. & Wooden, M. (2007). The Cross-National Equivalent File (CNEF) and its Member Country Household Panel Studies. *Schmollers Jahrbuch: Journal of Applied Social Science Studies,* 127, 627-654.

Fuchs-Rechlin, K. (2008) Zahlenspiegel 2007: Kindertagesbetreuung im Spiegel der Statistik. München, Dortmund: DJI und Universität Dortmund.

Gangl, M. (2010). Causal Inference in Sociological Research. *Annual Review of Sociology,* 36, 21-47.

Giddens, A. (1998). *The Third Way: The Renewal of Social Democracy,* Cambridge: Polity Press.

Giesecke, J., Heisig, J. P. & Solga, H. (2015). Getting more unequal: Rising labor market inequalities among low-skilled men in West Germany. *Research in Social Stratification and Mobility,* 39, 1-17.

Giesselmann, M. & Goebel, J. (2013). Soziale Ungleichheit in Deutschland in der Längsschnittperspektive. Befunde zur Armutsproblematik auf Basis des Sozio-oekonomischen Panels (SOEP). *Analyse und Kritik,* 35, 277-302.

Gilbert, N. (2002). *Transformation of the Welfare State: The Silent Surrender of Public Responsibility,* New York: Oxford University Press.

Goodin, R. E., Headey, B., Muffels, R. & Dirven, H.-J. (1999). *The real worlds of welfare capitalism,* Cambridge: Cambridge University Press.

Gornick, J. C. & Meyers, M. C. (2005). *Families That Work: Policies for Reconciling Parenthood and Employment,* New York: Russell Sage Foundation.

Grabka, M. (2011). Codebook for the $PEQUIV File 1984-2010. CNEF Variables with Extended Income Information for the SOEP. *DIW Data Documentation,* No. 57.

Grall, T. S. (2007). Custodial Mothers and Fathers and Their Child Support: 2005. *Current Population Reports,* P60-234.

Grall, T. S. (2009). Custodial Mothers and Fathers and Their Child Support: 2007. *Current Population Reports,* P60-237.

Grell, B. (2011). Family Dissolution and Public Policies in the United States. Social Provisions and Institutional Changes since the 1980s. *WZB Discussion Paper,* SP I 2011-203.

Hacker, J. S. (2006). *The Great Risk Shift. The Assault on American Jobs, Families, Health Care, and Retirement - And How You Can Fight Back,* New York: Oxford University Press.

Hainmueller, J. (2012). Entropy Balancing for Causal Effects: A Multivariate Reweighting Method to Produce Balanced Samples in Observational Studies. *Political Analysis,* 20, 25-46.

Hainmueller, J. & Xu, Y. (2013). ebalance: A Stata package for Entropy Balancing. *Journal of Statistical Software,* 54.

Haisken-DeNew, J. P. & Frick, J. R. (2005). Desktop Companion to the German Socio-Economic Panel (SOEP), Version 8.0. Berlin: DIW Berlin.

Heisig, J. P. (2015). *Late-career Risks in Changing Welfare States. Comparing Germany and the United States since the 1980s,* Amsterdam: Amsterdam University Press.

Holden, K. C. & Smock, P. J. (1991). The Economic Costs of Marital Dissolution: Why Do Women Bear a Disproportionate Cost? *Annual Review of Sociology,* 17, 51-78.

Holland, P. W. (1986). Statistics and Causal Inference. *Journal of the American Statistical Association,* 81, 945-960.

Hummelsheim, D. (2009) Germany: will the male breadwinner model survive? In H.-J. Andreß & D. Hummelsheim (Eds.), *When Marriage Ends: Economic and Social Consequences of Partnership Dissolution.* Cheltenham: Edward Elgar.

Iacus, S. M., King, G. & Porro, G. (2011). Multivariate Matching Methods That Are Monotonic Imbalance Bounding. *Journal of the American Statistical Association,* 106, 345-361.

Iacus, S. M., King, G. & Porro, G. (2012). Causal Inference without Balance Checking: Coarsened Exact Matching. *Political Analysis,* 20, 1-24.

Jansen, M., Mortelmans, D. & Snoeckx, L. (2009). Repartnering and (Re)employment: Strategies to Cope With the Economic Consequences of Partnership Dissolution. *Journal of Marriage and Family,* 71, 1271-1293.

Jarvis, S. & Jenkins, S. P. (1999). Marital Splits and Income Changes: Evidence from the British Household Panel Survey. *Population Studies,* 53, 237-254.

Jaschinski, I. (2011). Der Übergang in eine nacheheliche Partnerschaft: Eine vergleichende Analyse zwischen Männern und Frauen auf Basis des deutschen Generations and Gender Survey. *Zeitschrift für Familienforschung,* 23, 219-240.

Jenkins, S. P. (2008). Marital splits and income changes over the longer term. *ISER Working Paper Series,* 2008-07.

Kalmijn, M. (2005). The Effects of Divorce on Mens Employment and Social Security Histories. *European Journal of Population/ Revue europenne de Demographie,* 21, 347-366.

Kamerman, S. B. & Gatenio-Gabel, S. (2007). Early Childhood Education and Care in the United States: An Overview of the Current Policy Picture. *International Journal of Child Care and Education Policy,* 1, 23-34.

Kiernan, K. (2002) Cohabitation in Western Europe: Trends, Issues, and Implications. In A. Booth & A. C. Crouter (Eds.), *Just Living Together: Implications of Cohabitation on Families, Children, and Social Policy.* (pp. 3-30), Mahwah, NJ: Lawrence Erlbaum Associates.

Kohler, U. (2011) Features of the Data Base, Problems Therein and Solutions. Unpublished Manuscript, Berlin: Wissenschaftszentrum Berlin für Sozialforschung.

Kohler, U., Ehlert, M., Grell, B., Heisig, J.-P., Radenacker, A. & Wörz, M. (2012). Verarmungsrisiken nach kritischen Lebensereignissen in Deutschland und den USA. *Kolner Zeitschrift Fur Soziologie Und Sozialpsychologie,* 64, 223-245.

Kreyenfeld, M. & Geisler, E. (2006). Müttererwerbstätigkeit in Ost- und Westdeutschland. *Zeitschrift für Familienforschung,* 18, 333-360.

Lois, D. (2008). Arbeitsteilung, Berufsorientierung und Partnerschaftsstabilität – Ehen und nichteheliche Lebensgemeinschaften im Vergleich. *Kolner Zeitschrift Fur Soziologie Und Sozialpsychologie,* 60, 53-77.

Lovell, V., O'Neill, E. & Olsen, S. (2007) Maternity Leave in the United States. Institue for Women's Policy Research.

Lyngstad, T. H. & Jalovaara, M. (2010). A review of the antecedents of union dissolution. *Demographic Research,* 23, 257-291.

Manning, W. D. & Brown, S. (2006). Children's Economic Well-Being in Married and Cohabiting Parent Families. *Journal of Marriage and Family,* 68, 345-362.

Manting, D. & Bouman, A. M. (2006). Short- and long-term economic consequences of the dissolution of marital and consensual unions. The example of the Netherlands. *European Sociological Review,* 22, 413-429.

Martiny, D. & Schwab, D. (2002) Grounds for Divorce and Maintenance between former Spouses. Commission on European Family Law.

McCoy, J. L. (2005). Spousal Support Disorder: An Overview of Problems in Current Alimony Law. *Florida State University Law Review,* 33, 501-526

McGonagle, K. A., Couper, M. & Schoeni, R. F. (2009). An experimental test of a strategy to maintain contact with families between waves of a panel study. *Survey Practice,* 2.

McGonagle, K. A., Schoeni, R. F., Sastry, N. & Freedman, V. A. (2012). The Panel Study of Income Dynamics: overview, recent innovations, and potential for life course research. *Longitudinal and Life Course Studies,* 3, 268-284.

McKeever, M. & Wolfinger, N. H. (2001). Reexamining the Economic Costs of Marital Disruption for Women. *Social Science Quarterly,* 82, 202-217.

McKernan, S. M. & Ratcliffe, C. (2005). Events that Trigger Poverty Entries and Exits. *Social Science Quarterly,* 86, 1146-1169.

McManus, P. A. & DiPrete, T. A. (2000). Market, Family, and State Sources of Income Instability in Germany and the United States. *Social Science Research,* 29, 405-440.

McManus, P. A. & DiPrete, T. A. (2001). Losers and Winners: The Financial Consequences of Separation and Divorce for Men. *American Sociological Review,* 66, 246-268.

Mulder, C. (2013). Family dynamics and housing: Conceptual issues and empirical findings. *Demographic Research,* 29, 355-378.

Network of Care (2010) California's Paid Family Leave Law.

Neyman, J. S., Iwaszkiewicz, K. & Kolodziejczyk, S. (1935). Statistical problems in agricultural experimentation. *Supplement to the Journal of the Royal Statistical Society,* 2, 107-180.

OECD (2014) OECD Family Database, PF1.5: Child Support. OECD, Paris.

Peschel-Gutzeit, L. M. (2008). *Unterhaltsrecht aktuell. Die Auswirkungen der Unterhaltsreform auf die Beratungspraxis,* Baden-Baden: Nomos.

Pierson, P. (1994). *Dismantling the welfare state? Reagan, Thatcher, and the politics of Retrenchment,* Cambridge University of Cambridge Press.

Pierson, P. (1996). The New Politics of the Welfare State. *World Politics,* 48, 143-179.

Poortman, A.-R. (2000). Sex Differences in the Economic Consequences of Separation: A Panel Study of the Netherlands. *Eur Sociol Rev,* 16, 367-383.

Proksch, R. (2002). Begleitforschung zur Umsetzung der Neuregelungen zur Reform des Kindschaftsrechts.

Raz-Yurovich, L. (2013). Divorce Penalty or Divorce Premium? A Longitudinal Analysis of the Consequences of Divorce for Men's and Women's Economic Activity. *European Sociological Review,* 29, 373-385.

Rubin, D. B. (1974). Estimating causal effects of treatments in randomized and nonrandomized studies. *Journal of Educational Psychology,* 66, 688-701.

Sainsbury, D. (1999) Gender, Policy Regimes, and Politics. In D. Sainsbury (Ed.), *Gender and Welfare State Regimes.* (pp. 245-273): Oxford University Press.

Schier, M. & Proske, A. (2010). One Child, Two Homes. How families succeed in reorganizing daily life after a separation. *DJI-Bulletin,* Special English Edition, 16-18.

Schmaus, G. & Bould, S. (2011). Equivalence Scales and the Cost of Children: The Case of Household Splits in Denmark, France, Germany and the United Kingdom. *Schmollers Jahrbuch: Journal of Applied Social Science Studies,* 131, 369-380.

Schwarze, J. & Härpfer, J. (2000). Die wirtschaftlichen Folgen von Trennung und Scheidung für Familien: Erwerbstätigkeit, Einkommen und Lebenszufriedenheit *ifb Materialien,* 4/2000.

Seeleib-Kaiser, M. (2002). A Dual Transformation of the German Welfare State? *West European Politics,* 25, 25-48.

Smock, P. J. (1993). The Economic Costs of Marital Disruption for Young Women Over the Past Two Decades. *Demography,* 30, 353-371.

Smock, P. J. & Manning, W. D. (1997). Nonresident Parents' Characteristics and Child Support. *Journal of Marriage and Family,* 59, 798-808.

Sobotka, T. & Toulemon, L. (2008). Overview Chapter 4: Changing family and partnership behaviour: Common trends and persistent diversity across Europe. *Demographic Research,* 19, 85-138.

SOEP Group (2013) SOEP 2012 – Documentation on Biography and Life History Data for SOEP v29. *SOEP Survey Papers 176: Series D.* Berlin: DIW/SOEP.

Starke, P., Obinger, H. & Castles, F. G. (2008). Convergence towards where: in what ways, if any, are welfare states becoming more similar? *Journal of European Public Policy,* 15, 975-1000.

Statistisches Bundesamt (2015) Einkommen und Lebensbedingungen in Deutschland und der Europäischen Union, EU-SILC 2013, Fachserie 15, Reihe 3. Wiesbaden: Statistisches Bundesamt.

Taylor-Gooby, P. (2004) New Risks and Social Change. In P. Taylor-Gooby (Ed.), *New risks, new welfare: the transformation of the European welfare state.* (pp. 1-27), Oxford: Oxford University Press.

Uunk, W. (2004). The Economic Consequences of Divorce for Women in Europe: The Impact of Welfare State Arrangements. *European Journal of Population,* 20, 251-285.

van Damme, M., Kalmijn, M. & Uunk, W. (2009). The Employment of Separated Women in Europe: Individual and Institutional Determinants. *European Sociological Review,* 25, 183-197.

Vandecasteele, L. (2010). Poverty Trajectories after Risky Life Course Events in Different European Welfare Regimes. *European Societies,* 12, 257-278.

Vandecasteele, L. (2011). Life Course Risks or Cumulative Disadvantage? The Structuring Effect of Social Stratification Determinants and Life Course Events on Poverty Transitions in Europe. *European Sociological Review,* 27, 246-263.

Wagner, G. G., Frick, J. R. & Schupp, J. (2007). The German Socio-Economic Panel Study (SOEP) - Scope, Evolution and Enhancements. *Schmollers Jahrbuch: Journal of Applied Social Science Studies,* 127.

Walker, R. (1999). The Americanization of British Welfare: A Case Study of Policy Transfer. *International Journal of Health Services,* 29, 679-697.

Weiss, R. S. (1984). The Impact of Marital Dissolution on Income and Consumption in Single-Parent Households. *Journal of Marriage and the Family,* 46, 115-127.

Wengler, A., Trappe, H. & Schmitt, C. (2008). Partnerschaftliche Arbeitsteilung und Elternschaft: Analysen zur Aufteilung von Hausarbeit und Elternaufgaben auf Basis des Generations and Gender Survey. *BiB-Mitteilungen,* 127.

Willenbacher, B. (2010) Die Umgestaltung des Geschlechterkontraktes durch das nacheheliche Unterhaltsrecht. In M. Cottier, J. Estermann & M. Wrase (Eds.), *Wie wirkt Recht?* (pp. 369-389), Baden-Baden: Nomos.

Wörz, M. (2011). Family Dissolution and Public Policies in Germany. Social Provisions and Institutional Changes since the 1980s *WZB Discussion Paper,* SP I 2011-207.

Wu, Z. & Schimmele, C. M. (2005). Repartnering after first union disruption. *Journal of Marriage and Family,* 67, 27-36.

Ziefle, A. (2004). Die individuellen Kosten der Erziehungsurlaubs. *Kolner Zeitschrift Fur Soziologie Und Sozialpsychologie,* 56, 213-231.