



Martin Ehlert

# The Impact of Losing Your Job

Unemployment and Influences  
from Market, Family, and State  
on Economic Well-Being in the  
US and Germany

## The Impact of Losing Your Job

# Changing Welfare States

For quite some time, a key finding and theoretical puzzle in comparative welfare state research was welfare states' remarkable stability. In the last decade, however, it has become clear that advanced welfare states were (far) less immovable than they seemed at first. In fact, speaking of *changing welfare states* captures much better the actual reforms that were taking place. This series is about the trajectories of those changes. Have there been path-breaking welfare innovations or are the changes incremental instead? Are welfare states moving in a similar or even convergent direction, or are they embarking on divergent trajectories of change? What new policies have been added, by which kind of political actors, how, and with what consequences for competitiveness, employment, income equality and poverty, gender relations, human capital formation, or fiscal sustainability? What is the role of the European Union in shaping national welfare state reform?

This series answers these and related questions by studying the socioeconomic, institutional and political conditions for welfare state change, its governance, and its outcomes across a diverse set of policy areas. The policy areas can address traditional "old" social risks like old age, unemployment, sickness (including the health care system), disability and poverty and inequality in general, or "new" social risks that have arisen mainly due to post-industrialization, such as reconciling work and family life, non-standard employment, and low and inadequate skills. In addition to focusing on the welfare state more narrowly defined, the series also welcomes publication on related areas, such as the housing market. The overriding objective of the series is tracing and explaining the full trajectories of contemporary welfare state change and its outcomes.

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State on Economic Well-Being in the US and Germany*

*Martin Ehlert*

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# Table of Contents

<b>Acknowledgments</b>	13
<b>1 Introduction</b>	15
<b>2 Life Courses and Trigger Events: Theoretical Considerations</b>	35
2.1 Institutional influences on the life course	37
2.2 Family influences on the life course	42
2.3 Unemployment dynamics over the life course	46
2.4 Embedding the trigger events approach in the life course	50
2.5 Expectations about differences in economic insecurity due to job loss	65
<b>3 Welfare State Institutions and Labor Market Trends</b>	69
3.1 Social policy	69
3.2 Family policy and tax policy	73
3.3 Labor market regulation and labor market structure	75
3.4 Labor market trends	76
<b>4 Data and Methods</b>	83
4.1 Empirical strategy to estimate the consequences of job loss	84
4.2 Data sets	92
4.3 Operationalization	96
<b>5 The Incidence of Job Loss and Unemployment</b>	109
5.1 Descriptive statistics on the incidence of job loss	110
5.2 What causes higher rates of job loss among singles and single mothers?	127
5.3 Summary: Market, family, and state influences on job loss and unemployment	138
<b>6 Income Trajectories After Job Loss</b>	143
6.1 Theoretical expectations and hypotheses	143
6.2 Comparing individuals with and without job loss	149
6.3 Country specific income trajectories	157
6.4 Differences between households	162
6.5 Differences between social strata	168
6.6 Trends over time	176
6.7 Summary: The impact of job loss embedded in the life course	181

<b>7 Household Strategies to Buffer Job Loss</b>	187
7.1 Hypotheses	188
7.2 Partner's labor force participation before job loss	193
7.3 Incidence of the AWE	198
7.4 Magnitude of the AWE	211
7.5 Summary: The added worker effect in linked life courses	219
<b>8 Conclusion</b>	225
8.1 Key findings	228
8.2 Significance of the findings for current debates	236
<b>Appendix</b>	241
<b>List of Abbreviations</b>	247
<b>Bibliography</b>	249
<b>Index</b>	263

## List of Figures and Tables

### Figures

Figure 1.1	The trigger events approach	18
Figure 1.2	The trigger events approach embedded in the life course	20
Figure 3.1	Unemployment rates in the United States and Germany 1980 to 2011	77
Figure 3.2	Employment protection legislation strictness in the United States and Germany 1985 to 2008	79
Figure 3.3	Labor force participation rate of women and men aged 15-64 in the United States and Germany 1980-2011	80
Figure 5.1	Incidence of job loss and subsequent unemployment over time in the United States and Germany	111
Figure 5.2	Incidence of job loss and subsequent unemployment over time in the United States and Germany by gender and region in Germany	112

Figure 5.3	Incidence of job loss and subsequent unemployment over time in the United States and West Germany by post-government household income quartile in previous year	117
Figure 5.4	Incidence of re-employment after job loss over time in the United States and Germany	124
Figure 5.5	Incidence of re-employment after job loss by previous post-government household income quartiles in the United States and West Germany	125
Figure 5.6	Incidence of re-employment after job loss in different household types in the United States and West Germany	127
Figure 6.1	Average income changes in percent compared to the base year for men in the United States and West Germany	154
Figure 6.2	Average income changes in percent compared to the base year for women in the United States and West Germany	156
Figure 6.3	Difference-in-Difference estimates of post-government household income, pre-government household income, and individual earnings after job loss among men in the United States and West Germany	158
Figure 6.4	Difference-in-Difference estimates of post-government household income, pre-government household income, and individual earnings after job loss among women in the United States and West Germany	161
Figure 6.5	Difference-in-Difference estimates of post-government household income after job loss among men in different household types in the United States and West Germany	163
Figure 6.6	Family buffers among men after job loss in different household types in the United States and West Germany	165
Figure 6.7	Difference-in-Difference estimates of post-government household income after job loss among women in different household types in the United States, West Germany, and East Germany	167
Figure 6.8	Difference-in-Difference estimates of income after job loss among men by previous post-government	



	household income quartiles in the United States and West Germany	170
Figure 6.9	Family and welfare state buffers after job loss among men by previous post-government household income quartiles in the United States and West Germany	172
Figure 6.10	Difference-in-Difference estimates of income after job loss among women by previous post-government household income quartiles in the United States and West Germany	173
Figure 6.11	Family and welfare state buffers after job loss among women by previous post-government household income quartiles in the United States and West Germany	175
Figure 6.12	Income losses after job loss at different points in historical time in the United States and West Germany. Men	177
Figure 6.13	Income losses after job loss at different points in historical time in the United States and West Germany. Women	180
Figure 7.1	Work hours among women before partner's job loss and in matched control group in the United States and Germany	196
Figure 7.2	Work hours among women before partner's job loss and in matched control group by quartiles of post-government household income in the United States and Germany	197
Figure 7.3	Estimated probability of the AWE among women in the United States and West Germany	203
Figure 7.4	Estimated probability of the AWE among women by previous work hours in the United States and West Germany	205
Figure 7.5	Estimated probability of the AWE among women by previous work hours and education in the United States and West Germany	206
Figure 7.6	Estimated probability of the AWE among women with and without children under 16 in the household in the United States and West Germany. Error bars show the 90 per cent confidence interval	208
Figure 7.7	Estimated probability of the AWE among women with children under 16 in the household by previous work hours in the United States and West Germany	209

Figure 7.8	Estimated probability of the AWE among women with children under 16 in the household in the United States, West Germany, and East Germany	210
Figure 7.9	Estimated probability of the AWE among women above and below the median of prior adjusted post-government household income in the United States and West Germany	212
Figure 7.10	Estimated effect on earnings among women due to partner's unemployment as percentage of prior pre-government household income in the United States and West Germany	213
Figure 7.11	Estimated effect on earnings among women due to partner's unemployment as percentage of prior pre-government household income by presence of children <16 in the United States and West Germany	215
Figure 7.12	Estimated effect on earnings among women with children under 16 in the household due to partner's unemployment as percentage of prior pre-government household income by previous work hours in the United States and West Germany	218
Figure 7.13	Estimated effect on earnings among women due to partner's unemployment as percentage of prior pre-government household income above and below the median of prior adjusted post-government household income in the United States and West Germany	219

## Tables

Table 4.1	Composition of pre- and post-government household income in the CNEF	98
Table 4.2	Definition of job loss event and re-employment	101
Table 4.3	Definition of household types	103
Table 5.1	Individual characteristics of individuals with and without job loss and subsequent unemployment in the United States	114
Table 5.2	Individual characteristics of individuals with and without job loss and subsequent unemployment in West Germany	115

Table 5.3	Household characteristics of persons with and without job loss and subsequent unemployment in the United States	118
Table 5.4	Household characteristics of persons with and without job loss and subsequent unemployment in West Germany	119
Table 5.5	Characteristics of cases with and without changes in household composition	122
Table 5.6	Selected linear probability model coefficients for the incidence of job loss	132
Table 5.7	Average willingness to take risks among men in different household types in Germany	133
Table 5.8	Effect of change in household structure on willingness to take risks among men in Germany	135
Table 5.9	Importance of job/work among women in different household types in Germany	135
Table 5.10	Effect of change in household structure on the probability of regarding job/work less important or unimportant among women in Germany	137
Table 5.11	Selected linear probability model coefficients for the incidence of job loss among women in single parent households	137
Table 5.12	Summary of hypotheses and results about the incidence of job loss	140
Table 6.1	Coarsenings of variables used for CEM analyzing the consequences of job loss	150
Table 6.2	Descriptive statistics of the matched and unmatched samples in the United States	151
Table 6.3	Descriptive statistics of the matched and unmatched samples in West Germany	152
Table 6.4	Summary of hypotheses and results about income trajectories after job loss	183
Table 7.1	Individual characteristics of women with and without partner's job loss and subsequent unemployment (PUE) in the United States and West Germany	195
Table 7.2	Coarsenings of variables used for CEM analyzing the occurrence and magnitude of the AWE	199

Table 7.3	Descriptive statistics of the matched and unmatched samples in the United States and West Germany for the estimation of the AWE. Women only	200
Table 7.4	Summary of hypotheses and results about household strategies to buffer job loss	222
Table A.1	Individual characteristics of individuals with and without job loss and subsequent unemployment in eastern Germany	241
Table A.2	Household characteristics of persons with and without job loss and subsequent unemployment in eastern Germany	243
Table A.3	Descriptive statistics of the matched and unmatched samples for the analysis of income changes in eastern Germany	244
Table A.4	Descriptive statistics of the matched and unmatched samples for the analysis of the AWE in eastern Germany	245



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# 1 Introduction

Job loss and unemployment are major problems of modern capitalist societies. It is beyond question that employment instability is connected to many unfavorable outcomes for individuals and countries. At the same time, such instabilities are, to some degree, inevitable elements of labor markets in capitalist economies. Despite the existence of employment protection legislation in most countries, there are always firms that displace employees for a variety of reasons. For those affected, losing a job has severe consequences for many aspects of their lives (Brand 2015). This is even more pronounced if they are not able to obtain a new job after displacement and enter a longer spell of unemployment. Among all of the negative consequences that job loss entails for individuals, I focus on the most obvious in this study: decreases in individual economic well-being. While there are other important effects of job loss, for example on life satisfaction as well as on physical and mental health, the effects on economic well-being are arguably the most far-reaching. The aim of this study is to advance the knowledge about economic insecurity that job loss causes over the life course. In particular, I want to find out which factors offset and which factors increase the impact of displacements on economic well-being.

Labor income is the prime income source in most households, except for those who are retired. Therefore, large parts of the population rely on stable jobs to maintain their standard of living. This concerns both those who are employed and their dependents in the household, because labor income is usually pooled and shared within a household. Even though the actual allocation of income within households may be unequal, total pooled labor income in a household is a good indicator of the household members' economic well-being. If job loss and subsequent unemployment hit one household member, the whole household experiences a decrease in its economic well-being. Thus, job loss is one of the important causes of income insecurity over the life course (Western et al. 2012). Income loss in households implies that levels of consumption cannot be upheld, and rents and mortgages can no longer be paid. Also, the economic insecurity that job loss creates makes it difficult to plan ahead, to decide about investments or savings. This has negative effects on individual life courses and societies as a whole. On the individual level, income losses cause downward social mobility. On the aggregate level, if job loss and unemployment affect a large part of the population, decreases in domestic demand may send the economy into a downward spiral and reduced social cohesion may breed political instability.



Nevertheless, the effects of job loss and unemployment on economic well-being are not determined by losses in labor income alone. Because of the risks entailed in job loss, all modern welfare states implement some form of unemployment insurance. These programs usually replace a fraction of the lost wage for a certain amount of time. Thus, at least for a while after job loss, the welfare state cushions some of the losses in income if re-employment does not occur. Furthermore, there are two other ways through which downward income mobility after job loss may be mitigated. First, rapid re-employment in a well-paid job may maintain economic well-being. Second, other household members could provide income to offset the losses. Hence, the extent of economic insecurity after job loss emerges from the nexus between the market, the family, and the state. This also implies that there are variations between individuals, families, and nations in the effects of job loss on economic well-being. The present study starts from this observation and asks how job loss and unemployment affect the economic well-being of individuals in different contexts. In doing so, I want to carve out the mechanisms that shape economic well-being after job loss. This knowledge is important to devise ways of reducing economic insecurity due to job loss.

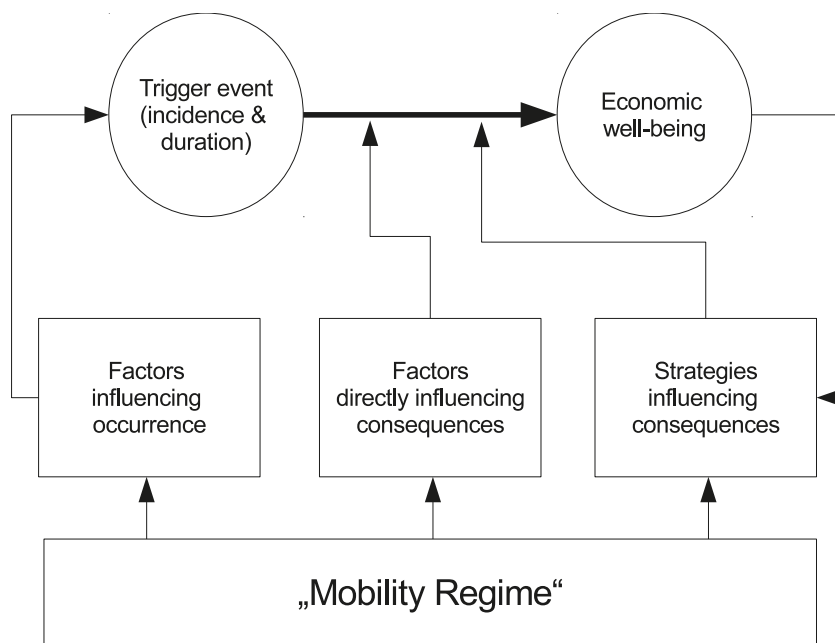
Economic insecurity recently received much public and academic attention. Books such as Jacob Hacker's (2006) *The Great Risk Shift* or Peter Gosselin's (2009) *High Wire* describe a trend toward growing volatility of incomes and, consequently, economic insecurity in the United States. According to them, this is due to the government and corporations retreating from safeguarding against risks. Instead, individuals now carry the burden of most risks themselves. These accounts gained much public attention in the United States. In Germany, this issue also surfaces in public debates. For example, in the German magazine *Der Spiegel*, journalists see the advent of an "era of insecurity" (Dettmer et al. 2010: 82; translation M.E.) in Germany. Especially the growth of atypical employment, such as contract work and temporary employment, and the recent turn to employment-centered social policy are often held responsible for this development. Therefore, Butterwegge (2012) discusses a "crisis of the welfare state," brought about by politicians dismantling social protection. He argues that the German welfare state, which has traditionally been more generous than its counterpart in the United States, becomes "Americanized" (cf. Starke et al. 2008; Alber 2010) and, consequently, economic insecurity grows.

In the academic discourse, research on economic insecurity is a growing sub-field in the study of social stratification (Western et al. 2012). A growing body of research not only considers inequalities in the cross-sectional

perspective, but also risks and instabilities that occur over the life course. The dynamic perspective on social stratification is especially appealing to researchers, because it comes closer to the experiences in everyday life than cross-sectional perspectives on inequality. Also, this perspective illuminates mechanisms through which cross-sectional inequality changes or persists. In their overview of the field, Western et al. (2012) distinguish two branches: first, research that analyzes economic insecurity more generally by considering, for example, income volatility. And second, research that focuses on the influence of “trigger events” (DiPrete 2002) on economic insecurity. In this line of research, the focus is on adverse events or risks over the life course and their consequences for economic well-being. The present study falls in the second group.

In the trigger events approach, economic insecurity due to adverse events is disaggregated into two factors: the risk of experiencing the event, and its immediate and long-term consequences (DiPrete and McManus 2000a; DiPrete 2002). The advantage of this disaggregation is the identification of mechanisms that influence economic insecurity. On the one hand, there are mechanisms that influence the occurrence; on the other hand, there are mechanisms that influence the consequences. The latter set of mechanisms may be again divided into factors that offset the consequences directly and strategies that individuals pursue to offset the negative consequences of the event. The mechanisms in this framework derive from institutions: they generate events, mediate consequences, and set incentives for individual strategies. Together, these institutions constitute “mobility regimes” that govern social mobility over the life course. This framework offers a set of categories that are useful starting points for this study. It integrates the above-mentioned market, family, and state influences on the consequences of job loss with a perspective on economic insecurity by considering the occurrence of the event as well. Empirical work in the trigger events framework consists of three steps: first, an analysis of the incidence of the adverse event; second, an analysis of the consequences of the adverse event focusing on the factors that directly cushion the consequences; and third an analysis of the occurrence and magnitude of strategies to offset the consequences. Figure 1.1 graphs the trigger events approach.

Research on economic insecurity using the trigger events approach is rooted in the field of life course research (Elder et al. 2003; Mayer 2000, 2009). This connection is obvious, yet rarely stated explicitly. I argue that analyzing economic insecurity and trigger events as parts of life courses generates important insights. Life course research is an interdisciplinary

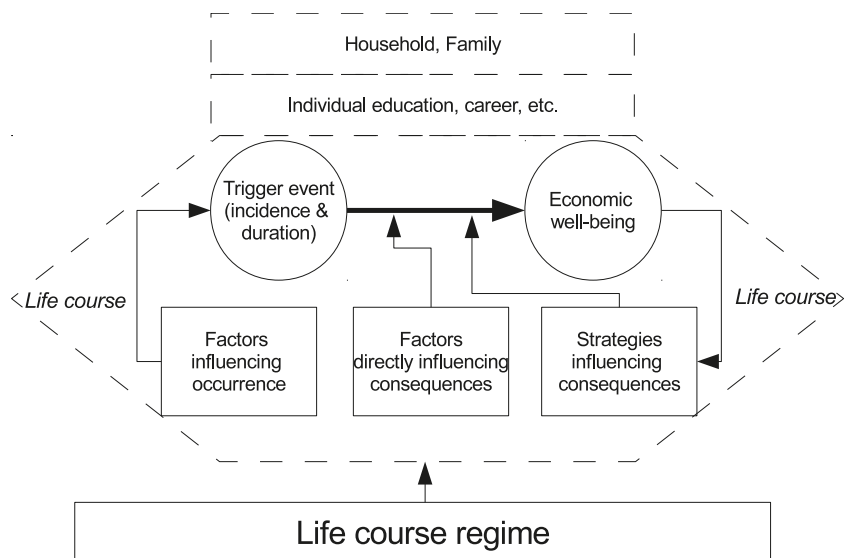
**Figure 1.1 The trigger events approach**

endeavor to understand the whole course of peoples' lives from birth to death. According to Mayer (2004), life courses are shaped by self-referential, multidimensional, and multilevel processes. Self-referentiality implies that life courses have to be considered in their entirety. Thus, specific transitions within a life course can only be understood in the context of the whole life course up to the transition. Furthermore, life courses are multidimensional because they proceed in different life domains, such as work and family. Finally, life courses are influenced on different levels, such as the labor market or the welfare state.

The theoretical background of this study builds on the trigger events approach and embeds it in the sociology of life courses to broaden its scope. Thus, instead of focusing on events and consequences only, I aim at a more encompassing approach that situates trigger events within the life course and the different dimensions and levels in which it proceeds. I begin with the notion that individual life courses are shaped by nation-specific "life course regimes" consisting of a specific institutional configuration (Mayer 1997, 2001, 2005). These institutions not only structure the life course, but also influence the incidence and the impact of adverse life events. The

welfare state is a form of “social risk management” that cushions risks generated by the labor market (Leisering and Leibfried 1999; Schmid 2006). These notions are similar to DiPrete’s “mobility regimes.” Yet, they are based on a holistic view of the life course and not just on trigger events. A major drawback of all of these approaches is that they mainly focus on the labor market and the welfare state. Yet, as mentioned earlier, the family and the household are also important providers of income security, because they pool incomes and risks. To include this into the theoretical framework, I use the concept of “linked life courses” inside families and households (Elder 1994; Moen 2003). Following this notion, I conceptualize economic insecurity due to job loss as embedded in (previous) life courses and influenced on different levels (individual, household, and welfare state) and in different life domains (work life and private life). Figure 1.2 provides a graphical illustration of my approach. Compared to Figure 1.1, the events, consequences, and mechanisms of the trigger events approach are now embedded in the life course. The individual life course, in turn, consists of several domains and levels (family, career). Finally, the nation-specific life course regime shapes all of these processes. This framework will be described in greater detail in the following chapter.

The regulation of economic insecurity through the market, the family, and the welfare state is a topic where research on economic insecurity and life courses overlaps with research on welfare state regimes. This line of research identified systematic differences in the set-up of welfare states between countries. Early work in this field mainly concentrated on the nexus between the market and the state. Esping-Andersen (1990) showed that there are different modes of taming the labor market (“decommodification”) and the distribution of benefits (“stratification”) in welfare states. From this observation, he identified his well-known three ideal types of welfare states. However, feminist scholars criticized that Esping-Andersen’s analysis omits the role of households and gender (Sainsbury 1999). Therefore, Orloff (1993) proposed to expand the analysis to the nexus between the market, the state, and the family. Clearly, the focus of the two fields differs: Research on welfare states aims to explain the emergence and stability of these institutions, whereas in research on life courses, institutions are used to explain outcomes such as income losses. Nevertheless, the two traditions have strong influence on one another. For example, Mayer’s above-mentioned “life course regimes” build on Esping-Andersen’s typology. Thus, it is not surprising that the framework omits the role of the family. Therefore, the feminist critique also applies to life course regimes. As argued above, this can be amended through the inclusion of the family as a unit where life

**Figure 1.2 The trigger events approach embedded in the life course**

courses are linked and the treatment of life courses as multidimensional processes that incorporate different life domains.

Based on these considerations, this study aims to make both theoretical and empirical contributions. On the theoretical side, I integrate the trigger events framework into life course sociology, especially in the sub-field of the family. On the empirical side, I want to provide a comprehensive analysis of the impact of job loss on economic well-being over the life course that not only includes labor market and welfare state influences, but also considers the family and the household as determinants. The main *research question* is therefore: How do the market, the family, and the state influence economic insecurity due to job loss? Of special interest to this study are differences in the impact of job loss between social strata and household types that follow from the influence of the market-family-state nexus. To answer this question, I compare the occurrence of job loss and its consequences between individuals, households and countries. I measure the consequences in terms of changes in household net income in the short- and in the long run after job loss. Additionally, I analyze which income sources buffer losses in labor earnings due to displacement. Finally, I look into strategies to offset income losses that households pursue after job loss. Thus, I analyze the full set of factors that DiPrete (2002) proposed in his trigger events framework for the analysis of mobility generating events. Yet, going beyond this, I consider

group differences that derive from the integration of this framework into life course sociology.

The results generated in this study address important scientific and public debates about economic insecurity, social inequality, and welfare states. First, I can show to what extent job loss and unemployment contributed to the growth in economic insecurity as described above. Also, the results are of interest for contemporary debates about the interrelationship of risk and social inequality in western societies. Some researchers argue that risks increasingly affect everyone, regardless of their position within social stratification. Beck (1986) argues that the “risk society” is the successor of the class society, where risks were concentrated on certain individuals. Likewise, Leisering and Leibfried (1999) conclude from their research that poverty is increasingly temporal and hits large numbers of people at least once during their life courses. According to these accounts, life becomes more precarious for everyone. Other scholars, however, suggest a different distribution of risk in modern societies. They argue that existing inequalities, structured, for example, by class or education, still shape the occurrence of risks (Breen 1997; Layte and Whelan 2002; Groh-Samberg 2004). One social mechanism that may generate such a concentration of risk is “cumulative disadvantage” over the life course, which means that existing disadvantages within a life course cause further disadvantages (DiPrete and Eirich 2006). Accordingly, life course trajectories are mainly shaped by initial conditions such as education (Manzoni et al. 2014). These claims can be evaluated with regard to the risk of job loss using the data in the empirical chapters.

The present study also aims to provide empirical data on contemporary debates in welfare state research. In these discourses, job loss and unemployment are hotly debated topics. Everyone agrees that unemployment has negative consequences in many dimensions. Nevertheless, there is little agreement on the best policy solution ameliorating the impact of job loss. Some see private initiative as the key and demand that social policy should primarily generate incentives for rapid re-employment, for example through low unemployment benefits. Others believe that the government should do more to enable the unemployed to help themselves, for example by providing retraining and education. Yet another fraction does not believe that high unemployment benefits discourage re-employment. They argue that these benefits enable the unemployed to find good jobs because they are freed from economic pressures. This list is not exhaustive, but it shows that there are different assumptions about how social policy interacts with individual behavior in shaping living situations. One way of evaluating the different policy approaches is to assess how people fare after job loss.

Following Goodin et al. (1999), I argue that research should focus on the economic well-being of households to compare different welfare states. In comparison to other approaches, such as the analysis of macro data, this approach captures the joint impact of the market, the family, and the state. In particular, the role of the family has rarely been studied in research on unemployment and social policy.

In this study, I apply a comparative research design. The two countries studied are the United States and Germany. Generally, these two countries constitute opposing models of government influence on society. In the United States, the government intervenes less into the economic sphere than in Germany (Hall and Soskice 2001). This is mirrored in the configurations of the respective welfare states, where the “liberal” regime in the United States only provides little safeguard against social risks while the “conservative” German regime alleviates the adverse consequences of most risks during the life course (Esping-Andersen 1990). Thus, in the United States, private initiative to overcome financial hardship is much more important than in Germany. Labor market institutions in the two countries also conform to this general notion. The labor market in the United States is characterized by low employment protection and low occupational boundaries through a focus on general skills. In Germany, the opposite is the case. Together with social policy, this leads to labor market mobility regimes where the “individualist” regime in the United States leads to high labor market turnover while the “collectivist” regime in Germany leads to lower turnover (DiPrete et al. 1997).

Yet, this well-known characterization of Germany mainly applies to West Germany. East Germany differs in many regards, because it is still influenced by the economic turmoil following reunification and a distinct institutional legacy (Mayer et al. 1999; Matysiak and Steinmetz 2008). Therefore, I conduct the cross-national comparisons mainly between the United States and West Germany. However, in some cases I will exploit the institutional divergence within Germany. One of the main differences is family policy. In East Germany, the availability of childcare is much higher than in West Germany (Kreyenfeld and Hank 2000). As a consequence, more women work full-time. Since one aim of this study is to analyze family income support after job loss, I use the variation in family policy to explore its impact on income after job loss.

The United States and Germany are clearly “dissimilar systems” in terms of institutions (Przeworski and Teune 1970). This design does not allow the separation of single institutions’ influences, because the two countries vary on many dimensions. Instead, I focus on the influence of the whole

nation specific regime – the sum of all institutions – on the outcomes. Therefore, I provide thorough descriptions of the institutional structure and formulate expectations about differences in micro processes between the two countries. Then, I test whether these expectations are supported by the micro analyses. The comparison of such distinct social models also has practical relevance, since the two countries often serve as role models in public debates about unemployment.

This study proceeds with the following steps: In the following section, I review the existing empirical literature about the incidence and the consequences of job loss, highlighting where this study advances this literature. Then, in Chapter 2, I develop a theoretical framework for this study. This is supplemented by a description of institutions and labor market structures in the United States and Germany in Chapter 3. I use both Chapters 2 and 3 to develop hypotheses about the impact of job loss on economic well-being. These hypotheses are stated at the beginning of each of the three empirical chapters. Chapter 4 then describes the data and methods used to test these hypotheses. Before I turn to the analysis of income trajectories after job loss, I consider the incidence of job loss in Chapter 5. Since job loss only occurs to a fraction of the total population, it is important to describe and explain differences in incidence rate between groups to understand the resulting income trajectories. Chapter 6 presents analyses of income trajectories after job loss both cross-nationally and for sub-groups. Next, I focus on families' capacities to buffer income by analyzing the employment behavior of the unemployed's partners in Chapter 7. I aim to find out whether an "added worker effect" exists and which factors shape its magnitude. Finally, Chapter 8 summarizes the findings and provides an outlook.

## Existing research

In this section, I give an overview of existing research in the three important dimensions of the trigger events framework: the incidence of job loss and unemployment; the economic consequences of job loss and unemployment; and strategies to offset the negative impact of job loss. Based on this, I identify research gaps and indicate where this book advances the knowledge about income mobility after job loss. Clearly, the literature on each of these fields is vast (Brand 2015). Therefore, I mainly concentrate on work that considers the effects of the market-family-state nexus on incidences, consequences, and strategies, at least in part. Also, I primarily cover literature on the United States and Germany. I begin with literature



on the incidence of job loss and unemployment and then move on to the economic consequences and household strategies to offset these.

## The incidence of job loss and unemployment

Generally, job loss and unemployment are two different, albeit connected risks: the risk of becoming displaced and the risk of staying without a job. While there are factors that influence both risks, it is important to separate the two, because there are also different mechanisms at work in each risk. The risk of job loss mainly depends on factors on the demand side of the labor market, i.e. labor market opportunities for workers. Staying unemployed, on the other hand, depends on both opportunities and the unemployed's choices given the opportunities (labor supply) (cf. Logan 1996). In the following, I first review literature on the incidence of job loss and then on the incidence and prevalence of unemployment after job loss.

A part of the debate about growing economic insecurity centers around the question of whether employment relationships became more unstable over time and thus the risk of becoming displaced increased (for an overview, see: Hollister 2011). The results of these studies are mixed: While there is some evidence that average employment tenure decreased over time in both the United States and Germany (Farber 2008b; Bergemann and Mertens 2004), the results for the trends in the rates of job loss are inconsistent. In the United States, Valletta (1999) for example finds an increase in the risk of job loss over time whereas Gottschalk and Moffitt (1999) find no such trend. More recent analyses in the United States show that the risk of job loss remained level even though the economy became stronger (Stewart 2002; Keys and Danziger 2008). This could also be interpreted as an increase in relative risk. In Germany, Bergemann and Mertens (2004) concluded that the risk of job loss has increased overall since the 1980s. Erlinghagen (2005) also finds a slight increase in the rate of involuntary job loss. At the same time, the number of voluntary job terminations also grew. He thus concludes that there has been no major change on the German labor market in terms of employment insecurity. Instead, the business cycle dominates the trend in displacements.

Looking at sub-groups, however, there are clear trends in employment insecurity in both countries. Giesecke and Heisig (2010) show that low educated individuals face increasing rates of job loss over time whereas there are no trends for other groups in Germany. Likewise, Erlinghagen

(2006) finds an increasing polarization in employment insecurity over time. Klein (2015) argues that the polarization is mainly due to worsening macroeconomic conditions over time in Germany. The results in Giesecke et al. (2015), on the other hand, suggest that the trend is secular and likely to be caused by structural changes on the labor market and welfare state reforms. Evidence from the United States also indicates that employment instability increased for certain already disadvantaged groups such as blacks and high school dropouts (Neumark et al. 1999; Stewart 2002). Overall, the literature shows that rates of job loss vary with the business cycle and differ between groups. There are a few signs of a decline in job security over time, but this mainly affects already disadvantaged groups. Hence, existing individual differences seem to become more important over time.

Beyond these trends over time, job loss seems to belong to the “cumulative disadvantages” over the life course in both the United States and Germany (DiPrete and Eirich 2006). That is to say, job loss often hits those who are already disadvantaged because of earlier events during their life course. Education, in particular, has a large effect: High school dropouts in the United States and people without vocational or university training in Germany face much higher risks of job loss than other educational groups (Keys and Danziger 2008; Bergemann and Mertens 2004; Wilke 2005). Additionally, workers with low tenure lose their jobs more often than workers with high tenure (Farber 2008a). Thus, seniority not only increases wages, but also employment security. However, in Germany, the incidence of job loss increases with age, especially above age 55 (Gangl 2003). This is partly due to the possibility of *de facto* early retirement after job loss for people over the age of 58, which was in place until 2008 (Mauer and Mosley 2009). Thus, some people who lost their jobs were actually entering early retirement. Beyond these disadvantages, which are rooted in the life course, job loss rates also vary with ethnicity. Blacks in the United States and migrants in Germany seem to be disadvantaged in this respect (Keys and Danziger 2008; Erlinghagen 2006). The incidence of job loss also depends on company characteristics. The risk of job loss is higher among those working in small firms in Germany (Erlinghagen 2005, 2006). This may be because larger firms are less likely to close down. Also, work councils have a greater influence on decisions about change in personnel in larger firms and may use this to stop mass lay-offs. Similarly, in the United States, job losses are more common in the private sector than in the public sector where unions are still stronger (Farber 2008a).

In addition to individual and labor market influences, there are also institutional influences on the occurrence of job loss. Employment

protection legislation (EPL) limits firms' abilities to dismiss employees. For example, EPL may contain regulations that employees may only be displaced if the company faces bankruptcy. The scope and strictness of EPL differs among countries. As expected, there is a strong connection between the strictness of EPL and the number of dismissals in an economy (OECD 2004).

Household effects on employment stability are less well researched. Some scholars analyzed mutual influence on employment participation and mobility within couples. Bernasco et al. (1998) found that partners' education and work experience decrease the probability of employment exit among men in the Netherlands. The authors explain this finding with shared networks, skills, and knowledge within a couple. Women, on the other hand, leave employment more often if their partners have high education and work experience. Unfortunately, the authors do not distinguish between the types of exits. In line with these results, Verbakel and De Graaf (2008) found that a partner's labor market resources lower the probability of transitions to jobs with lower status. A related study in the Netherlands found that holding a precarious job increases the probability that the partner's job is also insecure (De Lange et al. 2013). Extending this research, Grotti and Scherer (2014) showed that accumulation of employment risks within couples occurs in many European countries. Yet, this research mainly focused on couples and omitted single adult households, which are a growing in numbers in many countries.

The risk of staying unemployed after job loss has also attracted much research. Analyses generally show that low-educated and older people as well as ethnic minorities often experience longer unemployment spells (Bender et al. 2000; Gangl 2003; Wilke 2005). Thus, the same groups of people who have a high incidence of job loss also often stay unemployed. Further results also indicate that unemployment spells show "duration dependence"; that is, the longer the spell, the lower the probability of re-employment (Heckman and Borjas 1980). However, duration dependence seems to be mainly caused by selection based on unobserved variables: those with good chances of finding a new job leave the unemployed group quickly. Those who stay longer are therefore negatively selected based on unobserved variables that influence re-employment (Van den Berg and Van Ours 1996).

There are also several institutional effects on unemployment duration that are discussed in the literature. Some researchers argue that strict EPL decreases the chances of becoming re-employed because employers offer fewer positions if they cannot easily dismiss them again (Siebert 1997).

This was often cited as a major cause of high unemployment on the rigid European labor markets compared to the flexible American labor market. Taking a closer look at the European labor markets, however, Nickell (1997) argued that the cause of long periods of unemployment has different roots than strict EPL. He considers another institutional influence as more important for high levels of unemployment in Europe: the presence of generous and long-lasting unemployment benefits without the pressure to take up a job. Unemployment benefits increase the options that individuals have after job loss: because they are financially secure, they can stay unemployed for a longer time and search for suitable jobs. Research shows that longer benefit durations increase unemployment durations. Yet, this increase is not as high as some critics may think: Schmieder et al. (2012), for example, find that a one-month increase in unemployment benefits leads to, on average, a 0.1-month increase in unemployment duration. Likewise, Gangl (2003) finds that benefit durations explain only a small part of the difference between unemployment durations in the United States and Germany. Instead, he shows that the business cycle has much greater effects on unemployment duration than benefit duration. Furthermore, he shows that longer spells of unemployment are actually desirable, because they enable the unemployed to find better jobs. I enlarge on this below when I discuss findings about income losses after job loss.

Family effects on unemployment duration also received some scholarly attention. As argued in the introduction to this study, other incomes in the household may also act as an insurance against unemployment. This is confirmed by the finding that greater wealth is correlated with longer unemployment durations in Denmark (Lentz and Tranaes 2005). Taking a closer look at the mutual influence of household members on unemployment duration in Germany, Jacob and Kleinert (2014) show that there are strong gender differences in the effect of such household influences. Men return to work more rapidly if they have a partner, and even more so if they are married. Women's unemployment duration, on the other hand, increases if they are married. If they contributed only a little to household income, their unemployment spells are, on average, even longer. The authors interpret this as the result of gender role expectations: Especially married couples act upon the male breadwinner principle, which makes men's returns to employment more important than women's. However, beyond this, Jacob and Kleinert (2014) also find that women's education decreases men's unemployment duration, implying that a partner's experience and networks play a role as well.

## Economic consequences of job loss and unemployment

Previous studies about the economic consequences of job loss and unemployment can be grouped in two categories: first, research that deals with labor earnings in the new job after unemployment; and second, research on household income after job loss. Clearly, earnings after unemployment are a major part of household income after job loss. Yet, as previously argued, there are factors beyond labor earnings that influence economic well-being after job loss, especially during unemployment when there are no labor earnings. The present study is mainly concerned with economic well-being and therefore analyzes household income. However, I also review the literature on labor earnings after unemployment because it yields important insights on economic well-being.

The literature on labor earnings after job loss and unemployment usually compares the wages in the new job to the wages in the old job. If earnings in the new job are lower than in the old job, researchers denote this as a “scar” in individuals’ earnings trajectories. Income scarring through unemployment is quite common and occurs in different countries and sub-groups. However, individual characteristics and institutions influence the extent of the scars. On the individual level, age is an important determinant of the scars in income trajectories after job loss. Older workers usually have larger earnings losses compared to their pre-unemployment incomes than younger workers. Also, women usually have larger scars than men (Gangl 2006; Strauß and Hillmert 2011). Another difference can be found between income groups: the larger labor earnings were before job loss, the higher the scars (Burda and Mertens 2001). Apparently, it is more difficult to find a similar new job if earnings were high before. This may be one of the reasons why older workers experience larger scars through unemployment. Finally, the length of the unemployment spell also influences re-employment wages. Generally, scars grow as individuals stay out of work for a long time (Addison and Blackburn 2000). This is because they become more willing to accept lower wages.

Institutions mediate the scarring effects of unemployment. If an unemployed individual receives unemployment benefits, the negative effect of longer unemployment durations that Addison and Blackburn (2000) find is partly offset. Other studies confirm the positive effect of unemployment benefits on wages after unemployment. In international comparison, scarring effects are smaller if unemployment benefits are more generous (Gangl 2004, 2006). This relationship exists because unemployment benefits enable the unemployed to search longer without financial

pressure. This enables them to find well paid jobs. A second labor market institution also proved to be connected to lower scars: strict EPL leads to higher re-employment wages because it reduces wage differences between firms (Gangl 2006). Overall, strictly regulated European labor markets protect workers' wages better than the liberal American labor market. Thus, although they slightly prolong unemployment, as indicated in the previous section, unemployment benefits and EPL lead to better outcomes among the affected population in the long run.

Next, I turn to the effects of job loss and unemployment on household income. Broadly speaking, there are two approaches used to study this. One line of research analyzes whether household income falls below a certain poverty line. A second approach examines relative income losses after job loss. I begin with a discussion of the literature on poverty entry after job loss.<sup>1</sup> Research on poverty dynamics revealed that poverty is not a static state for many of those who are poor in a given year. Instead, there are huge numbers of transitions in and out of poverty. The pioneering work by Bane and Ellwood (1986) demonstrates that, in the United States, job loss often triggers poverty entry and re-employment often ends poverty spells. In addition to this result, they also demonstrated that exits from poverty are often triggered by other family members' entry into the labor market. Hence, household composition plays an important role. A large body of research reproduces the finding that the loss of labor income is associated with poverty entry (e.g. McKernan and Ratcliffe (2005) for the United States or Andreß (1996) for Germany).

Comparative literature also shows how different institutional configurations mediate the influence of unemployment on poverty entry. Comparing European countries, Layte and Whelan (2003) calculated that the proportion of people who become impoverished after a loss in labor earnings varies greatly, a result they explain with the regime types developed by Esping-Andersen (1990). The generous "social democratic" welfare regimes in Scandinavia protect the unemployed much better from poverty than residual "liberal" regimes, for example in the United Kingdom. McGinnity (2004) conducted a related study, looking at poverty transitions after job loss in Germany and the United Kingdom. Her theory also builds on Esping-Andersen's

1 Clearly, there are many definitions of poverty lines. In the United States, there is an official federal poverty line that the census bureau calculates using consumption data. Hence, poverty is defined in absolute terms. In Europe, most countries use a relative definition, typically 60 per cent of median household income. The relative definition proved to be better suited for comparative research, since it takes the country context into account (Brady 2003). In this review, I mainly cover literature that uses the relative approach.

welfare state typology and her results are in line with its predictions: German unemployed people are better protected than the unemployed in the United Kingdom. Clearly, this is because unemployment benefits are more generous in Germany than in the United Kingdom. McGinnity also demonstrated that households with only one adult – single or single-parent households – are worse off than couple households after unemployment because they cannot profit from other earnings within the household.

Beyond the effects of household structure and the welfare state in shaping poverty risks after job loss, there is little research on the effect of other factors. Vandecasteele (2011) shows that job loss has an equally strong poverty-triggering effect for all educational groups and classes. Yet, she does not consider poverty exit, where individual characteristics presumably play a more important role given the findings on unemployment dynamics summarized above. Kohler et al. (2012) show that poverty risk after job loss changes over historical time. This is especially the case in the United States, where the business cycle influences poverty risk to a great extent because the welfare state is relatively weak.

Overall, research on poverty dynamics illuminates the importance of the market, the family, and the state in influencing economic well-being after job loss. The focus on a discrete poverty line has certain advantages for describing the outcomes: the researcher is able to count how many people enter a precarious income position through unemployment. However, this line of research disregards income losses of those not crossing the poverty line. However, their income trajectories are also important in order to understand the effects of unemployment on household income. Thus, dynamic poverty research discards a large amount of interesting variation that can be used to learn more about the mechanisms that connect job loss to household income.

Research on income losses after displacements considers all affected individuals. However, the measurement of losses differs. Burkhauser and Duncan (1989), for example, report the percentage of people with different adverse life events in the United States who experienced a 50 per cent drop in their household income during the 1970s and 1980s. They find that about 20 per cent of those who live in a household where the head loses a job experience a 50 per cent drop in household income. Reductions in the work hours of the secondary earner, which are almost always wives, lead to a much smaller chance of a serious drop in income. Thus, household composition and who becomes unemployed are important determinants of losses in household income. Denier and Smith (2012) analyze the impact of the welfare state after job loss by comparing losses in household income



before and after taxes and transfers during the 2000s. They find that unemployment reduces household incomes post-tax by 13 per cent in couple households and 26 per cent in single households. Before taxes and transfers, the losses are 16 per cent and 30 per cent, respectively. Thus, the welfare state clearly reduces losses due to job loss. In West Germany, Klein and Zimmermann (1991) find that becoming unemployed reduced household income by about ten per cent on average during the 1980s. Thus, household composition and unemployment benefits clearly offset much of the loss in earnings (Klein 1987; Landua 1990). For the 2000s in Germany, Heyne (2012) calculates household income losses after job loss of 18 per cent (2001-2004) and 14 per cent (2006-2009). However, none of these studies tried to gauge the relative impact of the household and the welfare state. Also, they all focus on one country and therefore do not allow an analysis of the effect of different welfare state institutions.

DiPrete and McManus (2000a) analyze household income after different adverse life events – among them job loss – in the United States and Germany. Going beyond previous studies, they not only consider short-term losses but also long-term income trends after job loss. They find that German men have lower household income losses than American men directly after job loss. Also, German men recover faster than American men from the income loss. Among women, losses in household income after displacement are much smaller compared to men and more similar in the two countries. By calculating the effect of job loss on both household income before and after taxes and transfers, the authors show how much influence the welfare state has on household income trajectories. The results show that the German welfare state buffers income volatility much more than its American counterpart. Also, they compare losses in labor earnings with losses in household income before taxes and transfers. In doing so, they show the impact of other household members incomes. The authors find that German men profit more from their partners' incomes than American men. In a further study, DiPrete and McManus (2000b) also compared the consequences of unemployment between individuals with different previous household incomes. They show that household income losses after displacement are higher in the upper parts of the income distribution than in the lower parts in both the United States and Germany. However, they do not explore the causes of this finding.

Research on the consequences of unemployment that goes beyond poverty transitions is able to draw a much more complete picture of the processes that shape the living situations of households. This approach allows comparison between losses in earnings and household income before



and after taxes in order to gauge the influence of the household and the tax and transfer system (DiPrete and McManus 2000a). Thus, it integrates the trends in labor earnings after a spell of unemployment with the support of the household and the government. This allows the individual-level employment and earnings dynamics described above to be linked with household income. Also, it considers the whole range of the income distribution and not just those who become impoverished. It is therefore possible to trace the income trajectories for the upper segments of the distribution as well. Heisig (2015) implemented this approach to analyze the economic consequences of late-career job-loss in the US and Germany. He finds that German men suffer slightly more than American men after job losses when they are 55 years of age or older. In Germany, public benefits played a greater role in buffering the income losses whereas in the US men are more often supported by their partners' incomes.

### **Household strategies to offset income losses**

The final part of the literature review covers studies that analyze other household members' employment behavior after job loss. Usually, researchers study the occurrence and magnitude of increases in women's work hours or earnings after men's job losses. In labor economics this increase is known as the "added worker effect" (AWE) (Lundberg 1985). Men are rarely studied in this regard because they are most often the main earners and cannot increase their incomes further whereas many women in couple households are inactive on the labor market.

Many opposing views on the added worker effect exist in the literature. To begin with, some researchers claim that the strategies to buffer income losses after job loss inside households do not exist. Instead, they argue that employment statuses of partners in a couple are positively correlated (De Graaf and Ultee 2000; Verbakel et al. 2008). That is to say, if one partner is unemployed, the other is likely to be unemployed as well. The reasons for this are local labor market conditions, educational homogamy, and the resources of partners to help each other in finding a job. According to this reasoning, the result of partner's unemployment is more often "double unemployment" than an increase in the partner's income. Looking at different European countries, De Graaf and Ultee (2000) find considerable levels of double unemployment in some countries like the United Kingdom whereas others, like Germany, show very low rates. However, the analytical strategy they apply is limited because they rely on cross-sectional analyses

of labor force participation. Unemployment and, consequently, the AWE, is best understood through longitudinal analyses because they capture different manifestations of unemployment. For example, in cross-sectional analyses, the long-term unemployed are often overrepresented because short unemployment spells that end before or start after the survey are not covered. The question of whether strategies such as the added worker effect exist can thus not be answered using cross-sectional data. Therefore, I mainly review longitudinal studies in the following.

Economists conducted many studies to gauge the extent of the AWE. Almost all of these only consider women's reactions to male unemployment. Some researchers in the United States found a small effect (Lundberg 1985; Stephens 2002), but others concluded that it is non-existent (Maloney 1991; Yeung and Hofferth 1998). In Europe, only a few papers address this question. Prieto-Rodríguez and Rodríguez-Gutiérrez (2003) concluded that the AWE exists in only a few European countries, among them Germany. Nilsson (2008) shows that when men in Sweden become unemployed, their partners do not respond with increased rates of labor market participation.<sup>2</sup>

These varying results suggest that there are factors not included in the analyses, which drive the results. Dex et al. (1995) showed that the different rules about additional income in unemployment insurance schemes lead to different responses by wives of unemployed men. If benefits are means-tested, as they are in the United Kingdom, additional incomes decrease benefits or even render households ineligible. Thus, they create a disincentive for labor market entry. Their research analyzed this relationship cross-sectionally: in the United Kingdom, wives of unemployed men are also likely to be unemployed. McGinnity (2004) confirmed this finding using longitudinal data: when a male becomes unemployed in the United Kingdom, his wife is not likely to enter the labor market. For Germany, on the other hand, McGinnity showed that the added worker effect is present. The reason for this cross-national difference is that, unlike in the United Kingdom, German unemployment benefits in the first year are not means-tested. Thus, there is no disincentive affecting women's labor market entry: Increases in women's earnings do not render the household ineligible.

Furthermore, not only the institutional setup creates these disincentive effects, but benefit generosity is also important in this respect. In a study comparing states within the United States, Cullen and Gruber (2000) found that higher benefits received by unemployed husbands "crowd out"

<sup>2</sup> To my knowledge, the latter study is the only one that also analyzes men's behavior after women's job losses.

female labor market participation. Moreover, private financial transfers to unemployed families are lower if unemployment benefits are higher (Schoeni 2002). Hence, there is an interaction between public and private income buffering mechanisms. Macroeconomic conditions also play a role in determining the extent of spousal labor supply while the husband is unemployed. Comparing labor market entry of spouses during the 2008/09 recession with that in 2004/05 in the United States, Mattingly and Smith (2010) found that the added worker effect was greater during the recession. The women reacted to the dire employment prospects of their husbands.

From a theoretical point of view, all of the cited studies use the rational actor approach to family behavior to explain the added worker effect. In this reasoning, families rationally choose to re-allocate work within the family after job loss based on expected utility. Some authors introduced the idea that institutions constrain these decisions by changing the utility of the options a family faces. However, this addition remains within the general model of New Home Economics. None of the studies included intra-household factors in their analyses. Thus, the impact of the family is often measured without taking the structure of the family into account.

Summing up, the literature on the incidences and economic consequences of job loss and unemployment as well as on strategies to offset ensuing income losses mainly focuses on labor market and welfare state impacts. With a few exceptions, family and household influences are rarely incorporated. The present study aims at filling this gap by providing a thorough analysis of economic well-being after job loss that considers all aspects of the market-family-state nexus including interactions between the factors. The literature review showed that the analysis of household income trajectories after job loss is suitable for this project. By breaking down household income into labor earnings as well as pre- and post-government household income, the different factors can be uncovered, as DiPrete and McManus (2000a) proved. However, going beyond their work, I explore the effect of job loss in sub-groups, especially those connected to different types of households to carve out the impact of the family. Also, I present an integrated analysis of all three groups of mechanisms through which job loss generates economic insecurity over the life course: the incidences, the consequences, and the strategies to offset the consequences. In the following chapter, I develop a theoretical framework that spans all of these dimensions.

## 2 Life Courses and Trigger Events: Theoretical Considerations

In this chapter, I describe the theoretical framework used in this study and derive expectations about the impact of job loss on economic well-being. Like other scholars, I start with the notion that the market, the family, and the welfare state shape economic insecurity caused by job loss over the life course (DiPrete 2002; Western et al. 2012). As indicated in the literature review in Chapter 1, previous research has revealed interdependencies between the welfare state and the labor market in influencing the impact of job loss (Gangl 2003). Also, the capacity of welfare states to cushion income losses due to displacements has received scholarly attention (Goodin et al. 1999; DiPrete and McManus 2000a). Yet, little light has been shed on the role of households and families and the interactions between the household level, the individual level, and the welfare state. In this chapter, I add to the literature by advancing existing theoretical considerations in order to include labor market and welfare state influences as well as household level influences on economic instability caused by displacements. The key concept that combines these three realms is the sociology of the life course.

The life course framework is able to capture the complex interdependencies between the market, the family, and the state because it conceives the life course as shaped by multilevel, multidimensional, and self-referential processes (Mayer 2004; Huinink and Feldhaus 2009). These three analytical dimensions are connected to my research in the following ways: First, the life course as a *multilevel process* points to the different levels and contexts that shape the life course, such as individual (inter) actions, the household, and the welfare state. Thus, the framework takes the different levels of my research into account. Second, the *multidimensionality* of the life course highlights the interaction of several life domains. The two domains of interest for this study are work and family. This incorporates the link and possible frictions between the family and the labor market in influencing economic insecurity caused by job loss. Finally, the *selfreferentiality* of the life course calls attention to the influence of past events within a life course on future events. Individuals can cumulate resources or disadvantages over the life course that have an effect on the further course of their lives. Following this notion, economic insecurity is not only determined by singular events, but also by previous life courses. This is important for understanding why economic insecurity varies between individuals.

As mentioned in the introduction, this study builds on the “trigger events approach” to social stratification developed by DiPrete (2002). This includes three steps of analysis: first, an analysis of the incidence of job loss; second, an analysis of the economic consequences of job loss and income sources that buffer the losses in labor earnings; and third, an analysis of long-term consequences and strategies that individuals and households pursue to offset the consequences. In this chapter, I describe this approach in greater detail and extend it to include the whole market-family-state nexus and embed it into the life course framework. However, before I do so, I briefly detail four key concepts in this study: the incidence of job loss; economic consequences; income buffering; and strategies to offset consequences.

The *incidence of job loss* simply denotes the involuntary termination of employment relationships, i.e. the transition from a job to unemployment or another job. The analysis of the incidence of displacements includes the comparison between different groups to find out about the distribution of such events. *Economic consequences*, in turn, are defined as changes in economic well-being after job loss. My main focus in this study is on changes in household income after taxes and transfers, adjusted for household size, because it is a good measure of a person’s standard of living (Sørensen 2000; DiPrete 2003; Western et al. 2012). Building on this, I define *income buffering* as any amelioration of income losses after job loss through actions, resources, or welfare state transfers in the short- and long-term after job loss (DiPrete and McManus 2000a). Job loss and subsequent unemployment obviously entail losses in labor earnings. Yet, labor earnings are not the only possible source of income in a household. There may be other incomes from household members or welfare state transfers, such as unemployment insurance, which add to the “income package” of a household (Rainwater et al. 1986). Income buffering is thus the impact of other incomes besides labor earnings on economic well-being after job loss. Because of these factors, losses in individual earnings do not necessarily translate directly into the same losses in household income. The buffer may also consist of additional incomes that are the outcome of *strategies to offset consequences* in the household. Such strategies consist of, for example, taking a job or increasing hours in a current job.

The chapter is structured as follows: First, I review theoretical approaches about institutional influences on the life course. This serves as the core of my theoretical approach. However, in this perspective, the family and individual unemployment dynamics are not sufficiently incorporated, as I will show below. Therefore, I review theoretical perspectives on the family and the life course as well as approaches that explain individual-level

unemployment dynamics in the following sections. Combining the three perspectives, I extend the trigger events approach by embedding it into the life course framework. At the end of this chapter, I use this extended trigger events framework to develop theoretical expectations about market, family, and state influences that guide my analysis of economic instability generated through job loss.

## 2.1 Institutional influences on the life course

For a long time, the influence of institutions on the life course received comparatively little attention in scholarly debates. From modest beginnings at the beginning of the twentieth century to the development of large scale databases since the 1960s, life course analyses have become an important part of social scientific research today (Elder et al. 2003; Mayer 2009). Despite this progress, Mayer and Müller (1986) observed already at an early stage that many researchers consider life courses “as if they were occurring in a stateless structure” (217-8). Given the progress in comparative research on the welfare state (e.g. Flora and Heidenheimer 1981), Mayer and Müller argue that the sociology of the life course should incorporate welfare state influences.

Mayer and Müller (1986) sketched a theoretical framework to include the welfare state into the sociology of the life course. They propose four analytical questions that can be used to explore the relationship between life courses and the welfare state. First, they apply a historical perspective and ask how the development of the modern state and the modern life course are interrelated. Second, they consider how the welfare state structures the life course. Third, they inquire about the influence of the welfare state on individual action within the life course. And finally, the fourth question regards the influence of the welfare state as an employer and provider of transfer incomes. These four questions provide important guidelines for my analysis. They point to two micro-macro linkages that are useful in order to analyze the effects of institutions on economic insecurities generated by job loss. First, institutions define stages and transitions within the life course. As an example, they define who is counted as unemployed and hence receives unemployment benefits, which cushion ensuing income losses. Second, institutions influence behavior by providing opportunity structures and incentives that render certain decisions during the life course rational. For example, the duration and benefit level of unemployment insurance influences the time available for job search. If benefit duration is short, it is rational for the unemployed to take jobs that are below their qualification

level in order to maintain their household income, even if this leads to declining career prospects. If benefit duration is long, the unemployed are enabled to search longer. Finally, they point to the fact that institutions change and life courses may be influenced by these trends. Likewise, there may be changes in life courses that induce changes in institutions.

Based on this conceptual groundwork, Mayer (1997) explores several ways in which life courses can be related to socio-economic macro structures. He uses the term *life course regime* to describe nation-specific life course patterns. Across nations, these patterns are linked to types of “political economies”. That is to say, they are linked to nation-specific combinations of government policies and economic structure. Mayer (1997) explores the usefulness of different political economy typologies, among them “varieties of capitalism” by Hall and Soskice (2001) and “three worlds of welfare capitalism” by Esping-Andersen (1990). In a later paper, Mayer (2001) relies mainly on the latter approach. Esping-Andersen’s focus on social rights applies better to individual life courses than Hall and Soskice’s firm-centered framework.<sup>3</sup>

Allmendinger and Hinz (1998) apply the life course regime approach to the analysis of men’s occupational careers in Germany, the United Kingdom, and Sweden. They consider the impact of educational systems, vocational training, and social policy on job changes and class changes during a career. According to Esping-Andersen (1990), each of the three countries belongs to a different welfare state regime type: Germany is a conservative welfare state; Sweden belongs to the social democratic cluster; and the United Kingdom is an example of a liberal welfare regime. Allmendinger and Hinz base their analysis on this typology and detail how the regimes lead to certain career patterns via the educational system and the influence of social policy. In Germany, for example, the vocational training system equips trainees with standardized industry specific skills that hamper downward mobility. In addition, social policy fosters status preservation through wage related benefits. Therefore, occupational careers are relatively stable. In the United Kingdom, on the other hand, training is mostly firm specific and social policy only provides minimum security. Thus, occupational careers are characterized by high job mobility and also high class mobility. This example shows that the link between life courses and welfare state regimes can be established to explain individual-level life course dynamics.

3 Clearly, both typologies lead to a similar grouping of countries. Therefore, it may be argued that they both mirror an underlying historical heritage and thus may be used interchangeably (Schröder 2009).



A major drawback of the work by Allmendinger and Hinz is that they only focus on the welfare state's influence on men's careers and omit the family's influence. Hence, they ignore two important aspects that influence individual careers over the life course. First, class positions of male household heads become a less reliable indicator for the position in the social stratification because a growing number of households rely on two incomes (Sørensen 2000; Blossfeld and Drobníč 2001b). Second, work and family are interwoven over the life course: the family influences career decisions and vice versa (Moen 2003).

One way to include the family into the analysis of life courses is to measure intra-generational social mobility differently. Instead of using individual characteristics such as occupation or class, other researchers looked at household income. In "Time and Poverty in Western Welfare States", Leisering and Leibfried (1999) analyze transitions into and out of social assistance in the German city of Bremen. Movements into and out of social assistance measure household income poverty, because the benefit is means-tested on the household level. Their approach derives from an early study by Rowntree (1901) who described workers' life courses in York at the end of the nineteenth century. Rowntree found that poverty is concentrated in specific periods within male workers' life courses. They were likely to be poor while they had dependent families and as they became older and lost their capacity to work. Rowntree's work inspired many researchers to view poverty not as a static phenomenon but as part of biographies (e.g. Bane and Ellwood 1986; Layte and Whelan 2003).

Leisering and Leibfried (1999) use a framework of institutional influence on the life course similar to Mayer's approach. They also assume that institutions structure the life course. Yet, beyond structuring, there are also integrative institutional effects that provide security during the life course. Leisering and Leibfried (1999) term this "risk management". According to them, risk management includes programs such as unemployment insurance or social assistance that cushion disruptions during the life course. The perception of social insurance programs as risk management highlights the dynamic nature of these policies and their outcomes. This notion is useful for my analysis because it explicitly includes the welfare state as a buffer for risks over the life course. The concept has not only been used as an analytical tool, but also as a normative concept in the "transitional labor markets" approach by Günther Schmid (2006). According to Schmid, the life course perspective is important for designing social policies that cater to the growing uncertainties within careers. Hence, this concept can also guide policymaking.



Leisering and Leibfried's framework complements the life course regimes perspective. It introduces the idea of life courses as income trajectories and the integrative effect of institutions that manage social risks over the life course. This complements Mayer's notion of the structuring influence of institutions. Yet, like Mayer's "life course regimes", Leisering and Leibfried consider only institutions and individuals, not households as levels of analysis. Although poverty dynamics derive from household income, they consider only institutional influences on individual careers and make no effort to introduce the family as a level of influence.

DiPrete (2002) developed an approach that includes elements of both the above mentioned frameworks. Like Leisering and Leibfried (1999), he concludes that the measurement of transitions between occupational positions is insufficient for the study of life course dynamics, because this approach only considers those on the labor market. He argues that household income is a better choice because it captures the "life conditions" of all household members and is able to include the increasingly complex living arrangements that emerged as the male breadwinner model loses importance (cf. Sørensen 2000). Yet, going beyond Leisering and Leibfried, he focuses on total household income mobility during the life course and not just transitions into poverty or benefit receipt. Still, transitions are also important in his framework: "trigger events" that alter income such as job loss or promotion influence income mobility. By considering all income mobility patterns after events such as job loss and not just entry into poverty, DiPrete's framework provides a more complete picture of economic insecurity over the life course. Hence, he examines all parts of the social stratification and not just those who become poor. This enables the researcher to look more closely at changes in economic well-being among those affected by job loss and other events.

DiPrete outlines two groups of mechanisms through which macro structures influence life courses. The first group contains mechanisms that influence the rate at which events occur during the life course. As an example, employment protection legislation influences the incidence of job losses. This resembles the structuring of the life course through institutions discussed by both Mayer and Müller (1986) and Leisering and Leibfried (1999). The second group contains mechanisms that influence the consequences of events. This includes, for example, unemployment insurance, which replaces lost labor income. Thus, this group of mechanisms is similar to the processes that Leisering and Leibfried (1999) termed "risk management". However, DiPrete goes beyond their focus on institutions by including private strategies to offset income losses as a second mode

of influence on the consequences of events. This includes, for example, re-employment or other household members' incomes. Hence, the macro structure in a society influences income mobility by generating events and altering their consequences in DiPrete's framework. Yet, he also considers individual and household level processes.

DiPrete's trigger events perspective can be seen as an extension of the life course regimes approach. However, DiPrete mainly focuses on the middle of the life course, whereas life course regimes consider the whole life course. Like Mayer's life course regimes, DiPrete applies a broader notion of macro structures that influence life courses than Leisering and Leibfried, who mainly consider welfare state policies. According to DiPrete (2002), each country has a "mobility regime" consisting of institutions that alter the rate and the consequences of trigger events. This, for example, also includes the labor market and the educational system. The main difference between DiPrete's and Mayer's approach is that life course regimes focus more on how institutions and the economic structure shape the life course as a whole. That is to say, they consider the structural and normative frame in which life courses proceed (Diewald 2010). The trigger events framework, on the other hand, focuses more on the micro-level by establishing direct links between events, consequences, and factors mediating the consequences.

Moving beyond earlier empirical studies, the trigger events approach explicitly considers the role of the household. Clearly, this notion is also present in the life course framework, as mentioned at the beginning of this chapter. However, few studies to date included a thorough analysis of the household level into research on economic insecurity over the life course. DiPrete incorporates the role of buffering strategies inside the household through the notion of "counter-mobility strategies". These are defined as reactions inside the household to offset income losses. One example of such a strategy is that other persons in the household enter the labor market after job loss. Hence, the consequences of an event initiate another mobility generating event.

For my analysis, the trigger events perspective has many advantages, but there are also some issues that still need to be addressed. The framework includes micro-level employment dynamics, the family level, and institutional influences. Because it uses household income dynamics as life course outcomes, there is a direct link to living situations and economic insecurity. Yet, there are two issues in this concept that require further elaboration. First, DiPrete (2002) makes no direct reference to the inequality of incidences and consequences among different groups within a country. As shown in the literature review in Chapter 1, it is well known that incidence

rates of job loss differ in terms of education, class, and other characteristics (Keys and Danziger 2008; Giesecke and Heisig 2010). Also, income trajectories after risks during the life course differ along these lines (DiPrete and McManus 2000b; Vandecasteele 2011, 2015). However, this perspective has not been theoretically incorporated into the trigger events approach. The second issue is the treatment of the household as a unit of analysis in the approach. DiPrete's framework is vague about the mechanisms that shape behavior inside the household. Both issues can be solved by integrating the mobility regimes approach into the life course framework. I capture the stratification of incidences and outcomes by conceptualizing life courses as self-referential processes where previous events influence future events. The family influence, in turn, can be included by conceiving of life courses as proceeding in different life domains.

In the following two sections, I discuss theoretical literature about family and labor market influences on the life course that complement the approaches introduced in this section. The life course approach and the trigger events framework clearly provide interfaces for such additions. Yet, since welfare state institutions have been the main focus of the discussed approaches, family and labor market influences have seldom been included. The insights from this review will then be integrated into the trigger events framework in the remainder of this chapter.

## 2.2 Family influences on the life course

In this section, I introduce theoretical approaches focusing on the impact of the family and the household on life courses. DiPrete's (2002) trigger events framework, described above, includes the family as a level of analysis. Also, he makes implicit assumptions about family influence and family behavior after mobility generating events such as job loss. By measuring the living situation of a person through household income, he assumes a common interest among household members in maintaining and improving household income. Consequently, not only individual well-being, but also family well-being influences individual behavior. Hence, he assumes interdependencies between life courses within the household. If the household loses income through job loss, the trigger events framework predicts that "counter-mobility events" occur inside the household. He also mentions that incentives and structural constraints influence the occurrence of these events. Yet, there is no further theoretical elaboration of these processes. Below, I therefore review two approaches that address

this interdependency of individuals within households and discuss their usefulness for my study. First, I introduce New Home Economics and second, the “linked lives” approach.

Before I begin the review, I first briefly discuss the “family” as a unit of analysis in this study. The definition of the individual level and the welfare state level are straightforward whereas the family can be thought of in different ways. At one end of the possible spectrum there is the cohabiting family (often termed household); at the other end there is the whole family including all of a person’s cohabiting and non-cohabiting kin. All of these possible forms of family may influence economic insecurity. For example, in the household, cohabiting adults such as the partner may provide financial help after adverse events. Yet, parents or other non-cohabiting kin might also provide money in times of need. In this study, however, the analysis is restricted to the cohabiting family, for two reasons. First, the mutual influence on life courses and of the welfare state is much more straightforward within this type of family. Applying a broader definition of the family would introduce another level of complexity that would go beyond the scope of this study. Second, there is little data available about kin outside the household.<sup>4</sup> Hence, in the following, I use the terms family and household interchangeably, both denoting a cohabiting family.

New Home Economics assumes that there is a common interest that guides the actions of a family (Becker 1981). This theoretical approach portrays the family as an actor that tries to improve family utility. Inside the family, individuals jointly decide which strategies to pursue to reach this goal. One important assumption of New Home Economics is that family members have complete information about the outcomes of strategies and therefore decide rationally which strategy to follow. For example, following this line of reasoning, the male breadwinner household is a rational decision if men earn more on the labor market and women are more efficient at housework.

If households lose income after job loss, the family decides how to maintain its utility given the options’ expected outcomes (Lundberg 1985; Stephens 2002). If there are no credit constraints, the family borrows money assuming that there will be new employment soon. However, if access to credit is hampered, the family might decide to reallocate labor supply. In male breadwinner households where the husband becomes unemployed, the wife’s housework loses value because the husband is able to do housework

4 However, financial help by family members outside the household is an interesting direction in the study of social inequality (Pfeffer 2011).

tasks himself now that he stays at home. If the potential earnings of the wife surpass the reduced value of her housework, the family decides that the wife enters the labor market. This is known as the “added worker effect” (Lundberg 1985). Thus, New Home Economics provides a theoretical background for family strategies to offset the consequences of job loss. By assuming that there is a common utility function within the family, the theory provides a link between individuals inside the family. Consequently, housework and employment are just different forms of generating this utility.

The assumption of joint and rational decision-making within the family has often been contested. Therefore, refinements of this theory included power differences between the spouses to model bargaining inside the household. The “resource bargaining model” posits that the main sources of bargaining power are earnings, hence the person in the household with the highest earnings has a greater say in the household’s decisions (for an overview, see: Brines 1993). Many sociologists argued, however, that the refined theory still omits important aspects of linkages between individuals within the household, because it does not include structural constraints and gender differences (Moen and Wethington 1992; Blossfeld and Drobníč 2001c; Rusconi and Solga 2008).

Sociological literature aims at developing a more encompassing theory of family influence on the life course. Researchers often use Glen Elder’s (1994) term “linked lives” to describe the complex interrelationships between life courses inside families. In particular, the interrelationship between work and family, sometimes termed “work-family interface” (Moen 2003), has received much attention. The notion of the work-family interface implies that work and family exist in different spheres each with its own rationale. The two rationales may conflict if processes in the household apply to both the sphere of work and the sphere of the family. Much of the literature following this notion deals with couples’ career trajectories and how work and family life are interrelated in shaping distinct life courses. A general finding is that gender plays a major role for family effects on life courses. Men’s careers proceed largely independent of their partner’s careers, whereas women’s careers depend heavily on the partner and the family. This is even true for women with high earnings potential compared to their husbands. This contradicts the specialization hypothesis stemming from New Home Economics (Blossfeld et al. 2001; Han and Moen 2001): Even in households where women are equally productive in employment compared to men, they still do more of the housework. Hence, contrary to the assumption of economic theory, there are constraints that frame individual decisions within the household.

Yet, which constraints are important and where do they stem from? Rusconi and Solga (2008) propose a multilevel framework for the study of couples' careers that provides a systematic treatment of these processes and constraints. They separate three levels: the individual level, the external-couple level, and the inner-couple level. The individual level includes all of the factors that influence a person's career independent of the family. Here, labor market structure is crucial. The external-couple level comprises the factors that arise because someone lives in a partnership. On this level, institutional regulations that are geared toward couples are of importance. Finally, the inner-couple level comprises the influence from within the family. Here, the distribution of bargaining power within the household plays a major role.

Gender is an important dimension in all of these levels of family and household influence on the life course (Krüger and Levy 2001). On the labor market, gender segregation and the gender pay gap influence career prospects. There are jobs that are gender typical and often "men's jobs" involve better careers and earnings than "women's jobs". On the external-couple level, being a woman in a couple may imply certain role expectations, such as being a homemaker. Such role expectations have often been institutionalized into laws that promote certain living arrangements, like the German joint taxation that benefits single earner couples. On the inner-couple level, these constraints on women's careers in couples lead to lower bargaining power in joint decisions on careers. Hence, the three levels are highly interrelated. In sum, inner-couple decision-making about the work-family interface is constrained by institutions and gender specific norms.

What do these considerations imply for economic insecurity generated by job loss? I argue that the same factors that shape careers in couples may also influence the incidence of job loss and strategies that are aimed at buffering income inside the family. This seems likely because research on couples' careers identified many ways through which the family and the labor market interact. However, there is little research so far on this influence in the context of economic insecurity. The only exception to this rule is literature on family reactions to changing circumstances within the linked lives framework. In a review about such "family adaptive strategies", Moen and Wethington (1992) conclude that the concept needs refinement and should be embedded in a life course framework where both individual agency and structural constraints can be included.

Some empirical work applied the concept of family adaptive strategies in a life course framework. Most of the studied strategies focus on adapting to challenges at the work-life interface such as childbirth. Research showed

that the strategies are influenced by gender. Women often stay at home after childbirth, even in couples stating egalitarian gender values (Moen and Sweet 2003). Therefore, a strategy for women to maintain their careers is to postpone childbirth (Altucher and Williams 2003). International comparisons of couples' careers also discovered institutional effects on couples' strategies. For example, dual-career couples with two full-time jobs after childbirth are much more common in Northern Europe than in other countries because of extensive public services such as childcare (Blossfeld and Drobnič 2001a). Also, cross-national variations in gender role expectations seem to be important. An analysis of women's employment behavior after childbirth showed that West German women are less likely to return to work than East German women (Matysiak and Steinmetz 2008). The researchers explain this pattern with more traditional values among West German women and a lower dispersion of child care facilities in West Germany. This difference is due to the employment regime in the former GDR, which actively promoted dual earner couples. However, in this stream of literature there is no study so far on income buffering strategies like the added worker effect described above.

Summing up, the review suggests that life courses are strongly shaped by the household a person lives in. This especially applies to labor market careers. Therefore, it is plausible that there are household influences on economic insecurity due to job loss. The linked lives perspective proved to be fruitful for the analysis of these influences. This perspective especially points to the importance of gender in shaping household influence on the life course. After reviewing theories about unemployment dynamics over the life course in the following section, I integrate the linked lives perspective into the trigger events approach below to advance its scope.

### 2.3 Unemployment dynamics over the life course

In addition to the literature on institutional and familial influences on the life course, it is also important to review approaches that explain the occurrence and the duration of unemployment over the life course. Implicitly, unemployment dynamics are already present in the trigger events framework since they are a type of mobility during the life course. However, since this framework concentrates on institutions there is little elaboration of the micro-level processes behind unemployment dynamics. Questions concerning who is affected by job loss and the time until re-employment are important determinants of economic insecurity caused by job loss.



A plethora of theoretical and empirical work – mainly rooted in Labor Economics – deals with these issues. Broadly speaking, this literature identifies three factors that influence incidence and duration of unemployment: the economic cycle, labor market structure, and individual characteristics. However, this line of research seldom addresses the consequences of its findings for economic well-being.

My theoretical considerations on unemployment dynamics build on the notion that employment outcomes are shaped by two-sided processes consisting of opportunities and choice (Logan 1996). That is to say, employers provide job opportunities that people may choose to take. Both opportunity and choice are governed by distinct mechanisms that have to be assessed individually. If both employers and workers agree on an employment relationship this is called a job match. Accordingly, unemployment starts once these matches are dissolved. By definition, in my analyses, job loss always stems from the opportunity side because I only consider involuntary job loss. After being laid off, the unemployed person starts to look for job opportunities and makes a choice from those available. This is the basic idea behind most theoretical accounts of unemployment dynamics. However, as I show below, theories differ with regard to the emphasis they put on opportunities versus choice.

First, I cover individual factors that influence outcomes after job loss. Several factors, such as education and experience, determine the attractiveness of the unemployed to employers. Consequently, low-educated and inexperienced people have longer unemployment durations until they find a new job (Wilke 2005). Unemployment duration, in turn, may influence the “scars” unemployment leaves in individuals’ earnings trajectories. That is to say, the degree to which post-unemployment wages are lower than wages without job loss would have been. However, there are competing hypotheses about the direction of the relationship between scars and unemployment duration. Human Capital Theory predicts lower wages as unemployment duration increases because human capital devaluates while it is unused (Becker 1975). Signaling Theory predicts the same outcome but states a different mechanism. According to this theory, spells of unemployment are signals for low productivity. Since employers cannot assess productivity directly they base wages on observable factors. Therefore, they pay lower wages to those who have been unemployed before (Spence 1973). Thus, both theories base their predictions only on employer’s decisions, i.e. the opportunities they generate.<sup>5</sup> Search Theory, on the other hand, takes both

5 Labor economists also call this “demand side arguments”.



opportunity and choice into account. Here, job seekers receive job offers at a certain rate and choose from them depending on their preferences and financial constraints (Mortensen and Pissarides 1999). That is to say, they search until they find a good match or run out of funds and have to settle for a worse job than preferred. This reasoning predicts the opposite: long unemployment durations can be used to search for better jobs and therefore post-unemployment wages should be higher when unemployment duration becomes longer.

There is evidence supporting both predictions. Researchers often found “duration dependence” in unemployment spells meaning that re-employment chances decrease as unemployment duration increases (Heckman and Borjas 1980). However, most studies agree that this is not due to the mechanisms described in Human Capital Theory and Signaling Theory, but rather a selection effect because those with high re-employment chances leave unemployment earlier and those remaining have considerably lower chances (Van den Berg and Van Ours 1996). On the other hand, longer job searches, made possible by unemployment benefits, seem to improve re-employment outcomes (Addison and Blackburn 2000; Gangl 2004).

These micro-level relationships are, however, mediated by institutions and other macro-level factors. Therefore, I turn to the two macro factors influencing the incidence and duration of unemployment: the economic cycle and labor market structure. In the two-sided job search framework the macro factors mainly affect opportunity; that is to say, how many job matches are dissolved and how many job offers exist. The influence of the economic cycle is well known: in economic booms job loss becomes less prevalent and there are more job offers. Conversely, in economic downturns workers face a higher risk of losing a job and finding a new job becomes difficult (Bover et al. 2002).

Besides the business cycle, labor market structure is a major determinant of unemployment dynamics. Labor market structure emerges from three types of institutions that govern labor market mobility: first, policies affecting job security such as employment protection legislation; second, the educational system; and third, welfare state policies such as unemployment insurance (DiPrete et al. 1997). Institutions that provide job security decrease the number of job losses. Yet, they also decrease opportunities for job seekers because fewer jobs become available. Thus, countries with high employment protection legislation typically have a “low-flow equilibrium” (Gangl 2003: 8) on their labor markets where overall mobility is low.

The educational system, on the other hand, influences labor market segmentation (Marsden 1990; Estevez-Abe et al. 2001). In some countries,

the educational system is strongly connected to firms and educational certificates bound to certain occupations shape career trajectories. In this case, skills learned in the educational system are often occupation specific or firm specific. In other countries, where the coupling of the educational system and firms is less pronounced, labor market mobility is less influenced by occupational boundaries. Here, the educational system often provides general skills that can be used in any job.

Marsden (1990) characterized the labor market structures that result from these differences in educational systems as “occupational labor markets” (OLM) and “internal labor markets” (ILM). In OLMs, the job opportunities of an unemployed worker are generally limited to their own occupation, which decreases the pool of possible jobs. On the other hand, the standardization of skills enables the unemployed to return to equally paid positions. They can generally apply their skills in any firm that employs certain occupations. In ILMs, on the other hand, skills are more often firm specific. Thus, the unemployed can generally apply for any job on the market. However, since their skills are not likely to be useful in the new job, they have to start again in lower positions and work their way up within the internal labor market of the new firm.

Estevez-Abe et al. (2001) point out that welfare states influence workers’ skill specificity. In a welfare state with little employment protection and low unemployment benefits, workers have incentives to invest in general skills that enable them to find a new job rapidly. In generous welfare states, on the other hand, investment in firm specific skills is less risky because job loss is less common and the financial consequences are less severe. Thus, welfare states and educational systems are complementary in creating a distinct labor market structure. Likewise, DiPrete et al. (1997) show that the interaction of labor market structure and welfare state regimes shape labor market mobility. Comparing workers in shrinking occupations across countries they find that occupational change is more common if the welfare state is weak. In strong welfare states, on the other hand, workers from shrinking occupations often move to non-employment instead of changing occupations.

The welfare state may influence both opportunity and choice for unemployed workers. Job opportunities arise if the welfare state offers public employment options. Also, active labor market policies that foster training of unemployed workers enhance their opportunities. On the other hand, unemployment insurance affects the choices available to the unemployed: if benefits are low and short-term, the unemployed have to choose the first job they come across. Long-term and generous benefits, on the other hand,

enable them to search longer, which is beneficial for post-unemployment wages (Gangl 2004). Thus, unemployment insurance acts as a “search subsidy” for the unemployed that enables them to find better jobs (Burdett 1979).

In sum, the review suggests several important factors that influence unemployment dynamics over the life course: the economic cycle, labor market structure, and individual characteristics. Labor market structure, in turn, is influenced by different institutions such as the welfare state and the educational system. Consequently, these factors are also linked to economic insecurity. I will incorporate these aspects into the trigger events framework in the following section.

## **2.4 Embedding the trigger events approach in the life course**

In this section, I advance the theoretical ideas about life course regimes and trigger events with further considerations about market, government, and family influence on the life course. I use these enhancements to develop a theoretical framework for my study. The basic idea for my framework is to start with DiPrete’s (2002) mobility regimes approach. This approach suggests that income mobility after adverse life events such as job loss are best understood by analyzing three dimensions: first, the incidence of the event; second, the immediate consequences and income buffers that have an immediate impact; and third, consequences and income buffers that emerge through “counter mobility strategies” pursued after the event. The income buffering mechanisms that offset income losses after displacements can be classified in two categories: the family buffer consisting of all income sources from within the household, and the welfare state buffer consisting of welfare state benefits.

The review of the theoretical approaches suggests that economic insecurity due to job loss originates from a complex interaction of individual agency and social structure. The incidence of job loss and the immediate consequences are mostly governed by structural forces such as labor market structure and the welfare state. The position on the labor market and institutions influence who becomes displaced. Then, the configuration of unemployment insurance and further benefits influence the consequences of job loss. Beyond this, the literature on linked lives also suggests that there are household influences on these processes. This aspect will be elaborated below. In the case of counter mobility strategies, individual agency plays an important role. For my analysis, I conceptualize individual agency as nested in the life course. Life courses, in turn, are linked within

the family. Finally, both the individual life course and the family are nested in the macro structure of a society. My general – and obvious – behavioral assumption is that individuals try to offset income losses due to job loss using a variety of strategies. These strategies may either be caused by the event or sometimes adopted in anticipation of the event. The availability of these strategies as well as the constraints they face in this attempt, however, depend on socio-structural factors, the family, and their previous life courses. Additionally, following the notion of the multidimensionality of the life course, the buffering mechanisms within the household differ from those that stem from the market or the welfare state. Household strategies to offset income losses always affect both the work and the family sphere and therefore follow a different logic than other income buffers. In addition, resources accumulated over the life course influence available strategies in interaction with the socio-structural factors and the family.

DiPrete (2002) developed the trigger events framework mainly to analyze the effects of the welfare state and the labor market between countries. These depend on the configuration of nation-specific institutions. I describe the relevant institutions in Chapter 3 and generate expectations based on this information. In his empirical work, DiPrete also considered counter mobility strategies originating from within the household (DiPrete and McManus 2000a). Yet, this aspect is not well integrated into the framework. Also, the selectivity of mobility triggering events and differences in consequences among groups are an underdeveloped issue. To integrate these dimensions, I supplement the approach with theories about the family and the life course introduced above. In the following section, I introduce the notion of family income buffering after job loss and formulate theoretical expectations about the occurrence of this type of income buffering. Thereafter, I address the issue of differences in incidences and consequences between social strata and show how this can be included in the trigger events framework.

### **Family income buffering**

The family buffers income losses in two ways that are similar to buffering mechanisms generated by the welfare state. This is, firstly, a form of direct insurance because other sources of income in the family ameliorate income losses. Among the additional sources of income, the presence of a second earner is the most important factor. Thus, for example, in a dual-earner household where both partners contribute equally, job loss reduces household labor income by 50 per cent compared to 100 per cent in the case of a

single-earner household. Second, it is a source for “counter mobility events” because other family members may initiate events that buffer income losses. Here, the most important event is an increase in partner’s earnings. This can be achieved either by labor market entry or an increase in hours. However, as the discussion above indicated, the family is a complex structure and several constraints as well as opportunity structures from within the family and from outside the family shape these two mechanisms. Building on the framework for the study of couples’ careers by Rusconi and Solga (2008), I distinguish structural influences on three levels: first, factors that influence the individual level independent of being in a family; second, factors that originate from being in a family; and third, factors that originate from within the family.

Following the considerations above, I expect that individual characteristics, family characteristics, and institutions shape these factors. Thus, certain patterns of family buffering should be identical in the two countries studied here whereas others should differ. In the following, I begin with expectations about income buffering through the family that should occur in both countries. Then, in the following Chapter, I describe the institutional structure in the two countries and carve out how these patterns should differ between the United States and Germany.

Regarding the income buffering effect of existing incomes in a household, family structure has an important influence. Clearly, single-adult households do not have access to this buffer. Therefore, these considerations only apply to couple households. Yet, also in couple households, there may be only one income and if there is a second income it may be marginal. Thus, for this part of the family buffer, I have to consider the existence and the actual structure of dual-earner couples. In the United States and Germany, as in most western countries, men in couples are most often employed full-time whereas women’s labor market attachment is lower on average. Therefore, a first expectation is that the family buffers more of the income losses after women’s job losses. Yet, this is merely because of the lower share of total household income that women provide on average. However, there are variations both within and between countries that I detail below.

The share of household income that women provide depends on joint decisions of couples about the work-family interface given structural and normative constraints. These two constraints are clearly interrelated. It is beyond the scope of this study to explain couples’ employment strategies. However, on the family level, the division and the amount of housework are crucial factors. The division of housework is clearly influenced by gender norms (Lewin-Epstein et al. 2006). If women do most of the housework

because they follow prevailing gender role expectations their time to do paid work is limited. Moreover, children in the household increase the amount of housework further and reduce the employment potential for the caretaker. This is especially the case if no external child care is available. Thus, at one extreme of the spectrum, there are “traditional couples” where the man is the main earner and the woman stays at home. Men in such traditional households do not have access to family income support initially if they become unemployed.

The other ideal type is the “modern” dual-earner couple where men’s job losses are partly offset by the existing second income if they become unemployed. There are many possible configurations of women’s employment in couples from marginal part-time to full-time jobs. As mentioned above, couples negotiate the extent of employment given structural influences on different levels. On the family level again, children are presumably an important factor for this decision. Depending on the availability of childcare, women often work part-time. Men, on the other hand, rarely reduce their hours because of domestic work. Thus, the buffering of men’s losses through existing incomes in a household depends on the degree to which women can reconcile work and family duties.

The decision about the work-family interface is influenced by institutional factors. The influence of childcare duties might be offset by public provision of childcare that enables women to participate in the labor market to a greater extent. Hence, the family buffer for unemployed men in couples with children should be greater if there are public childcare arrangements. Furthermore, tax regulations may influence couples’ employment behavior. Joint taxation of couples often entails significant tax advantages for single-earner households compared to dual-earner households. This forms an incentive to form single (often male) breadwinner households. In countries with individual taxation, there is no such incentive (Dingeldey 2001). Therefore, in the following chapter, I examine the institutional structure in the United States and Germany with special focus on institutions that influence couples’ decision making about the work-family interface. This includes tax laws and welfare state programs.

Besides these institutional influences on household labor supply, there may also be a connection between household formation, household structure, and the mobility regime. As mentioned before, the family can be a form of insurance against economic risk. Therefore, it may be a strategy for individuals to form a dual-earner household if they face economic uncertainties. If this is true, countries with high rates of job loss and low unemployment benefits should show higher rates of dual-earner couples.

Likewise, people with high unemployment risk should have a high probability of being in a dual-earner couple. However, these people may also have difficulties finding a partner because they do not have a stable income. I will return to this point when I consider selection effects below.

The second income buffering mechanism provided by the family is the capacity of other family members to increase their incomes, the so-called added worker effect. Again, this strategy is part of couples' joint decisions about the work-family interface given opportunity structures and constraints. Therefore, it is influenced by the same factors as the earner configuration. Because of the prevailing gender division of work in couples described above, this mechanism almost exclusively buffers men's incomes; women are often not full-time employees and can therefore increase their work hours if their partners become unemployed. Two starting points can be distinguished: first, women who are not on the labor market and second women who already work. The situation between the two cases is clearly different: in the first case, the couple separated work and family duties. Hence, they are a traditional couple. However, after the job loss, this arrangement is under pressure since the only source of market income is lost. In the second case, the couple decided that at least one of them does both paid and domestic work, which applies mostly to women. Hence, these modern couples have more experience in dealing with the work-family interface.

Thus, one expectation is that the added worker effect appears more often in modern couples than in traditional couples, because they face fewer normative barriers to increased labor force participation on the part of women. Moreover, not only current, but also previous labor force attachment of women in couples may be important here. If the couple is generally open to a dual-earner configuration and women have labor force experience this should increase the incidence of the added worker effect. A test for the impact of gender role expectations is the analysis of couples with children who are mainly at home. In a gender neutral world, the unemployed men could take up the caring responsibilities while their partners enter the labor market or increase their hours. However, if the role expectations directed at women cause them to keep the responsibility for the children they cannot increase their labor force participation.

Beyond these factors that influence individual life courses in couples, there are further constraints stemming from the labor market. First, those women who already have a job may have difficulties increasing their hours because many jobs do not allow such a change. Thus, they face "hours constraints" in their job. Several studies showed that a change of jobs is often the only possibility to increase hours (Altonji and Paxson 1992;



Reynolds and Aletraris 2010). Job changes, in turn, are not always feasible. This mechanism may counteract the positive effect expected for modern couples. Additionally, there is gender segregation on the labor market that may hamper women's ability to increase their earnings after their partner's job losses (Reskin 1993). Typical "women's jobs" are often lower paid than "men's jobs". Also, there may be constraints in the flexibility or work hours. For example, Petrongolo (2004) shows that many women involuntarily work part-time in Europe. Also, fixed-term contracts are more common among women than among men controlled for productivity. Thus, a perfect added worker effect where the increase in women's incomes completely offset men's losses is very unlikely.

Additionally, education may play a role in shaping the extent of the added worker effect. Women who are not currently on the labor market when their partners lose their jobs may be faced with problems when looking for a job. First, their skills may have depreciated through inactivity. Also, employers may see their inactivity as a negative sign in terms of productivity. However, the degree to which employers use credentials for their hiring decisions may ameliorate this negative effect. If credentialism is strong, women may have more chances of returning to a job if they have the required qualifications. Thus, I expect that the extent of the added worker effect depends on women's previous educational achievements and their labor market careers.

Welfare state institutions should also influence the occurrence of the added worker effect. If welfare state benefits are high, an increase in earnings on the part of the partner may not be necessary in order to stabilize household income. In the following chapter, I analyze the generosity and the eligibility criteria of unemployment benefits in the two countries to formulate expectations about the cross-national difference in the added worker effect.

### **The stratification of incidences and consequences**

In addition to a thorough treatment of the family, I also supplement the trigger events framework with perspectives on the stratification of incidences and consequences. This serves two goals: First, I want to develop expectations about the selectivity of job loss that also include household structure. Second, I want to generate hypotheses about differences in the consequences of job loss between groups. These two additions bridge the gap between the trigger events approach and traditional approaches to social stratification that focus on differences between individuals. Analyzing who is affected by job loss, and comparing the losses between individuals, yields



a more encompassing analysis of economic insecurity due to job loss than just considering the average consequences of an event.

As mentioned earlier, the stratification of the incidences and consequences of job loss follows from embedding the trigger events approach in the life course framework. Life courses are self-referential; that is to say, previous events influence future events. Individuals accumulate advantages and disadvantages as their life courses proceed. For example, entry into higher education depends on, among other things, performance in school and, consequently, leads to better paid jobs. This process is known as “cumulative advantage” (CA) (or disadvantage) (DiPrete and Eirich 2006). However, it is not always clear whether the process is CA in a strict sense, since this would require that later outcomes depend solely on previous events and not on individual specific characteristics. Heckman and Borjas (1980), for example, show that incidences of unemployment depend on individual characteristics, rather than on previous incidences of unemployment. However, in this study, I do not aim to test CA in a strict sense, but instead use the idea of accumulation over the life course as a descriptive tool.

With these considerations in mind, I expect that accumulated advantages and disadvantages over the life course influence both incidences and consequences of job loss. Concerning incidences, previous research has already revealed the influence of the labor market and the welfare state, as summarized above. However, the influence of the family and the household has not received much attention to date. Therefore, I develop expectations about the selectivity of job loss between household types in the following section. Subsequently, I turn to the stratification of consequences after job loss. Here, I argue that income buffering mechanisms generated by the market, the family, and the state differ between groups. Consequently, I expect differences in economic well-being between these groups.

### **The selectivity of job loss between household types**

In research on social mobility over the life course, it is a well-established fact that job loss hits already disadvantaged groups more often than others (see literature review in Chapter 1). Research on the household's influence on the incidence of job loss, however, is scarce. Clearly, this link is less apparent. However, it fits the idea formulated by Rusconi and Solga (2008) that being in a couple influences labor market outcomes because of role expectations and laws that institutionalize those. Although the relationship between households and job loss has not been addressed so far, there is a substantial literature devoted to a similar phenomenon: household

influence on wages. Results from this field may guide expectations about the incidence of job loss.

Many researchers have tried to analyze the causes of the “marriage premium”, i.e. why married men earn more than unmarried men on average (e.g. Korenman and Neumark 1991; Pollmann-Schult 2011). Also, much research focused on the negative influence of childbearing on subsequent wages for women, the so-called “maternal penalty” (e.g. Budig and England 2001; Gash 2009; Gangl and Ziefle 2009; Cooke 2014). Presumably, some of the mechanisms that bring about these effects also influence job security and, consequently, the incidence of job loss. Therefore, I will first describe these mechanisms and then carve out their influence on the incidence of job loss.

The literature reveals two broad strands of explanations for the “marriage premium” (Pollmann-Schult 2011). According to the first hypothesis, it is due to selection into marriage; that is to say, the same individual characteristics that make people more attractive marriage partners also improve their wages. The second line of argument posits that there are causal effects of being married or living with a partner on wages. The empirical literature generally finds huge selection effects. Single men differ from married men in many regards that are crucial for high wages. A common explanation is that women are looking for men with high earning potential, a good education, upward career prospects, and other favorable characteristics. Yet, after these factors are controlled for, married men still earn more (Korenman and Neumark 1991). Even when comparing monozygotic twins, a positive effect of marriage on wages can be detected (Antonovics and Town 2004).

The causal effects presumed in the literature are on the individual, household, and firm level. On the individual level, the attitude hypothesis formulated by Gorman (2000) states that married men are more interested in high wages than singles, because they now have to support for a whole family. Because of this changed attitude towards work they put more effort into their jobs or search for better paid employment. Reed and Harford (1989) likewise hypothesize that married men make more concessions regarding job quality to provide a high income. Empirical studies found some evidence supporting this argument. Married men are less satisfied with their pay and value high income more than single men (Gorman 2000; Pollmann-Schult 2011).

The explanation on the household level derives from Becker’s (1981) specialization hypothesis: As soon as a man moves in with a woman, he can specialize in paid labor and therefore his productivity increases. At the same time, women specialize in household production. Singles, on the other hand, have to do both housework and paid work and can therefore

not be as productive. Empirical literature generally refutes this hypothesis. The marriage premium does not seem to vary with the share of housework (Hersch and Stratton 2000; Pollmann-Schult 2011).

Finally, on the firm level, married men may receive preferential treatment compared to unmarried men. This may be because the employer values marriage and wants to help those with a family. Alternatively, the employer may see marriage as a positive signal for productivity. Additionally, work councils may support the promotion of workers with a family because they have greater need. To test this influence, Pollmann-Schult (2011) estimated separate models for employees and self-employed people. His results support the hypothesis that employers favor married men, because he found a marriage premium for dependent employees but not for self-employed people who are married.

Like the “marital premium”, there are many possible explanations for the “maternal penalty” (Budig and England 2001; Gash 2009). Some of these explanations resemble aspects discussed above. Firstly, a selection effect is likely here as well: Women with low labor force attachment and little career ambitions may be more likely to have children, whereas women with high ambitions may delay childbirth. For women who face problems acquiring a job on the labor market, childbirth may even be an “alternative career” (Friedman et al. 1994). Empirical evidence shows that women with a high level of education have children much later than women with low education. Also, childlessness is more common among highly educated women (Blossfeld and Jaenichen 1992; Rindfuss et al. 1996; Schmitt 2012). Clearly, if reconciliation of work and family are problematic, women who invested in higher education have a lot to lose if they interrupt their careers with childbirth. However, the penalty remains if selection is controlled for (Budig and England 2001). Hence, we can assume that there are other mechanisms behind this effect. Again, I distinguish between effects stemming from the individual, household, and firm level. Additionally, there is also evidence of welfare state effects on the extent of the maternal penalty.

On the individual level, it may be that childbirth causes women to value family higher than work. Therefore, they look for “mother friendly” jobs that allow them to reconcile work and family obligations. Such jobs often pay less than standard jobs. Research shows that mothers often return to part-time jobs, which are often less well paid than full-time jobs (Gash 2009). Such a change in attitudes may be explained by prevailing gender norms: If women are seen as responsible for childcare, they adapt their attitudes toward work to comply with the norm. Furthermore, women’s skills may depreciate while they are on parental leave. This, in turn, decreases their chances of finding a well-paid job.

On the family level, a hypothesis is that the increased amount of housework caused by having children may decrease the effort women put into their jobs. This derives from Becker's (1985) specialization hypothesis: Women usually specialize in housework while men specialize in paid work because they are both more productive in the respective area. Consequently, women put less effort into paid work because they spend most of their energy on domestic work. Trying to test this hypothesis, Anderson et al. (2003) compared the motherhood penalty among different educational groups. They derived from Becker's hypothesis that the motherhood penalty should be largest among women with college education because their jobs should require most effort. Contrary to this expectation, mothers with high school education had the largest penalty. Thus, the effort explanation is not supported.

Analogous to positive discrimination toward married men, there may be negative discrimination toward women with children on the firm level. If employers assume that mothers are less flexible and less productive, they may hire them only for low paid jobs, if at all. Confirming this, Correll et al. (2007) found that employers discriminate against mothers but not against fathers when looking for employees. All of these effects may be influenced by welfare state provisions for working mothers. Gash (2009) shows that the "maternal penalty" is smaller or even non-existent in countries that foster mothers' employment.

How do these theories and findings about the marital premium and the maternal penalty relate to employment insecurity? Firstly, they suggest that there is a strong selection effect in the incidence of job loss between different household types. One of the main reasons for this is selectivity of partnership formation with regards to socio-economic status and education. If we accept that women tend to marry upwards or an equal, whereas men tend to marry downwards or an equal, two groups face difficulties finding a partner: low-educated men and high-educated women (Lichter et al. 1995; Blossfeld and Timm 2003a). Thus, especially male singles are negatively selected with regard to social status. Recent analyses additionally suggest that women with low earning potential also increasingly remain single in the later cohorts (Sweeney and Cancian 2004; Lengerer 2012). Hence, people that have a high risk of job loss and low re-employment probabilities are single more frequently than others. Therefore, when comparing couple to single households, I have to account for this fact. Another important selection effect may occur in connection with motherhood. The literature suggests that highly educated women who pursue a labor market career often delay childbirth or even stay childless. Therefore, when comparing

women with and without children, I have to consider possible differences in education and age between them.

Yet, beyond this, there may be mechanisms stemming from being in a partnership and having children that may further impact differences between different types of households in terms of employment security. First, it may be that married men not only strive for higher wages, but also for higher employment security in order to support their family in the long term. Presumably, men who have to support a family have a taste for stable jobs and hence choose a secure position. Another mechanism leading to this outcome is that employers prefer married men. Consequently, single men have more difficulties finding a stable position. Regardless of the cause, this should lead to sorting of married men into stable positions and hence higher rates of job loss among single men.

For women, higher rates of job loss are presumably connected to motherhood: whether they chose “mother friendly” jobs because of attitude changes, gender role expectations, or the increase of housework, they are likely to be in less stable employment relationships. Likewise, discrimination against mothers in the hiring decision could lead to a similar effect. The need to find jobs that allow a reconciliation of work and family may lead to higher incidences of job loss for them. This may be even more the case for single mothers who face even greater difficulties in reconciling work and family (Zagel 2014). Also, employment interruptions because of childbirth may hamper access to stable jobs.

The second argument about the influence of the employer can also be turned around: If a firm has to dismiss employees, they discriminate against singles because they do not have to support a family. Additionally, discrimination against mothers on the labor market may have the same effect for them. Not only are they likely to take worse jobs to reconcile family and work, their decreased flexibility may make them vulnerable to dismissals in the case of restructuring or downsizing in the firm. These two hypotheses assume gender specific employer behavior. In the case of fathers, the assumption is that employers want to support families. In the case of mothers, the hypothesis assumes a negative reaction by employers to being in a family.

In sum, there are some reasons to believe that singles have a higher risk of job loss beyond the selection effect mentioned above. Presumably, this difference is especially salient for men, because living in a partnership or marriage should entail advantages especially for them. Women's job loss risks, on the other hand, should be influenced by motherhood. The group at the intersection of these factors, single mothers, presumably faces the highest probability of job loss.

So far, I have only covered the effect of household structure on the incidence of job loss – yet, there may also be the reverse connection: job loss changes household structure. This may affect household formation, childbirth, and household dissolution. Economic theories of household formation usually state that expected economic advantages from the joint household lead to partnership formation (Becker 1981). In other words, one of the reasons people move in together is economic gain. Therefore, economic uncertainty in the form of job loss may discourage people from forming unions because they feel they are not desirable partners. In male breadwinner societies, this argument should apply mainly to men, because they are the main income providers. From this perspective, those who lose jobs are also less likely to form a union. On the other hand, a person with an unstable career may want to move in with someone to secure her or his standard of living. Research shows that men with unstable careers have generally lower probabilities of union formation. As women become more active on the labor market over time, this phenomenon is also visible for them (Sweeney 2002). However, cohabitation seems to be an option for people with unstable jobs: research shows that economic uncertainty makes a cohabiting union more likely (Clarkberg 1999; Oppenheimer 2003; Kalmijn 2011). This is explained by “trial relationships”; that is to say, people with unstable careers also form couples but on a less formal basis. Still, union formation including cohabitation is less common among those who experience unstable careers. They often postpone union formation until they have acquired a stable position.

Further research shows that unemployment and insecurity influences the timing of childbirth and the incidence of family dissolution. Using German data, Gebel and Giesecke (2009) find that unemployment in the household delays the decision to become a parent. According to this study, the strongest effect on fertility decisions was that of men’s unemployment in West Germany, where the male breadwinner model is still widespread. Women’s labor market insecurities proved to be more or less unrelated to the timing of childbirth. However, Kreyenfeld (2010) finds that low-educated women have an even higher incidence of childbirth in the face of job insecurity. The author explains this with a change in roles: Faced with difficulties on the labor market, low-educated women retreat into the role of the homemaker.

The second possible influence of job loss on household structure is that the event may cause partnership dissolution. Yeung and Hofferth (1998) assume that job loss is a major cause for stress within a relationship. One way of relieving this is break up. In their analyses of American families,

they show that job loss leads to an increased probability of break up and divorce. Sayer et al. (2011) explored the mechanisms behind this connection in the United States. Men's unemployment leads to a higher probability of divorce because it violates norms of the male breadwinner and lowers the economic incentives for women to stay. Women's unemployment, on the other hand, has no effect on marital dissolution. Instead, high labor force participation on the part of females increases the probability of break-up if the wife is not satisfied with the marriage. Thus, economic independence enables women to leave if they are unhappy with the union. Consequently, male unemployment seems to cause partnership dissolutions. Therefore, I have to control for changes in the household after men's job losses.

In sum, the literature suggests that careers dominated by employment insecurity often go together with living in a single household: such careers delay union formation and increase the probability of union dissolution. Combining this evidence with the results about the incidence of job loss in different types of households, it becomes apparent that men living in a single household are negatively selected in a broad range of characteristics that influence labor market success. Yet, beyond this, several mechanisms depicted above may lead to a further accumulation of disadvantages: employment insecurity decreases their probability of union formation; this, in turn, decreases their career prospects, which leads to job loss and further disadvantages. For women, motherhood seems to cause disadvantages on the labor market. This may be especially salient for single mothers. Thus, the literature suggests that household structure influences living situations beyond the financial aspect of family income support.

### **The stratification of income consequences**

The theoretical considerations in this chapter suggest that not only incidences, but also consequences of job loss differ between social strata. This is due to differences in the effects of buffering mechanisms. This perspective is an important addition to the trigger events framework, because combining the information about who is most affected by job loss and who loses most income gives a more complete picture of economic insecurity caused by job loss. In the following, I discuss possible variations in the impact of the relevant buffering mechanisms among social strata and their consequences for economic well-being after job loss. This comprises re-employment, partner's employment, and welfare state benefits.

On the individual level, income buffering through re-employment is the most common strategy to buffer income losses and return to the



previous income level. The opportunities for re-employment, however, are influenced by the previous life course in connection with the labor market. An often replicated finding is that unemployment leaves scars in earnings trajectories (Arulampalam 2001; Burda and Mertens 2001). That is to say, workers affected by unemployment have lower wages in their new job than comparable workers without unemployment experience. Numerous studies show that higher education leads to rapid re-employment and lower chances of scarring (e.g.: Kuhn 2002; Gangl 2003). Clearly, those people receive more and better job offers on the labor market. On the other hand, there are indications that workers with long job tenure and high wages prior to job loss face higher losses in their post-unemployment jobs (Burda and Mertens 2001). Thus, workers who climbed high in the internal structure of a firm seem to have difficulties returning to an equally well-paid position.

Theories about the mutual influence of the educational system and the labor market suggest cross-country differences in re-employment outcomes for different income groups (Marsden 1990; Estevez-Abe et al. 2001). As introduced above, some countries are characterized by occupational labor markets (OLM) in which skills and credentials are occupation specific. This enables employees to move between firms within the same sector. For example, if one company closes down, employees move to another firm and use their credentials to enter into a job that is comparable to their previous one. Thus, their human capital is less likely to devalue. In other countries, internal labor markets (ILM) dominate. In firms with ILMs, skills are firm specific. Thus, after job loss, employees cannot use their skills in other firms and their human capital depreciates. Therefore, I expect larger wage scars among people with high pre-unemployment wages in ILMs than in OLMs.

In addition to these factors, the household level also influences re-employment chances. One influence derives from the selectiveness of household formation. As indicated above, male singles often have low education and unstable careers because labor market success influences partnership formation. Consequently, male singles' re-employment chances should be lower than those observed for men in couples. For women, the effect of household composition is less clear since being single often results from having a higher level of education and high labor force attachment. However, as women's incomes become more important within couple households, labor market chances seem to become a more important predictor of partnership formation for them as well (Sweeney and Cancian 2004; Lengerer 2012). Thus, depending on education, female singles are either positively or negatively selected with regards to chances on the labor market.



Beyond selection, there are also causal influences of certain household characteristics on labor market careers as the discussion of the “marriage premium” and the “maternal penalty” indicates. Men in couple households should have advantages with regards to re-employment that go beyond selection effects due to employer discrimination and a different attitude toward work. Also, their partners’ resources, such as information about available jobs, may reduce unemployment duration and improve re-employment outcomes (Jacob and Kleinert 2014). For mothers, on the other hand, I expect disadvantages in re-employment chances because of work-family reconciliation difficulties. It is also possible that some mothers who become unemployed and face these difficulties when searching for a new job retreat from the labor market completely and assume the role of a homemaker (Friedman et al. 1994). The existence of such an “exit strategy” is supported by the finding that low-educated mothers react to job loss with childbirth (Kreyenfeld 2010).

Income buffering through partner’s employment is also unequally distributed. First, since only couples have access to this form of income buffer, the same selectivity described above applies: higher educated men have higher probabilities of living in a couple household than lower educated men. Consequently, lower educated men’s incomes after job loss are less likely to be buffered by the family. For women, the pattern is different: both high- and low-educated women have a higher likelihood of living alone than those with average education. Second, the buffering capacity of the family depends on partners’ education: Higher education leads to higher possible labor earnings. Since people living in a couple are likely to have similar education, higher educated people are likely to have a higher educated partner with high income buffering potential. Such “educational homogamy” emerges from segregated marriage markets: Most individuals meet their partners while attending school (Blossfeld 2009). Although the rate of homogamy increased with educational expansion, two gender specific patterns remained: men are more likely and women are less likely to marry downward. Hence, in couple households high-educated women have a high likelihood of having a high-educated partner while high-educated men’s wives may also have lower education. In international comparison, the United States and Germany exhibit about the same rate of homogamous couples (Blossfeld and Timm 2003b). Therefore, in both countries, individuals in couple households with high education should be protected by the family to a greater degree. Those with low education, on the other hand, should be less protected.

The impact of the welfare state on incomes after job loss also differs depending on the prior life course. According to Esping-Andersen (1990),

welfare states not only decommodify, i.e. ameliorate the losses, but also stratify. That is to say, welfare state benefits are not equally accessible for all. For example, eligibility rules make benefits conditional on certain characteristics, such as having paid into the insurance system for a certain amount of time. Also, there may be ceilings in benefit payout or means tests that limit benefit payout to certain amounts depending on prior incomes and other incomes inside the household. Taking up this notion, I also analyze the stratifying impact of welfare state institutions geared toward the unemployed in the following chapter. This information will be used to formulate hypotheses about the stratifying impact of the welfare state after job loss.

## 2.5 Expectations about differences in economic insecurity due to job loss

In this chapter, I discussed several mechanisms through which the labor market, the family, and the welfare state influence economic insecurity due to job loss. Following DiPrete (2002), I identified two sets of mechanisms: first, mechanisms that affect the incidence of job loss and second, mechanisms that influence the consequences of job loss, i.e. income buffering mechanisms. Within the second set, there are factors that influence the consequences directly, and so-called “counter mobility strategies” that individuals or households pursue to offset the loss. I grouped these factors into the family buffer, which contains income support from within the household, and the welfare state buffer, which includes income support from the welfare state. I also consider counter mobility through re-employment. Together, these mechanisms shape social stratification by influencing economic insecurity over the life course; that is to say, they influence who is at risk of job loss and who loses most if it occurs. My theoretical considerations show the importance of considering market, family, and welfare state influences on the life course jointly. Mayer’s (2004) idea of life courses as multi-level, multidimensional, and self-referential processes helps to structure these influences and to generate expectations about the consequences of job loss.

Below, I sum up the expectations about differences in incidences and consequences between individuals and household types that derive from my theoretical considerations. In the following chapter, I describe institutional differences between the United States and Germany and develop expectations about cross-national differences. I order the expectations

by the empirical chapter they are tested in: first, expectations about the incidence of job loss and re-employment (tested in Chapter 5); second, expectations about the immediate and long-term consequences of job loss as well as buffering effects (tested in Chapter 6); and third, expectations about the incidence of counter mobility through the added worker effect (tested in Chapter 7). For the sake of clarity, I repeat these expectations in the empirical chapters and formulate testable hypotheses there.

The discussion in the previous section yielded expectations about individual level and household level differences in the incidences of job loss and unemployment. As indicated above, low-educated people and those holding low-paid jobs are more likely to experience job loss. They are often in segments of the labor market or occupations that feature low job stability. Also, re-employment is more difficult in this group because they are less sought after on the labor market. Thus, I expect to find that those who are already in disadvantaged socio-economic positions face further difficulties through job loss and longer duration of unemployment. Beyond individual level differences, I also expect to find differences in job losses and re-employment between household types and gender specific roles within these households. Single men and mothers should be more affected by job loss than other groups. There are two possible mechanisms influencing this: first, single men and mothers may hold less stable jobs and second, employers may discriminate against singles and single mothers when laying off workers. For single mothers, this could cumulate in even higher rates of job loss. Also, these groups are presumably disadvantaged in terms of re-employment. Employers might discriminate against them because they expect lower flexibility in the case of mothers and lower productivity in the case of singles. Also, singles lack the support that a partner could give, for example in terms of information about new jobs. In Chapter 5, I analyze whether these expectations are true.

With regard to economic well-being after job loss, I expect to find differences between household types as well as between social strata. This is because income buffering differs along these lines according to the theoretical considerations introduced above. In respect of household types, I expect that the presence of a partner is an important stabilizer for household income. Consequently, single households should have much higher decreases in economic well-being than couple households. Within couple households, I distinguish between immediate buffering through a partner's existing income and buffering through increases in partner's income after job loss. Generally, gender and the division of housework and paid work play an important role in the capacity of partners to buffer income losses in

couple households. In modern western societies, men in couple households are almost always employed full-time whereas women's employment varies. Therefore, the family buffer in couple households depends on women's labor force participation. For men, the extent to which their partners are employed and are able to increase income governs the family buffer and, consequently, household income losses after job loss. Women in couples, on the other hand, almost always have a full-time working partner. Thus, household income losses after job loss depend on the share of household income they provide. Small children in the household presumably further influence income trajectories after job loss. If they are at least partially cared for within the household, they increase housework and thus reduce time for paid employment. In couples, women usually reduce their employment after childbirth because of gender role expectations. This may reduce the family buffer and consequently increase household income losses after men's job losses. In single parent households, household income losses are even more long-lasting, because re-employment into a job that facilitates a reconciliation of work and childcare is difficult.

Also, the position in the social stratification prior to job loss may influence economic well-being after job loss. First, this may be due to re-employment probabilities and earnings in the new job after unemployment. It could be that those with well-paid jobs face difficulties securing an equally paid position and therefore lose most. On the other hand, it may be that this group has better chances of finding a well-paid position because their skills are valuable on the labor market and therefore lose least. The theoretical considerations above indicated that this depends on the structure of the labor market. I will return to this in the following chapter on institutional differences. The discussion of family income support yielded the expectation that higher social strata are better off after job loss because they are likely to have a partner with high earning capacity. This follows from the observation that many marriages are homogamous in terms of education. Thus, I expect to find a higher impact of the family on income buffering in the upper strata. However, the welfare state could counteract this through a stratified tax and transfer system. To explore this, I analyze the welfare states in the two countries with respect to their built-in stratification in the following chapter. The question is, whether the buffering impact of the welfare state on incomes after job loss differs among social strata. To test the expectations about differences in income trajectories and income buffers, I need to find suitable measures. I therefore operationalize these quantities in Chapter 4.

I also expect differences in the occurrence and the magnitude of additional family incomes after job loss – the so-called added worker effect

(AWE). Firstly, individual factors should play a role. Most obviously, if someone already works full-time, the AWE is unlikely. Therefore, the AWE should only be observable among women. Also, education and work experience should be important. Women with low education or little work experience may have a hard time finding a job or increasing their hours. This, however, partly depends on the labor market. On the household level, I expect differences depending on the way the couple reconciles the spheres of paid and unpaid work. In traditional couples, where the wife stays at home to care for children, the AWE could be less likely because gender role expectations prevent these women from entering the labor market even though their partner is unemployed. In modern or semi-modern couples where women are on the labor market, the AWE should occur more often because these couples have experience in non-traditional distributions of paid and unpaid work between them and are presumably less constrained by gender role expectations.

In the following chapter, I describe the institutional setting and economic conditions in the United States and Germany. This information supplements the expectations formulated here. The expectations based on my theoretical considerations in this chapter, together with the expectations about cross-national differences, will be condensed into hypotheses at the beginning of each empirical chapter (Chapters 5 to 7). However, before I turn to the analysis, I first describe my data set and the operationalizations of the main quantities of interest, namely job loss, (household) income, and income buffering in Chapter 4.

### 3 Welfare State Institutions and Labor Market Trends

The previous chapter identified several institutions and other macro structures that influence economic insecurity due to job loss. To gauge the influence of these macro factors, I conduct an international comparison. The two country cases used here are the United States and Germany. Within the group of modern capitalist economies, the two countries differ greatly. In commonly used typologies of countries, they are often presented as ideal types of a certain variant of capitalism or welfare state (e.g. Esping-Andersen 1990; Hall and Soskice 2001). Thus, the institutions in the two countries differ in a plethora of ways. Consequently, differences between the two countries cannot be causally ascribed to a certain institution. Instead, it is always the nation-specific bundle of macro conditions that drives the comparative findings. The research design is therefore a “most different systems design” (Przeworski and Teune 1970). Such a design is usually applied to find out if micro mechanisms have the same effect in different contexts. Hence, the international comparison in this study can be used to identify differences, but not to explain differences.

Although the research design does not test the impact of institutions directly, I aim to explain the cross-national results with the help of a thorough description of the country cases. Thus, the explanations are based on theoretical considerations rather than statistical methods. To accomplish this, I review differences in the institutions that govern economic insecurity caused by job loss in this chapter. Using this information and the theoretical framework developed in the previous chapter, I formulate expectations about differences between the United States and Germany. I begin with a review of social policy aimed at the unemployed, then cover family and tax policy, and finally examine labor market structure. Finally, I turn to changes on the labor market over time.

#### 3.1 Social policy

Generally, in the United States and Germany, there are two types of government programs that protect against the economic consequences of unemployment: wage-related unemployment insurance (UI) and targeted

minimum income schemes.<sup>6</sup> Unemployment insurance in the United States is regulated at the state level. The federal government has passed only a few policy guidelines for implementation in all states – such as the coverage of almost all industries – leading to a wide variety of unemployment compensation policies throughout the country. Wage replacement rates vary at around one-half of lost wages up to an earnings ceiling among the states. In all but two states, the maximum duration of regular benefits is 26 weeks. In addition, there are federal programs that extend the duration of benefits by up to one year in times of economic crises. Eligibility criteria vary widely among the states. There are considerable barriers to receiving benefits in some states for low-wage and part-time workers. In 2000, for example, workers who had been employed for half a year at 20 hours per week and who were earning the federal minimum wage did not satisfy the earnings requirement in eight states (Wenger 2003).

There are indications that income buffering by means of unemployment benefits has changed over time in the United States between the 1980s and the 2000s. Benefits have become subject to federal income tax since 1986, which led to lower actual benefits and a decline in take-up rates (Anderson and Meyer 1997). In addition, the 1981 Omnibus Budget Reconciliation Act (OBRA) made it more difficult for states to borrow money from the federal government if their unemployment insurance ran a deficit. Consequently, at least 44 states tightened the monetary and/or non-monetary eligibility criteria (US General Accounting Office 1993). During the 1990s and the 2000s, however, many states lowered the barriers to benefit receipt again (Wenger 2003). Hence, while the 1980s saw cuts in actual benefits through taxes and tightened eligibility criteria, these changes were partly reversed during the decades afterward.

After UI benefits are depleted, there are no further government programs directed at the unemployed. However, there are some targeted programs that provide a minimum income for those in need. Among these programs, food stamps (later: Supplemental Nutrition Assistance Program (SNAP)) have the widest coverage. Food stamps are vouchers that can be exchanged for food in grocery stores. The eligibility criterion for this program is low or no income.<sup>7</sup> The benefit amount of this in-kind transfer is low, however. In

6 For further information about welfare state policies for the unemployed in the United States and Germany and their changes over time, see Grell (2011) and Wörz (2011), who provide detailed overviews of this topic.

7 The eligibility criteria are complex and changed numerous times. Welfare Reform in 1996 made receipt conditional on working for “Able-bodied adults without dependents”.

2011, the average monthly benefit among single households amounted to \$153 (Center on Budget and Policy Priorities 2013). Beyond food stamps, Aid to Families with Dependent Children (AFDC) provided a low but unlimited benefit to single mothers with children. However, the program was discontinued in 1996 and replaced by Temporary Aid for Needy Families (TANF) through the Welfare Reform Act (Blank 2002; Haskins 2004). TANF is both less generous than AFDC and limited to five years per claimant. Currently, TANF is below 50 per cent of the federal poverty level in all states (Finch and Schott 2011).<sup>8</sup> When looking at US welfare policy, tax policy must also be considered. The tax system offers low-wage workers a refundable tax credit, the Earned Income Tax Credit (EITC). This wage subsidy improves the financial situation of those who have taken up a low-paid job after job loss. The EITC has been continuously expanded during the last decades (Blank 2010).

In Germany, unemployment insurance is administered at the federal level, which is reflected in a much more uniform institutional arrangement. Unemployment benefits provide the unemployed with an earnings-related benefit. Since 1998, the unemployed receive 67 per cent of their former monthly net wages if they live with children and 60 per cent if they live without children (pre-1998: 67 per cent and 63 per cent, respectively). Maximum payout is governed by an earnings ceiling of currently €5,800 per month above which no further contributions to unemployment insurance have to be made. The normal duration of benefits is one year after having worked in insured employment for about two years. For older workers with long tenure, the duration of the benefits is longer. The minimum duration of work that grants eligibility for a reduced period of unemployment benefits is one year. Thus, as in the United States, the short-term employed are excluded from benefits. Low-wage workers, on the other hand, are eligible in Germany because there is no earnings requirement.<sup>9</sup>

When unemployment benefits are depleted, unemployed persons in Germany are eligible for further programs. Until 2004, unemployment assistance paid unemployed persons with children 57 per cent and those without children 53 per cent of their former income. In contrast to unemployment benefits, this benefit was means-tested. If the eligibility criteria were fulfilled, the duration of the benefit was unlimited. The 2004

8 Note that the US federal poverty level is below the relative poverty level, measured as 60 per cent of median income that is usually used in international comparisons (Brady 2003).

9 However, so called "Mini Jobs" with monthly earnings below a certain threshold are excluded. The threshold is €450 in 2016.



Hartz Reforms, among other things, abolished unemployment assistance and established a new benefit for unemployed persons who are not or no longer entitled to unemployment benefits, which is called Unemployment Benefits II (Kemmerling and Bruttel 2006). This scheme accommodates all long-term unemployed persons who are able to work. Although, like the former unemployment assistance, it is directly targeted at the unemployed, its benefits are now paid as a lump sum.<sup>10</sup> Furthermore, several reforms increased the pressure on the long-term unemployed to take up a new job. For example, the possibility to decline a job offer because it is below a person's qualification level has been gradually abolished. Also, the Hartz Reforms implemented monetary sanctions that can be imposed on the unemployed if they reject a job offer or do not search actively.

In sum, public protection in the event of unemployment is much stronger in Germany than in the United States. This applies to both initial unemployment insurance and benefits for long-term unemployed. According to a simulation by the OECD (2007b), wage replacement rates amount to 73 per cent in Germany and 56 per cent in the United States for one-earner married couples with two children earning an average wage. In the long run, the estimated replacement rate falls to 40 per cent in the United States while it remains at 62 per cent in Germany.<sup>11</sup> The differences compared to the statutory replacement rates indicated above are due to taxes and further transfers that are included in the simulations.

Based on these descriptions, I expect cross-national differences in the amount of income buffering through the welfare state, the incidence of the added worker effect, and the stratification of benefits. First, the buffering effect of the welfare state should be greater in Germany, both initially and also in the long run. Second, the added worker effect should be stronger in the United States because of lower government help. Third, welfare state impact in both countries should be stronger for low-income groups because of the ceiling in benefit payout. However, difference between high and low income groups should be smaller in the United States, because some unemployed with low previous income are excluded from UI benefits, which should lower the relative advantage of the low-income groups. In Germany, on the other hand, the unlimited safety net at the bottom provides a minimum income that almost nobody can fall below, apart from those

10 Currently in 2016 the benefits amount to € 768 for a couple without children plus costs of accommodation up to a locally-set maximum. The household receives another € 237 to € 306 for each child depending on its age.

11 The difference is similar for other household types and different previous earnings.

who become sanctioned. Thus, low-wage earners do not fall much deeper than they already were if they become unemployed. This should increase the advantage of low-income groups relative to high-income groups.

Over time, both welfare states became less generous for the long-term unemployed. Also, both countries implemented activation measures directed at the unemployed. Yet, despite the common trend, the difference between the two countries in buffering potential through the welfare state presumably remained stable. The United States provided little support for the long-term unemployed even before Welfare Reform. Thus, the retrenchment presumably affected only a small group. In Germany, by contrast, there is still a safety net for the long-term unemployed after the Hartz Reforms. Yet, the welfare state lost its status-preserving element by providing the same benefit amounts for all long-term unemployed. Taken together, I expect to find a lower welfare state buffer in the long run after job loss in both countries. Whether this translated into higher overall losses is an open question, since the decrease in the welfare state buffer might have been offset by other income buffers.

### 3.2 Family policy and tax policy

The theoretical considerations about the family's influence in Chapter 2 suggest that family policy and tax policy should generate nation-specific patterns of income buffering through the family. Two factors are important: the taxation of couples and the organization of childcare. In the following, I describe the differences and similarities in the two policy fields and develop expectations about cross-national differences in the family buffering effect. Generally, in both countries, income tax is progressive; that is to say, higher incomes lead to higher taxes. However, income tax is much higher in Germany and the German tax system is more progressive (OECD 2011b).

The taxation of couples is similar in the United States and Germany. In both countries, couple's incomes are assessed jointly. This form of taxation is often regarded as a disincentive for the partner with lower earnings to increase earnings, because any additional income may shift total household income into a higher tax bracket in a progressive tax system. Thus, the marginal tax rate on additional income is much higher than in countries with individual taxation where the additional income would be taxed in a lower bracket according to the individual amount (Dingeldey 2001). Therefore, we can expect that there are disincentives for women to enter the labor market in both countries when their husbands work full-time.

However, simulations by the OECD (2001) show that these disincentive effects only appear in the German system. The simulations compare male-breadwinner couples with full-time/ part-time combinations and double full-time households and find that the German system taxes additional income to a greater extent than the American system. This is due to additional regulations for married couples in the US tax code that countervail the disincentives. Married couples in the United States have a higher standard deduction and larger tax brackets (Johnson and Rohaly 2009).

The availability and the organization of public childcare also differ between the two countries. There are no statutory entitlements to childcare for pre-school children in the United States. Germans, on the other hand, have a legal claim to childcare for 3- to 6-year-old children since 1996. However, childcare is usually only provided on a half-day basis. The American childcare system is very diverse and consists of a variety of arrangements in the individual states, which are too numerous to be covered here. The scope of childcare in Germany also differs within the country, albeit in clear-cut regions. In the former GDR, full-day childcare is widely available, because the former socialist regime promoted female employment. In West Germany, by contrast, the prevailing male-breadwinner model led to fewer facilities, which provide mainly half-day childcare.

Overall, about 56 per cent of American children between 3-6 years are enrolled in childcare. In West Germany, by comparison, there are places for about 90 per cent of the children between 3 and 6, of which only 24 per cent are full-day places. In East Germany, however, childcare facilities provide full-day places for almost all children of this age (OECD 2006). After age 6, when compulsory school starts in both countries, children in the United States generally have a longer school day than in Germany. While school ends around noon in Germany, American children stay until the afternoon. In East Germany, there are afternoon-care facilities for about 70 per cent of the schoolchildren, whereas such facilities are rare in West Germany.

Hence, East Germany provides the most encompassing childcare and the United States provide more than West Germany. However, childcare in the United States is often expensive. Parents have to pay much more for the services than in Germany, especially for younger children. Therefore, childcare provision facilitates the formation of dual-earner couples with children in East Germany to a greater degree than in the United States and in West Germany. Thus, I expect that the initial family buffer for couples with children is greatest in East Germany. In the United States, this buffer should be greater than in West Germany where childcare is much less available.

### 3.3 Labor market regulation and labor market structure

The labor markets in the United States and Germany differ to a great extent. The German labor market is much more regulated than the American labor market (DiPrete et al. 1997). This leads to much greater labor market dynamics in the United States compared to Germany: Job changes and unemployment are much more common in the United States compared to Germany (Gangl 2003). The regulations that influence these dynamics operate on different levels. First, employment protection legislation is much stronger in Germany than in the United States making it harder to dismiss workers in Germany. Second, the educational systems in the two countries lead to different occupational structures. The German vocational training system creates occupation-specific skills and credentials. Described in the terms introduced in the previous chapter, the German labor market is characterized by occupational labor markets (OLM) where workers can apply their skills in different firms within an occupation. Consequently, changes of occupations in the middle of the life course are rare. Education in the United States, on the other hand, is based on general skills and workers learn occupational skills “on the job”. Hence, the labor market is based on internal labor markets (ILM) where occupational barriers are low since skills are firm-specific and changing a job implies new training on the job, regardless of the previously learned skills (Althausen and Kalleberg 1981; Eyraud et al. 1990; Marsden 1990). Hence, according to this distinction, job changes across occupations are easier in the United States than in Germany.

The characterization of labor markets using the concepts of OLM and ILM suggests cross-national differences in job quality and wages after unemployment as indicated in the previous chapter. Occupation specific skills in Germany enable employees to move between firms within the same sector. For example, if one company closes down, the employees can move to another firm and use their credentials to enter into a job that is comparable to their previous one. In the ILM dominated United States, on the other hand, employees cannot use their skills in other firms and have to take up a job that is much lower within a firm’s hierarchy than their previous position. Thus, according to this reasoning, high-wage workers’ incomes in the United States should be more affected by unemployment than in Germany. For them, unemployment should leave much larger scars in their earning trajectories.

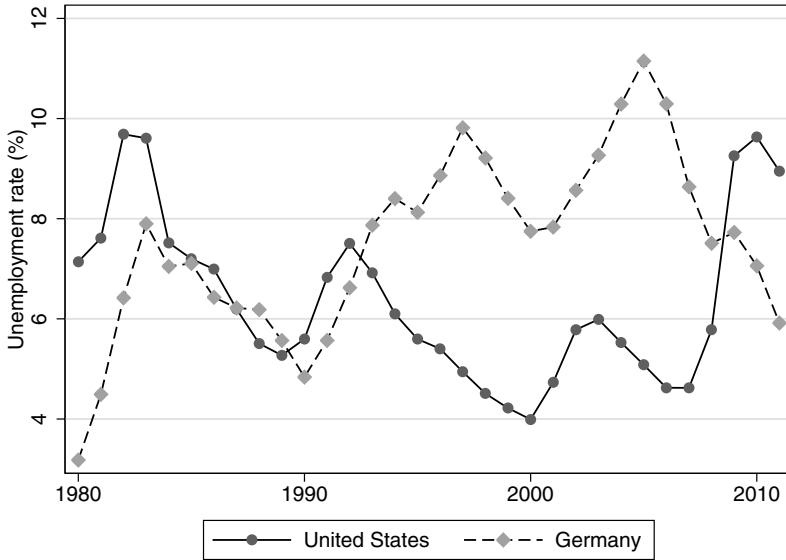
Yet, this characterization of the two labor markets is not sufficient, because it neglects the influence of social policy and educational systems on labor market structure (DiPrete et al. 1997). Following the idea of

occupational labor markets, job changes in Germany should be common within occupations. However, the German educational system, in combination with strong employment protection, generated a labor market where both firms and workers have incentives to invest in firm-specific skills as well (Estevez-Abe et al. 2001). Because workers do not have to fear dismissal, it is a rational strategy for them to invest in skills that cannot be applied in other firms. In the United States, on the other hand, workers rather invest in skills that ensure re-employment after job loss. Likewise, employers in Germany cannot simply hire new workers and therefore invest in their current staff, while American employers may easily replace their employees with more skilled individuals instead of training them.

Overall, this suggests country-specific patterns for both the probabilities of re-employment and of partners' increases in hours to offset income losses (i.e. the AWE). First, the German labor market provides fewer opportunities for re-employment than its American counterpart. Hence, beyond the effect of longer-lasting unemployment benefit, job search durations should be longer in Germany. Second, and connected to the first point, there should also be fewer opportunities in Germany for those who want to take up a job in the case of their partner's unemployment. The same applies to those who are already working and want to increase their hours: Because of "hours constraints" (Altonji and Paxson 1992) the only possibility to do so is a change in jobs, which is more difficult in Germany. However, credentialism in Germany could help those women who re-enter the labor market from a position of inactivity: if they hold a vocational training certificate, they may have better chances of re-entering than American women, whose skills are less transferable and more prone to depreciation.

### 3.4 Labor market trends

Over time, the labor markets in the two countries changed considerably due to the business cycle, changes in the economic structure, and institutional changes. First, between 1980 and the end of the 2000s, both countries saw several recessions and upswings. This is reflected in the unemployment rate presented in Figure 3.1. It is often overlooked that the United States' unemployment rate surpassed German figures at the beginning of the 1980s. The recession at this time hit the American labor market harder than its German counterpart. Until 1990, unemployment rates decreased simultaneously in the two countries and increased again during the next recession. Subsequently, however, the trends diverged. German unemployment soared

**Figure 3.1 Unemployment rates in the United States and Germany 1980 to 2011**

Source: OECD (2010b)

continuously after 1990, whereas the unemployment rate in the United States trended downward. The main reason for the German trend is the reunification in 1990 and the restructuring of the East German economy. Following the move from a planned economy to a market economy, East Germany saw a massive de-industrialization leading to mass layoffs. However, unemployment rates also grew in West Germany indicating a larger structural problem that affected the whole German labor market. By the end of the 2000s, however, the German labor market recovered. In the United States, by contrast, the Great Recession caused by the financial crisis after 2008 sent unemployment rates to levels not observed since the beginning of the 1980s.

Beyond changes in unemployment, both countries also experienced changes in job characteristics. Here, the most important change regards the rise of precarious work in both countries (Kalleberg 2009). In the United States, many results suggest that employment stability has declined since the 1970s (Hollister 2011). Average job tenure has decreased, especially among men in the private sector (Farber 2008a). At the same time, transitions from one job to another increased (Stewart 2002). Hence, the high turnover labor market in the United States, described above, trends toward even greater labor market dynamics.

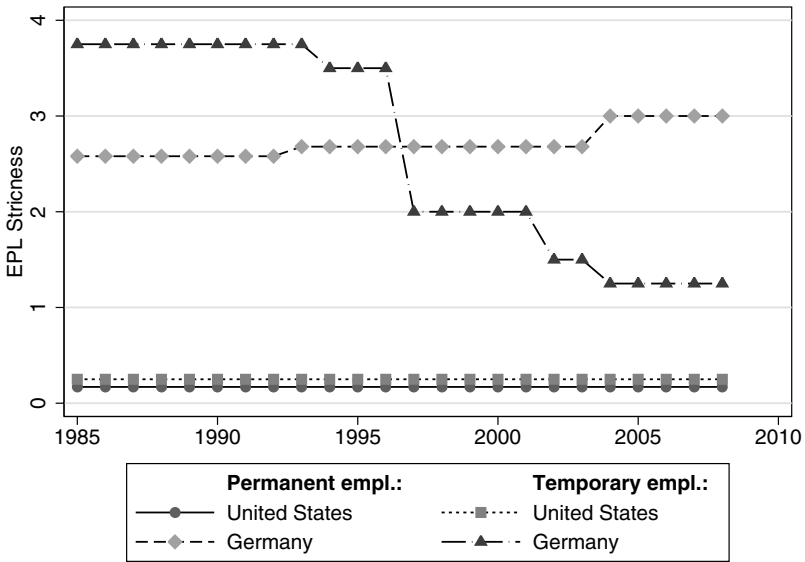
In Germany, there is also a trend toward more flexible employment arrangements. During the last decades, the number of fixed-term and contingent jobs increased (Leschke 2008). In 2010, about 15 per cent of the employees in Germany held a temporary job (OECD 2011a). Yet, on average, this trend does not seem to decrease employment stability in Germany (Mayer et al. 2010). One possible reason for this could be that temporary employment is a stepping stone into permanent contracts (Gash 2008). This view, however, has not been uncontested. Other studies show that holding a fixed-term contract increases the probability of becoming unemployed or moving into the next temporary job (Giesecke and Groß 2003). A closer look at the workers holding temporary contracts reveals an overrepresentation of low-educated individuals among them. A study analyzing trends in employment stability for the low-educated consequently found that they experience more employer changes and transitions to unemployment over time (Giesecke and Heisig 2010). Hence, the German labor market became more flexible at the lower margin over time.

The increase of temporary employment and the increasing labor turnover for low-educated individuals in Germany is likely to be caused by changes in employment protection legislation for temporary contracts. Figure 3.2 shows that there has been almost no change in the protection of permanent employment contracts in Germany. If anything, employment protection for this segment of the labor market has increased. Regulations regarding temporary contracts, on the other hand, have been liberalized over time. This is in line with the observation that employment relationships in Germany have become more unstable in the lower strata. In the United States, employment protection legislation is constantly at a low level. Thus, it is likely that the observed change in employment stability in the United States is not rooted in institutional change but in changing firm policies (Hollister 2011).

Another important change on the labor market is the steady increase in female labor force participation, as Figure 3.3 depicts. In the United States, the percentage of working women increased from around 60 per cent at the beginning of the 1980s to over 70 per cent at the end of the 2000s. German women's labor force participation was even lower during the 1980s. It started from around 50 per cent and grew at a faster pace and reached the share measured in the United States by the 2000s. The trend in Germany has been fueled by reunification. In the former GDR, female employment was the norm and many women continued to be in employment after 1990.

Although the aggregate female employment rates are similar since the 2000s, important differences between female employment in the United

**Figure 3.2 Employment protection legislation strictness in the United States and Germany 1985 to 2008**



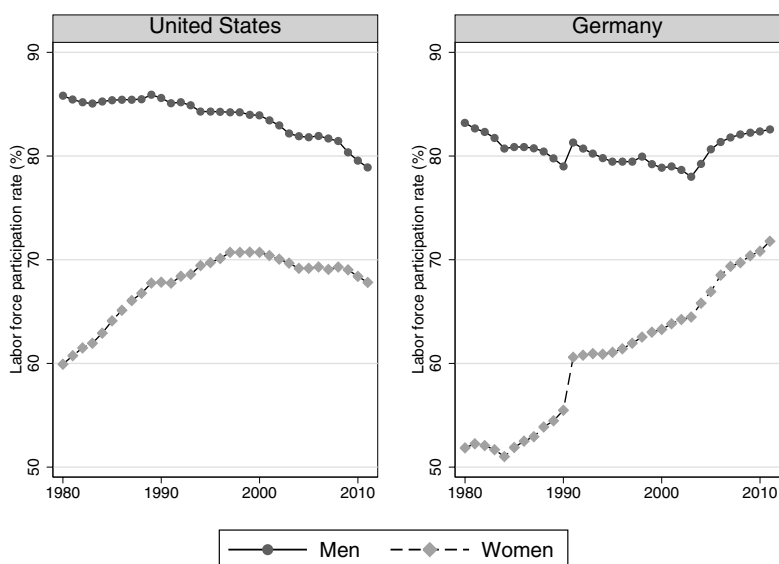
Source: OECD (2010a)

States and West Germany persist. In West Germany, many more women than in the United States work part-time (OECD 2007a). This is especially prevalent among West German mothers, who often take up part-time jobs as their children become older (Drobnič et al. 1999). Thus, West German women’s incomes in couple households are often supplementary, whereas American women often provide a larger share of total household income. The reason for this pattern is, presumably, a complex interaction of gender norms and economic constraints (Steiber and Haas 2012). For example, tax laws in Germany privilege couples with full-time/part-time combinations (Dingeldey 2001). Also, the male-breadwinner model remains more prevalent in West Germany than in the United States (Grunow et al. 2006). In East Germany, on the other hand, the legacy of the GDR continues to have an influence on female employment. Employment rates are higher, especially among mothers, and more households are dual-earner couples (Rosenfeld et al. 2004). Also, working women are more accepted in East Germany than in West Germany (Lee et al. 2007).

The cross-national comparison of female labor force participation suggests that family income support directly after job loss is lower among men in West



**Figure 3.3 Labor force participation rate of women and men aged 15-64 in the United States and Germany 1980-2011**



Source: OECD (2010b)

Germany than in the United States. In West Germany, more households rely mainly on men's wages. Consequently, if a single-earner's job is lost, market income in the household drops to zero. In the United States, by contrast, there is often still another earner in the household when the man loses his job. At the same time, this implies that women's job losses affect household income much more in the United States than in West Germany. Over time, losses in household income should become similar among men and women in both countries as dual-earner couples become more prevalent. However, this trend is presumably stronger in the United States, where a greater share of the increase in female labor force participation has been due to full-time jobs.

Summing up, this chapter provided insights into differences between the United States and Germany that, presumably, shape economic insecurity due to job loss. Generally, this comprises the well-known distinction between the "liberal" welfare state regime in the United States, where the government interferes little in the economy, and the "conservative" welfare state regime in Germany where the government has much more influence (Esping-Andersen 1990). Yet, beyond this, the labor market and family structure also differ to a large extent. Following the discussion in the previous chapter, these differences are also of importance for the extent of

economic insecurity. The high-turnover labor market in the United States is characterized by internal labor markets and general skills. In Germany, on the other hand, labor market turnover is lower and there are occupational labor markets where firm-specific skills are more important. Finally, working women, and especially working mothers, are much more prevalent in the United States. Together, all of these cross-national differences should lead to country-specific patterns of economic insecurity due to job loss. In the empirical chapters (5, 6, and 7), I formulate hypotheses about country differences that build on the theoretical considerations in the previous chapter and the institutional synopsis in this chapter. Yet, before I turn to the analyses, I will describe my empirical strategy and the data in the following chapter.



## 4 Data and Methods

The aim of this study is to analyze economic insecurity caused by job loss. As indicated in the previous chapters, I apply three steps of analysis to fully explore this issue: first, analyses of the incidence of job loss and unemployment; second the analysis of consequences and buffering effects; and third the analysis of household strategies to offset the consequences. While the first step is of a descriptive nature, the other two steps aim to isolate the effect of job loss on economic well-being and other household members' employment behavior under different circumstances. Thus, for the first step I need no special method beyond summary statistics.<sup>12</sup> However, for the second two steps, I need an empirical strategy that isolates the impact of displacements from other possible influences. One aim of this chapter is to describe this method. I rely on the counterfactual model of causal inference (Gangl 2010). Specifically, I use Difference-in-Difference (DiD) estimation with a matched control group. The matching of cases is achieved through Coarsened Exact Matching (CEM). I discuss the merits of this approach below.

To be able to test the implications of my theoretical considerations about economic insecurity caused by job loss in the previous chapters, I need data that span all three levels of my analysis: the individual, the household, and the welfare state. The latter level of analysis requires data from different countries, in this case the United States and Germany. Also, the data has to be longitudinal so that I can estimate changes due to job loss. Therefore, I use two long-running household panel data sets for my analysis: the Panel Study of Income Dynamics (PSID) for the United States and the German Socio Economic Panel (GSOEP). However, these two data sets cannot be easily compared due to differences in operationalization and nation-specific categories such as education. To compare the analyses, the data must be harmonized. As a first step, I use the Cross National Equivalence File (CNEF), which contains a subset of harmonized variables from both panel studies. However, the CNEF does not include all the data needed for my analyses. Therefore, I conduct further harmonization, which I describe below, together with further operationalizations of my theoretical concepts.

This chapter is structured as follows: first, I detail the statistical methods used to estimate the effects of job loss. Then, I describe the data sets used

<sup>12</sup> I will, however, use some further methods to test hypotheses about differences in incidences between groups that will be described in the chapter on incidences.

in the analyses. Finally, I turn to the operationalization and harmonization of key concepts in this study and describe the composition of the data set used in the analyses.

#### 4.1 Empirical strategy to estimate the consequences of job loss

My theoretical expectations are about group differences in the effects of job loss on two main outcomes. The first outcome is changes in economic well-being and the second outcome is changes in partners' employment participation (the added worker effect). I want to find out how the effects of job loss differ among individuals, families, and welfare states. To be able to compare the effects along these dimensions, I need to ensure that they are due to job loss and not due to another factor. In other words, I want to extract the causal effect of job loss, i.e. the effect that is only due to the fact that someone becomes unemployed.

To isolate the effects of job loss, I apply the counterfactual model of causal inference (for an overview, see: Winship and Morgan 1999; Gangl 2010). This model borrows its vocabulary from medical research. The event or condition that a person is exposed to is called "treatment". In my case, the treatment is job loss. At its core, this model has a simple idea: If a researcher could observe the same person with and without the treatment, the causal effect of the treatment on an outcome is the difference in outcomes between the two states. Expressed formally, the Treatment Effect (TE) for one unit  $i$  is

$$TE_i \equiv (Y_i|D_i = 1) - (Y_i|D_i = 0) \quad (4.1)$$

with  $D = 1$  indicating that the event occurred and  $D = 0$  that it did not. Of course, one of the states is hypothetical: The same person cannot simultaneously be employed and unemployed. Therefore, the individual treatment effect  $TE_i$  cannot be observed. Nevertheless, it is possible to estimate treatment effects using this framework under certain circumstances.

The first step to identify treatment effects in the counterfactual framework is to move away from unit treatment effects to treatment effects in a population. The most straightforward way is to estimate the Average Treatment Effect (ATE), which is simply defined as the expected values, i.e. the average, of unit treatment effects:

$$ATE \equiv (E(TE) = E[(Y|D = 1) - (Y|D = 0)]) \quad (4.2)$$

The ATE includes both the treatment effect among the treated and the untreated. For my study, this would mean that I obtain the effects of job loss among those who lose their jobs and the effects of job loss among those who do not lose their jobs. However, it is not informative for a study of economic well-being after job loss to find out about the effects of job losses that do not occur. Instead, I want to find the effects of job loss among those who are affected by it. Therefore, I only estimate the Average Treatment Effect on the Treated (ATT):

$$\text{ATT} \equiv E(\text{TE}|D = 1) = E[(Y|D = 1) - (Y|D = 0)|D = 1] \quad (4.3)$$

Compared to the ATE, the only difference is that I now estimate the treatment effect given that the treatment  $D$  is present. The ATT is not only more interesting with regard to my research question, but also easier to identify using the observed data. Still, the ATT as presented above, includes hypothetical counterfactual observations and thus cannot be estimated.

An identification strategy for the ATT has to estimate values for the hypothetical cases that are not observed. This is done using existing cases that have the required state. Thus, I compare observations with the treatment to those without the treatment. Such a comparison yields the ATT if the process of treatment assignment is known. For example, if the treatment is randomly distributed, as in Randomized Controlled Trials (RCT) in pharmaceutical research, the ATT is defined as the difference between outcomes in the treatment ( $i$ ) and in the control group ( $j$ ):

$$\text{ATT}_{\text{RCT}} = E[(Y_i|D_i = 1) - (Y_j|D_j = 0)] \quad (4.4)$$

This is because under random assignment, the only thing that differs between the treatment and the control group is the treatment. Thus, the difference is due to the treatment. Clearly, random assignment of job loss is not possible for many reasons. In the observational data I use, job loss is likely to be selectively distributed, which biases the measured effect. For example, if job loss occurs more often among low-skilled workers and this group also has lower wages on average, then the comparison of income between the groups with and without job loss is presumably overestimated.

To estimate a causal effect using observational data where I cannot manipulate the selection myself, I have to account for selection. If I can render the assignment of the treatment as good as random conditional on covariates, I can identify the ATT. This idea, called the Conditional Independence Assumption (CIA), is the key to estimating treatment effects

using observational data. The CIA holds if the treatment and the control group become similar in aspects that influence the outcome other than the treatment. Thus, in the example above, if I can render the occurrence of job loss independent of skills and other factors that influence both its occurrence and income, the CIA would hold and I could estimate the ATT of job loss on income.<sup>13</sup>

There are two possible ways of identifying the ATT using observational data. First, I could compare the same individual at different points in time (“within approach”). Second, I could compare individuals with and without the treatment (“between approach”). Both approaches have their strengths and weaknesses. The within approach is the most obvious implementation of the counterfactual model if panel data is available: If I can observe the same persons before and after the occurrence of job loss, the treatment and the control group consist of the same individuals at different points in time and are therefore very similar. In the same stylized notation as before, the ATT in the within approach is defined as follows:

$$ATT_{FD} = E[(Y^t|D^t = 1) - (Y^{t-1}|D^{t-1} = 0)] \quad (4.5)$$

where  $t$  is the time at which the treatment occurs and  $t - 1$  is before the treatment. The only elements that differ between the groups are factors that change over time. This estimation strategy is also known as First-Differences (FD). The FD model is a simple form of a Fixed-Effects (FE) model. In these kinds of models, all individual-specific time-constant factors are controlled for, because they do not affect changes within the individuals by definition (Halaby 2004). The FD approach is nicely illustrated on the basis of linear regression. Consider a model of  $y_{it}$  with a vector of explanatory variables  $x$  that vary between individuals and over time and the corresponding vector of coefficients  $\beta_1$ . Also, there is a vector of time-invariant covariates  $z$  and coefficients  $\beta_2$ . Finally, there is a time-constant error term  $a_i$  and a time-varying error term  $u_{it}$ :

$$y_{it} = \beta_1 (x_{it}) + \beta_2 (z_i) + a_i + u_{it} \quad (4.6)$$

13 Also, the stable unit treatment value assumption (SUTVA) has to be met. It states that there should be no effects of the treatment assignment process on the outcome. There should also be no interactions between the units under study that influences the outcome. An example would be that workers in a randomized experiment who do not receive a treatment that boosts productivity (maybe a special tool) organize themselves to work harder in order to make up for the disadvantage. Obviously, this is of greater relevance in randomized trials than in my case.

If I now take the first difference of every covariate, this yields

$$(y_{it} - y_{it-1}) = \beta_1 (x_{it} - x_{it-1}) + \beta_2 (z_i - z_i) + (a_i - a_i) + (u_{it} - u_{it-1}) \quad (4.7)$$

where the vectors  $z_i$  and  $a_i$  drop out because they have the same values at both points in time. As a result, the FD model implicitly controls for all measured and unmeasured individual-specific and time-constant covariates. At the same time, the effect of measured time-constant variables ( $\beta_2$ ) cannot be estimated using a FD model.<sup>14</sup>

Since many individual-specific confounding factors, such as gender or education, among adults do not change over time, the CIA is often plausible in FD and FE models. Clearly, FD and FE can only assess changes in outcomes. Yet, because I am interested in changes in economic well-being through job loss, this is not an issue. However, there are trends over time that these types of models do not control for, such as maturation effects and common shocks. Maturation effects may be, for example, the seniority effect in wage settings that assigns higher wages to people with higher job tenure. Common shocks, on the other hand, are events that reduce all incomes, for example because of a recession. Thus, in both cases, the situation before the event is not an adequate estimation of the counterfactual situation that job loss did not occur. The two examples illustrate that trends over time are important factors when analyzing economic well-being. To control for trends over time, I need observations of individuals' trends that are not affected by job loss.

As an extension of FE or FD models, Difference-in-Difference (DiD) estimation controls for time-varying factors and common shocks. DiD estimation also includes individuals that do not experience the treatment to estimate the outcome that would have happened between the two points in time if the treatment had not occurred. To achieve this, the change in the outcome among the treated is compared to the change in the outcome among the control group. In other words, I calculate the difference between the differences within the cases. In the notation above this yields:

$$ATT_{DiD} = E[(Y_i^t | D_i^t = 1) - (Y_i^{t-1} | D_i^{t-1} = 0)] - ((Y_j^t | D_j^t = 0) - (Y_j^{t-1} | D_j^{t-1} = 0)) \quad (4.8)$$

<sup>14</sup> FE models have the same properties. However, they can also be applied to situations with more than two time points. FE achieves the elimination of individual specific heterogeneity by subtracting the individual specific means from each variable. Again, individual-specific time-constant variables drop out of the equation.



where  $i$  signifies the treatment group and  $j$  signifies the control group again. However, since DiD uses control cases, the issue of selection between individuals resurfaces. Clearly, the outcome in the control group is also in differences, and thus individual-specific time-constant differences between the treatment and control group are still controlled for. Still, trends over time may differ. For example, if job loss occurs more often among the low-skilled and wage growth is also lower in this group, a control group with many high-skilled workers has different trends and therefore biases the results. Therefore, I also need techniques for the estimation of causal effects between individuals.

The between approach in the counterfactual model compares different individuals at the same point in time. In this case, the treatment and the control group differ greatly if the treatment is selective. To comply with the CIA, I have to estimate the counterfactual situation in the control group using other observed covariates; or, put differently, I have to render the control group similar to the treatment group. There are several techniques to achieve this. One strategy is to control for the relevant covariates using multiple regression. If variance due to variables that influence both the selection and the outcome is removed through regression, the CIA may hold. However, regression based analyses have the weakness that they are parametric, i.e. that they assume certain functional relationships between variables. If the functional forms are mis-specified, the factors are not properly controlled for and the CIA does not hold.

Therefore, researchers applying the counterfactual model mostly rely on non-parametric methods. The most commonly used non-parametric method is statistical matching. The basic idea behind statistical matching is to find statistical twins of observations, i.e. observations that are identical, based on several relevant observed variables. If there is a statistical twin for each treatment observation in the control group, the two groups are similar given the covariates and the CIA holds. This basic approach is called “exact matching”. However, it is quite obvious that exact matching is often not feasible because it is unlikely to find enough individuals with exactly the same values on several variables. Therefore, researchers calculate a measure of similarity between cases. There are different methods to find out which individuals are similar. The most commonly used measure is the propensity score. The propensity score is the predicted probability of being in the treatment group given the covariates. Rosenbaum and Rubin (1983) show that the propensity score is a sufficient one-dimensional summary statistic for the multi-dimensional similarity between cases. Usually, researchers use predicted probabilities from a logistic regression or a similar technique.

Then, weights are constructed from the propensity scores for the control group that render it similar to the treatment group. The similarity between the two groups is often called balance. In the simplest case, control cases that are very unlikely to be in the treatment group are weighted down, whereas control cases that are likely to be in the treatment group receive a larger weight. There are many different ways to construct the weights. For example, the researcher may set cut-off values (“calipers”) that remove control cases that have a very low propensity to be in the treatment group or define strata where weights are constructed for different subgroups (Gangl and DiPrete 2004; Caliendo and Kopeinig 2008). At the end, the researcher must always check whether the constructed weights balance the treatment and the control group on all relevant variables. If not, the matching model has to be re-specified. Also, the researcher always has to identify the area of common support between the treatment and the control group at some point in the matching process. The area of common support is the range of values on all considered matching variables that appear both in the treatment and in the control group. If a treatment case is outside the common support, it either cannot be used in the analysis or a control case has to be modeled. The first option yields a local ATT that only applies to the treatment cases with valid controls. The second option makes the ATT model dependent. In this case, the researcher has to decide what is less severe.

Propensity Score Matching (PSM) and related methods have several weaknesses. Firstly, they disconnect the calculation of the similarity of cases from balance checking between treatment and control group. The researcher always has to define a model that predicts the propensity scores, and then calculate the balance in the weighted data. Often, changes in the model to increase balance on one variable worsens balance on another. This often leads to many iterations of matching and checking until the groups are balanced on the most important variables. Checking balance not only includes means in variables, but also, for example, variances or higher order interactions. This makes the process of finding a suitable control group cumbersome. Likewise, finding the area of common support is an extra step in the matching process that is not achieved through calculating the propensity score. Instead, the researcher has to check that the cases are within the common support in further analyses. Furthermore, King et al. (2011) show that propensity score matching often does not perform better than randomly matching cases. According to the authors, this is due to the reduction of the data to one propensity score. This one-dimensional

metric is insufficient to balance treatment and control group given the multi-dimensional distribution of the covariates.

To overcome the shortcomings of propensity score matching, Iacus et al. (2012) propose a different matching technique called Coarsened Exact Matching (CEM). The basic idea behind CEM is to find exact matches for treatment units in the control group on coarsened variables. In this technique, the researcher sets the balance between treatment and control group before the matching by deciding about categories of values in the variables. For example, if individuals within quartiles of household income are regarded as reasonably similar, the researcher coarsens household income to quartiles and matches people within these categories. If more coarsened variables are used for matching, individuals are always matched to cases with the same combination of categories. Thus, the method also considers all types of interactions between the variables. The combinations of categories are called “strata”. To generate weights that balance the data, CEM takes the number of treatment and control cases in each stratum and weights the control cases so that their number equals the number of treatment cases. To restore the original proportions of control and treatment cases, the weight in each stratum is multiplied by this proportion. The weight is defined as follows:

$$w_i = \begin{cases} 1, & i \in T^s \\ \frac{m_c m_T^s}{m_T m_c^s}, & i \in C^s \end{cases} \quad (4.9)$$

where  $m_c^s$  is the number of control cases in stratum  $s$ ,  $m_T^s$  is the number of treatment cases in stratum  $s$ .  $m_c$  and  $m_T$  are the number of treatment and control cases, respectively. Finally,  $T^s$  and  $C^s$  are all treatment and control units, respectively, in a stratum. Strata that contain none or only one group of cases are not incorporated in the construction of the weight. Thus, observations that have no match in the other group are dropped from the data set. As a result, CEM also automatically restricts the analysis to the area of common support given the coarsening of the data. Therefore, the ATT calculated using CEM is always a local effect among the treatment units for which a matching control case is present. Iacus et al. (2012) call this the Feasible Average Treatment Effect on the Treated (FATT). Because not all treatment cases are used to estimate the FATT, I present descriptive statistics for the treatment cases with and without a match in the later chapters to assess the selectiveness of the used sub-sample of the treatment cases.

CEM has several desirable properties that justify my decision to use it in this study. First, according to King et al. (2011), CEM outperforms other

matching solutions in generating balance between the treatment and the control group. Second, CEM is able to balance the data based on theoretical considerations and a priori knowledge about the variables. For example, if the researcher knows that certain educational degrees are very similar, they can be summarized in one category without loss of much information. Thus, instead of technical measures of the similarity of cases, I use existing information to match the cases.

To estimate the effect of job loss on economic well-being and partners' employment participation I therefore use DiD with a matched control group obtained through CEM in the following chapters. Through this estimation strategy, I obtain effects that contain both the changes within the individual and also changes that would have happened in the counterfactual situation should job loss have not occurred. The latter part of the effects is estimated through the matched control group. Presumably, the selection mechanism is different in both outcomes that I consider. Therefore, I present the variables on which I match and their coarsenings in the respective chapters.

So far, I have not examined the issue of sampling and population level effects. The (feasible) ATT I described was always the Sample Average Treatment Effect on the Treated (SATT). Yet, since this study also wants to describe the situation of those affected by job loss in the United States and Germany, I am actually interested in a Population Average Treatment Effect on the Treated (PATT). In a random sample of the population, the PATT is the expected value of the SATT. However, the two data sets I use are not pure random samples of the respective population in the United States and Germany (see below for details). First, both contain oversamplings of certain groups. Second, they are panel surveys and, consequently, subject to selective drop-outs. Both issues can be corrected using appropriate survey weights. In order to estimate the PATT, I have to apply these weights as well.

The use of survey weights in matching estimators is an underdeveloped issue. Usually, the literature recommends only weighting the treatment cases (Bryson et al. 2002). The reason for this is that the control cases are weighted to resemble the treatment cases through the matching procedure. Thus, if the treatment cases are weighted correctly, so are the control cases (Heisig 2015: Chapter 4.2). Therefore, I include the survey weights into the CEM weights according to the following formula to generate the individual weights that contain both the matching weight and the survey weight:

$$w_i^m = \begin{cases} l_i, & i \in T^s \\ \frac{\sum_{i \in T^s} l_i}{\sum_{i \in C^s} 1}, & i \in C^s \end{cases} \quad (4.10)$$

The weights for the treatment cases are therefore simply the survey weights. For the control group, the weights are the proportion of the weighted number of treatment cases and the number of control cases in each stratum. This is the weight that I use in the analyses of the effects of job loss in Chapters 6 and 7.<sup>15</sup> Note that the weights no longer include the overall proportion of treatment and control cases. This is not needed, however, in my analyses, because I am only interested in the sizes of the effects and not in the relative occurrence of the treatment. I analyze this aspect separately in Chapter 5.

To conduct the analyses using the method proposed in this section, I need data with repeated observations (panel data) covering the United States and Germany. From these data sets, I need to construct a treatment and a control group. The treatment group consists of individuals who are employed at one point in time and who subsequently lose their jobs. The control group, on the other hand, consists of individuals who are also employed – and thus at risk of becoming unemployed – and stay employed afterward. In the following section, I describe the data used, the operationalizations, and the construction of the treatment and the control group.

## 4.2 Data sets

### Panel Study of Income Dynamics (PSID)

Launched in 1968, the PSID is the longest running household panel study in the world.<sup>16</sup> At its core, the PSID consists of two samples of non-institutionalized households. The first sample originates from an earlier study called the Survey of Economic Opportunity (SEO). In the SEO, a representative sample of the population in the United States of about 30,000 households was surveyed with regard to income and poverty in 1966 and again in 1967. Subsequently, the Office of Economic Opportunity, which launched the study, asked the Survey Research Center (SRC) at the University of Michigan to continue the study with a sub-sample of 2,000 low-income households. The SRC, however, proposed adding a second nationally representative sample of 3,000 households so that the study also comprises non-poor households. The latter sample is known as the SRC sample. Together, the 5,000 households from the SEO and the SRC samples have been the basis

15 I am grateful to Jan Paul Heisig for pointing out this solution to me.

16 The following overview builds on the introductions to the PSID by Hill (1992) and McGonagle et al. (2012).

for the PSID. Over the course of time, two more samples have been added to keep the PSID representative of the population, which has changed because of immigration. In 1990, a sample of about 2,000 Latino households was added. However, in 1995, the PSID dropped this sample again because of funding issues and because this sample did not cover all of the post-1968 immigrants. In 1997, a part of the original SEO sample had to be dropped because the PSID faced problems funding the study. At the same time, the study added about 500 families who immigrated to the United States after 1968. The PSID provides weights that adjust for the different sampling probabilities in the sub-samples. In 2009, the PSID consisted of about 8,500 households with about 23,000 household members.

Initially, the families were surveyed every year in the PSID. From 1997 on, however, the interviews have been conducted bi-annually due to the above mentioned budget issues. This leads to a serious difficulty for my analyses: I can only analyze two-year changes in income after job loss in the United States from 1997 on. The PSID conducts an interview with one person in the household per wave. This person is called the “head” of the household. In couple households, this is usually the man. The “head” also gives information on other household members. Most of the interviews are conducted by telephone. The PSID follows initial sample members even if they leave a household, for example as a result of leaving the parental household or divorce. Newborn and adopted household members also become part of the sample and are followed throughout their lives. Persons who move in with a sample member are followed as long as they live with the original sample member. However, they are not considered as sample members and have a weight of zero. Thus, they drop out in weighted analyses. If they move out again, they are not followed.

Through extensive tracking and monetary incentives, the PSID reaches re-interview rates of more than 95 per cent in most years, which is among the highest response rates found among panel studies worldwide (Schoeni et al. 2013). Still, as in every panel survey, selective panel attrition is an issue. Analyses showed that low-income households are especially likely to drop out of the sample (Fitzgerald et al. 1998). The PSID provides weights that counteract this tendency. Compared to the March Current Population Survey (CPS), Gouskova et al. (2010) find slightly higher average incomes in the weighted PSID. However, this difference does not change over time and overall trends in the distribution of income are similar in the two data sets. Hence, the weighted results from the PSID are still representative of the population in the United States.

Taken together, the PSID is well suited for my research because it covers all levels of analysis and provides internationally comparative information through the CNEF, as described below. Also, the long panel duration and high response rates are well suited to assessing long trajectories after job loss. This justifies use of the PSID instead of the Survey of Income and Programme Participation (SIPP). The SIPP provides the employment status on a monthly basis, which is better suited to analyzing the dynamics of unemployment. However, data on household income is less detailed and there is no harmonized data for international comparisons.

### **German Socio Economic Panel (GSOEP)**

The GSOEP started in 1984 and its design has been strongly influenced by the PSID.<sup>17</sup> Like the PSID, the GSOEP follows households over the years and surveys the non-institutionalized household members with regard to income and a multitude of other aspects of their lives. The study started with a representative sample of about 4,000 households living in West Germany and an additional sample of about 1,400 households with a non-German household head. After German reunification in 1990 an additional sample of about 2,000 residents of East Germany was added. After 1990, the GSOEP added several other new samples, some as refreshments of the original sample to keep it representative of the population, some to oversample groups that are of special interest such as immigrants and high-income households. Weights are provided in the GSOEP to adjust for the different sampling strategies. In 2009, the GSOEP consisted of about 11,000 households with about 20,000 household members.

Interviews in the GSOEP are conducted annually. Different from the practice in the PSID, the GSOEP interviews every household member older than 16 individually. The interviewers conduct most of the interviews face-to-face; telephone interviewing is rarely used. The following rules for participants deviate a little from the PSID. In the GSOEP, not only the original sample members and their offspring are followed after they leave a household, but also people who moved into a sample household. Thus, they become sample members as well. Response rates are usually between 90 per cent and 95 per cent per wave and thus similar to the PSID. Yet, like the PSID, there are selective panel drop-outs, mainly in the extremes of the social stratification. To adjust for selective attrition, the GSOEP provides

17 The overview in this section is based on Haisken-DeNew and Frick (2005) and Wagner et al. (2007).



staying weights (Kroh 2012). The GSOEP also adjusts its weights so that the sample matches the marginal distributions of certain key variables in the population. The population parameters for this post-stratification are taken from the German Mikrozensus survey, which is similar to the CPS in the United States. Thus, it is not surprising that the results from the GSOEP and the Mikrozensus are very similar (Hauser 2007). Compared to the Einkommens- und Verbrauchsstichprobe (EVS), another important survey of income in Germany, incomes in the GSOEP are slightly higher on average. This is presumably due to differences in survey methods. The secular trends in incomes in Germany in recent years appear in both studies (Becker et al. 2003). Overall, the weighted results of the GSOEP are representative of the German population.

In sum, the GSOEP is well suited for my analysis because it incorporates all levels of analysis and is part of the CNEF. In Germany, there is no data set that provides comparable information. The Mikrozensus offers a large sample size and information on households but is only a cross-sectional survey. The process generated register data by the Institut für Arbeitsmarkt und Berufsforschung (IAB), by contrast, provides detailed information about employment status and wages but does not include the household level. This overview reveals some minor differences in sampling, following rules, and interviewing procedures between the PSID and the GSOEP. However, it is unlikely that this will bias the results. The most important factors when comparing different surveys are harmonized variables. A large part of the variables needed for my study are already in the CNEF, which I will describe below. Further harmonizations, which I implemented myself, are described in the following section.

### **Cross National Equivalence File (CNEF)**

The CNEF is a collection of harmonized variables from panel studies throughout the world maintained at Cornell University (Frick et al. 2007). Starting with only the PSID and the GSOEP in 1991, at the time of writing, the CNEF has added six more panel surveys. Together with the Luxembourg Income Study (LIS) it is one of the largest attempts at international data harmonization in the social sciences. However, while the LIS focuses on cross-sectional data, the CNEF only includes household panel studies.

The main topics in the CNEF are income, demographics, and employment. The involved researchers put special effort into harmonizing income variables. As a result, the CNEF features generated variables that go beyond the variables provided by the individual surveys. For example, the CNEF includes



yearly household income before and after taxes, which is not available in the GSOEP. Also, the CNEF staff imputed annual work hours in the GSOEP using work hours at the time of the interview and the activity calendar for the previous year. Also, the CNEF includes harmonized education variables.

A major advantage of the CNEF is that it also includes the identifier variables used in the original surveys. Thus, I can easily merge CNEF variables with either data from the PSID or the GSOEP. This is important since the CNEF does not cover all the variables needed in order to conduct my analyses. In the following, I describe the composition of my data set from the PSID, the GSOEP, and the CNEF.

### 4.3 Operationalization

The largest issue in terms of comparability is the switch to two year intervals in the PSID after 1997. The PSID collected data for the years in between, but it is not very reliable since they changed the methods several times. Therefore, the PSID staff advises against using this “off-year” data. The CNEF does not include this data either. Thus, for the most recent periods in the United States, I only have every second year. Since I want to use data before 1997 and have comparable data within the United States, I decided to use two-year changes throughout the PSID. Also, I consider two-year changes in the GSOEP to achieve cross-national comparability. Clearly, this leads to a loss of information. However, in this study, comparability is more important than a fine grained analysis. Also, two-year changes in income are still informative about the consequences of job loss. Although I only consider every second year, I do not discard information about job losses because I construct episodes around every event I find in my data. I explicate this approach at the end of this section.

In the following, I first introduce the operationalizations of my key concepts. This includes the dependent variable household income, the concept of income buffering, the independent variable job loss, and the two main dimensions on which I expect differences within the two countries: household types and social strata. Then, I introduce further variables that I generate and the preparation of my data set.

#### Income and income buffers

The main dependent variable in this study is annual disposable (post-government) household income adjusted for household size. This is a

good proxy for a household's standard of living since it measures its total resources (DiPrete 2003). Thus, it enables me to assess the question of how individuals' life situations change after job loss. Additionally, I analyze annual household income before taxes and transfers (pre-government) and individual labor earnings to find out more about the importance of different income sources after job loss. I use labor earnings and pre-government household income to assess the buffering of income losses through the family and the welfare state.

The income variables used are from the CNEF. They contain information about annual income in the year prior to the interview. There is no comparable measurement of household income with smaller intervals than one year in the CNEF. The income variables for Germany in the CNEF are constructed using the GSOEP's income calendar. Here, each person over the age of 15 in a household states the number of months a certain income or public transfer was received and its monthly amount in the previous calendar year. The product of both values yields the annual amount. The variables on the household level were then calculated using information from each household member (Grabka 2008). In contrast, the PSID directly asks the household head about annual incomes in the previous year. Dynan et al. (2012) found that some individuals' earnings in the PSID drop to zero despite continuously high work hours. I removed these cases because they are likely to be due to measurement error and may bias my estimates about income changes. Consistent information on paid taxes, however, is missing in both surveys. Therefore, national experts wrote tax simulation programs for each country that estimate the households' tax burdens (see Butrica and Burkhauser (1997) for the United States and Schwarze (1995) for Germany).

To ensure comparability over time, I deflated the incomes using the consumer price index provided in the CNEF. I then adjusted both pre- and post-government household income for household size using the new OECD equivalence scale. To account for the economies of scale of a household, the head is weighted with 1, other adults with 0.5, and children with 0.3. The retrospective collection of household income is conducted for the household as it stands at the time of the interview. Thus, if someone who has been present throughout the previous year moved out of the household before the interview, his or her income is not recorded in annual income. This leads to bias in the case of marital break-ups: If, for example, an inactive woman moves out and forms a single adult household in which she is surveyed, her annual household income in the previous year is essentially zero, because she did not earn anything. However, her actual situation was different since she lived in a household in which her former husband's earnings existed

(Debels and Vandecasteele 2008). However, since I study job loss, this should be a minor issue for my analyses.

Clearly, annual household income is a coarse measure of a household's well-being, especially given the dynamic nature of unemployment. For example, if unemployment occurs in the second half of the year, annual income is the average of both the income before and after job loss. If the spell of unemployment is short and a person is re-employed before the year ends, annual income also includes earnings from the new job. This has to be kept in mind when interpreting the results. Yet, besides data availability, there are also reasons in favor of annual household income. First, taxes are assessed on a yearly basis. Therefore, it is easier to calculate the tax burden using annual income. Second, annual income also includes less regularly received incomes such as bonuses or dividends. Therefore, it better captures a household's economic well-being than monthly income.

I measure income changes in percentages of income prior to job loss. This operationalization assumes that the severity of changes depends on prior standard of living. Put differently, I argue that the actual amount of income that is lost matters less than the relative reduction compared to what individuals have. For example, a reduction of \$ 10,000 is a different event for those earning \$ 30,000 a year ( $\approx -33$  per cent) compared to those earning \$ 100,000 a year ( $= -10$  per cent). Yet, a 50 per cent reduction is severe for both groups. Hence, with this operationalization I can better compare the losses between individuals who are at different points of the income distribution. Because changes in percentages can have huge positive outliers, I top-coded all changes above +100 per cent.

**Table 4.1 Composition of pre- and post-government household income in the CNEF**

<b>Pre-Government Income</b>	<b>Post-Government Income</b>
=	=
Household Labor Earnings	Household Labor Earnings
+	+
Household Asset Income	Household Asset Income
+	+
Household Private Transfers	Household Private Transfers
+	+
Household Private Retirement Income	Household Private Retirement Income
	+
	Household Public Transfers
	+
	Household Social Security Pensions
	-
	Total Household Taxes

Table 4.1 shows the income components used to generate pre- and post-government household income in the CNEF. In addition to the household members' labor earnings, there are many other sources of incomes covered. Retirement income should not play a large role in my analysis because I focus on prime-age workers (see below for details). Yet, the list shows that there are many other income sources a household has if unemployment takes away one person's labor earnings. This insight is key to the notion of income buffering that plays a large role in my explanation of economic well-being after job loss.

The notion of *income buffering* describes the relationship between labor earnings, household income before taxes and transfers ("pre-government"), and household income after taxes and transfers ("post-government"). Generally, each percentage point of income lost through job loss often does not translate into the same losses in post-government household income. This is because other sources of income within the household, such as transfers or additional incomes, are still there after job loss or even replace the lost wage like unemployment benefits. Building on the work of DiPrete and McManus (2000a) and the theoretical considerations in Chapter 2, I propose to decompose income buffering into buffering through the family and buffering through the welfare state.

The family income buffer comprises all other components of pre-government household income apart from the lost labor earnings through displacement. To measure it, I compare the losses in labor earnings with the losses in pre-government household income. If, for example, a person loses 100 per cent of former labor earnings but only 80 per cent of pre-government household income, the difference of 20 percentage points is due to other private incomes in the household. The welfare state income buffer, on the other hand, comprises all transfers and taxes that affect household income. To gauge this, I need to compare losses in household income before and after taxes and transfers.

Formally expressed, the buffering effects are defined as follows:

$$\text{Welfare state buffer} = \hat{\delta}^{\text{PrG}} - \hat{\delta}^{\text{PoG}}$$

$$\text{Family buffer} = \hat{\delta}^{\text{LE}} - \hat{\delta}^{\text{PrG}}$$

Where  $\hat{\delta}^x$  signifies the estimated changes in labor earnings (LE), pre-government household income (PrG), and post-government household income (PoG) due to job loss. This resembles the approach introduced by DiPrete and McManus (2000a). However, I use the simple difference in

changes while they standardized the buffering effect as a percentage of pre-government losses. However, this yields implausible values as income changes before taxes and transfers become small.

### **Job loss**

Job loss is defined as moving from work to unemployment after involuntary displacement. In both the PSID and the GSOEP there is a similar question about changes in employment between the current and the previous interview. If the respondents state that there has been a change, they are asked, among other things, about the reason for this change. I considered all displacements as involuntary if they happened either because someone got fired, a company closed down, or a contract expired. It is questionable whether the expiration of a contract is really a trigger event, because the displaced person saw the end of the temporary contract coming and could have prepared. Still, I argue that a spell of unemployment after the termination of a contract is likely to be involuntary. When someone knows that their contract is ending, they are likely to pursue a seamless transition into another job. Also, with the recent growth of fixed-term employment, omitting this reason for becoming unemployed would presumably bias my results.

In order to add the occurrence of unemployment after involuntary job loss, I need information about labor force status in the year the displacement occurred. The most detailed and longitudinally consistent information about labor force status in the PSID is the time in work and unemployment in the previous year. Respondents were asked how many weeks of the previous year they were working or not working and actively looking for a job. Unfortunately, there is no information about the timing of employment and unemployment in the data. To construct a comparable measure in the GSOEP, I use data from the activity calendar. This calendar is presented in the questionnaire and the respondents are asked to mark the months and the corresponding labor market activity. Because it is possible to report more than one status in a single month, I applied a state space proposed by Gangl (2003: 56) and deleted months of unemployment in which the respondent also marked some form of employment. Then, so as to render the data comparable with the question in the PSID, I added up the number of months each year. This obviously removes the information about the timing of job loss. Yet, because this information is not available in the PSID either, the comparable measure I propose seems the best compromise. Thus, I cannot ascertain whether the spell of unemployment occurred directly

after the displacement. Unfortunately, employment data is only available for household heads and their partners (“wives”) in the PSID, but not for other household members. To ensure comparability, I removed all other household members besides head and partner in the GSOEP.

Using the variables described above, I record a job loss event if a person is displaced from a job and experiences more than one month of unemployment in the same year. I deliberately excluded shorter spells of unemployment because they are likely to be labor market churning. To ensure that the individuals recorded are only those employed two years before job loss, I include only those who worked more than six months prior to job loss. I also discarded all cases in which individuals are self-employed, in education, retired, permanently disabled, or in military service two years before job loss. Table 4.2 summarizes the definition of the job loss event. Because of the above-mentioned data limitations, I cannot ensure that the months in work or unemployment are consecutive. Also, I cannot detect the year in which the spell began. Thus, my operationalization might lead to a detection of events in consecutive years since the conditions for months worked and months in unemployment could both be met in adjacent years. I deleted the second event in such cases. However, since the income data are only available for whole years, the coarseness of the indicator is presumably not of great significance.

**Table 4.2 Definition of job loss event and re-employment**

	<b>Two years before job loss</b>	<b>Year of job loss</b>	<b>Two years after job loss</b>
Job loss event	Employed >6 months	Displacement & unemployed ≥1 month	-
Job loss & re-employment	Employed >6 months	Displacement & unemployed ≥1 month	Employed >6 months

This operationalization leads to the treatment of job loss with subsequent unemployment as a singular event regardless of what happens thereafter. Thus, I do not differentiate between spells of unemployment that end quickly with re-employment and long-term unemployment. While there are good reasons to run separate analyses of different pathways after job loss, I chose to remain with the analysis of the consequences of trigger events as introduced in Chapter 2. The reason for this is that I want to disentangle the impact of job loss and the mechanisms that subsequently lead to different trajectories. The probability of re-employment is thus

included in the estimates of incomes after job loss. In the following chapter, I present data on re-employment to gauge the influence of this factor in the analyses of income after job loss. I record re-employment if someone works seven months or more two years after job loss, as indicated in Table 4.2.

### **Families and households**

Families are an important aspect of my analyses, not only because they are a level in which life courses proceed, but also because they link the spheres of work and family within life courses. As elaborated in Chapter 2, I focus on families that live together in one household. I distinguish between different types of households: Single adult; single adult with children; couples without children; and couples with children. In both countries, I take the information about the size of the household and the age of the household members from the CNEF. To distinguish single adult households from couple households, I use variables from the original surveys. The PSID provides a “married pairs indicator” that indicates whether a person is married to or permanently cohabiting with someone in the household. Likewise, a variable in the GSOEP (“Partnerzeiger”) gives the same information. I do not distinguish between married and cohabiting couples.

I only consider children under the age of 16 in the household. The main idea is to identify households with children that need to be cared for as this changes the amount of housework that has to be done. Clearly, housework reduces as children become older and by the time they reach age 15, the additional effort is presumably low. Still, I argue that it structures intra-familial processes and especially women’s labor market behavior. Even though many women return to work by the time their children reach age six and enter primary school, they usually work fewer hours than before and earn less (Budig and England 2001; Gangl and Ziefle 2009). Furthermore, at least in Germany, employment rates among mothers with children aged six to 16 are still below average among women (OECD 2007a). Above 16 however, children in the household are likely to be mostly self-reliant. They could even have a job or an apprenticeship themselves, because compulsory schooling may already have ended for them. Table 4.3 summarizes the household types I use and their operationalization. The category “Other HH” mainly includes single adults living with children older than 16.

**Table 4.3** Definition of household types

HH Type	Composition
Single adult HH	No partner in household and household size of one
Single parent HH	No partner and children under 16 in the household
Couple without children	Partner and no children under 16 in the household
Couple with children	Partner and children under 16 in the household
Other HH	All other combinations

For my analysis, I also have to make sure that the households are stable over time while I study them. This is important for two reasons: First, changes in household composition due to marital break-ups have severe consequences for household income (Radenacker 2011). In order to estimate the effect of job loss on household income, these disturbances have to be removed. Second, I want to gauge the influence of the household composition on household income trajectories after job loss. To do this, the composition has to be roughly the same throughout the trajectory. Therefore, I consider only households where the partnership status of the adult members did not change for four years. In other words, I discarded all couple households that experienced marital break-up and all single households where a new partner moves in. To show the scope of this restriction, I analyze the incidence of these kinds of household dynamics and the selectivity of the events in the following chapter. The birth or departure of children, on the other hand, may still occur in these households. I control for this event in the models by including the number of children under 16 in the household.

### Social strata

Another key dimension in my analysis are social strata. As elaborated in Chapter 2, I expect differences in income trajectories after job loss depending on the previous position within social stratification. The reason for this is unequal access to sources of income buffering after job loss. There are many possible ways of measuring an individual's position within the social stratification. Most approaches rely on occupations and relationships of dominance and property rights that go along with it (e.g.: Erikson and Goldthorpe 1992; Weeden and Grusky 2005). While these approaches have their merits, they have difficulties mapping individuals' economic well-being as earnings arrangements in households become more complex (DiPrete 2003). Thus, in dual-earner households it is no longer the



occupation of the male breadwinner that determines the social position of the whole household. Since I am mainly interested in economic well-being in this study, I measure stratification through the control over economic resources in a household; or, as Sørensen (2000) puts it: “class as life conditions”. Clearly, this approach is closer to social strata than to classes since it omits important aspects of classes such as relationships of power. Therefore, Sørensen’s concept is not about classes in a strict sense.<sup>18</sup> Yet, in this study, I am mainly interested in the economic well-being of individuals and thus use social strata as a descriptive tool.

To measure “life conditions”, I use quartiles of post-government household income adjusted for household size, as described above. This deviates from Sørensen’s suggestion to use wealth as a measurement for his concept. However, data on wealth is not continuously available in the data sets. Therefore, I decided to use post-government household income. As indicated above, this is a good measure of economic well-being and thus the situation a household is in. Additionally, this operationalization has the advantage of being measured on the same scale as my dependent variable.

### Further harmonizations

Beyond the variables that are directly connected to my research questions and the theoretical expectations, I harmonize further variables needed for my estimations. First, concerning occupation, which is an important control variable in analyses of job loss and income. Second, concerning weights, which are not completely comparable between the PSID and the GSOEP. The CNEF does not produce its own weights.

Occupations in the CNEF for the United States are provided in a peculiar manner that does not seem to follow conventional codes. Thus, no grouping of the occupations is possible. Therefore, I use the variables from the PSID. Unfortunately, the PSID codes occupation in Census 1970 codes until 2001 and subsequently in Census 2000 codes. There are no direct crosswalks available between these two coding schemes. Therefore, I use a crosswalk that converts the two codings into a consistent category system based on Census 1990 codes, developed by Meyer and Osborne (2005). Since I do not

18 The German discourse seems to be stricter in separating between classes “*Klassen*” and strata “*Schichten*” than the American discourse. Yet, there are good reasons to distinguish between the relational concept of classes and the descriptive concept of strata (Goldthorpe 2010).

compare occupations cross-nationally, I use the ISCO-88 coding that the GSOEP provides for all waves in Germany.

As mentioned above, the PSID and the GSOEP both provide weights that account for the different samples and the probability of staying in the panel. However, the methods used for obtaining the weights and the staying probabilities differ between the PSID and the GSOEP. The PSID uses a very basic model for staying probabilities that consists of only a few demographic characteristics (Gouskova et al. 2008). Furthermore, the PSID assigns zero weights to non-sample members who, for example, moved in with an original sample member. The GSOEP, on the other hand, uses a much broader set of variables for the calculation of staying probabilities (Spieß and Kroh 2008). Individuals who are not original sample members also receive weights. These differences in weighting strategies may lead to bias when comparing the estimates from the two countries. Therefore, I use “comparability optimized weights” constructed by Kohler (2009). In these weights, staying probabilities are calculated similarly in the two surveys. Also, weights are derived for non-sample members in the PSID.

### **Preparation of the data sets**

Using the variables described above, I constructed a data set from the PSID, the GSOEP, and the CNEF. Generally, I restricted the data set to the time between the 1980s and the latest available wave of the data sets. Thus, in Germany I use data from 1984 to 2011 and in the United States I have data from 1980 to 2007. The American data only extends to 2007 because the harmonized variables from the CNEF have not been made available for the later waves by the time of writing. Furthermore, I restrict the analysis to household heads and their partners in the GSOEP, in order to be comparable to the PSID in which data on other household members is not collected. In the PSID, I do not use the immigrant sample and the Latino sample to have the same population over time. In the GSOEP, I drop the high income sample. Also, I mainly use residents of West Germany, i.e. the pre-unification Federal Republic of Germany, because East Germany differs markedly on factors that may influence the results. Yet, in some analyses I include East Germans as well to test certain hypotheses. Because I focus on individuals of prime working age, I restrict the analyses to individuals between 25 and 55. Clearly, this may include some Germans who are still in education. Therefore, I remove individuals who are in education from the group that is at risk of becoming unemployed, as indicated above.

Job loss is an event that can occur several times over the life course. Because the years around the events may overlap, it is not easy to ascertain which event led to which outcome. I therefore extract seven-year episodes centered around each the years in which the events happen (two before, four after). Thus, if I observe, for example, three job loss events, as described above, for a person in the data set, I generate three (possibly overlapping) episodes. Thus, the level of analysis is no longer individuals but instead an individuals' unemployment episodes. The episodes always consist of two-year changes to be comparable to the later years in the PSID. Thus, for each year in which I observe a job loss event ( $t$ ), I additionally add the observation two years before the event ( $t-2$ ) as well as two and four years after the event ( $t+2$  and  $t+4$ ). The episodes are balanced panels from  $t-2$  to  $t+2$ . Data four years after job loss is only available in about 80 per cent of the episodes in both data sets.

To add a control group, I begin with all person-years that have the same characteristics as those who lose their jobs at  $t-2$ . As indicated above, this includes, among other things, being employed and not being in education. Then, I generate an episode if this person does not experience job loss, as defined above, within the following six years. Thus, they may become displaced during that period but do not experience unemployment after displacement. The shift to biennial interviewing in the PSID in 1997, however, creates a difficulty: I do not have information on job loss events two years before the interview. Therefore, I cannot assert that the control episodes do not contain job loss events in the years not surveyed. Although there is information on displacements, the PSID does not survey the months in unemployment for this year. Therefore, I impute the event for the gap-years using the time with annual interviews and two-year changes in a large number of variables. Among them are all sub-categories of household income, job characteristics, and partner characteristics. The imputation model used is a logistic regression.<sup>19</sup> Then, I removed control episodes with an imputed job loss event after 1997 in the PSID.<sup>20</sup>

The analyses in Chapter 7, in which I address changes in women's employment behavior after men's job losses, rely on a sub-set of the above described data set. In this sub-set are only men in couple households whose partners are not in education at  $t-2$ . Furthermore, I only use the balanced panel from

19 The exact specification can be obtained from the author upon request. See Heisig (2015: 143-145) for a similar approach.

20 I also ran the models without the imputations. The results remain basically unchanged.

$t-2$  to  $t+2$  for the analyses in this chapter. For the sake of clarity, I briefly describe this again in Chapter 7.

In the following three chapters, I analyze the data using the described strategy to find out whether the theoretical expectations generated in Chapters 2 and 3 are correct. I first turn to the incidence of job loss in the next chapter. Then, in Chapter 6, I analyze the consequences by considering income trajectories and buffering effects. Finally, in Chapter 7, I turn to the added worker effect.<sup>21</sup>

<sup>21</sup> All of the Stata do-files for preparation and analysis of the data sets can be obtained from the author on request.



## 5 The Incidence of Job Loss and Unemployment

To understand economic insecurity generated by job loss it is crucial to analyze who is affected by this event. This is important for two reasons: first, such knowledge helps to understand the distribution of insecurity that job loss and unemployment generate. In other words, while displacements almost certainly have negative consequences, some people may have lower chances of losing their jobs and hence a lower probability of economic instability. Second, understanding the selectivity of job loss and unemployment is important for estimating the consequences correctly. If the unemployed are selected on characteristics that also influence income trajectories after job loss, the difference-in-difference models are biased, as discussed in Chapter 4. The remedy for selection bias I use is statistical matching, as mentioned earlier. This, however, hinges on knowledge about the selection processes. Therefore, I use the results from this chapter to select the variables for matching.

The present chapter consists of two parts. In the first part, I provide descriptive evidence on the occurrence of job loss, unemployment, and re-employment. In the second part, I explore the influence of household composition on job security. The literature review in Chapter 1 showed that there has been very little research on household influences on the incidence of job loss to date. Most researchers focused on market and welfare state influences. Nevertheless, the impact of the household is an important issue for my study because I want to conduct an encompassing analysis of income insecurity through job loss that includes all parts of the market-family-state nexus. In Chapter 2, I developed several expectations about the influence of the household on the incidence of job loss. I argued that “marital premiums” for men and “maternal penalties” for women not only exist for wages, but may also exist for job security. In the second part of this chapter, I test whether these effects exist and carve out the mechanisms behind them.

Thus, the remainder of this chapter consists of three parts. First, I provide descriptive statistics about the occurrence of job loss and unemployment in the United States and Germany. Within this section, I depict trends in the incidence of job loss and unemployment in the United States and Germany over time. Then, I turn to individual and household level differences. This is followed by an analysis of the occurrence of re-employment after job loss and unemployment. In the second part of this Chapter, I test

explanations for differences in job security between different household types. The final part sums up the market, family, and state influences on job loss and unemployment.

## 5.1 Descriptive statistics on the incidence of job loss

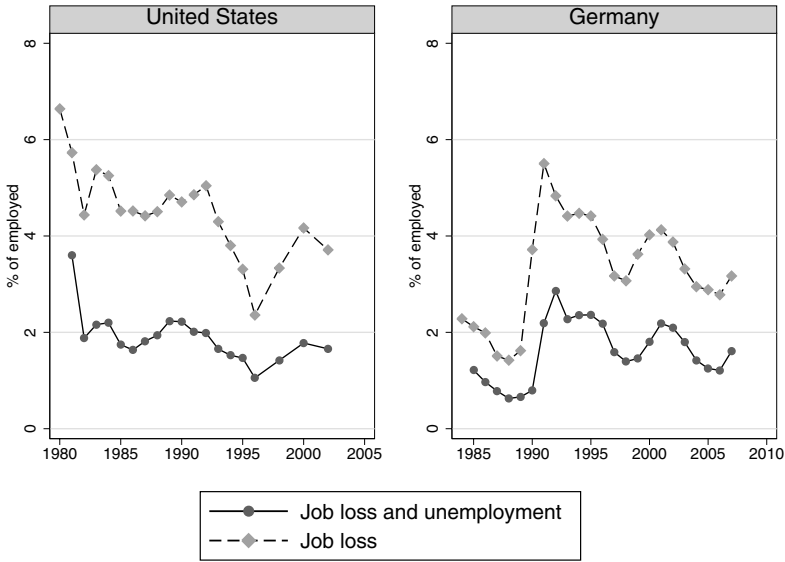
### Cross-national comparison of the incidence of job loss

To give an impression of the cross-national differences in the incidence of job loss, I first compare trends over time in the United States and Germany. Figure 5.1 depicts the incidence of my main indicator of job loss as described in Chapter 4: involuntary job loss succeeded by at least one month of unemployment. The incidence is defined as the percentage of the population in employment between 25 and 55 years of age who experience this event in the following year.<sup>22</sup> As argued in Chapter 4, I focus on job losses that lead to unemployment in my analysis because I want to analyze buffering mechanisms that have an impact during times without labor earnings. Therefore, I only use this indicator in the following analyses. For the sake of brevity, I call this indicator “job loss” in the remainder of this study. However, for comparison, and to find out about the restrictiveness of this operationalization, in Figure 5.1 I also show the incidence of involuntary job loss regardless of unemployment.

The dashed lines in Figure 5.1 reveal that job loss regardless of unemployment used to be much more common in the United States than in Germany during the 1980s, but that subsequently the rates converged. Until the 1990s, about five per cent of employed Americans became displaced each year. During the 1990s, the incidence of displacements reduced to around four per cent. Thus, American jobs became a little more stable between the 1980s and the 2000s. This finding is at odds with literature claiming an increase in employment insecurity in the United States (Valletta 1999; Hollister 2011). However, these studies mostly compared the 1970s with the years afterward. Most of the growth in employment insecurity happened between the 1970s and 1980s. The late 1990s in the United States, on the other hand, saw favorable labor market conditions with a decreasing unemployment rate, as shown in Chapter 3. The decreasing incidence rate mirrors this trend.

<sup>22</sup> Because of the switch to biennial interviewing in the PSID after 1997, it is the percentage that experiences such an event two years after.

**Figure 5.1 Incidence of job loss and subsequent unemployment over time in the United States and Germany**



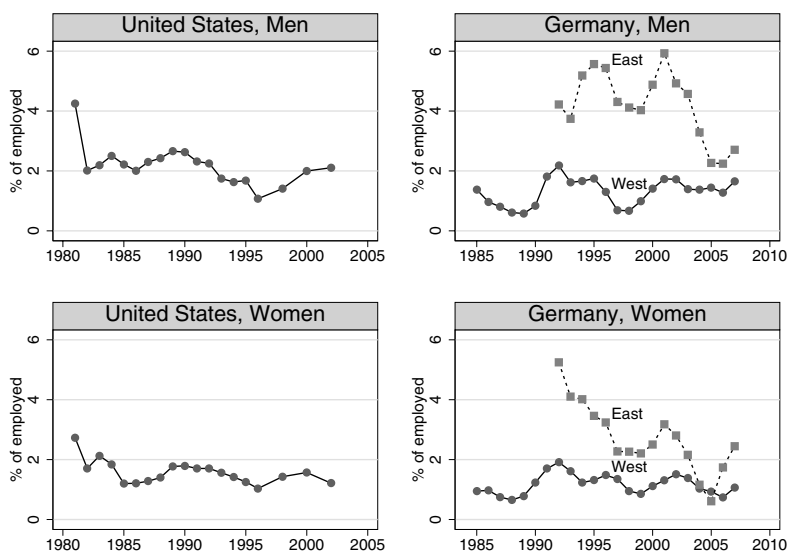
Smoothed using a span-2 running mean  
 Sources: PSID, GSOEP, and CNEF, author's calculations

In Germany, Figure 5.1 shows a U-shaped trend in displacements with and without ensuing unemployment. The incidence of involuntary job loss increased from about two per cent in the 1980s to about five per cent during the 1990s. Then, the rate dropped again to about four per cent in the 2000s. Overall, employment insecurity is higher in the 1990s and 2000s than during the 1980s in Germany. However, the German population changed considerably after 1990 when Germany was reunified and the former GDR joined the West German population. I analyze this in greater detail below.

The share of those who become unemployed after job loss is slightly higher in Germany than in the United States, as the difference between the dashed and the solid line in Figure 5.1 reveals. In the United States, around 40 per cent of those who became displaced also experienced a month of unemployment or more. In Germany, by contrast, about 50 per cent of the displaced enter unemployment. Apart from some fluctuations, this is largely stable over time. This finding is in line with other results stating that direct transitions from one job to the other after displacement are more common in the United States than in Germany (Gangl 2003). Thus, my job



**Figure 5.2 Incidence of job loss and subsequent unemployment over time in the United States and Germany by gender and region in Germany**



Smoothed using a span-2 running mean

Sources: PSID, GSOEP, and CNEF, author's calculations

loss indicator, which includes only those who also become unemployed, is a little more selective in the United States than in Germany where more people experience unemployment after job loss.

Figure 5.2 takes a closer look at the trend in my main event indicator – job loss followed by unemployment – by differentiating between men and women as well as East and West in Germany. This analysis shows that the surge in the incidence of job loss in Germany has been largely due to reunification. Many East Germans lost their jobs during deindustrialization and restructuring of the former socialist economy. Observations from the early 1990s in East Germany are thus unique cases that cannot be easily compared to the other cases in Germany. Therefore, I base my analyses mainly on West Germany. However, in some hypotheses I test the impact of the distinct East German institutional environment. In this case, I drop observations from the early 1990s because of the special economic circumstances. Overall, job loss and subsequent unemployment occurs slightly more often in the United States than in West Germany. However, the main differences in incidence rates exist during the 1980s. Subsequently, the rates converge at about two per cent among men and one per cent among women.

## Individual level influences on the incidence of job loss

To examine the incidence of job loss more closely, I now compare individual characteristics of those who lose their jobs and become unemployed with those who stay employed. The expectation from the literature is that unemployment hits those who are already less privileged more often, such as low-skilled workers and minorities (see literature review in Chapter 1). The comparison in this chapter of those who become unemployed and those who do not follows the analytical strategy proposed in Chapter 4. As elaborated there, I construct a data set consisting of episodes around job loss events (treatment group) and episodes without job losses (control group). Individuals in both groups are employed at the beginning of the episode, i.e. they are at risk of becoming unemployed. The following analyses reveal how much the two groups differ. The variables for the treatment group are measured two years before job loss, the variables in the control group in the first year of the control episode. In the terminology of statistical matching, the results show the balance of covariates between the two groups.

Tables 5.1 and 5.2 show descriptive statistics for individual characteristics in the treatment and control group. The results always represent means or percentages within the group. For example, Table 5.1 shows that American men who are continuously employed over a period of four years are on average 36.7 years old. Also, 9.9 per cent of this group is black. On the other hand, American men who experience job loss and subsequent unemployment are, on average, slightly younger. Also, the share of blacks among them is higher than in the control group. Note that the figures are calculated for episodes and not individuals. Consequently, a person may appear more than once in one group and also in both groups at different points in time (see Chapter 4 for details).

Overall, both Table 5.1 and 5.2 show that those who experience job loss are, on average, already disadvantaged in many respects: First, they are more likely to be low-educated than the continuously employed. Second, minority groups, which often face discrimination on the labor market (Pager et al. 2009), are overrepresented among them. Finally, the jobs they hold before job loss are, on average, of lower quality than the jobs of those in the control group. For example, their average earnings are lower, and they are more often in low skill occupations. Also, their employment stability is lower, as indicated by lower average tenure in their previous jobs. All of these results confirm findings of other studies (e.g. Giesecke and Heisig 2010; Keys and Danziger 2008). Job loss and subsequent unemployment is an event that

Table 5.1 Individual characteristics of individuals with and without job loss and subsequent unemployment in the United States

	Men		United States		Women	
	Cont. employed	Job loss & unempl.	Cont. employed	Job loss & unempl.	Cont. employed	Job loss & unempl.
Avg. age	36.7	35.4	37	36.2		
Black (%)	9.9	12.7	13.8	19.7		
Avg. weekly work h. in previous job	43.8	41.1	35	35		
Avg. tenure in previous job (yrs.)	8.7	4.7	6.7	3.8		
Avg. yearly labor income (\$)	58288	44008	32823	26274		
Avg. yearly eq. household income (\$)	33051	27020	32785	26986		
Industrial sector (%)	40.5	54.7	16	28.9		
Public sector (%)	22.2	5.7	26.8	10.6		
Firm with union (%)	23.9	23.9	17.2	11.4		
<i>Education</i>						
Less than High School (%)	8.4	15.9	7.2	12.4		
High School (%)	36	41.4	38.6	43.9		
Greater than High School (%)	55.6	42.7	54.2	43.7		
Education total (%)	100	100	100	100		
<i>Occupations</i>						
Managerial & professional specialty occ. (%)	33.9	25	34.8	24.6		
Technical, sales, & admin. support occ. (%)	16.1	13.1	41.8	38.3		
Service occ. (%)	6.9	6.4	12.9	17		
Farming, forestry, & fishing occ (%)	1.6	2.4	.3	1.3		
Precision production, craft, & repair occ. (%)	19.4	23.7	1.7	1.9		
Operators, fabricators, & laborers (%)	19.5	29.1	8.2	16.6		
Military occ. (%)	2.4	.3	.4	.3		
Occupations total (%)	100	100	100	100		

All variables measured two years prior to job loss.

Sources: PSID, GSOEP, and CNEF, author's calculations

**Table 5.2 Individual characteristics of individuals with and without job loss and subsequent unemployment in West Germany**

	Men		W. Germany		Women	
	Cont. employed	Job loss & unempl.	Cont. employed	Job loss & unempl.	Cont. employed	Job loss & unempl.
Avg. age	38.4	37.1	38	36.9		
Migrants (%)	17.7	30.2	16	27.2		
Avg. weekly work h. in previous job	43.1	41.5	30.7	31.4		
Avg. tenure in previous job (yrs.)	11.3	6.6	8.1	5.2		
Avg. yearly labor income (€)	41052	28501	22216	20539		
Avg. yearly eq. household income (€)	21193	16987	22487	19752		
Industrial sector (%)	54.9	63.5	24.1	34.4		
Public sector (%)	26.3	7	33.6	10.9		
Firm <20 empl. (%)	12.2	35.2	24.2	33.7		
<i>Education</i>						
Without voc. training (%)	14.7	29.9	20.6	28.9		
Voc. training (%)	60.4	61	59.2	59.3		
Higher edu. (%)	24.9	9.1	20.3	11.7		
Education total (%)	100	100	100	100		
<i>Occupations</i>						
Legislators, sen. officials, & managers (%)	5.4	2.4	1.8	2.2		
Technicians & associate professionals (%)	17.3	6.6	11.2	8		
Professionals (%)	18.4	10.4	28.8	20		
Clerks (%)	8.6	6.4	22.3	22.2		
Service Workers & shop & market sales w. (%)	4.6	4.1	17.2	20.5		
Skilled agricultural & fishery Workers (%)	4	1.7	.6	.8		
Craft and related trades workers (%)	25.5	40.5	4	8.1		
Plant and machine operators and assemblers (%)	13.7	16.3	4.1	6.6		
Elementary occupations (%)	5.1	10.9	10	11.5		
Occupations total (%)	100	100	100	100		

All variables measured two years prior to job loss.  
Sources: PSID, GSOEP, and CNEF, author's calculations

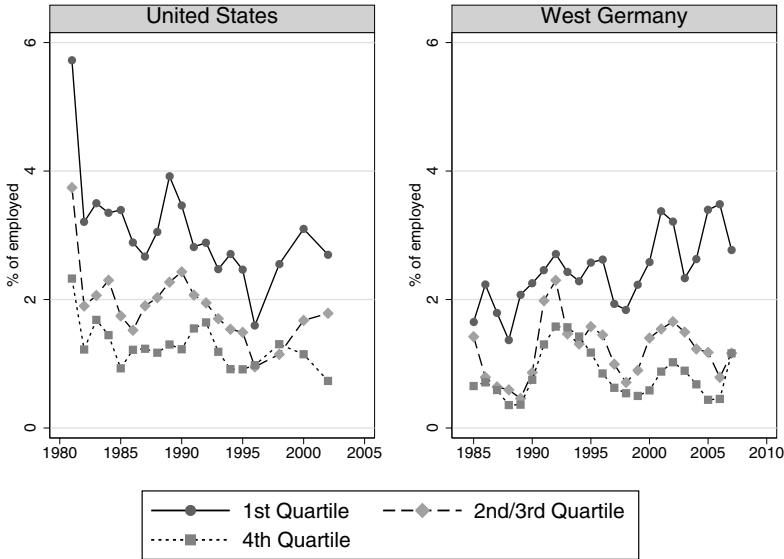
occurs for those who are already in a weak position on the labor market. It thus reproduces and deepens existing inequalities.<sup>23</sup>

Comparing those who lose their jobs between the United States and Germany in Tables 5.1 and 5.2 reveals that the populations differ massively. For example, about nine per cent of those with job loss in West Germany have higher education compared to 42 per cent in the United States. Clearly, this is caused by the overall higher rate of college attendance in the United States, which cannot easily be compared to higher education in Germany. Still, the unemployed in the United States clearly have a different educational background than the unemployed in Germany. This is also reflected in the higher proportion of unemployed coming from the upper ranks of the occupational hierarchy in the United States. For example, among those who lose their jobs in the United States, more held managerial positions than in Germany. Again, this is partly driven by differences in the occupational structure between the United States and Germany, as the distribution in the control groups show. Nevertheless, when comparing the results in the following chapters, it has to be kept in mind that the risk of becoming unemployed is slightly more equally distributed with regards to socioeconomic circumstances in the United States than in Germany.

The inequality in the risk of becoming unemployed changes over time in both countries as Figure 5.3 reveals. In this analysis, I graphed the incidence of job loss and subsequent unemployment for households with the lowest (1st Quartile) to the highest (4th Quartile) post-government household incomes. The lower ranks of the household income distribution in West Germany face increased risks of losing a job compared to the middle and upper quartiles. This confirms the finding of Giesecke and Heisig (2010), who show that the risk of losing a job increases especially among low-skilled workers in Germany. One reason for this trend may be the de-regulation of temporary employment in Germany, as depicted in Chapter 3. Temporary employment is most prevalent among low-skilled workers and therefore their careers became more unstable as the possibility to establish such employment relationships increased. Another reason might be worsening macro-economic conditions over time (Klein 2015). In the United States, on the other hand, the differences between the quartiles slightly decrease over time. As a result, the incidence rates in West Germany in the lowest quintile become similar to American rates in the lowest quintile. The higher

23 Results for East Germany are shown in Table A.1 in the Appendix. The described patterns appear as well.

**Figure 5.3 Incidence of job loss and subsequent unemployment over time in the United States and West Germany by post-government household income quartile in previous year**



Smoothed using a span-2 running mean  
Sources: PSID, GSOEP, and CNEF, author's calculations

inequality in the risk of job loss in West Germany is thus influenced by recent developments. During the 1980s, the incidence rates have been much more equally distributed. I must consider these trends when comparing income changes over time in the following chapter.

### Household level influences on the incidence of job loss

The influence of the household on the incidence of job loss has not received much scholarly attention. However, as I argued in Chapter 2, there are reasons why the structure of the household may play a role. Couples may have advantages in job security over singles for different reasons. As with earnings, there may be a “marital premium” in job security among men. There may also be a “maternal penalty” among women. In this section, I first explore the connections between household structure and the incidence of job loss. This is important for understanding the distribution of economic insecurity in the United States and Germany. In the second part of this chapter, I test different explanations for the observed differences.

**Table 5.3 Household characteristics of persons with and without job loss and subsequent unemployment in the United States**

	United States, Men	
	Cont. employed	Job loss & unempl.
Avg. household size	3.3	3.1
Avg. no. of children 0-15	1.2	1.1
<i>Household types</i>		
Single without children	11.9	19.4
Single with children (%)	1.3	1.6
Couple without children (%)	18.3	13.9
Couple with children (%)	60	57.4
Other (%)	8.5	7.8
Household types total (%)	100	100
<i>Household dynamics</i>		
Couples with separations in next 4 yrs. (%)	5.9	8.3
Singles with new partner in next 4 yrs. (%)	39.4	39

	United States, Women	
	Cont. employed	Job loss & unempl.
Avg. household size	3.1	3.2
Avg. no. of children 0-15	1	1.2
<i>Household types</i>		
Single without children	10.7	11.3
Single with children (%)	10.2	19
Couple without children (%)	18.7	15.9
Couple with children (%)	47.9	44.1
Other (%)	12.4	9.6
Household types total (%)	100	100
<i>Household dynamics</i>		
Couples with separations in next 4 yrs. (%)	7.7	13.1
Singles with new partner in next 4 yrs. (%)	24.3	18.6

All variables measured two years prior to job loss.

Sources: PSID, GSOEP, and CNEF, author's calculations

Summarizing the household characteristics of the groups with and without loss I find marked differences, which are similar in both countries. Tables 5.3 and 5.4 reveal that these differences are not so much in actual household size, but rather in household type. Also, there are clear gender specific patterns. Men living in a single household are overrepresented among those who lose their jobs in both countries. Men in couples with and without children, on the other hand, occur much more frequently in the control group than in the group with job loss. The pattern among

**Table 5.4 Household characteristics of persons with and without job loss and subsequent unemployment in West Germany**

	<b>W. Germany, Men</b>	
	<b>Cont. employed</b>	<b>Job loss &amp; unempl.</b>
Avg. household size	3.1	3
Avg. no. of children 0-15	.9	.9
<i>Household types</i>		
Single without children	11.7	19.7
Single with children (%)	.6	.9
Couple without children (%)	21.8	18.9
Couple with children (%)	54.2	49.7
Household types total (%)	100	100
<i>Household dynamics</i>		
Couples with separations in next 4 yrs. (%)	4.6	9.7
Singles with new partner in next 4 yrs. (%)	34.6	41.1

	<b>W. Germany, Women</b>	
	<b>Cont. employed</b>	<b>Job loss &amp; unempl.</b>
Avg. household size	2.9	2.8
Avg. no. of children 0-15	.7	.7
<i>Household types</i>		
Single without children	11.2	14
Single with children (%)	5.1	6
Couple without children (%)	26.7	26
Couple with children (%)	39.2	38.7
Other (%)	17.8	15.3
Household types total (%)	100	100
<i>Household dynamics</i>		
Couples with separations in next 4 yrs. (%)	6.5	11.1
Singles with new partner in next 4 yrs. (%)	28.5	28.1

All variables measured two years prior to job loss.

Sources: PSID, GSOEP, and CNEF, author's calculations

women is slightly different: Here, single households appear in both groups almost equally. Instead, female single parents are much more affected by job loss. Clearly, male single parents are also overrepresented among those with job loss; however, their number is too small to draw clear conclusions.

As argued in Chapter 2, families are risk-pooling units because other adults may provide additional incomes that offset the losses after job loss. Accordingly, single households do not have access to this type of income buffer. In this regard, they are disadvantaged. Thus, job loss hits those



without the resources for coping inside the household more frequently. For single parents, the situation is even more difficult. They not only lack possible additional incomes, but are also constrained by domestic duties because of their children, which they cannot share with a partner. As in the case of individual characteristics, job loss is concentrated in certain household types that are already disadvantaged before displacement.

Comparing household composition of those affected by job loss between the United States and West Germany in Figures 5.3 and 5.4, I find marked differences among women but no differences among men. There are many more single mothers among unemployed women in the United States than in West Germany. On the other hand, I find many more women living in couples without children among the unemployed in Germany. Both results originate from a higher prevalence of these household types in the population as the comparison to the control group shows: in the United States, single mothers are a much more common household type than in West Germany. On the other hand, in West Germany more women live in couples without children than in the United States.<sup>24</sup>

For some people, household composition is not stable over time and hence there are some episodes in my data set where singles move in with someone or couples break up. So far my analyses considered household composition two years before job loss. To depict household dynamics, I added the percentage of single adult and couple households who experience a change in household type within four years to Tables 5.3 and 5.4. The results show that these changes affect a substantial number of singles and couples. However, changes are more common among singles than among couples in both countries.

The most striking result regarding household dynamics in Tables 5.3 and 5.4 is that break-up is more common among those who lose a job than among those who are continuously employed. This is visible in both countries as well as for both women and men. Thus, for about ten per cent of men and women in couple households who lose their jobs, the possibility of benefiting from the family buffer disappears after job loss. Since this happens more often than in the control group, this is a further accumulation of disadvantages for those who lose their jobs. However, it is unclear from this analysis whether the difference to the control group is due to job loss or selection. Clearly, both job loss and marital dissolution happen more frequently at young ages (South and

24 Results for East Germany are in Table A.2 in the Appendix.

Spitze 1986; Rapp 2008). Also, low-educated couples have a higher risk of divorce than those with high education in the United States (Härkönen and Dronkers 2006), which further drives selection because job loss is also more concentrated among the low-educated. In Germany, however, most studies found no educational gradient or even a slightly positive correlation between education and risk of divorce (Wagner and Weiß 2003). Studies that directly analyzed the effect of job loss on divorce are only available for the United States. They concluded that men's job losses increase the risk of divorce (Charles and Stephens 2004). Women's job losses, on the other hand, had no effect (Sayer et al. 2011). My results suggest that job losses among both genders are connected with separations. Yet, my descriptive results are not directly comparable to the other studies, because I do not control for selection at this point. This will be done in the following section.

Singles' rates of moving in with a partner, however, differ less between those who lose their jobs and those who do not. Only German single men seem to move in with a partner more frequently after job loss than without. Again, this could be an effect of the lower average age among those who lose their jobs. German and American single women move in with a partner even less frequently if they become unemployed than without unemployment. This is especially pronounced in the United States. Overall, these results seem to reflect the lower attractiveness of those with low career prospects on the marriage market (Oppenheimer 2003). Still, a substantial number of singles gain access to family income support after job loss.

In my theoretical considerations in Chapter 2, I speculated that mobility regimes could also influence family formation. In a country with high labor market turnover and high risks of job loss, forming a family could be a strategy to pool risks and avoid economic instability. However, the present analysis does not support this notion. Although the risks of losing a job are higher on average in the United States than in Germany, I find no higher prevalence of couple households in either those who become unemployed and those who do not. Also, the depicted family dynamics do not point in this direction. However, it may be that the negative selection of those who become unemployed masks this effect. Unfortunately, it is beyond the scope of this study to fully look into this issue.

**Table 5.5 Characteristics of cases with and without changes in household composition**

	United States			
	Singles		Couples	
	Stay single	Form couple hh	Stay with partner	Separate from partner
Avg. age	35.1	33	36.5	34.4
Men (%)	43.8	68.5	62.6	50.2
Black (%)	32.1	12.9	9.9	22.4
Less than High School (%)	17.4	10.5	14	14.5
High School (%)	36.8	39.3	43.3	55
Greater than High School (%)	45.9	50.2	42.7	30.5
Avg. yearly labor income (\$)	23568	26993	28539	23221
N Episodes	411	125	949	140

	W. Germany			
	Singles		Couples	
	Stay single	Form couple hh	Stay with partner	Separate from partner
Avg. age	36.2	33.3	37.7	36.4
Men (%)	51.9	65.8	59	55.2
Migrants (%)	17.6	23.9	33.6	14.7
Without voc. training (%)	26.4	22.4	31.1	28.4
Voc. training (%)	60	65.6	59.8	59.7
Higher edu. (%)	13.5	12	9.1	11.9
Avg. yearly labor income (€)	15935	19203	18418	18738
N Episodes	110	59	622	61

All variables measured two years prior to job loss.

Sources: PSID, GSOEP, and CNEF, author's calculations

In the analyses of income trajectories after job loss in the following chapter, I keep only cases with the same partnership status within the observed period of time. This is important to measure the effect of being in a couple or being in a single household on household income after job loss. To assess the selectivity of this restriction, I show the difference between people with and without a change in partnership status in Table 5.5. The analyses show that singles who move in with someone after job loss are younger on average and earn slightly more than those who remain single in both countries.

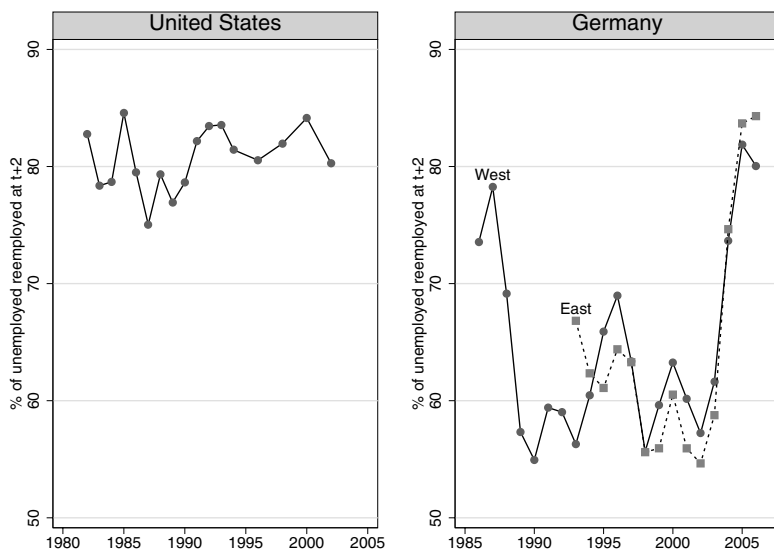
Thus, those who remain single after job loss are more disadvantaged than those who find a partner. Regarding divorce, I find almost no difference in Germany between those who leave a couple after job loss and those who do not. The only thing that stands out is that migrants leave couples less often after job loss. In the United States, on the other hand, the social gradient in divorce rates mentioned above is visible. Those who become single after job loss have lower education and incomes than those who remain married. Thus, disadvantages cumulate further for Americans who lose their jobs.

Summing up, there is ample evidence that household composition is connected to the incidence of job loss. Especially single men and single mothers are more often affected than men and women living in couple households. Since the reasons for this are largely unexplored, I provide further analyses of the mechanisms behind this correlation in the second part of this chapter after the descriptive account of re-employment. The connection between job loss and household dynamics that I also depicted further supports the notion that disadvantages cumulate over the life course: A considerable share of those who lose their jobs also experience partnership dissolutions.

### **The incidence of re-employment**

As mentioned before, the risk of staying unemployed is connected to individual labor market opportunities and choice. Labor market opportunities are generally governed by the same mechanisms that are connected to job loss. In contrast, choice depends on preferences regarding the new job and financial constraints, such as the duration of unemployment benefits. A large body of literature analyzed these connections (e.g. Heckman and Borjas 1980; Van den Berg and Van Ours 1996; Bover et al. 2002; Gangl 2003). It is beyond the scope of this study to add to this literature. Yet, I show some results on unemployment duration from my data sets in this section to provide background information for the analyses of income trajectories in the following chapter. Unfortunately, data on spells of unemployment is only available for a few years in the PSID. Also, after 1997 it offers only two-year data intervals. To allow a comparison between the two countries, I show the probabilities of being employed two years after job loss. Note that being unemployed two years after job loss is not equal to an unemployment duration of two years. Some of those who are not working two years after job loss may have been employed in the previous year. That said, this analysis provides some information on unemployment duration.

**Figure 5.4 Incidence of re-employment after job loss over time in the United States and Germany**



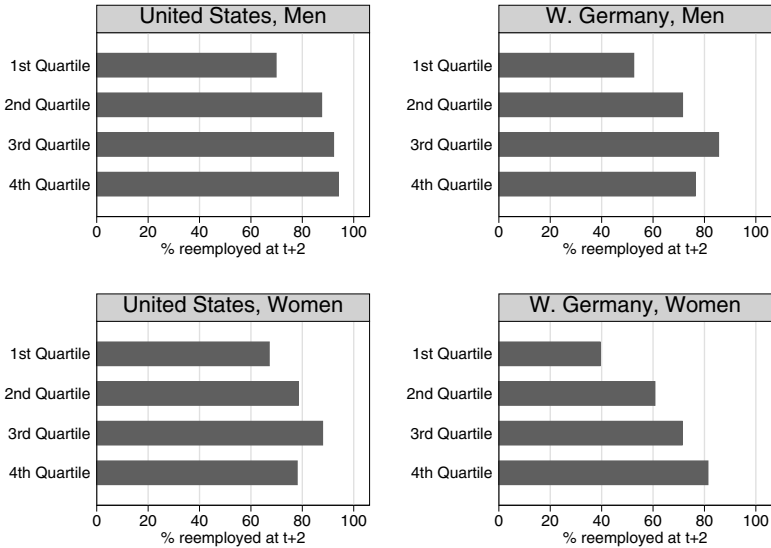
Smoothed using a span-2 running mean

Sources: PSID, GSOEP, and CNEF, author's calculations

Figure 5.4 shows that German re-employment rates fluctuate much more over time than American rates. Between the 1980s and the 1990s, German re-employment rates initially drop from around 80 per cent to around 60 per cent. Then, in the 2000s, the trend is reversed and re-employment rates climb back to 80 per cent. The trend is essentially the same in East Germany. In the United States, on the other hand, about 80 per cent of those who become unemployed return to a job within two years throughout the period of observation. Thus, during the 1980s and the late 2000s, Germany had similar re-employment probabilities two years after job loss. However, it has to be kept in mind that the average duration of unemployment spells is generally lower in the United States (Gangl 2003). During the 1990s, many Germans became long-term unemployed. This trend led to a steady build-up of unemployment rates (see Chapter 3). In the United States, by contrast, changes over time in unemployment rates do not show up in two-year reemployment rates because even in economic downturns, unemployment durations rarely reached two years.<sup>25</sup>

<sup>25</sup> This changed during the financial crisis and the ensuing recession after 2008, which, unfortunately, is not covered by my data.

**Figure 5.5 Incidence of re-employment after job loss by previous post-government household income quartiles in the United States and West Germany**



Sources: PSID, GSOEP, and CNEF, author’s calculations

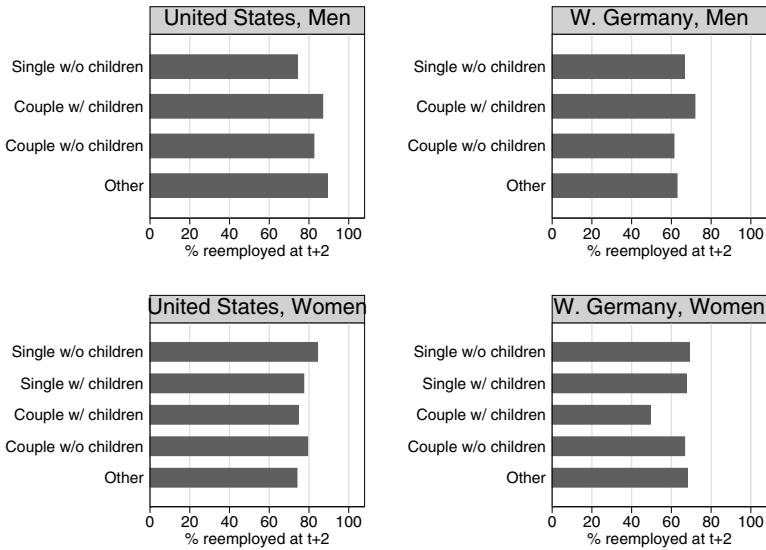
The individual level determinants of unemployment duration have already been depicted in previous studies (see literature review in Chapter 1): low-educated workers, older workers, and minority groups face higher risks of becoming long-term unemployed. Thus, the lower strata are less likely to find a new job. Figure 5.5 summarizes this by showing the percentage in employment two years after job loss for quartiles of post-government household income previous to job loss. Generally, in both countries and for both genders, those with the lowest incomes prior to job loss have the lowest rates of re-employment. The gradient is especially strong among women in West Germany. In the first quintile, only 40 per cent return to the labor market after job loss. A reason for this may be that they take on the “alternative role” of the homemaker after experiencing disappointments on the labor market (Friedman et al. 1994; Kreyenfeld 2010). Since this is a normatively accepted role for women, especially in West Germany, such a reorientation reduces the pressure to search for a new job. In combination with the difficulties of finding a new job in the lowest quartile, this presumably explains the low re-employment rate among West German women in low-income households.

Household level influences on the incidence of re-employment are less well studied in the literature so far. In this study, these differences are important because I compare incomes after job loss between different household types. Figure 5.6 graphs the percentage of men and women in a certain household type who are re-employed two years after job loss. The figure shows that re-employment rates differ by household composition. Male singles without children have a lower re-employment rate than men in couple households with children in both countries. The difference is even more pronounced in the United States. Thus, single men not only become unemployed more often, they also face difficulties returning to the labor market. This finding is in line with results by Jacob and Kleinert (2014), who show that married men have higher re-employment rates than single men. Thus, this is another disadvantage single men have to face. Interestingly, German men in couples without children have much lower re-employment rates. This may be rooted in the higher average age in this group. In Germany, re-employment rates are especially low among older workers (Mauer and Mosley 2009).

Women living in couples with children have lower re-employment rates than women in other households in both countries, as Figure 5.6 reveals. This is especially pronounced in Germany. Again, this confirms findings by Jacob and Kleinert (2014). Single mothers' re-employment rates, on the other hand, are much higher. Thus, low re-employment among women in couples with children does not seem to be caused by a "motherhood penalty". Instead, it is more likely that some women in couple households adopt the role of the homemaker after job loss. The finding that the re-employment rates among German mothers living in couple households are especially low supports this: In Germany, gender role expectations of "the good mother" who stays at home are still more prevalent than in the United States (Fortin 2005; Grunow et al. 2006).

In sum, the analysis of re-employment rates provides insights that are important for interpreting income trends after job loss. Between the two countries, I have to take into account that Germany experienced a large increase in the share of those who do not return to the labor market after job loss during the 1990s. Between households, two groups had lower re-employment rates: single men and mothers living in couple households. For the first group, this is accompanied by higher rates of job loss. Thus, male singles' lives are characterized by high economic instability. Mothers living in couple households, on the other hand, do not become unemployed more often than other groups. Their lower re-employment presumably does not lead to economic instability because they are

**Figure 5.6 Incidence of re-employment after job loss in different household types in the United States and West Germany**



Sources: PSID, GSOEP, and CNEF, author’s calculations

secured by their partner’s incomes. Interestingly, single mothers, who face above average unemployment risks, have much higher re-employment rates. Hence, although their careers are often interrupted, they are able to secure new employment. However, whether this new employment cushions their losses is an open question that will be addressed in the following chapter.

### 5.2 What causes higher rates of job loss among singles and single mothers?

The previous results show that single men and single mothers face high risks of job loss and subsequent unemployment. However, it remains unclear whether this is an effect of their household arrangement or due to selection. Clearly, there are compositional differences between singles and couples. For example, male singles are often low-educated. Yet, as I elaborated in Chapter 2, some theoretical perspectives suggest an effect of household composition on job loss beyond selection. Following Rusconi and Solga



(2008), I argue that being in a couple influences labor market outcomes. Likewise, children in a household constrain behavior on the labor market. In the following, I first sum up the hypotheses developed in Chapter 2 and then test them.

## Hypotheses

In Chapter 2, I derived expectations about the influence of household characteristics on the risk of job loss from two strands of literature: First, research on the “marital premium” (e.g. Korenman and Neumark 1991; Pollmann-Schult 2011); and second, research on the “motherhood penalty” (e.g. Budig and England 2001; Gash 2009; Gangl and Ziefle 2009). Following this literature, family formation influences earnings. Yet, the processes and the outcomes differ by gender. For men, there is a connection between becoming married and higher wages. For women, childbirth is connected to lower wages. Both literatures have surprisingly similar explanations for lower wages of single men and mothers. These can be summarized in three categories: First, hypotheses based on preferences for certain kinds of jobs; second, hypotheses based on employer discrimination; and third, hypotheses based on regional differences. In all three cases, norms about gender roles play a decisive role.

Part of the differences in unemployment risk could be due to changes in attitudes toward paid work after marriage for men and childbirth for women. The literature shows that men put more effort into work after marriage (Pollmann-Schult 2011). Consequently, I expect that men who start families choose more stable jobs to support them in the long run and hence have lower risk of becoming unemployed. Women, on the other hand, often move to part-time or marginal jobs after childbirth to be able to care for their children (Gangl and Ziefle 2009). This is especially true for single mothers and for mothers without access to childcare. These jobs often provide less employment security and hence present higher unemployment risks. Thus, family formation often leads to more traditional roles in the household. Among men, this is apparently induced by gender role expectations, whereas women’s transitions to traditional roles are often driven by structural barriers. This leads to several hypotheses, which are denoted with an “I” in this chapter, signifying that they are about incidences of job loss. First, if singles and mothers self-select into certain jobs, controlling for sector, occupation, and job characteristics should reduce the difference in unemployment risks (Hypothesis I.1).

However, the stability of a job not only captures attitudes, but also discrimination in the hiring process. Mothers may be regarded as less flexible and productive by employers because they have to care for children. In an audit study, Correll et al. (2007) found that employers indeed regard mothers as less competent and would hire them less often than women without children. Likewise, employers may believe that singles are less productive because they do not find a partner (Pollmann-Schult 2011). Both forms of discrimination should lead to fewer and worse job offers for singles and mothers. This could also lead to the outcomes predicted in Hypotheses I.1. It is difficult to disentangle whether attitudes or discrimination in the hiring process drive the results. To explore this, I conduct some further analyses using data on attitudes. For men, if the attitude explanation is true, the willingness to accept risks should decrease as men form a family (Hypothesis I.2a). For women, if attitudes drive selection into jobs, the self-reported importance of work should reduce after childbirth (Hypothesis I.2b). If the hypotheses about attitudes are not confirmed, this might suggest discrimination in the hiring process.

There could also be differences in layoff practices at the firm level. It is possible that employers discriminate against singles and dismiss them first if they have to reduce their staff because they do not have to support a family. For single mothers, on the other hand, it may be that they are discriminated against because they are less flexible and are considered less productive, as argued above. Unfortunately, this is difficult to test empirically because there is little information on employers in the data set. Therefore, this explanation is likely if the testable hypotheses are not true.

In a cross-national perspective, differences in the availability of childcare between the United States and Germany may influence the impact of household composition on the incidence of job loss. As indicated in Chapter 3, in West Germany the availability of childcare is lower than in the United States. In East Germany, however, childcare provision is higher than in the United States. Comparative literature showed that the motherhood penalty in wages is higher in countries where childcare is uncommon (Gash 2009). Childcare enables mothers and especially single mothers to be more flexible in the job. This should enable them to take up standard jobs. Also, it could decrease discrimination because employers no longer consider them less productive. Consequently, I expect that childcare provision leads to more stable jobs for mothers. Following the institutional data in Chapter 3, job loss among mothers should be highest in West Germany and lowest in East Germany with the United States in between (Hypothesis I.3).

## Analysis

To test the hypotheses, I model the probability of job loss using linear probability models. The incidence of job loss is a binary variable and hence a logistic regression or a similar non-linear technique would be most suitable to model the distribution of the dependent variable. However, the method has drawbacks that complicate the test of my hypotheses. The coefficients of a logistic regression cannot easily be compared between different samples and across models for the same sample as in a linear regression (Allison 1999; Mood 2010; Breen et al. 2011; Karlson et al. 2012). Since my hypotheses require both the comparison between models and samples, standard logistic regression would lead to biased estimates. There are several suggestions of how to solve this problem within the framework of logistic regression in the literature. The most straightforward solution is to use ordinary least squares regression on binary outcomes, which is often called linear probability model. The main weakness of this approach is that it does not take the non-linear relationship between the dependent variable and the independent variables into account. However, since I am mainly interested in the comparison of effects and not in the functional form of the relationships, I use linear probability models in the following. To tackle the problem of heteroscedasticity of the error term in this type of model, I use robust standard errors.<sup>26</sup>

Compared to the descriptive statistics, I now also consider marital status in the analyses. This leads to a more fine-grained depiction of a person's stage within the life course. I compare never married singles and single parents to those who became single or single parents after divorce. Also, I compare cohabiting couples with married couples. The reference category in the models consists of married couples with children. I use two sets of control variables. First, in the reduced models, I control for the following individual characteristics: age; education; work experience; number of children in the household; and minority status (black/white in the United States and migrant/non-migrant in Germany).<sup>27</sup> I also include year effects to adjust for the economic cycle. Second, the full set of control variables additionally includes the following job characteristics: labor earnings;

26 I also tried the method proposed by Karlson et al. (2012) to compare effects across models and the results are similar.

27 I also control for age and work experience squared. Education is included in categories indicating less than high school, high school, and college education in the United States. In Germany, I use school without vocational training, vocational training, and university degree as categories.

household income; work hours; tenure (also squared); sector; occupation; and months employed in the focal year. I do not show the coefficients for the control variables in the following tables.

Note that modeling the incidence of job loss includes a change in perspective compared to the descriptive statistics of the incidence in the previous sections. In the descriptive statistics, I compared the composition of the groups with and without job loss. Thus, I compared the probabilities of being in a certain type of household given job loss or continuous employment. This perspective is important for learning about the composition of my data sets. The linear probability model, on the other hand, yields the probability of job loss given different household types. Thus, the results are the difference in the probability of job loss between household types. In this perspective, the differences between households no longer depend on their relative occurrence. Therefore, the magnitudes of the differences are not comparable between the descriptive statistics and the models. Yet, the direction of the differences is the same in both perspectives.

In the reduced models in Table 5.6 (Models 1, 3, 5, and 7), which only control for individual characteristics, the descriptive results presented in the previous chapter reappear: Men living in single households and single mothers are more likely to experience job loss than men and women living in couple households with children. The coefficients from the linear probability model are percentage point differences in incidence rates compared to married couples with children. Thus, the coefficients indicate a difference in the probability of becoming displaced of zero to three percentage points between the household types, once I control for individual characteristics. As mentioned before, this is not directly comparable to the descriptive results in the previous sections. Yet, compared to the large differences found in the descriptive statistics, the effects are small. This indicates that the observed difference is partly due to selection into certain households. The effect for single mothers in West Germany is below even the five per cent significance level. Beyond single adult households, other household compositions differ less in the risk of job loss. Especially, the “motherhood penalty” in the risk of job loss solely appears among single mothers. Women in couples without children do not have a higher incidence of displacements. Interestingly, unmarried men in couple households with children in the United States have significantly higher displacement probabilities than married men with children. Apparently, being married directly influences job stability in the United States. This is not the case in West Germany.

Table 5.6 Selected linear probability model coefficients for the incidence of job loss

	United States				West Germany			
	(1) Men, Red.	(2) Men, Full	(3) Women, Red.	(4) Women, Full	(5) Men, Red.	(6) Men, Full	(7) Women, Red.	(8) Women, Full
Single HH, never mar.	0.0224** (3.23)	0.0165** (2.41)	0.00201 (0.43)	-0.000385 (-0.08)	0.0133** (2.53)	0.0128** (2.48)	0.00436 (0.78)	0.00116 (0.20)
Single HH, divorced	0.0132** (2.03)	0.00965 (1.49)	0.0205** (2.39)	0.0165** (1.96)	0.0116 (1.45)	0.0100 (1.24)	0.00811 (0.92)	0.00378 (0.42)
Single Parent, never mar.	0.0279 (0.85)	0.0209 (0.67)	0.0169 (1.95)	0.0147 (1.71)			0.00755 (0.62)	0.00181 (0.15)
Single Parent, divorced	-0.00728 (-0.96)	-0.00967 (-1.27)	0.0110** (2.25)	0.00855 (1.77)	0.0105 (0.47)	0.0112 (0.49)	0.00970 (1.11)	0.00259 (0.29)
Couple HH, ch., not mar.	0.0344** (2.45)	0.0301** (2.18)	0.0111 (1.05)	0.00860 (0.83)	0.00432 (0.74)	-0.0000616 (-0.01)	0.00828 (0.84)	0.00551 (0.56)
Couple HH, no ch., married	-0.000265 (-0.06)	-0.00132 (-0.32)	0.00239 (0.62)	0.000468 (0.12)	0.00208 (0.61)	0.00251 (0.71)	0.00249 (0.50)	0.00298 (0.58)
Couple HH, no ch., not mar.	0.00734 (0.83)	0.000507 (0.06)	0.00254 (0.36)	-0.0000527 (-0.01)	0.00609 (1.34)	0.00511 (1.06)	-0.000338 (-0.06)	-0.00209 (-0.36)
Other HH comp.	0.00306 (0.60)	0.00145 (0.29)	0.00156 (0.39)	-0.000143 (-0.04)	0.00792** (2.16)	0.00660 (1.80)	-0.00101 (-0.23)	-0.00253 (-0.55)
Observations	29629	29629	28778	28778	28696	28696	21337	21337

Ref. category: Couple households with children, married

Reduced: Controlled for individual characteristics and year dummies

Full: Also controlled for job characteristics

Cluster robust *t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Sources: PSID, GSOEP, and CNEF, author's calculations

Comparing the full models with reduced models in Table 5.6 shows that the effects for singles and single mothers become smaller. The reduction is largest among never married single men in the United States and divorced single mothers in Germany. Among never married single men in Germany, on the other hand, the coefficients remain almost equal. Thus, except for German single men, Hypothesis I.1 is supported: Job characteristics explain some of the differences between singles and couples. Apparently, singles in the United States and single mothers in both countries select into unstable jobs. This may be interpreted in two ways: First, this may reflect the preferences of singles and single mothers. Singles may be less risk averse when choosing a job. Single mothers, on the other hand, may prefer flexible jobs over secure jobs in order to have time for their children. The second interpretation would be that employers discriminate against singles and single mothers when hiring employees and therefore they are more likely to have low-quality jobs. I explore this issue further below when I analyze attitudes.

Comparing between the two countries, the difference between household types in the occurrence of job loss is generally higher in the United States than in Germany, both before and after controlling for job characteristics. Only unmarried single men in Germany have a significantly higher risk of job loss that comes close to the effects observed in the United States. In the United States, on the other hand, the higher risk of job loss among singles and single mothers remains even after controlling for selection. This could be interpreted as a sign of greater discrimination toward singles and single mothers in lay-off decisions in the United States. Clearly, in the American system, the employer has greater leeway in this respect because employment protection legislation is lower than in Germany.

**Table 5.7 Average willingness to take risks among men in different household types in Germany**

Household type	Avg. willingness to take risks
Single w/o children	4.95
Single w/ children	4.99
Couple w/ children	4.9
Couple w/o children	4.99
Other	4.67

Higher values denote higher willingness.

Sources: GSOEP and CNEF, author's calculations

To analyze whether attitudes or discriminatory hiring influence singles' and single mothers' risks of becoming unemployed, I analyze self-reported willingness to take risks and the importance of work for individuals. Unfortunately, such variables are only available for Germany. First, I want to test the hypothesis that single men are more willing to take risks. Willingness to take risks is measured on a ten-point scale in the GSOEP where higher values denote higher willingness to take risks.<sup>28</sup> This item is available in the years 2004, 2006, and on a yearly basis from 2008 on. To ensure a homogenous population, I only include men who currently work.

Taking a first look at the data, Table 5.7 shows average willingness to take risks for German men in different household types. Casual inspection reveals that the willingness to take risks among men does not differ between household types. From this point of view, higher rates of job loss among single men do not seem to be caused by a preference for risky jobs. Yet, the averages presented in Table 5.7 could also be influenced by the compositional differences between the groups. Therefore, I control for composition in the next step of analysis.

Hypothesis I.2a states that family formation increases risk aversion among men. Since the GSOEP provides multiple observations of risk attitudes within a person, I can test this directly using fixed-effects regression. By taking out all individual specific and time constant differences between the individuals, fixed-effects regression yields largely unbiased estimates of changes within a person. Table 5.8 presents the fixed-effects estimates for changes in the willingness to take risks within a person controlled for age. The first coefficient states that the willingness to take risks decreases by 0.159 scale points if a person moves in with a partner. Thus, the coefficient has the expected sign. However, the estimate is slightly below the five per cent significance threshold. The number of children has a much smaller negative effect. Overall, Hypothesis I.2a is not supported. Although people seem to be slightly more risk averse after family formation, the effect is small compared to the scale and not significant. This finding fits the observation that job characteristics explain only a little of the disadvantage of West German single men in employment security. This suggests discriminatory lay-off practices. Unfortunately, I do not have similar data for the United States, where sorting into unstable jobs among single men seems to be more prevalent as the regression analysis suggests.

For women, I test the attitude explanation using the self-reported importance of work. If the selection into risky jobs is due to a preference for family-friendly jobs among mothers, the importance of work should

28 The actual wording is: "Are you generally a person who is fully prepared to take risks or do you try to avoid taking risks?"

**Table 5.8 Effect of change in household structure on willingness to take risks among men in Germany**

	(1)
Living with a partner	-0.159 (-1.50)
No. of children in HH	-0.0258 (-0.56)
Age	-0.132* (-14.51)
Observations	11645

Fixed-effects model

Cluster robust *t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Sources: GSOEP and CNEF, author's calculations

be lower among them. Clearly, this is not a perfect test since the question involves no trade-off between work and family. Women could answer that both are important. Therefore, this is a conservative test of the hypothesis. If there are differences despite this weakness, they are likely to be substantial. This item is measured in the GSOEP on a 4-point scale from "very important" to "totally unimportant".<sup>29</sup> I dichotomized the variable by combining "very important" and "important", on the one hand, and "not very important" and "totally unimportant", on the other hand. The item is available in 1994, 1998, and 1999. As with men, I consider only women who currently work.

**Table 5.9 Importance of job/work among women in different household types in Germany**

Household type	% regarding job/work less important or unimportant
Single w/o children	6.47
Single w/ children	9.43
Couple w/ children	15.35
Couple w/o children	9.2
Other	11.38

Sources: GSOEP and CNEF, author's calculations

29 The wording of the question is: "How important for your well-being and satisfaction is work?"



Table 5.9 shows that both partnership status and having children influences the self-reported importance of work. Compared to singles without children, single mothers consider work less important. In comparison to mothers in couple households, however, single mothers consider work more important. Thus, according to these results, it is unlikely that attitudes influence sorting into unstable jobs: Although single mothers find work more important, they are more likely to lose their jobs than women in couples with children. However, again it is unclear whether the results in Table 5.9 are due to selection. Also, it is difficult to derive causal explanations from attitudes. As much as attitudes influence behavior, they are also shaped by circumstances. For example, since single mothers are the sole earners they think that work is more important than women in couples who are often secondary earners.

In Table 5.10, I analyze whether changes in household composition influence changes in the self-reported importance of work among women. Again, I apply fixed-effects regression to rule out the influence of person-specific and time-constant heterogeneity. Additionally, I control for age and age squared. Since the dependent variable is dichotomized, this is a linear probability model.<sup>30</sup> In the model, I control for the interaction of having a partner and children. Thus, the main effect for having children includes only single mothers. The results in Table 5.10 show that becoming a single mother does not significantly change the attitude toward work. Moving in with a partner, on the other hand, clearly increases the probability of stating that work is less important. A possible interpretation of this finding is that the change in attitudes does not follow childbirth but instead starting a couple household. In these households, women often adopt the role of the traditional housewife and, consequently, consider paid work less important. Interestingly, their risk of job loss is lower than the one found among single mothers. These findings suggest a rejection of Hypothesis I.2b. Attitudes toward work do not seem to explain the higher incidence of displacements among single mothers. It is more likely that discrimination in the hiring process or in displacement decisions lead to more unstable jobs for them.

30 A conditional effects logistic regression yields similar results.

**Table 5.10 Effect of change in household structure on the probability of regarding job/work less important or unimportant among women in Germany**

	(1)
No. of children in HH	0.0120 (0.59)
Living with a partner	0.0478* (2.24)
No. of children * Partner	0.0142 (0.67)
Age	-0.0262* (-2.73)
Age <sup>2</sup>	0.000324* (2.91)
Observations	6948

Fixed-effects model

Cluster robust t statistics in parentheses

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Sources: GSOEP and CNEF, author’s calculations

**Table 5.11 Selected linear probability model coefficients for the incidence of job loss among women in single parent households**

	(1) US	(2) W. Ger.	(3) E. Ger.
Single Parent, never married	0.0169 (1.95)	0.00755 (0.62)	0.0998 (1.68)
Single Parent, divorced	0.0110* (2.25)	0.00970 (1.11)	0.0136 (0.44)
Observations	28778	21337	4344

Ref. category: Couple households with children, married

Controlled for individual characteristics and year dummies

Cluster robust t statistics in parentheses

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Sources: PSID, GSOEP, and CNEF, author’s calculations

Finally, I explore the influence of institutions on the occurrence of job loss among single mothers. Hypothesis I.3 stated that job loss among single mothers should be lower if childcare provision is higher. In Table 5.11, I show the coefficients for single mothers from the reduced models in Table 5.6 again. Thus, I only control for individual characteristics and not for job characteristics, because childcare provision could also

influence sorting into jobs. To have more variance in childcare provision, I also consider East Germany, where childcare provision is much more widespread than in West Germany. Table 5.11 shows that the disadvantages for single mothers in terms of displacement risk are highest in the United States. This is despite the fact that childcare provision is more widespread in the United States than in West Germany. Yet, since most childcare is privately organized and expensive, single mothers may not be able to afford it. The intra-German comparison shows no large differences. Thus, the risk of job loss among single mothers is not reduced by more encompassing childcare. Therefore, Hypothesis I.3 has to be rejected.

In sum, the data suggest that discrimination by employers is the main source of differences in the risk of job loss between singles and couples. Self-selection because of changes in attitudes toward work does not seem to explain the differences. Discrimination occurs in the hiring process and in lay-off decisions. Presumably, it stems from employers' expectations about singles' lower productivity. In the United States, I found evidence for both sorting into unstable jobs and discrimination in lay-off decisions. In West Germany, on the other hand, single men seem to be more affected by discriminatory lay-offs whereas single mothers' employment insecurity seems to result from sorting into unstable jobs.

### **5.3 Summary: Market, family, and state influences on job loss and unemployment**

The goal of this chapter was twofold: first, I wanted to provide a descriptive overview of the occurrence of job loss and unemployment in the United States and Germany to put the analyses of income mobility after job loss into context. Second, I aimed at carving out reasons for differences in the incidence of job loss between household types. The results in this chapter show that analyses of incidences are important for understanding the influence of job loss over the life course. This is because there are considerable differences in the incidence of the event between individuals, families, and the two countries in this study. In this summary, I recapitulate the most important findings and highlight their importance for the interpretation of the results about income losses after job loss that I cover in the following chapter. Also, I highlight the influence of the market-family-state nexus on employment insecurity.

The results in this chapter confirm the expectation that displacements hit the lower strata more often than the higher strata in both countries. Thus, those who are already disadvantaged on the labor market additionally suffer more often from employment insecurity. The analyses also show that the same disadvantaged groups have difficulties finding a new job after unemployment. Concerning the household level, I found that single adult households are more affected by job loss than couple households. Among women, this is especially apparent for single mothers. Thus, households that cannot offset the income loss after job loss through other household members' incomes are more often affected by displacements. Still, within this group, only single men are also disadvantaged in terms of reemployment. Single mothers, on the other hand, have comparatively good chances of returning to employment within two years. In my analyses in the following chapter, I account for these differences through statistical matching on the variables that I identified in the analyses.

This chapter also showed that the group of those who are affected by job loss differs between the United States and Germany. Generally, job loss is more concentrated in the lower strata in Germany than in the United States. In terms of household composition, single mother households are generally much more prevalent in the United States than in Germany. This also shows up in high numbers of single mothers entering unemployment in the United States. These country differences are difficult to account for statistically. Clearly, some form of weighting could adjust the marginal distributions of the samples. Yet, for some variables, such as education, this is not possible since the country specific categories cannot easily be transformed. Therefore, I use the information about the differences between the two countries in the qualitative interpretations of the effects.

Over historical time, the incidence rates of job loss are not constant in both countries. The difficult labor market conditions in Germany during the 1990s and the beginning of the 2000s resulted in higher incidence rates of job loss and lower re-employment probabilities. The trend toward higher employment insecurity was especially pronounced among the lower strata, presumably because of the partial de-regulation of the German labor market. In the United States, on the other hand, improving labor market conditions led to a slight decrease of employment insecurity between the 1980s and the mid-2000s. Re-employment probabilities, by contrast, remained high throughout this period in the United States.

**Table 5.12 Summary of hypotheses and results about the incidence of job loss**

	<b>Hypothesis</b>	<b>Result</b>
I.1	Differences in rates of job loss between singles and couples are due to sorting into certain jobs	Confirmed for single mothers and men in the US, not confirmed for single men in W. Germany
I.2a	Single men are less risk averse than men in couples	Not confirmed
I.2b	Single mothers regard employment as less important than other women	Not confirmed
I.3	Single mothers have the lowest incidence of job loss in East Germany because of high availability of childcare	Not confirmed

Besides these labor market and welfare state influences, a main focus of this chapter was to add the household dimension to the analysis of the incidence of job loss. In the descriptive analyses, I identified two groups with especially high risks of displacements: single men and single mothers. To carve out the reasons for this, I conducted further analyses. Table 5.3 summarizes the hypotheses and results. The analyses revealed that single men have considerable disadvantages in employment security even after selection into this type of household is controlled for. This is partly due to sorting into certain jobs, as my analysis showed, especially in the United States. However, sorting does not seem to be due to workers' preferences for risky jobs, but rather because of employer discrimination in the hiring process. Yet, even after job characteristics are controlled for, differences between single men and men in couple households remain. I interpret this as discrimination in lay-off decisions. Thus, because of employer behavior, single men have less stable careers than men in couple households.

The results are similar for single mothers. However, the differences in incidence rates between single mothers and mothers in couples that I observed in the descriptive statistics disappear, to some extent, after I control for individual characteristics. This is especially the case in Germany. Also, job characteristics explain more of the difference than in the case of single men. Hence, the main drivers of higher incidence rates of job loss among women seem to be their individual characteristics and the jobs they hold. Further analyses show that sorting into unstable jobs among single mothers does not seem to be a matter of preferences: Most single mothers do not regard their job as unimportant. Therefore, the most plausible reasons for employment insecurity among single mothers are structural barriers that prevent them from taking up stable jobs. Such barriers may

be a lack of affordable childcare or inflexible work arrangements on the part of employers.

Concluding this chapter, I find evidence for a joint importance of the market, the family, and the state for the incidence of job loss and unemployment. Clearly, family influences are smaller than market and state influences. Labor market and welfare state institutions, the economic cycle and individual characteristics that are related to productivity or perceived productivity (discrimination) are the largest determinants of employment insecurity. Nevertheless, the type of household a person lives in is connected to displacements as well. Thus, economic insecurity through job loss is also determined by household level influences. In this chapter, I could only analyze the effects of the household on the incidence of job loss. However, there are further channels through which the household influences income insecurity after job loss, as my analyses of unemployment duration and household dynamics showed. Confirming earlier results, I found that male singles have longer unemployment durations (Jacob and Kleinert 2014). Also, job loss seems to be connected to marital break-ups (Sayer et al. 2011). Unfortunately, it is beyond the scope of this study to analyze these connections between the household and the labor market further. Instead, this study focuses mainly on the economic consequences of job loss in order to estimate the actual economic insecurity that job loss causes. This will be analyzed in the following chapter.



## 6 Income Trajectories After Job Loss

In this chapter, I analyze the impact of job loss on economic well-being.<sup>31</sup> To do so, I consider relative losses in post-government household income after job loss. The main aim is to test expectations about factors that buffer losses in labor earnings derived in Chapter 2. Thus, the goal of this chapter is twofold: First, I want to show who is most and who is least affected by declines in economic well-being after job loss. Second, I aim to explain differences in the impact of displacements by showing how different additional incomes in a household buffer earnings losses. In doing so, I shed light on the mechanisms that shape economic well-being after job loss over the life course.

As the theoretical considerations in Chapter 2 suggested, there are numerous factors on the individual, household, and welfare state level that buffer the impact of unemployment on post-government household income. In this chapter, I am especially interested in the buffering of income losses through the family and the welfare state;<sup>32</sup> but, I also consider individual earnings to examine the influence of the labor market. In the following, I first restate the hypotheses derived from the theory in Chapter 2 and the institutional synopsis in Chapter 3. The hypotheses are labeled with a “T” in the following because they pertain to trajectories after job loss. Then I follow the empirical strategy described in Chapter 4 and analyze relative changes in income after job loss. As in the other analyses, I mainly focus on West Germany in this chapter. For the sake of brevity, I use “Germany” throughout the text, meaning West Germany if not stated otherwise.

### 6.1 Theoretical expectations and hypotheses

In the previous chapter, I showed that re-employment within two years after job loss occurs more often in the United States than in Germany. This implies that income buffering through re-employment should be stronger in the United States. Yet, Gangl (2004) found that job loss in the United States creates much greater “scars” in income trajectories than in Germany.

31 This chapter builds on concepts and analyses I developed in two articles (Ehlert 2012, 2013). I expand and advance them in the following to fit them into the broader context of the book.

32 The concept of income buffering has been introduced in Chapter 4.



That is to say, Germans more often return to a job with little or no earnings losses compared to their old job. This is presumably due to longer durations of job search made possible by longer durations of unemployment benefits. From this perspective, buffering through re-employment should be larger in Germany, especially in the long run. However, research on scarring effects in individual earnings usually neglects those who stay unemployed. In this study, I consider income trajectories regardless of the employment status after job loss (see Chapter 4 for details and justification). Thus, my analyses also include those with zero earnings after job loss. As a result, my results provide a broader description of economic well-being after job loss. Whether the occurrence of re-employment or scars in earnings are more important for economic well-being after job loss remains an empirical question that will be assessed in the analyses below.

Comparing welfare state programs directed at the unemployed in the United States and Germany in Chapter 3 revealed two differences: Welfare state benefits in Germany are higher and last longer than in the United States. In addition, the German welfare state provides an almost universal minimum income scheme, whereas the American welfare state only provides very limited support once Unemployment Insurance (UI) benefits are depleted. Also, taxes on labor income are higher in Germany. Consequently, a smaller proportion of total labor income is actually available in post-government household income. Thus, a larger part of the losses in labor income does not affect post-government household income because it was never part of household income after taxes. Therefore, I expect to find larger income buffering effects through the welfare state on household income in all years after job loss in Germany (Hypothesis T.1).

In both countries, I expect that family income support in the year of job loss differs by gender. This is because men are often the main breadwinners whereas women are mostly earners. Therefore, women's job losses should influence total household income less than men's on average. From an income buffering perspective, this results in a larger family buffer for women: Their losses in earnings are mostly offset by their partner's existing earnings (Hypothesis T.2). However, the higher prevalence of dual-earner households in the United States where women work full-time should lead to higher household income losses after women's job losses than in Germany, because American women contribute relatively more to household income (Hypothesis T.3). Consequently, in Germany, the gender difference in household income losses after job loss should be larger than in the United States.

Beyond cross-national differences, I expect to find variation in household income losses and income buffers between household types within the countries. Most obviously, single households do not have income support from other household members. Therefore, singles' and single mothers' household income losses after job loss should be higher than those found among couples (Hypothesis T.4). These differences should be even more pronounced in the United States than in Germany, because single adult households solely rely on welfare state benefits after job loss, which are lower in the United States. Thus, single adult households should fare much worse after job loss in the United States than in Germany (Hypothesis T.4a).

However, my theoretical framework in Chapter 2 suggests that not only adult household members, but also children in the household influence the possibility and extent of income buffering. Mothers in couples often work less than women in couples without children because of structural pressures and gender role expectations. Therefore, household income losses among men in couple households should be larger if they live with children (Hypothesis T.5). This is because their partners are less likely to be employed or earn less on average than women without children. This also implies higher losses in the case of women's unemployment in couples without children. In the United States, labor force participation among mothers is higher than in West Germany (OECD 2007a). Therefore, American men's losses in households with and without children are more likely to be on a par than in West Germany because employment rates are similar between mothers and women without children (Hypothesis T.5a).

Single mothers face even greater difficulties after losing a job. First, they are not secured by a second income in the household. Second, they have to find a new job that allows them to reconcile their roles as caretaker and breadwinner. In Chapter 5, I showed that single mothers regain a job as quickly as other groups. Yet, they may end up in low-paid jobs because they have fewer employment options that allow them to pursue both roles. Consequently, I expect that single mothers have the highest losses in household income after job loss among all household configurations in both countries (Hypothesis T.6). This should be especially visible in West Germany with its low acceptance of working mothers and low availability of childcare. In East Germany, on the other hand, working mothers are much more common than in West Germany, as described in Chapter 3. Although I mainly focus on the comparison between West Germany and the United States, I use this difference to test the influence of higher rates of maternal employment. If my expectations are correct, single mothers in

East Germany should fare better after job loss than in West Germany while the United States should take the position in between (Hypothesis T.6a).

In addition to differences between household types, I also argue that the impact of job loss on household income depends on a person's origin within social stratification. The reasons for these differences are rooted in the nation-specific life course regime. As described in Chapter 4, I use quartiles of post-government household income to divide individuals into strata. Thus, I compare relative income changes between different income levels and can therefore derive origin and destination within the household income distribution.

The labor market has an influence on the outcomes for different strata because it influences re-employment opportunities. As argued in Chapter 2, the distribution of these opportunities depends on the educational system and resulting labor market structures. The labor market in the United States is dominated by firms with internal labor markets (ILM) where people make a career within a firm using firm-specific skills (Marsden 1990; Estevez-Abe et al. 2001). If they lose a job, they cannot use their specific skills in other firms and hence have to start again in entry level jobs. Germany, on the other hand, is dominated by occupational labor markets (OLM). Here, skills are occupation specific and hence portable across companies. Thus, if a high-skilled professional loses a job, she can apply her skills in another company and hence secure a comparable position. Clearly, this distinction is oversimplified and may mainly apply to jobs in production.<sup>33</sup> Still, even if they do not conform to the ideal types, the labor markets in Germany and the United States tend to be mainly organized around OLMs and ILMs, respectively. Consequently, I expect that in the United States, relative earnings losses after job loss are larger in the upper household income quartiles, because high-earning individuals often have to start in lower positions in the new job. In Germany, on the other hand, relative earnings losses should be highest in the lower strata, because credentials and portable skills allow the higher strata to find equally paid jobs while the lower strata often lack the needed credentials (Hypothesis T.7).

Concerning differences in the family buffer between strata, I expect a similar pattern in the two countries. Previous research showed that educational homogamy influences the formation of couples (Blossfeld 2009). Men and women with high education and status usually marry partners with similar characteristics. Since education influences earning potential,

33 For example, in other occupations, such as research or management, firm-specific skills may even be wanted by new employers.

there is a greater chance that two people with high earning potential will form a couple. Similarly, those with low earnings are likely to have a similar partner. Clearly, high earning potential because of high education does not translate to actual higher earnings. In Germany, high-educated women living in couples leave the labor market more often than low-educated women, as Drobnič et al. (1999) show. In the United States, on the other hand, education has no such effect. Apparently, men's high earnings make the role of the homemaker affordable for German women and thus foster the emergence of traditional couples. Nevertheless, Drobnič et al. (1999) also find that re-entry into the labor market is more likely among high-educated women. Therefore, even if they do not work at the time their husbands become unemployed, high-educated women in Germany are more likely to provide additional incomes through labor market entry than low-educated women. Thus, I expect a higher family buffer among the upper strata in both countries (Hypothesis T.8). In other words, in the upper strata, more of the losses in individual earnings are offset in pre-government household income.

The institutional setup of the tax and transfer system also leads to different income buffers among the social strata. As Esping-Andersen (1990) put it, welfare states not only decommodify, but also stratify. They do so by giving benefits to certain groups or limiting benefit payout to certain amounts. The unemployment benefit systems in both countries feature benefit ceilings in the sense that earnings are only replaced up to a certain threshold. This should lead to a lower impact of the welfare state after job loss among the upper strata (Hypothesis T.9). Thus, in the upper quartiles, the difference between losses in pre- and post-government household income should be smaller than in the lower quartiles. Yet, American unemployment benefit systems also often have earnings requirements and there is no minimum income scheme that accommodates those who do not qualify for benefits. Thus, the advantage of the lower strata is presumably lower in the United States. In Germany, on the other hand, there is a means tested minimum income scheme. Therefore, the impact of the welfare state should be much higher for the lower strata than for the higher strata because the unemployed cannot fall below the minimum income. If their earnings are close to the minimum before job loss, almost everything is buffered. Thus, the difference in welfare state buffers among the strata is presumably larger in Germany (Hypothesis T.9a). Compared to the upper strata, much more of the losses in the lower strata are buffered in Germany than in the United States.

However, in Chapter 3 I also described differences in the tax systems between the United States and Germany that may counteract the stratifying effect of welfare state benefits. The steeper progression in Germany implies that high-income households fall into lower tax brackets quicker than in the United States once they lose income after job loss. The reduction in taxes buffers the loss in pre-government household income because the households keep more of their income than before. Thus, high-income households in Germany should have a higher income buffer because of taxes than in the United States. This may counteract the expectations in Hypothesis T.9a. Additionally, the United States have a negative income tax that supports low-wage earners, called Earned Income Tax Credit (EITC). If households fall below a certain income after job loss, they no longer have to pay income taxes and even receive refunds because of the EITC. This may increase the welfare state buffer in the United States for the lowest quartiles given that they have labor income after job loss because they are more likely to fall below the EITC threshold. Thus, the tax systems suggest the opposite of Hypothesis T.9a: In Germany, the high progression should make income buffering through the welfare state more equal, whereas in the United States the EITC should lead to higher welfare state buffers among the poorest quartile relative to the others. Whether the tax or the benefit system has a greater influence is thus an empirical question that will be assessed in the empirical analysis.

Chapter 3 also discussed several changes in the two countries over time since 1980, which may have an influence on income trajectories after job loss. First, both countries decreased their support for long-term unemployed and implemented reforms directed at activating the unemployed to return to the labor market more rapidly. In Germany, the Hartz Reforms in 2004 cut benefits for unemployment durations of more than one year. Also, the pressure on the unemployed to take up jobs has been increased and atypical employment relationships like temporary work have been promoted. In the United States, Welfare Reform in 1996 cut the already low and selective benefits for the long-term unemployed with children as Aid for Families with Dependent Children (AFDC) was replaced by Temporary Aid for Needy Families (TANF). Also, the government expanded the Earned Income Tax Credit (EITC). Thus, a greater share of welfare state benefits became conditional on taking up a job. Moreover, in the United States, unemployment benefits became subject to income tax during the 1980s, which reduced their buffering capacity. In sum, both countries trend in the same direction but the large difference in welfare state support for the unemployed presumably remains. Consequently, I expect that welfare

state impact on household income after job loss decreases in both countries between the 1980s and the 2000s and, consequently, household income losses after job loss should increase. In Germany, this should only affect the long-run consequences from two years on after job loss. In the United States, both the year of job loss and the long-term consequences should be affected (Hypothesis T.10).

Since the 1980s, female labor force participation has grown in both countries. Following the hypotheses above, this should lead to decreasing household income losses after men's job losses and increasing losses after women's job losses. Presumably, this trend is more pronounced in the United States where more of the growth in female labor force participation was due to full-time employment than in Germany (Hypothesis T.11).

## 6.2 Comparing individuals with and without job loss

To estimate income losses after job loss, I use a difference-in-difference regression design as described in Chapter 4. The Difference-in-Difference (DiD) estimator is defined as the difference between income changes due to unemployment and income changes in a control group that did not experience the event. Thus, the estimates also reflect "foregone earnings" (Farber 2001) that would have been realized if job loss had not occurred. This is closer to the effect of loss on income than differences within a person. However, since job loss is not randomly distributed, as Chapter 5 demonstrated, a simple comparison between those with job loss ("treatment group") and those without ("control group") would be biased. Clearly, analyzing income changes already controls for time constant unobserved heterogeneity. However, treatment and control group may differ in terms of income trends. For example, if higher education leads to higher growth in earnings, the trends in the two groups cannot be compared since those with job loss usually have lower education.

To identify the effect of job loss correctly, the control group and the treatment group have to become more similar. This can be achieved by statistical matching. As mentioned earlier, I use Coarsened Exact Matching (CEM) (Iacus et al. 2012) to find matching observations without job loss for the treatment group. Table 6.1 shows the variables and their coarsenings used for matching. Generally, I use the individual and household level variables that proved to be associated with job loss in Chapter 5. Unfortunately, I could not include previous occupation because the number of matching observations in the control group is insufficient in this case.

**Table 6.1 Coarsenings of variables used for CEM analyzing the consequences of job loss**

Variable	Coarsening
Age	25-40, 41-55
Household composition	Single-adult, single-parent, couple with children <16, couple without children <16
Sex	Women vs. men
Education	US: Less than High School, High School, Greater than High School Ger.: School without voc. training, Vocational training, Higher education
Prev. individual earnings	Terciles
Prev. household income	Quartiles
Prev. weekly work hours	<10, <30, >30
Tenure in prev. job	Below and above 5 years
Sector	Industrial sector and other
Year of job loss	US: 1982-1986, 1987-1990, 1991-1995, 1996-2006 Ger.: 1986-1990, 1991-1996, 1997-2002, 2003-2008
Minority	US: Black and non-black Ger.: Migration background and no migration background
Region	Ger.: East and West

Tables 6.2 and 6.3 show descriptive statistics of the treatment and control group after CEM is applied. I also added details on treatment cases for which no matching control case was found. The tables thus depict the group for which I draw inferences about the treatment effect in the following analyses. As described in Chapter 4, I estimate the Feasible Average Treatment Effect on the Treated (FATT) in this study. Consequently, I draw no conclusions about the effect of job loss on persons without observed job loss using this method. Thus, the selectivity of the group who experience job loss depicted in Chapter 5 has to be kept in mind when interpreting the results. Also, the effect is only defined for the group for which a matching observation in the control group could be obtained.

The results in Tables 6.2 and 6.3 show how well CEM balanced the treatment and the control group. This is especially interesting for the coarsened metric variables. If the average is similar in the two groups, the cut-off points are well chosen. This seems to be the case in both countries. Also, variables that have not been used for matching such as occupation, firm size (in Germany), and unionization of the firm (in the United States) show reasonable balance. Therefore, the matching solution performs well in generating a control group that can be used for my difference-in-difference

**Table 6.2 Descriptive statistics of the matched and unmatched samples in the United States**

	United States					
	Men			Women		
	Matched Cont. employed	Job loss & unempl.	Not matched Job loss & unempl.	Matched Cont. employed	Job loss & unempl.	Not matched Job loss & unempl.
Avg. age	35.7	36	36.3	35.7	36.1	38.1
Black (%)	10.8	10.8	47.6	20	20	56
Avg. weekly work h. in previous job	43.2	42.2	34.9	35	34.4	33.4
Avg. tenure in previous job (yrs.)	5.7	5.2	4.1	4.1	3.7	4.8
Avg. yearly labor income (\$)	47590	47183	31703	26121	26850	24068
Avg. yearly eq. household income (\$)	27254	27525	23409	28710	28087	23717
<i>Sector</i>						
Industrial sector (%)	51.8	51.8	61.9	23.9	23.9	59
Service sector (%)	34.2	41.4	27.8	57.3	63.4	36
Public sector (%)	14	6.8	10.3	18.8	12.7	5
Firm with union (%)	21	23.9	31.8	12.7	10.9	23.3
<i>Occupation (Selection)</i>						
Precision production, craft, & repair occ. (%)	22.8	22.1	29.4	1.1	2.1	4
Operators, fabricators, & laborers (%)	25.6	29.2	35.7	13.9	12.3	40
<i>Education</i>						
Less than High School (%)	14.2	14.2	32.5	11.6	11.6	29
High School (%)	43	43	33.3	42.3	42.3	37
Greater than High School (%)	42.8	42.8	34.1	46.1	46.1	34
<i>Household</i>						
Single parent (%)	.1	.1	7.9	18.6	18.6	23
Single household (%)	12.5	12.5	31	8.8	8.8	18
N Episodes	8280	641	126	5228	481	100

All variables measured two years prior to job loss.  
Sources: PSID and CNEF, author's calculations



Table 6.3 Descriptive statistics of the matched and unmatched samples in West Germany

	West Germany					
	Matched Cont. employed	Men Job loss & unempl.	Not matched Job loss & unempl.	Matched Cont. employed	Women Job loss & unempl.	Not matched Job loss & unempl.
Avg. age	37.5	37.4	37.9	37.9	37.6	40.3
Migrants (%)	33.5	33.4	43.7	43.7	23.9	46.7
Avg. weekly work h. in previous job	43.2	43.4	37.3	32.2	32.7	31.5
Avg. tenure in previous job (yrs.)	7.1	6.8	6.1	5.9	5.4	6.7
Avg. yearly labor income (€)	31015	30960	25629	19449	22196	22913
Avg. yearly eq. household income (€)	17046	17221	16291	20593	20704	20838
<i>Sector</i>						
Industrial sector (%)	67.7	67.8	59.2	31.6	31.7	57.8
Service sector (%)	21.3	27.5	32.4	44.5	56.2	35.6
Public sector (%)	11	4.7	8.5	23.9	12.1	6.7
Firm <20 empl. (%)	21	37.5	42.3	30.8	38.3	40
<i>Occupation (Selection)</i>						
Craft and related trades workers (%)	37.8	42.8	41.4	5.4	7.5	13.3
Elementary occupations (%)	9.9	10	14.3	12.9	10.7	13.3
<i>Education</i>						
Without voc. training (%)	29	29.2	38	26.6	26.7	55.6
Voc. training (%)	63.1	62.9	46.5	64.3	64.5	33.3
Higher edu. (%)	7.9	8	15.5	9.1	8.8	11.1
<i>Household</i>						
Single parent (%)	0	0	1.4	7.5	7.5	8.9
Single household (%)	7.8	7.6	35.2	8	8	20
N Episodes	4480	283	71	2504	227	45

All variables measured two years prior to job loss.

Sources: GSOEP and CNEF, author's calculations

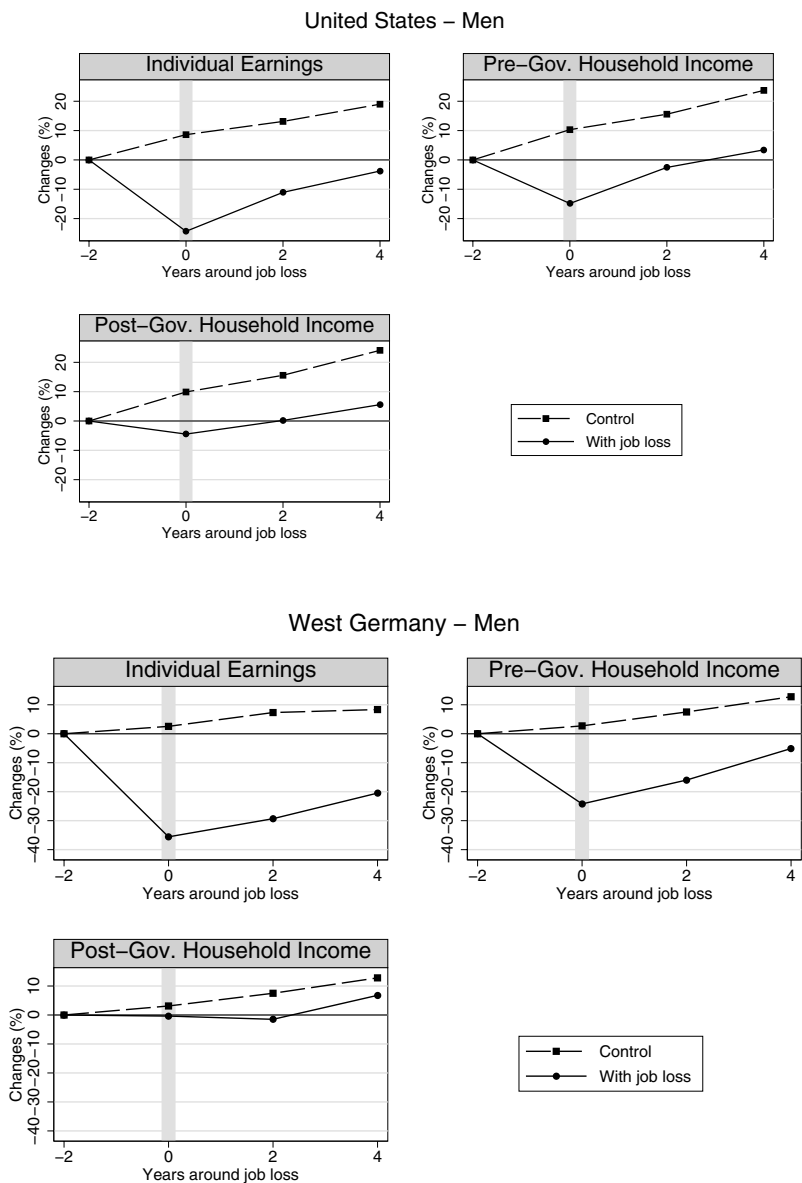
estimations. Furthermore, in the column titled “not matched”, I show descriptive statistics for individuals who could not be matched to control cases. The figures show that there are more extreme cases in this group than in those for which I could obtain matches. In particular, characteristics that are connected to the incidence of job loss and re-employment, such as belonging to an ethnic minority or being low-educated, occur more often among them. Also, there are more single-adult and single-parent households in this group. Thus, they are likely to have even larger income losses after job loss. The estimates in the following analyses therefore presumably underestimate the effect of job loss.

The bottom rows of the tables also show the number of cases that I use in the following analyses and the number of cases that I discarded because there are no matching control observations. In both countries, I have to prune about 20 per cent of the episodes with job loss. In Germany, the percentage is slightly higher than in the United States, indicating a stronger concentration of job loss among lower strata than in the United States that was already visible in Chapter 5. Clearly, given my estimation strategy, the ATT for observations without matched control observations cannot be obtained. Instead, the reported effects are the feasible ATT (FATT) given these restrictions.

In the following figures, I show averages in the year of job loss and thereafter for the dependent variables used in this chapter: changes in yearly individual earnings as well as yearly pre- and post-government household income. The changes are expressed as percentage changes compared to a base year. For those who lose a job, the base year is two years before job loss. For the control group, the base year is a year in which they are employed and thus also at risk of becoming unemployed (see Chapter 4 for details). To illustrate the DiD approach, I show income trends for those with job loss and the matched control group separately. The following graphs are not meant to test my hypotheses, but to give an impression of the data. In the following sections, I turn to the difference between treatment and control group, to estimate the effect of job loss on income trajectories.

Figure 6.1 shows that both the treatment and the control group exhibit different trends in the two countries. Income gains among men in the control group are much larger in the United States than in Germany. This is presumably due to two factors: First, the more dynamic and unrestricted labor market in the United States offers greater wage growth for those who stay in a job. At the same time, the risk of losing a job is higher. Second, Chapter 3 indicated that the conditions on the American labor market were good during the larger part of the period of observation from the mid-1990s to

**Figure 6.1 Average income changes in percent compared to the base year for men in the United States and West Germany**



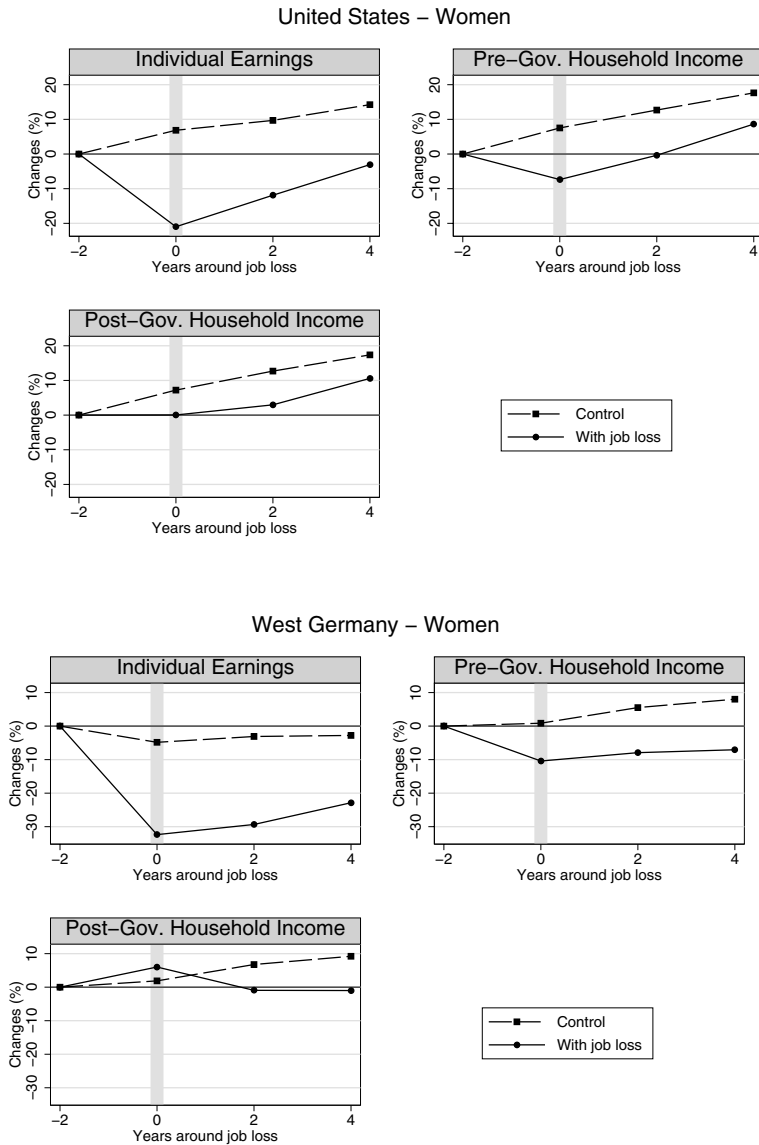
Sources: GSOEP, PSID, and CNEF, author's calculations

2007. Germany, on the other hand, experienced high rates of unemployment and very little or no wage growth between the 1990s and the 2000s (Brenke and Grabka 2011). In the group with job loss, there are also cross-national differences. Men in the United States lose less in individual earnings and recover faster than German men. This reflects shorter unemployment durations in the United States. Income losses in pre- and post-government household income are lower than losses in earnings in both countries indicating income buffering through the family and the welfare state. I will measure the exact impact of these buffers in the following section. In both countries, men offset the losses in post-government household income compared to their previous incomes on average by reaching zero losses. However, German men who experience unemployment come closer to the control group than American men after four years.

Among women in Figure 6.2, the most striking cross-national difference is in individual earnings. Here, American women show the same upward pattern as men, whereas German women show persistent losses if they lose a job and declining incomes in the control group. Apparently, some women in the control group reduce their labor force participation over time. A possible explanation for this is that some women leave the labor market or reduce their work hours after childbirth. The literature shows that this happens more often in Germany than in the United States (Drobnič et al. 1999). Pre-government household income losses show that women's job losses affect total household income much less than men's in both countries. However, in Germany, losses in household income persist whereas American women recover without reaching the control group. This mirrors the lower re-employment probabilities among German women depicted in Chapter 5.

The observed income growth in the control group in the first two years suggests the question whether the control group has a similar trend in the two years between the reference year ( $t-2$ ) and the occurrence of job loss. The DiD estimator assumes such a common trend. Looking at incomes one year before the event ( $t-1$ ), the common trends assumption holds for Germany. In the United States, on the other hand, for which I only have data until 1997, the trends in the treatment and the control group differ. While the control group trends upward, the treatment group stagnates between  $t-2$  and  $t-1$ . Thus, some of the difference between the two groups is due to this difference in trends. Consequently, the Difference-in-Difference estimates for the United States are somewhat overestimated. Unfortunately, I am not able to control for this because of the missing data in the year before job

**Figure 6.2 Average income changes in percent compared to the base year for women in the United States and West Germany**



Sources: GSOEP, PSID, and CNEF, author's calculations

loss after 1997.<sup>34</sup> However, this also reveals a peculiarity of the American labor market: those who eventually become unemployed are excepted from wage growth even before the event occurs. This foreshadowing can also be interpreted as a part of the treatment effect.

### 6.3 Country specific income trajectories

In this section, I turn to the DiD estimates of relative income changes after job loss and the buffering effects by the family and the welfare state. Compared to Figures 6.1 and 6.2, I now use the difference between the trajectories in the treatment and the control group, the Difference-in-Difference. To estimate income buffering through the welfare state and the family, I use the difference between the different income categories, as introduced in Chapter 4:

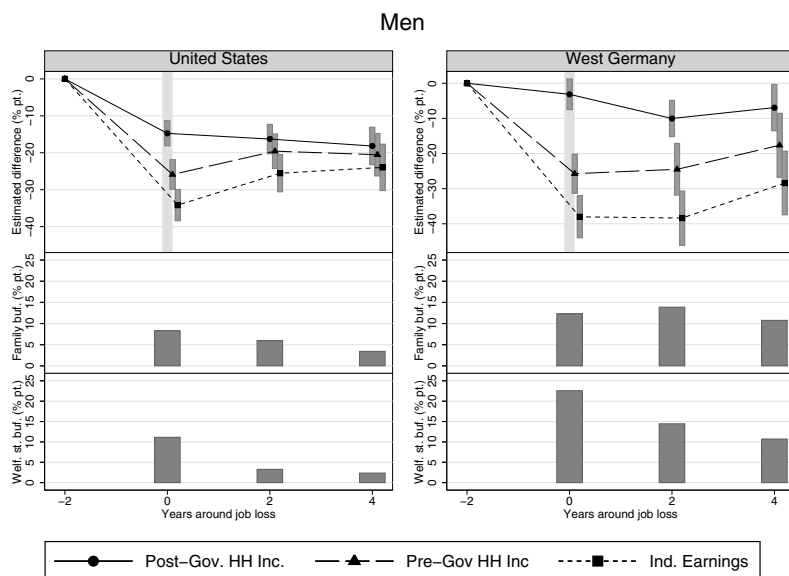
$$\begin{aligned}\text{Welfare state buffer} &= \hat{\delta}^{\text{PrG}} - \hat{\delta}^{\text{PoG}} \\ \text{Family buffer} &= \hat{\delta}^{\text{LE}} - \hat{\delta}^{\text{PrG}}\end{aligned}$$

where  $\hat{\delta}^x$  signifies the estimated changes from the models of labor earnings (LE), pre-government household income (PrG), and post-government household income (PoG). Expressed verbally, the welfare state effect is the difference between losses in household income before and after taxes and transfers. The family effect is the difference between losses in individual earnings and household income before taxes and transfers.

Figures 6.3 and 6.4 show the income losses due to job loss in the year of the event, two years after and four years after. In the upper panels, these trajectories are graphed for three income categories: post-government household income (solid), pre-government household income (dashed), and individual earnings (dotted). In the lower panels, I display the family buffer and the welfare state buffer for the respective years after job loss. Thus, the lower panels simply show the difference between losses in the upper panel. For example, consider the year of job loss (year 0) for men in the United States in Figure 6.3. The effect of job loss on pre-government household income is a 25 percentage point reduction compared to the counterfactual situation without job loss. Yet, post-government household income is only reduced by 15 percentage points. Thus, the welfare state buffered about ten

34 Using imputed incomes in the missing years as control variables decreased the effects slightly, as expected, but did not change the results substantially.

**Figure 6.3** Difference-in-Difference estimates of post-government household income, pre-government household income, and individual earnings after job loss among men in the United States and West Germany



Lower panels: income buffering effects

Error bars indicate the 95 per cent confidence interval

Sources: GSOEP, PSID, and CNEF, author's calculations

percentage points of the loss in household income. This is depicted by the bar in the lowest panel in the year of job loss.

Figure 6.3 shows that the estimates for post-government household income losses after job loss among men differ substantively between Germany and the United States. In the year of job loss, American men experience deeper drops in post-government household income on average than their German counterparts. In the years after job loss, American men's losses in post-government household income remain on the same level at about -15 percentage points. In Germany, on the other hand, men experience their greatest losses two years after job loss (-10 percentage points) and then recover slightly. Thus, throughout the observed trajectories, German men have less severe losses after job loss than American men. Four years after job loss, American men still have about 15 percentage points less post-government household income than they would have had without job loss. In Germany, this scar in the household income trajectory

amounts to about -8 percentage points. This difference is partly due to high post-government household income growth of those without job loss in the United States as depicted in Figure 6.1. Despite high rates of re-employment, American men often become disconnected from this trend whereas German men come closer to the counterfactual situation than they would have had without job loss. Thus, job loss alters the living conditions of men to a greater extent in the United States than in Germany.

How are these trends connected to earnings and household income before taxes and transfers? Figure 6.3 shows that the three income categories are much further apart in Germany than in the United States. In particular, the gap between pre and post-government household income is much larger in Germany. This gap is graphed in the lowest panel below the trajectories. The welfare state buffers about 22 percentage points of the losses in household income in the year of job loss, compared to about ten percentage points in the United States. This confirms Hypothesis T.1 for men: The welfare state buffers more of the losses due to displacements in Germany than in the United States. Yet, contrary to my expectations, the family buffer in Germany (11 percentage points) exceeds the one found in the United States (7 percentage points) as well. However, relative to the small welfare state buffer, the family buffer is important in the United States. This becomes obvious once I consider total buffering between earnings and post-government household income. In the United States the total buffer (welfare state buffer + family buffer) is about 17 percentage points in the year of job loss. Thus, the seven percentage points family buffer is about 40 percent of total buffering. In Germany, total buffering is 33 percentage points; consequently, the share of family buffering is only a third of total buffering. Two years after job loss the family buffer is even larger than the welfare state buffer in the United States. Thus, men's household incomes in the United States depend much more on individual earnings and other household member's incomes than in Germany.

The small impact of income buffers in the United States in absolute terms also emerges from the large importance of foregone earnings after job loss. As shown in the previous section, earnings of men with similar characteristics who do not experience job loss grow strongly. Part of the losses due to unemployment in the United States exist because the affected men become disconnected from this trend. Income buffers, however, usually do not compensate foregone earnings. Welfare state benefits are determined by previous income and do not consider the overall trends in earnings. Family income support may compensate



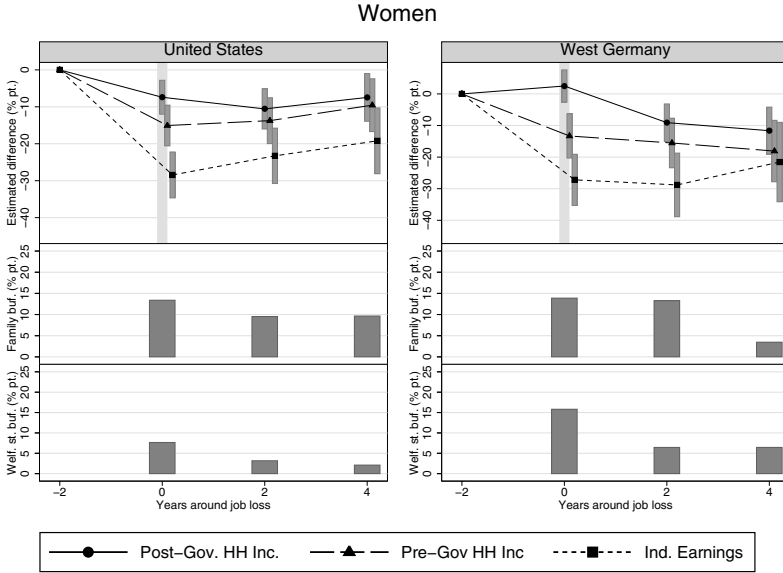
foregone earnings but many families are perhaps content with reaching the same income they had before. Again, this stresses the importance of earnings for household income after job loss among men in the United States.

The trajectories of individual earnings in Figure 6.3 mirror the duration of job loss and the incidence of re-employment in the two countries depicted in Chapter 5. In the United States, more rapid re-employment leads to lower losses in the year of job loss because more people already hold a new job within a short time after unemployment. Thus, their yearly labor income already includes earnings from the new job. Likewise, recovery between the year of job loss and two years after job loss is stronger than in Germany. Four years after job loss, Americans earn about 25 percentage points less than they would have without job loss. In Germany, these scars in the earnings trajectories amount to 30 percentage points on average. This finding, however, cannot easily be compared to other research on wage scarring, because this average also includes those who do not return to employment and, consequently, have no earnings. Looking only at those who returned, Gangl (2004) showed that scars in wages are larger in the United States than in Germany. However, it is likely that part of this difference derives from the selection of the sample in Germany: those who return are positively selected on characteristics that also influence wages.<sup>35</sup> My approach, by contrast, takes a more descriptive perspective by not distinguishing between the unemployed and the re-employed. The estimates therefore capture both the earnings in the new job and the probability of not returning to a job. Using this approach, scars in earnings trajectories are larger in Germany on average. Despite this, German men fare better on average after job loss once I look at household income, as shown above, because of the large family and welfare state buffers.

Income trajectories for women in Figure 6.4 show a different cross-national variation compared to men's. While American women have trajectories that are similar to American men's, German women show a downward trend after job loss. In both countries, women's post-government income losses in the year of job loss are lower than men's. Thus, initially, women's job losses affect a household's economic well-being less than men's job losses, as expected in Hypothesis T.2. The lower share of household income that they provide on average leads to this gender gap. In the

35 Clearly, Gangl was aware of this issue and modeled this selection in his analyses. Yet, such selection models only include observable characteristics and we can therefore assume that they are unable to capture the whole selection.

**Figure 6.4** Difference-in-Difference estimates of post-government household income, pre-government household income, and individual earnings after job loss among women in the United States and West Germany



Lower panels: income buffering effects  
 Error bars indicate the 95 per cent confidence interval.  
 Sources: GSOEP, PSID, and CNEF, author’s calculations

years after job loss, however, women in West Germany show unexpected trends: losses in post-government household income grow to more than ten percentage points until four years after job loss. American women, on the other hand, show a slight upward trend and end up a little under ten percentage points less post-government household income four years after job loss on average.

A look at pre-government income and individual earnings in Figure 6.4 reveals the sources of these trends. First, as expected in Hypothesis T.2, lower household income losses after job loss for women derive from a greater influence of the family in both countries. Because, on average, women earn less than men in households, their losses are mostly offset by their partner’s earnings. Comparing losses before taxes and transfers in the two countries however, women’s job losses have the same impact in the year of job loss: pre-government household income falls by about 15 percentage points and the family effects are about equal. This contradicts

Hypothesis T.3, which states that American women's job losses should have a greater impact on pre-government household income because they usually work more hours. However, this result may be influenced by the greater number of single adult households among women in the United States who have no family buffer through partner's earnings (see Tables 6.2 and 6.3). To explore this, I conduct separate analyses by household type in the following section.

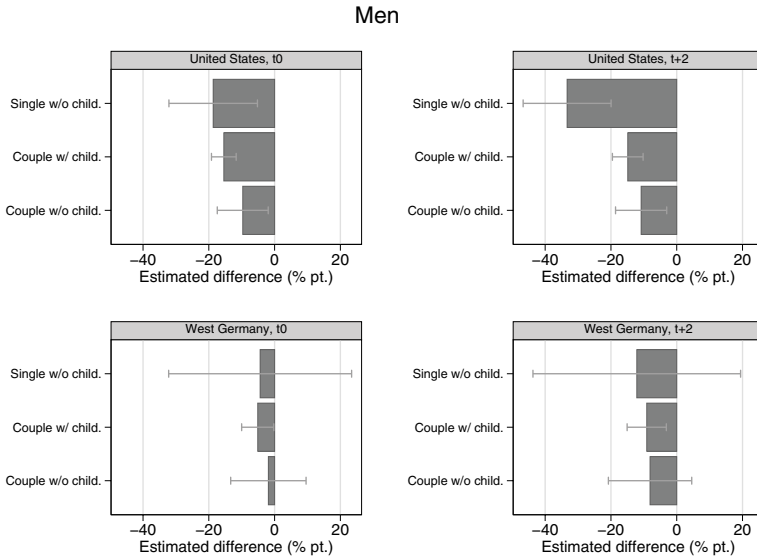
The downward trend observable among German women in Figure 6.4 stems from stagnating earnings and a reduction of the welfare state buffer. The welfare state buffer reduces because of limited benefit duration. The stagnating earnings, on the other hand, reflect the low incidence of re-employment among German women (see Chapter 5). A possible reason for this may be that some women take up the role of the homemaker after job loss. This "exit strategy" following a perceived failure on the labor market seems to be especially prevalent among low-educated women in Germany (Kreyenfeld 2010).

This first impression of income trajectories after job loss clearly shows that job loss leaves scars both in earnings as well as in post-government household incomes. Four years after job loss, the affected group is still below the incomes of comparable individuals on average. In Germany, the welfare state counteracts this trend more than in the United States. However, the roots of the scars in income trajectories are quite different: In the United States, income scars derive mainly from foregone earnings that would have been realized if the affected individuals had remained employed. In Germany, on the other hand, low rates of re-employment and a strong welfare state are the most important factors influencing trajectories after job loss.

## 6.4 Differences between households

The family proved to be an important stabilizer for income trajectories after job loss, as the previous section showed. In this section, I take a closer look at different types of households to learn more about the family income buffer. I compare single and couple households to find out about the consequences of not having the family buffer. Also, I examine the role of children within households. The figures in this section display the estimates in a different fashion than in the previous section. Here, I only present changes in post-government household income to show how individuals in different household types fare after job loss and the family buffer, as

**Figure 6.5 Difference-in-Difference estimates of post-government household income after job loss among men in different household types in the United States and West Germany**



Error bars indicate the 95 per cent confidence interval.  
 Sources: GSOEP, PSID, and CNEF, author's calculations

introduced above. The columns in the figures show the estimates in year of job loss ( $t_0$ ) and two years after job loss ( $t+2$ ). In the rows, I grouped the panels by country. In addition to the previous analyses, I also show results for East Germany, because I want to gauge the impact of the differences in female labor force participation in the two parts of Germany. Generally, East Germany has higher female labor force participation, a higher prevalence of childcare facilities, and greater normative acceptance of working mothers than West Germany (see Chapter 3 for details). In all of the analyses, I omit the estimates for single fathers because their number in my data set is very low.

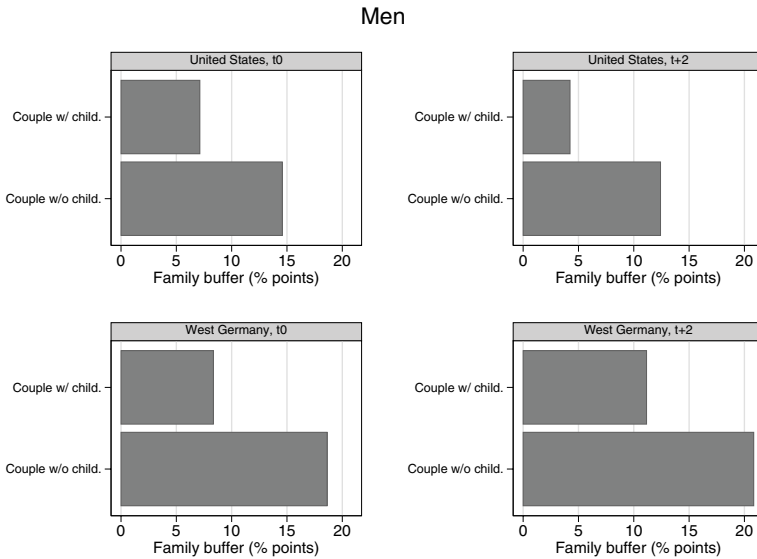
The estimates in Figure 6.5 show higher losses among male singles compared to men living in couple households in both countries. This is visible both in the year of job loss as well as two years later. This confirms Hypothesis T.4: The lack of family income support increases downward income mobility after job loss. Furthermore, as expected by Hypothesis T.4a, the disadvantages of single men are greater in the United States

because unemployment benefits are lower. This difference is especially apparent two years after job loss. Single men in the United States lose about 20 percentage points more than men in couples without small children on average. In Germany, this difference only amounts to about ten percentage points. The severe long-term losses for singles may additionally be explained by search theory (Mortensen and Pissarides 1999): Because single men are not supported by additional incomes in the household, they are under greater pressure to find a new job. Thus, the time they have to search for a new job decreases; consequently, the chances of obtaining job offers below their former wage level rise. This process may also be influenced by discrimination toward singles in hiring decisions (see Chapter 5).

Next, I consider men in couple households in Figure 6.5. In both countries, men in couple households with children aged 15 or younger have higher losses in post-government household income than men in couples without children. This supports Hypothesis T.5: Mothers in couples are less able to help their partners financially because they encounter difficulties on the labor market, such as the motherhood penalty in wages or institutions and gender norms that hamper reconciliation of employment and domestic work. However, the difference between the two types of couple households is small in West Germany. Thus, my expectation in Hypothesis T.5a, that the difference between households with and without children is larger in West Germany, is not supported by the data. Even though mothers are more likely to be employed in the United States than in West Germany, they are not able to support their partners as much as Germans. Still, this difference may be due to the larger impact of the welfare state in Germany. Therefore, I consider the income package after job loss more closely in the following by analyzing buffering effects again.

In Figure 6.6, I graphed the family buffer, as introduced above, for men in couple households with and without children. The family buffer measures how much of the relative loss in earnings is offset by other incomes within the household. Figure 6.6 reveals that even when only couple households are considered, the family buffer is larger in Germany. Thus, despite a more encompassing welfare state, German households also profit from larger family income support after job loss. Therefore, Hypothesis T.3, which states that family influence on men's household incomes after job loss is larger in the United States, has to be rejected. It may be that this is due to the measurement of family income support in this chapter. Income losses in the United States are strongly influenced by foregone earnings, as discussed

**Figure 6.6 Family buffers among men after job loss in different household types in the United States and West Germany**



Sources: GSOEP, PSID, and CNEF, author's calculations

above. Family income support, presumably, cannot make up for this and is consequently small compared to the losses. In the following chapter, I take a closer look at the mechanisms behind family income support to find out more about its occurrence and impact.

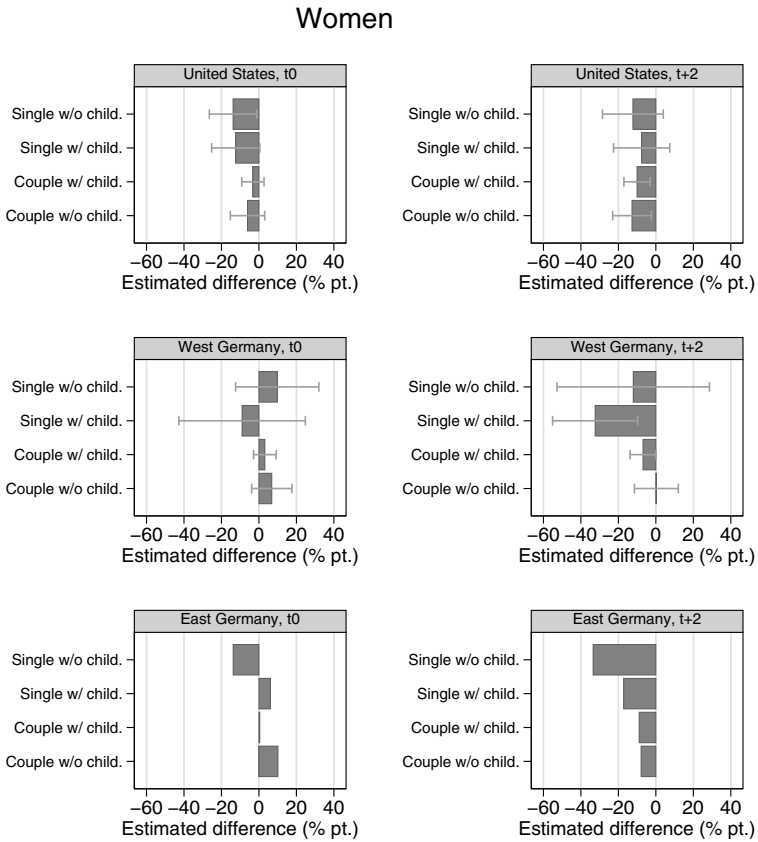
Figure 6.6 again confirms the expectation that family income support is lower in households with children. Compared to the results for post-government household income losses, the difference is now also clear in West Germany. Apparently, the German welfare state is able to compensate this difference and to produce equal outcomes in terms of post-government household income losses among couples with and without children. In comparison between the two countries, the gaps in the family buffer between couples with and without children are almost equal. Thus, the mechanisms that decrease income support by mothers formulated in Hypothesis T.5 seem to have a similar impact in both countries. Still, there is a slightly smaller gap in the family buffer between couples with and without children in the United States. Subtracting the two bars in each panel of Figure 6.6 yields about eight percentage points in the United States, compared to more than ten percentage points in West Germany.

This supports Hypothesis T.5a, which states that family income support for men in couple households with children should be closer to that of couple households without children than in West Germany. Yet, the difference is not large. Thus, the higher acceptance and occurrence of employment among mothers in the United States only alters the buffering effects to a small extent.

For women, Figure 6.7 reveals that singles and single mothers have country-specific income trajectories after job loss. Additionally, I now also show results for East Germany in order to gauge the influence of the institutional differences between the two parts of Germany. In the United States, singles and single mothers experience high losses, both initially and two years after job loss. However, the long-term losses are similar to the other household types. Thus, Hypothesis T.4, which states that singles fare worse after job loss than couples, only applies to the year of job loss among American women. This, however, is not because single women recover faster, but because the losses in the other groups increase. In West Germany, on the other hand, apparently the welfare state inhibits large losses among singles and single mothers in the year of job loss. Still, at least single mothers' losses are larger than couples' losses. Two years after job loss, losses increase in West Germany and even surpass those found in the United States. Thus, in West Germany, Hypothesis T.4 is supported, especially in the long run. In Chapter 5, I demonstrated that re-employment rates among women in single adult households two years after job loss do not differ compared to other household types. This suggests that they often take up low-paid jobs. This could be due to discrimination on the labor market toward single women. The comparison of single women and single mothers between the two countries does not confirm Hypothesis T.4a, which states that they should have larger losses in the United States. Instead, the results are quite similar, with the exception of single mothers in West Germany who fare much worse in the long run than American single mothers.

Taking a closer look at income changes among single mothers, I find considerable cross-national differences. In the United States, single women and single mothers face almost similar decreases in economic well-being after displacements. This contradicts Hypothesis T.6 in the United States, which states that single mothers should experience the highest household income losses after job loss because they have no income support through partners and are constrained in their job search by their children. Apparently, children do not have the expected impact in the United States. Single mothers seem to be able to maintain their incomes as well as singles

**Figure 6.7 Difference-in-Difference estimates of post-government household income after job loss among women in different household types in the United States, West Germany, and East Germany**



Error bars indicate the 95 per cent confidence interval. Confidence intervals omitted in East Germany because of low number of cases. No estimate in East Germany is significantly different from zero. Sources: GSOEP, PSID, and CNEF, author’s calculations

without children. In West Germany, on the other hand, single mothers fare much worse than any other household type. This supports Hypothesis T.6a, which states that the West German system of female employment and childcare should be worst for single mothers’ income trajectories after job loss. Looking at the results for East Germany, in the lowest panels in Figure 6.7, Hypothesis T.6a is also supported: single mothers fare better in East Germany than in the United States. The estimates for income changes



are positive, yet not significantly different from zero. The confidence intervals are larger than the scale of this panel. It has to be noted that the estimations in East Germany rely on a very small number of cases and have to be handled with care. That said, West Germany leaves single mothers with statistically significant post-government household income losses of more than 20 percentage points after job loss, whereas much smaller losses are found in East Germany. This suggests a positive impact of the availability of childcare on the incomes of single mothers who lose their jobs.

Turning to couple households again, the data in Figure 6.7 confirm the hypothesis that women's unemployment is more severe in American couple households. Since women contribute much more to total household income in the United States than in West Germany, their job losses are a much larger source of instability. In the long run, in particular, post-government household income scars after women's job losses in the United States are as large as men's in couple households. Thus, while working women in couple households stabilize household income after men's job losses, the downside is an increased vulnerability in the case of women's job losses. If rates of job loss are the same among men and women, the risk of a drop in household income is twice as high in couple households if both work full-time.

## 6.5 Differences between social strata

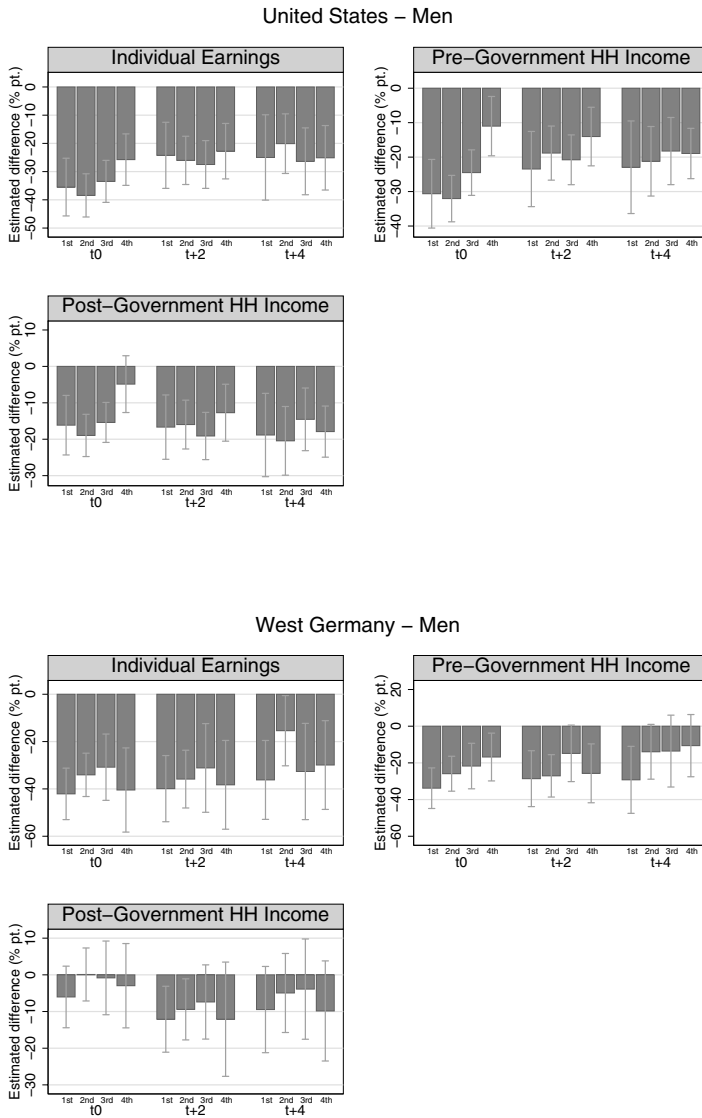
The analysis so far only considered changes in incomes within individual life courses. While this is an important perspective on changes in living situations over the life course, it disregards existing income inequality between individuals and households. The within perspective treats all individuals equally, regardless of where they originated in the social stratification. In this section, I broaden the analysis of income changes by analyzing income changes after job loss in different social strata. As mentioned above, I measure the strata using quartiles of post-government household income. In Chapter 2, I argued that there are good reasons to expect differing income trajectories after job loss depending on the previous position within the social stratification. This is because income buffers that offset income losses are not distributed equally within a society. In this chapter, I test Hypotheses T.7 to T.9a developed from this notion. The analysis provides new insights at the intersection of cross-sectional and

longitudinal inequality research, which has often been disregarded in previous research (see Whelan and Maître 2008; Vandecasteele 2011, 2015; Manzoni et al. 2014 for important exceptions).

Figure 6.8 presents DiD estimates of the effect of job loss on income by previous post-government household income quartiles. Again, I consider individual earnings, pre-government household income, and post-government household income to learn more about the sources of income buffering. Inside the panels, I group the estimates for each quartile by year relative to job loss. Since I use relative income losses, a ten percentage point loss for the upper quartiles is a higher amount of money than in the lower quartiles. I argue that the relative perspective comes closer to the reality of the affected households than the absolute perspective. A high-income household may lose more after job loss in absolute terms because it simply has more to lose. A relative perspective rather highlights where the household went relative to its initial position. In order to compare income buffers between quartiles however, this has to be kept in mind: In the upper quartiles a ten percentage point loss requires much more additional income to be offset than in the lower quartiles.

First, I take a look at the panels in Figure 6.8 containing the results for individual earnings among men. In the United States, the lowest and the highest stratum lose least in terms of earnings at to, the year of job loss. Four years after job loss, however, the third quartile loses most. This is some evidence in the direction of Hypothesis T.7, which states that the upper quartiles should lose most in the United States because of the prevalence of internal labor markets. In West Germany, on the other hand, the middle quartiles have the lowest losses in earnings after job loss. This contradicts the expectation formulated in Hypothesis T.7 that the occupationally segregated labor market in Germany produces similar losses in the strata. It could be, however, that the advantages due to occupational labor markets mainly affect the middle classes where many have occupational credentials obtained from the vocational training system. These credentials enable them to find a well-paid job after unemployment. In the lowest stratum, on the other hand, the persistent earnings losses may be caused by a high number of individuals without such credentials who face difficulties finding a new or a well-paid job. In the upper stratum, many hold higher education degrees. Such degrees are less connected to occupations and hence skills may be more firm specific. Therefore, in the highest stratum internal labor markets are more prevalent, which cause higher losses as individuals change their jobs.

**Figure 6.8** Difference-in-Difference estimates of income after job loss among men by previous post-government household income quartiles in the United States and West Germany



Error bars indicate the 95 per cent confidence interval.  
 Sources: GSOEP, PSID, and CNEF, author's calculations

How do these differences in earnings losses translate into losses in economic well-being of men affected by job loss? Figure 6.8 shows that American men's post-government household income losses in the quartiles resemble the pattern observed for earnings: the highest and the lowest strata lose least. However, in the first two years after job loss, the highest stratum has especially small losses. Thus, job loss initially causes the least instability among high-income households in the United States. In the long-run, however, all quartiles have similar losses relative to their previous incomes. Also in Germany, losses in earnings in the quartiles generally seem to govern losses in post-government household income. However, the variance in the losses between the quartiles is lower than observed for earnings. In the long-run, high-income men in Germany fare worst with respect to their previous incomes. Thus, in both countries there are quartile specific buffering mechanisms that change the extent of losses between earnings and post-government household income. Hence, as expected, the quartiles differ with regard to loss reduction through taxes and transfer as well as loss reduction through existing and additional private incomes in the household.

To explain the causes of differences in economic well-being after job loss between the strata, I graphed the quartile specific welfare state buffers and the family buffers for men in Figure 6.9. The data presented confirm Hypothesis T.8 about the distribution of the family buffer among the quartiles. In both countries, the family buffer is highest in the richest households, indicating that the upper quartiles are most secured through additional incomes in the household after job loss. This is most pronounced in the year of job loss indicating a high influence of existing additional earnings or immediate increases in partner's incomes in the upper quartiles. Thus, high-income men's losses in both countries are cushioned to a great extent, because their partners already earn much or are able to quickly increase their earnings. In the following chapter about household strategies, I provide more detail on the relative importance of these mechanisms. The differences in the family buffer between the quartiles level off in the years after job loss in the United States. In Germany, however, the highest quartile continues to have a huge family buffer. Thus, as expected, the family buffer mainly helps men in higher strata after job loss because assortative mating leads to couples where both have good labor market prospects.

The welfare state buffer among men is also distributed as expected in Hypothesis T.9. Lower quartiles profit most from the welfare state. That is to say, poorer men's income losses become cushioned most by the tax and transfer system. This is due to ceilings in unemployment benefits: they are only paid out up to a maximum even though the replacement rate would

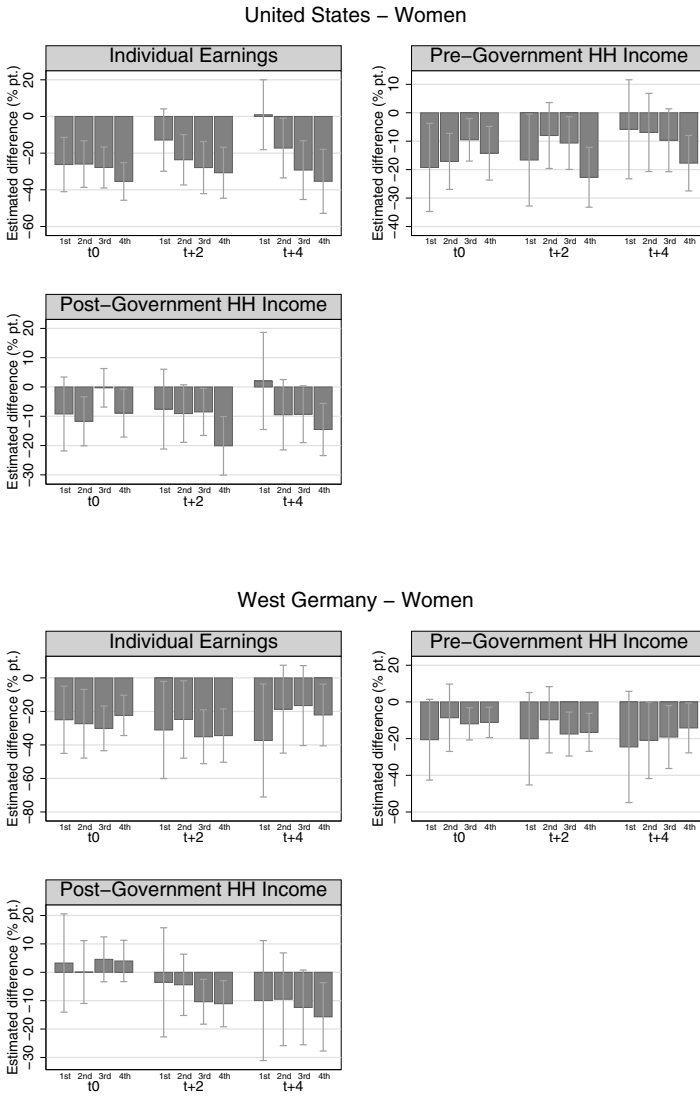
**Figure 6.9 Family and welfare state buffers after job loss among men by previous post-government household income quartiles in the United States and West Germany**



Sources: GSOEP, PSID, and CNEF, author's calculations

imply higher benefits for high-earning individuals. Comparing the two countries, I also find that the difference between the first and the fourth quartile is much larger in Germany than in the United States. This confirms my expectation expressed in Hypothesis T.9a. In the German welfare state, there is a minimum income that no one can fall below after job loss. If income previous to unemployment is close to this minimum income, almost all of the losses are replaced as individuals move into unemployment. This “floor effect” increases the welfare state buffer in the lowest quartile relative to the higher quartiles. In the United States, on the other hand, there is no universal minimum income and some states even have earnings requirements for UI benefits. Thus, some of the poorest receive no benefits after job loss, which draws the welfare state effect in this quartile downward. In sum, the German welfare state is much more successful at leveling the differences in income losses after job loss generated by the unequal distribution of the family buffer and re-employment outcomes.

**Figure 6.10** Difference-in-Difference estimates of income after job loss among women by previous post-government household income quartiles in the United States and West Germany



Error bars indicate the 95 per cent confidence interval.  
Sources: GSOEP, PSID, and CNEF, author's calculations

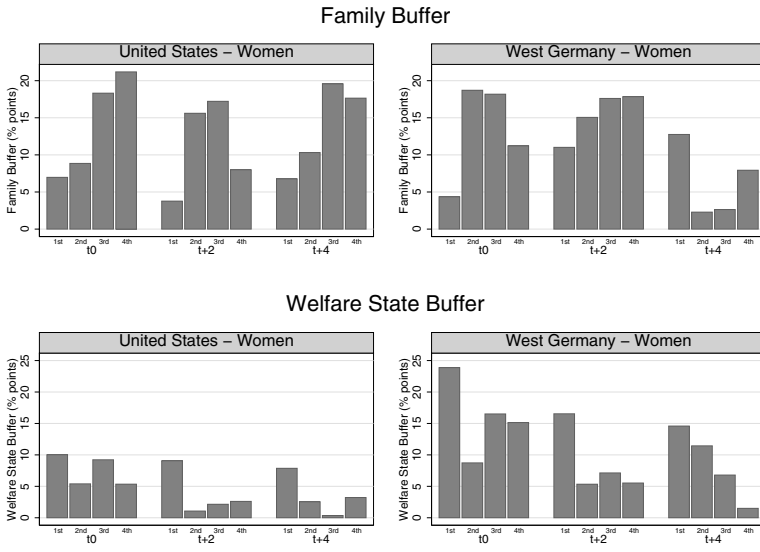
American women's earnings trajectories in Figure 6.10 more closely resemble the pattern expected in Hypothesis T.7: The upper income quartiles lose more than the lower quartiles. Women with low previous income have fewer problems offsetting their losses than women with high previous income, presumably because the ILMs on the American labor market mainly provide entry level positions for reentrants. In Germany, losses in earnings are initially similar for all women. In the long-run, however, the lowest quartile loses most earnings. As shown in Chapter 5 many German women in the lowest quartile leave the labor market after job loss. Therefore, high losses in the lowest quartile reflect the high number of women without earnings after displacements. The pattern four years after job loss resembles that of German men: Presumably, only the middle quartiles can profit from the OLMs whereas both extremes of income distribution have difficulties returning to their previous earnings.

Post-government income losses among women in Figure 6.10 show higher long-term losses in the upper quartiles in both countries. Thus, for women from the upper strata, job loss often implies a much greater reduction in economic well-being than in the lower strata. One reason for this may be that women contribute more to total household income in high-income households than in low-income households. Therefore, their earnings losses influence household income losses much more. The losses in pre-government household income in the United States support this interpretation because they are larger in the upper quartiles. In Germany, on the other hand, pre-government household income losses are more similar among the quartiles. Thus, the difference is due to the welfare state. I illustrate this by showing the family buffer and the welfare state buffer in the following.

Figure 6.11 shows income buffers for women in different strata to explain how earnings losses translated into post-government losses. The two patterns observed for men appear again, albeit less clearly. In the year of job loss, the family buffer is lowest in the first quartile in both countries. Yet, four years afterward, German women in the lowest quartile benefit from the largest family buffer. This contradicts Hypothesis T.8, which states that the upper strata have a higher family buffer. The reason for this is unclear. Maybe this is due to single women moving in with someone after job loss.<sup>36</sup> In the United States, on the other hand, Hypothesis T.8 is supported. The

36 As described in Chapter 4, I only fixed partnership status between  $t-2$  and  $t+2$ . Therefore, there could be a new partner at  $t+4$ . The analysis in Chapter 5 reveals that this occurs quite often: about 30 per cent of German single women move in with someone after displacements.

**Figure 6.11 Family and welfare state buffers after job loss among women by previous post-government household income quartiles in the United States and West Germany**



Sources: GSOEP, PSID, and CNEF, author's calculations

welfare state buffer is even less stratified among women in the United States than among men. In Germany, on the other hand, the differences between the quartiles are even larger. Thus, Hypotheses T.9 and T.9a are also supported among women.

Regarding the question whether the tax or the transfer system is more decisive in shaping differences between the quartiles, the data clearly show the superior importance of the transfer system. The calculated welfare state buffering effects that include both the tax and the transfer system support the expectations that have been made based on functioning of the transfer system. The universal minimum income in Germany and the resulting high buffering in the lowest quartile seem to be more important than the comparatively high buffering of losses in the upper quartiles through the tax system. Also in the United States, the EITC could not offset the low buffering capacity of the UI system among low-income households.

Summing up, I find that the household generates inequalities in income losses after job loss. High-income households are much more able



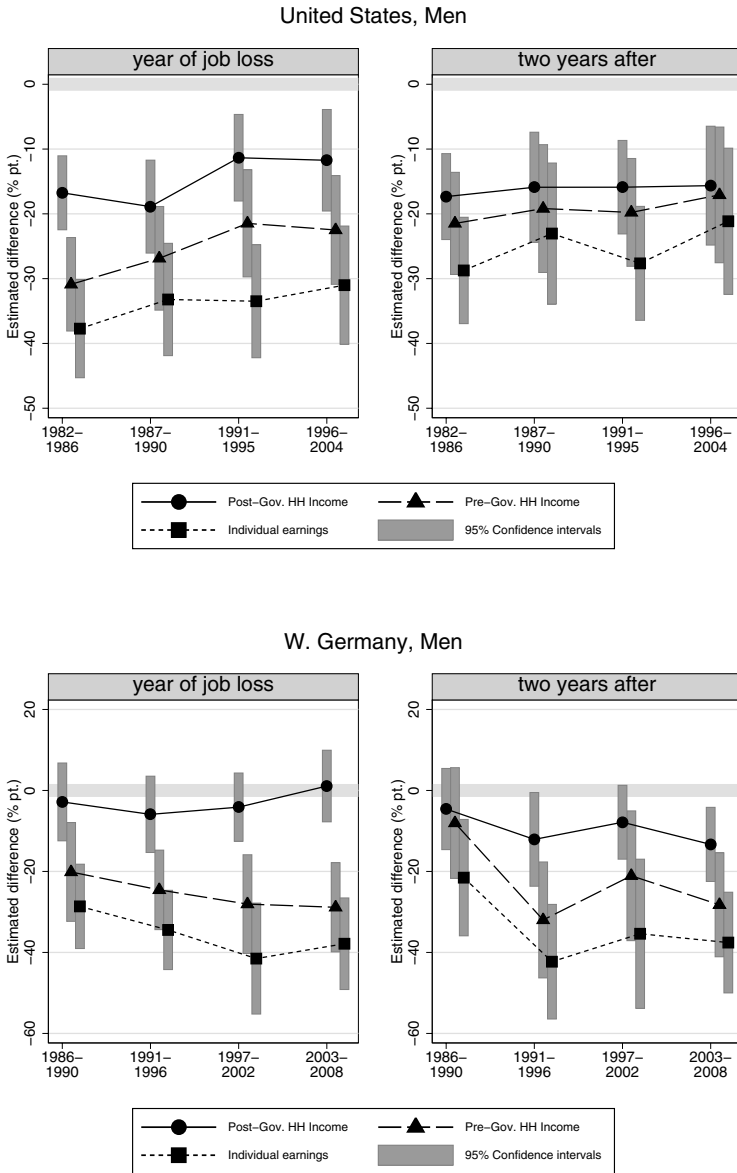
to maintain their pre-government household incomes after job loss than low-income households. In Germany, the welfare state counteracts this by providing benefits especially to low-income households. In the United States, on the other hand, the lack of such a system leads to higher losses in post-government household income among the lower quartiles compared to the highest quartile.

## 6.6 Trends over time

The review of institutional changes in Chapter 3 suggested that income losses after job loss also vary over historical time in the two countries. To test this, I compare four periods between the 1980s and the 2000s. In Germany, I chose 1986 to 1990, 1991 to 1996, 1997 to 2002, and 2003 to 2008. The first period covers the time before unification, followed by two post-unification periods and finally the period after the Hartz Reforms, which cut benefits for the long-term unemployed. In the United States, I compare the periods 1982 to 1986, 1987 to 1990, 1991 to 1995, and 1996 to 2004. Between the first and the second periods in the United States, UI benefits became lower and more restrictive. Between the third and the fourth periods, the government enacted the so-called Welfare Reform, which cut benefits for long-term unemployed families. The latest period is longer than the earlier ones because the PSID reduced its sample size in 1997 and I had to expand the period to obtain a sufficient number of cases. The figures in this section show changes in percent of the previous income in the year of job loss and two years thereafter for different incomes in different years.

The estimates in Figure 6.12 reflect the trends on the labor market depicted in Chapters 3 and 5. The economic circumstances generally improved in the United States between 1980 and 2007 with decreasing incidence of unemployment and persistently high re-employment rates. For men in the year of job loss in the United States, this led to a decrease in post-government household income losses from around 20 percentage points to ten percentage points. The trends in changes in pre-government household income and earnings after job loss confirm that this improvement originates from smaller income losses before taxes and transfers. Earnings losses in the year of job loss decreased by about eight percentage points, losses in pre-government household income by about ten percentage points between the 1980s and the 2000s. Thus, men in the United States have increasingly been able to offset losses due to job loss by finding new, well-paid jobs and through having a working partner. Interestingly, despite the upward

**Figure 6.12** Income losses after job loss at different points in historical time in the United States and West Germany. Men



Sources: GSOEP, PSID, and CNEF, author's calculations

trend before taxes and transfers, post-government household income losses increase between the first two periods. This confirms the expectation in Hypothesis T.10 that cutbacks in UI had an impact on life conditions of American men during the 1980s. Also, Hypothesis T.11 receives support: The growth in female labor force participation leads to a decrease in men's losses after job loss because more men have partners who contribute to household income.

Two years after job loss in the United States, post-government household income losses in Figure 6.12 show no trend while losses in pre-government household income and earnings decrease. In the last period, there is almost no difference between the estimates for pre- and post-government household income. Thus, there is almost no income support through the welfare state in the latest period for men two years after job loss. This is in line with my expectations in Hypothesis T.10: The already low welfare state impact on incomes after job loss decreased even further because of cutbacks in social policy. Apparently, the extension of the EITC did not counteract this trend. Yet, economic well-being of men affected by job loss did not deteriorate on average because of the positive trend on the labor market and increased support by their partners.

For men in West Germany, Figure 6.12 demonstrates that there are little post-government household income losses in all of the periods directly after displacement. Yet, for pre-government household income and earnings, I find a clear downward trend: losses in private incomes before taxes and transfers increased over time. Until the beginning of the 2000s, this mirrors the growth in long-term unemployment: a decreasing number of the unemployed find rapid re-employment. After 2003, however, when re-employment rates began to increase again as depicted in Chapter 5, losses in earnings remain high. This may be caused by an increase in "wage scarring" over time: More unemployed return to jobs that pay below their previous wages. Nevertheless, the downward trend in incomes before taxes and transfers did not affect post-government household income. Apparently, the welfare state is still able to buffer losses in the year of job loss. The slight upward trend between the last two periods may be caused by the increasing concentration of job losses in the lower quartiles as depicted in Chapter 5. As shown above, the lower quartile has a higher welfare state buffer because of the above mentioned "floor effect" in the German welfare state.

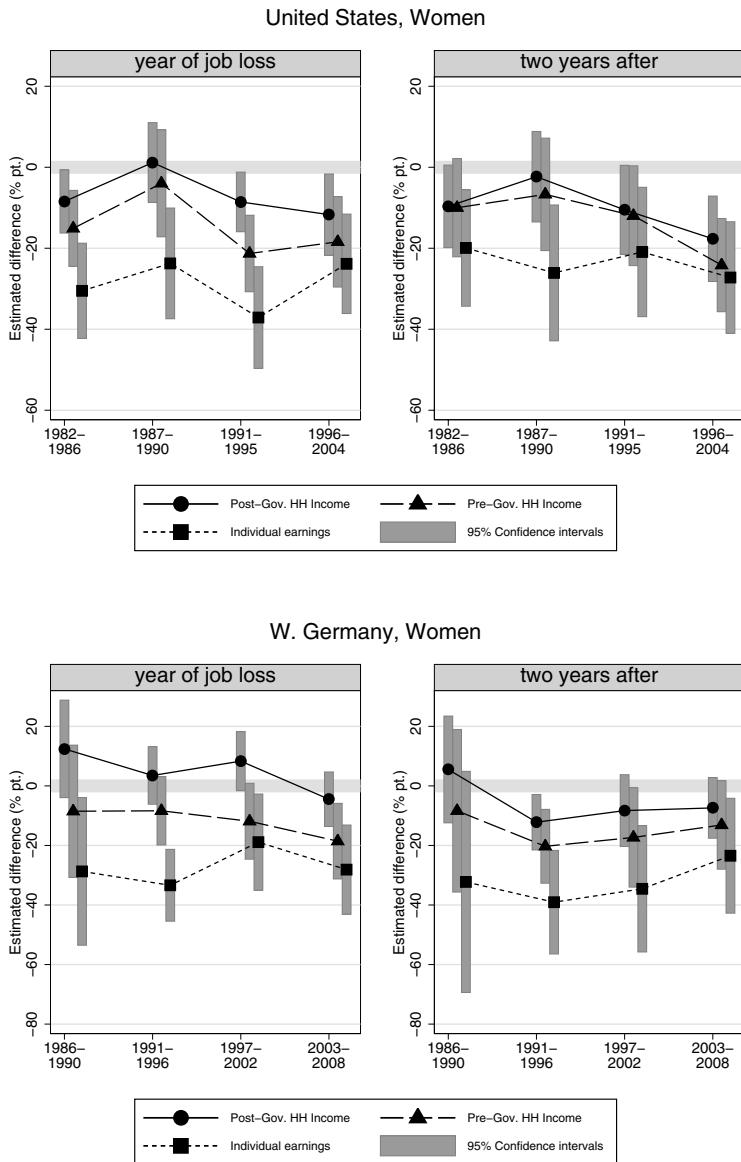
Two years after job loss, men's post-government household income changes in Germany first remain stable and then show a downward trend between the last two periods. This supports the expectation in Hypothesis T.10 that the Hartz Reforms increased income losses in the long run after

job loss because of the cut-backs in benefits for the long-term unemployed. However, a closer look at the lower right panel in Figure 6.12 reveals that changes in pre-government household income and individual earnings two years after job loss also trend downward in the last period. The difference between pre- and post-government household income – the welfare state buffer – however, remains unchanged. Thus, lower post-government household incomes derive from lower market incomes in the period after 2003. Since re-employment rates increased in this period, as mentioned above, this is also a sign of increased “wage scarring”. Apparently, the Hartz Reforms had indirect effects on post-government household income: Activation measures and low benefits pushed the unemployed back to the labor market where they took up low-paid jobs. In line with this, Gießelmann (2009) found that the risk of in-work poverty increased among re-entrants to the labor market between the 1990s and the mid-2000s. The activating measures in connection with the lack of suitable jobs thus led to a deterioration of men’s life situations after job loss in Germany. Yet, the increase of scars in earnings after job loss has been observable since the 1970s (Protsch 2008). Thus, beyond the effects of the Hartz Reforms, there is a secular trend on the German labor market that is, presumably, due to structural changes.

A closer look at Figure 6.12 reveals that the family buffer increased slightly over time for West German men. This is visible both in the year of job loss and two years later. Changes in pre-government household income are not as large as for earnings. This supports Hypothesis T.11, which states that growing female labor force participation increased the family buffer among men.

As depicted in the previous analyses, women’s income trajectories after job loss are more complex than men’s; hence, the analysis at different points in time in Figure 6.13 shows fewer clear trends. In the United States, I find that the losses in post-government household income first decrease and then increase again, both in the year of job loss and two years later. Contradicting Hypothesis T.10 for women in the United States, the impact of the welfare state does not change. Both in the year of job loss and two years after, the difference between losses in pre- and post-government household income follows no clear pattern. This calls into question the findings for men that the American welfare state reduced its capacity to buffer losses over the years. One reason for this finding may be that the significance of women’s job losses for household incomes differs much between household types, as depicted above. Therefore, the welfare state effect cannot be clearly identified. Unfortunately, the number of cases does not allow for a further breakdown of the trends.

**Figure 6.13** Income losses after job loss at different points in historical time in the United States and West Germany. Women



Sources: GSOEP, PSID, and CNEF, author's calculations

My second hypothesis over time concerned women's roles in households. Based on the growth in female labor force participation, I expected in Hypothesis T.11 that women's job losses should have an increasing impact on total household income over the years. For American women, evidence in favor of this hypothesis in Figure 6.13 is scarce. Only two years after job loss do I find a small increase in household income losses between the first and the last period. Among West German women, I observe the expected increase in household income losses after displacements in Figure 6.13. Apparently, women's job losses become more important because they more often contribute significantly to household incomes. This is also illustrated by the shrinking gap between losses in earnings and losses in pre-government household income: women's losses in earnings increasingly influence total household income. Two years after job loss, however, there is a slight upward trend after the initial drop after 1990. Yet, the reason for this seems to be lower losses in earnings in the years following 1996. Interestingly, unlike for men in West Germany, the growing re-employment rates also decreased losses in earnings and, consequently, in household income. Apparently, women have been more likely than men to find well-paid jobs compared to their former wages. For them, the Hartz Reforms did not have the same impact on "wage scarring" as for men. Furthermore, I also could not find other effects of cut-backs in the welfare state. For women, the welfare state is as effective in cushioning losses as during the 1980s.

## 6.7 Summary: The impact of job loss embedded in the life course

The analyses in this chapter demonstrate the importance of considering the different levels and life domains in which the life course proceeds as well as its self-referentiality in order to understand economic well-being after job loss. While previous studies often only covered welfare state and labor market influences, I additionally depict how the linkage of life courses within couples influences outcomes. I also show that the life course prior to job loss influences outcomes by differentiating between household composition and social strata. The findings underscore the importance of interactions between the market, the family, and the welfare state. Also, gender plays an important role for economic well-being after job loss because of the gender specific employment patterns in households. While most men work full-time, regardless of their household composition, hours in paid

work differ greatly among women. This leads to gender-specific income trajectories after job loss. In the following, I summarize the main results of this chapter and discuss them in the light of my theoretical framework. Table 6.4 summarizes the hypotheses and corresponding results from this chapter.

In cross-national comparison, I find that job loss among men in the United States has a much more negative influence on economic well-being than in Germany. In both countries, post-government household income remains lower than among similar individuals who did not experience the event until four years after job loss. However, these scars in household incomes through displacement are larger on average in the United States. One of the reasons behind this difference is the larger growth in income among the otherwise equal group without job loss in the United States. Thus, in the United States a large part of the impact of displacements is that the affected individuals could not participate in income growth and have less income compared to similar individuals without job loss. In Germany, on the other hand, such foregone earnings play a lesser role and most of the losses are because individuals are below their previous income levels.

Taking a closer look at men's income trajectories reveals that there are further important factors that lead to the observed differences between the two countries. In Germany, overall income buffering is much larger than in the United States: a much smaller portion of the losses in earnings after displacements are visible in post-government household income. Together, the tax and transfer system and family income support in Germany cushion more of the losses in earnings than in the United States. This is partly because income buffers usually do not affect foregone earnings. Beyond this, higher unemployment benefits in Germany clearly have an influence. Interestingly, the impact of family income support in Germany among men is larger than expected. Still, the relative importance of the family buffer in total buffering is higher in the United States.

Exploring the role of the family for men's household income after job loss further, I found that family income support is lower if there are children in the household. Apparently, children often lead to a persistent gender-specific division of paid and domestic work that continues to exist even after men lose their jobs. Thus, the existing boundaries between the sphere of work and the sphere of family in which the life courses proceed are stable, even as the circumstances change in the household. This also points to the self-referential nature of life courses. I explore this issue further when I analyze the employment behavior of women after men's job losses more

**Table 6.4 Summary of hypotheses and results about income trajectories after job loss**

	<b>Hypothesis</b>	<b>Result</b>
T.1	The welfare state buffer is larger in Germany than in the United States	Confirmed
T.2	Women have a larger family buffer than men	Confirmed
T.3	Women in the United States have higher household income losses after job loss than women in Germany	Not Confirmed
T.4	Singles' and single mothers' household income losses after job loss are higher than those found among couples	Confirmed
T.4a	Single adult households have higher losses after job loss in the United States than in Germany	Confirmed for men, not confirmed for women
T.5	Household income losses among men in couple households are larger if they live with children	Confirmed
T.5a	American men's losses in households with and without children should be more similar to one another than in West Germany	Confirmed but evidence weak
T.6	Single mothers have the highest household income losses among all household configurations	Not confirmed in the US, confirmed in West Germany
T.6a	Single mothers in East Germany fare better after job loss than in West Germany, the United States are in between	Confirmed
T.7	In the United States, earnings losses are larger in the upper strata, in Germany, earnings losses are highest in the lower strata	Confirmed in the US (weak evidence), not confirmed in West Germany
T.8	The family buffer is higher among the upper strata in both countries	Confirmed in the US, confirmed in West Germany only for men
T.9	The welfare state buffer is lower among the upper strata in both countries	Confirmed
T.9a	The difference in welfare state buffers among the strata is larger in Germany	Confirmed
T.10	The welfare state buffer decreases in both countries over historical time. In Germany, this only affects the long-run consequences. In the United States, both the year of job loss and the long-term consequences are affected	Confirmed in the US, not confirmed in Germany
T.11	Household income losses decrease after men's job losses and increase after women's job losses over historical time	Confirmed for West Germany and for men in the US



closely in the following chapter. The comparison of single men and men in couple households further stressed the importance of the families. Single men are not only disadvantaged on the labor market, as Chapter 5 shows, but also suffer more from job loss because they lack family income support.

Separating income losses after job loss between social strata, I also find evidence of self-referentiality on different levels and in different spheres of the life course. On the level of the labor market, I found some evidence that men in the middle strata suffer the smallest earnings losses in Germany. This may be due to the portability of skills, which is especially pronounced in middle-class jobs. Thus, the middle strata lose less earnings on average because they find a comparable new job quickly. No such trend is visible in the United States. Regarding the spheres of work and family, men from the upper strata receive more family income support after job loss than the lower strata. The reason for this is presumably assortative mating. Their partners' life courses proceed in similar ways through education and the labor market, forming couples where both have similar earning potential and, often, similar incomes. Thus, before taxes and transfers, household income losses are highest among men from the lower strata. However, the welfare state offsets this to some degree, since public support in both countries is more geared toward the lower strata. Yet, the German welfare state is more successful at buffering low-income households' losses after job loss than its American counterpart. This is presumably due to the universal minimum income in Germany. The United States, on the other hand, lack such a system. In post-government household income, this leads to more similar outcomes among the strata in Germany compared to the United States.

The analysis at different points in historical time further revealed that the consequences of job loss did not remain the same among men between the 1980s and the mid-2000s. To carve out the drivers of these changes, the life course framework again proved well suited. In the United States, the synopsis of changes in the welfare state suggested a reduction of support for the unemployed. Yet, despite this, losses in post-government household income after job loss decreased. The reason for this proved to be lower losses in incomes before transfers and taxes. Apparently, improving labor market circumstances and increasing female labor force participation offset the reduction in welfare state benefits and even changed men's economic well-being after job loss for the better in the United States. On the other hand, this dependence on a well-functioning labor market makes American men increasingly vulnerable to recessions. Unfortunately, I do not have data that covers the great recession after 2008. Yet, the analysis suggests

that the American welfare state is less able to buffer the consequences of job loss when there is no rapid re-employment than during the beginning of the 1980s. That said, American men who lost their jobs during the recent recession do profit from increasing family income support. In 2011, the share of female breadwinner couples in which the women earns most rose to 24 per cent (Wang et al. 2013).

German men, on the other hand, faced deteriorating labor market conditions during the study period. However, the welfare state has been able to offset increased losses despite cut-backs. Nevertheless, I found an interesting interaction between changes in the welfare state and the labor market: After the Hartz Reforms in 2004, which, among other things, cut benefits for long-term unemployed, re-employment rates increased, but this did not lead to a decrease in losses before taxes and transfers. Apparently, the jobs that the unemployed take up after the Hartz Reforms are in the low pay sector and do not improve their life situation (Gießelmann 2009, 2014). Still, inclusion into the labor market fosters social integration and also improves overall life satisfaction, even among the working poor, as Alber and Heisig (2011) show. However, the authors also conclude that low job quality reduces this effect considerably so that the benefits of an activation policy such as the Hartz Reforms may be low.

Among women, household characteristics have a much more direct influence on outcomes after job loss than among men. The differences in labor force participation and in the share of income provided in a household lead to a great variation on outcomes after job loss. This variation ranges from female sole breadwinners in single mother households to marginally employed women in couple households. Among female sole breadwinners, almost all of the losses in earnings are losses in pre-government household income. Among marginally employed women in couple households, the significance of women's losses in earnings for household income are negligible. The earner configuration is directly connected to the division of paid and unpaid work in couples: two-earner couples usually share more of the housework than male breadwinner couples. Thus, the way in which couples organize the separation of the sphere of work and the sphere of family is also important should women lose their jobs. The connection is different compared to men's, because now it is not the buffer that changes with different household arrangements but the importance of women's earnings for household income. Analyses of average outcomes among women after job loss do not capture this complexity. That said, some patterns that I found for men could also be observed for women: The welfare state has a larger influence in Germany, especially in the lower strata. Also, family income

support is stronger in the upper strata. Over historical time, however, the results remain unclear. There are some indications that women's employment in couple households becomes more important and thus their job losses have a stronger influence on household income.

Comparing household types, I also found the highest losses among single women. Interestingly, only in West Germany did I find that single mothers are worse off than single women without children. To test the influence of public childcare on income losses after job loss, I additionally considered East Germany, where childcare is more prevalent. In accordance with my expectations, income losses due to job loss among single mothers are lower in East Germany. Clearly, the estimates are not very robust in East Germany because of the low number of cases. Still, I count this as evidence in favor of the importance of childcare for single mothers. After job loss, childcare attenuates the conflict of the sphere of work and the sphere of family in their life courses and enables them to find a new and well-paid job more rapidly.

This chapter showed that the family is an important factor for economic well-being after job loss in couple households. Other household members' incomes can significantly reduce economic insecurity caused by displacements. The analyses also demonstrated that income buffering through the family is not equally distributed: some profit more from it than others. In the following section, I take a closer look at the family buffer by considering its two components: existing additional incomes in the household and the increase of other household members' incomes (the added worker effect).

## 7 Household Strategies to Buffer Job Loss

In this chapter, I take a closer look at the family income buffer after men's job losses. As depicted in the previous chapter, household composition has an important impact on income security after job loss because economic risks are pooled inside the household. In other words, if one job is lost, there may still be others who provide income in the household. In this chapter, I focus on the family income buffer after men's job losses for two reasons: first, men's job losses are more severe for household incomes than women's because men are often the main earners, as depicted in the previous chapter. Second, the family income buffer after men's job losses is more complex in terms of the intra-family structure. While the family buffer after women's job losses mostly consists of their partners' existing full-time earnings, as mentioned before, the family buffer among men consists of two sources that I aim to disentangle in this chapter: first, the extent to which partners already provide income before job loss; and second, increases in partners' incomes triggered by displacements. The latter factor is known as the "added worker effect" (AWE) (Lundberg 1985). Thus, while women's job losses cement prevalent intra-household gender division into male main earners and female supplementary earners or housekeepers, men's job losses challenge this arrangement. The aim of this chapter is to show if and how family income buffering after men's job losses emerges given this tension.

In this chapter, I analyze existing earnings among women in couple households as well as incidences and the magnitude of the AWE in order to gauge the importance of these two buffering mechanisms relative to each other. The literature review in Chapter 1 showed that many studies have already explored the AWE. However, most researchers relied on economic theory of household behavior to explain the effect. In this chapter, I want to add to the literature by probing explanations for the added worker effect that derive from family and life course sociology, as proposed in my theoretical considerations in Chapter 2. In the following, I first formulate hypotheses that follow from my theoretical considerations. The hypotheses in this chapter begin with an "S", to signify that they pertain to strategies that households pursue to buffer income losses. Then, I test these hypotheses empirically.

My theoretical framework developed in Chapter 2 goes beyond the assumption of New Home Economics that the family is a decision-making

unit, and conceptualizes families as consisting of linked life courses (Moen 2003). Consequently, decisions about the allocation of work after one person loses a job are negotiated between family members. Following Rusconi and Solga (2008), I consider three levels that shape these decision-making processes: the individual level; the internal structure of the family; and the family as a unit. Therefore, I expect differences between individuals, differences between household types, and differences between countries with different institutions and normative expectations that affect people because they are in a family. Nevertheless, the framework acknowledges that economic reasoning also shapes decision-making processes inside families. I argue, however, that constraints on the three levels influence the outcomes. Thus, my framework is not an alternative to New Home Economics, but rather an extension that provides a more encompassing explanation of the added worker effect.

## 7.1 Hypotheses

The added worker effect may not only occur after partner's job loss. Job losses may also be anticipated and hence some women may increase their hours even before the event. Stephens (2002) found some evidence that this is the case in the United States. Consequently, in some couple households, women's work hours are part of a larger strategy of risk pooling. If they live with men who have risky careers, women may adapt by increasing their incomes (Hypothesis S.1). For example, a woman may observe that her partner's job is in a sector with high labor turnover. To safeguard family income, she then decides to work more. This could also be a mechanism through which linked life courses influence one another.

On the individual level, the most obvious constraint that should inhibit the occurrence of the added worker effect is the hours a person already works. Full-time workers have little leeway to increase their income. The only possibility would be a change of job, which is often not feasible. As mentioned above, this is one reason why I do not consider men's reactions to women's job losses. They mostly already work full-time.

Even if women work part-time, an increase in hours is often not possible because of "hours constraints" in the current job (Altonji and Paxson 1992; Reynolds and Aletraris 2010). That is to say, most jobs are tied to a certain number of work hours. The only way to increase hours is to change jobs. This may be easier in the United States than in Germany because job changes are more common on the American labor market. Thus, the incidence of the

added worker effect should be most likely among women who are not on the labor market (Hypothesis S.2). Among those who already work, it should occur more often in the United States than in Germany (Hypothesis S.2a).

In addition to labor force status prior to partner's job loss, education and previous career should play an important role. In both countries, high education should lead to high incidence of the AWE because the labor market usually offers more opportunities for highly educated women (Hypothesis S.3). Beyond this, the effects of education are presumably mediated by the educational system and the labor market structure, as argued in Chapter 2. The German labor market is generally organized around occupational labor markets (OLM) where educational credentials are important. On the American labor market, on the other hand, internal labor markets (ILM) dominate where educational credentials are of lesser importance. Therefore, education should play a bigger role for the occurrence of the AWE in Germany than in the United States: The educational gradient should be steeper in Germany (Hypothesis S.3a).

The difference between these two systems should be especially apparent in the case of women who are inactive on the labor market before their partners become unemployed. In both countries, a considerable share of women in couple households are inactive because they leave their jobs after childbirth. This is more prevalent in West Germany than in the United States. Among these women, skills may devalue because they remain unused. This happens because either skills become outdated or employers perceive them as outdated. Yet, this effect may be less strong in Germany where educational certificates preserve employability because OLMs are prevalent. Even after a spell of inactivity on the labor market, applicants can still prove that they acquired certain skills using these credentials. Thus, among inactive women in Germany, the occurrence of the added worker effect should be higher for those with at least a vocational training degree compared to less educated women (Hypothesis S.4). The American labor market, on the other hand, offers many entry level positions that require no credentials because of the ILMs. Consequently, the occurrence of the AWE among low-skilled women who are inactive on the labor market should not differ much from high-skilled inactive women (Hypothesis S.5).

Additionally, there is a clear gender segregation on the labor market that may hamper women's ability to increase their earnings after their partner's job losses (Reskin 1993). Typical "women's jobs" are often lower paid than "men's jobs". Also, there may be constraints in the flexibility or work hours. For example, Petrongolo (2004) shows that many women involuntarily work part-time in Europe. Also, fixed-term contracts are more common among

women than among men controlled for productivity. Thus, I expect that the income gain through the added worker effect is lower on average than men's losses due to job loss (Hypothesis S.6).

Between households, differences in gender specific roles inside the household should influence the occurrence and the magnitude of the added worker effect. Broadly, I distinguish two arrangements: traditional couples, where men work and women stay at home with children and modern couples where both are employed and there are children in the household. Thus, the group of modern couples also comprises 1.5-earners where women work part-time and men work full-time. I do not consider couples without children in the household in this comparison because their division of paid and unpaid work usually differs from couples with children (see operationalization below). I expect the added worker effect to be more likely in modern couples (Hypothesis S.7). There are two reasons for this: First, they are less affected by the norm that women are responsible for housework and consequently should not work. Second, they have experience in negotiating housework duties under the constraint that both are employed. However, modern couples are defined through female labor force participation and thus all modern couples should face the problem of hours constraints, as described above. The empirical analysis will show whether constraints on the labor market or within the family are more important if children are present in the household.

The effects of being in a family consist of normative expectations and institutional arrangements, which often also have their roots in norms. Generally, in West Germany, working mothers are not as normatively accepted as in the United States (Fortin 2005). However, over time, acceptance grew in West Germany, especially after reunification (Lee et al. 2007). Still, this should lead to a lower incidence of the added worker effect among West German women compared to American women if children are present in the household. On the side of institutions, the tax system and the welfare state should play a role, as previous research has indicated. Both countries have a joint taxation system that should lead to more traditional household arrangements. However, the American tax system counteracts disincentives for female employment (Johnson and Rohaly 2009). Hence, the American tax system supports the emergence of modern couples whereas the German tax system impedes this.

The welfare state also proved to be related to the added worker effect in previous research. High benefit levels lead to a smaller added worker effect, because family income support becomes less important to maintain a certain standard of living if the welfare state is generous. As depicted in



Chapter 3, unemployment benefits are generally lower in the United States than in Germany. Furthermore, in both countries, regular unemployment benefits are not means-tested, implying that no effects beyond the influence of the benefit level should exist. Yet, in Germany, those who have had low incomes before job loss may directly receive benefits for the long-term unemployed (“Arbeitslosengeld II”) if these are higher than the regular unemployment benefits, which are set at 60 per cent of former wages. Benefits for long-term unemployed are means tested, which should lead to a lower AWE among low-income households. Taken together, the institutional configurations suggest that the added worker effect should occur more often and with greater magnitude among women in the United States than in Germany (Hypothesis S.8). Within Germany, low-income households should have a lower AWE than high-income households (Hypothesis S.8a).

Another aspect of the welfare state that should play a role in shaping the AWE is the availability of childcare. If parents have the option to leave their children in childcare facilities during the day, their chances to organize the work family nexus increase. First, this benefits the formation of modern dual-earner couples. Second, this increases the flexibility of the couple regarding paid work. Both factors should lead to a higher incidence of the AWE if the partners do not already both work full-time. In chapter 3, I concluded that families in the United States more often have access to childcare than families in West Germany. However, in East Germany, the availability of childcare is even higher than in the United States. Also, the acceptance of working mothers is higher (Lee et al. 2007). Therefore, the AWE among couples with children should occur most often in East Germany and least often in West Germany (Hypothesis S.9). Clearly, both hypotheses S.8 and S.9, about cross-national differences, are not about specific institutions but, on the whole, nation-specific models of female employment. Unfortunately, with only three country cases, I cannot disentangle the effect of single institutions.

In addition to these hypotheses, I also want to explore the connection between the AWE and social inequality. In the previous chapter, I showed that family income support after job loss is higher among high-income households. I explained this finding with educational homogamy: women and men in couples usually have similar earning potential. In this chapter, I aim to further analyze the social gradient in the family income buffer among men by looking at their partner’s employment before and after job loss. The question is, whether the higher buffer in more affluent households originates from a higher AWE or from higher previous earnings among their partners.



The chapter is structured as follows: First, I describe some additional operationalizations that go beyond the description of the data sets in Chapter 4. Then, I report descriptive statistics and explore the question of whether people whose partners become unemployed have higher hours and earnings even before it occurs. Finally, I present estimates of the incidence and the magnitude of the added worker effect. The chapter concludes with a discussion of the results.

### Operationalization of the AWE

To test the occurrence and the magnitude of the added worker effect, I measure the effect of partner's job losses and unemployment on work hours and earnings. Partner's job losses are measured in the same way as individual job losses, described in Chapter 4. Furthermore, I restricted the age of both partners to 25 to 55 to focus on the prime working age population. Also, I excluded all women who are in education before their partners become unemployed so that their possible work hours are not restricted. Thus, women are at risk of the event *partner's unemployment* (PUE) if they are between 25 and 55, not in education, and are living with a working partner within the same age group.

To measure the added worker effect, I use changes in weekly work hours and individual earnings. The incidence of the added worker effect is defined as a two or more hour change in weekly work hours.<sup>37</sup> I consider the incidence of the AWE regardless of its timing: If an increase of two hours or more occurs in the year of partner's job loss or two years afterward I record its incidence. The magnitude of the added worker effect is then defined as relative changes in individual labor earnings. To obtain estimates that are comparable to the results in the previous chapter, I calculate women's changes in earnings relative to their partners' prior labor earnings. Thus, I can find out how much of the relative loss in earnings depicted in the previous chapter is offset by increases in women's earnings and also compare the results to the magnitude of the family income buffer. I jointly compare average changes in earnings with those before the event in both years after

37 Weekly work hours are calculated using annual work hours divided by 52. Annual work hours are provided in the CNEF (see Chapter 4 for details). Unfortunately, the GSOEP, from which the German data in the CNEF is taken, does not measure annual working hours. In the CNEF, they are therefore imputed using available information on hours at the time of the interview and work spells in the previous year. There are some problems with the variable, as the level of hours in Germany seems to be too high compared to other data sources. However, because I mainly analyze changes, this should not pose a problem.

a partner's unemployment (PUE). In my hypotheses, I formulated expectations about modern couples. I operationalize these as two employed adults living together with one or more children under the age of 16. I distinguish between full- and part-time employment to show the difference between modern and so called partly-modernized couples.

## 7.2 Partner's labor force participation before job loss

Before I turn to the estimation of the added worker effect, I report descriptive statistics for the data set used in this chapter. Also, I analyze whether women anticipate their partners' job losses and increase their incomes even before the event. Compared to the other analyses in this study, I use a different data set in this chapter. It consists of a sub-sample of the main data set that only contains women and men in couple households. Beyond the already established constraint that individuals need to have the same partnership status throughout the episode, I further restrict the sample to those who live together with the same person for five years around job loss – two years before and two years after. Therefore, I remove all persons who experienced some form of partnership break-up or who changed their partners within this period.

However, the restriction to stable couples may render the sample selective and thus may bias results (Nilsson 2008). Previous research found that job loss increases the probability of divorce, especially for those with short partnership durations and those whose partners have been laid off instead of fired due to plant closings (Charles and Stephens 2004).<sup>38</sup> However, it is unclear whether this selectivity is related to the occurrence and magnitude of the added worker effect. It may be that those who would have increased their hours leave because they are generally more active in life and do not want to carry the burden of an unemployed partner. On the other hand, it may also be that those who would not ameliorate the situation leave, because they do not want to work more to maintain their standard of living. Additional analyses, not presented here, depict that women who leave a couple after men's job losses are slightly more likely to be full-time employed, better educated, and contribute relatively more to household income than those who stay. Thus, men lose partners who could have buffered more of

38 My analyses in Chapter 5 support this finding: Men in couples who experience job loss are more likely to experience a break-up (see Table 5.3 and Table 5.4). Note that I did not control for the selectivity of job loss in the analyses.

their losses through existing incomes. Still, only about three per cent of the couples experience a break-up after men's job losses.

Given the aim of my study and the small number of break-ups, it is questionable whether a correction for selection is desirable. Since I want to explain differences in incomes after job loss, I am more interested in an added worker effect that actually occurs and not in one that could have occurred. Thus, my endeavor is of a descriptive nature. If a woman leaves after her partner's job loss, there is no additional income and thus this person's income is not buffered through the family.

Table 7.1 presents descriptive statistics for women whose partners experience unemployment (PUE in the table and in the following text) and women whose partners remain employed. The results repeat the finding presented in Chapter 5 that unemployment is concentrated among already disadvantaged households. For example, household income is lower in the group with PUE on average two years before PUE. The data also reveal a difference in educational attainment that resembles the previous findings on education and the incidence of unemployment on the individual level: Women whose partners become unemployed are also less educated than those whose partners stay employed. This is caused by educational assortative mating (Blossfeld 2009).

Taking a closer look at work hours prior to PUE in Table 7.1 shows that the initial situation of women is very diverse, as expected. There are substantial shares of non-employed, part-time employed, and full-time employed in both countries. However, Table 7.1 also depicts the aforementioned higher female labor force participation in the United States: Almost half of the women in couple households are full-time employed whereas in West Germany only about a quarter works full-time. On average, women contribute 25 per cent and 20 per cent of household income in the United States and West Germany, respectively. Overall, this confirms that men are often the main income provider in both countries. As expected, the male-breadwinner model is more prevalent in West Germany than in the United States.

Comparing work hours between the two groups in Table 7.1 yields some evidence that West German women anticipate their partner's unemployment while American women do not. In West Germany, the share of full-time employed women is higher in the group with PUE. Yet, the share of non-employed women is also slightly higher. In the United States, on the other hand, women whose partners become unemployed are more likely to be non-employed and less likely to work full-time. This would suggest no anticipation of partner's unemployment. However, the groups with and without PUE differ on characteristics that may also influence employment and earnings. Thus, to test Hypothesis S.1, I have to control for these factors.

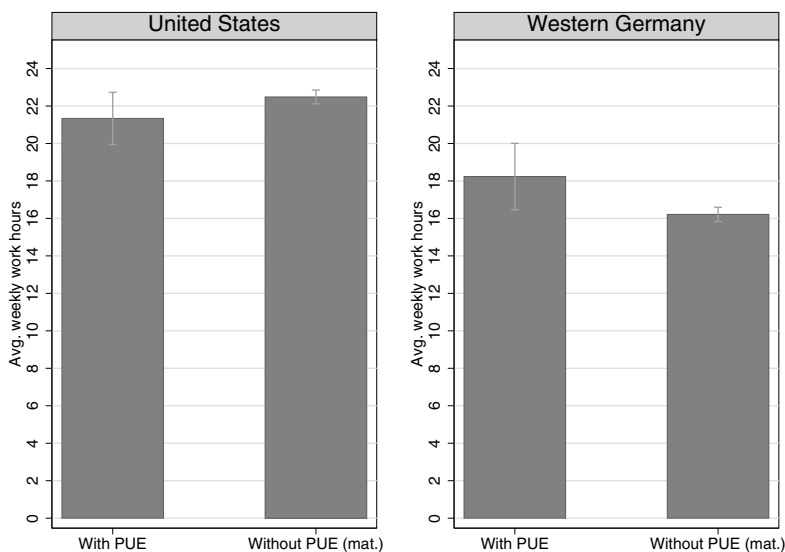
**Table 7.1 Individual characteristics of women with and without partner's job loss and subsequent unemployment (PUE) in the United States and West Germany**

	United States	
	With PUE	Without PUE
<i>Employment</i>		
Not employed (%)	24.6	19.4
Part-time: ≤ 30h/wk. (%)	32.4	32.6
Full-time: > 30h/wk. (%)	43	48
Avg. HH income share (%)	24.6	25.1
<i>Children</i>		
w/ children <16 in HH (%)	75.4	70
w/ children <5 in HH (%)	37.3	32.8
<i>Education</i>		
Less than High School (%)	12.5	8.1
High School (%)	49	39.5
Greater than High School (%)	38.4	52.4
<i>Sociodemographics</i>		
Avg. Age	37.4	38.5
Black (%)	8.5	8.3
HH Income (2007 \$)	27559	33274
N Episodes	588	23457
	West Germany	
	With PUE	Without PUE
<i>Employment</i>		
Not employed (%)	35.8	34.9
Part-time: ≤ 30h/wk. (%)	36.2	38.4
Full-time: > 30h/wk. (%)	28	26.8
Avg. HH income share (%)	20.2	19
<i>Children</i>		
w/ children <16 in HH (%)	65.1	62.5
w/ children <5 in HH (%)	24.1	24.6
<i>Education</i>		
Without Voc. Training (%)	43.1	23.6
Voc. Training (%)	48.5	60
Higher Education (%)	8.5	16.4
<i>Sociodemographics</i>		
Avg. Age	39.3	39.6
Migrant (%)	33.7	17.8
HH Income (2007 €)	17359	21127
N Episodes	363	24202

Two years before PUE

Sources: GSOEP, PSID, and CNEF, author's calculations

**Figure 7.1 Work hours among women before partner's job loss and in matched control group in the United States and Germany**

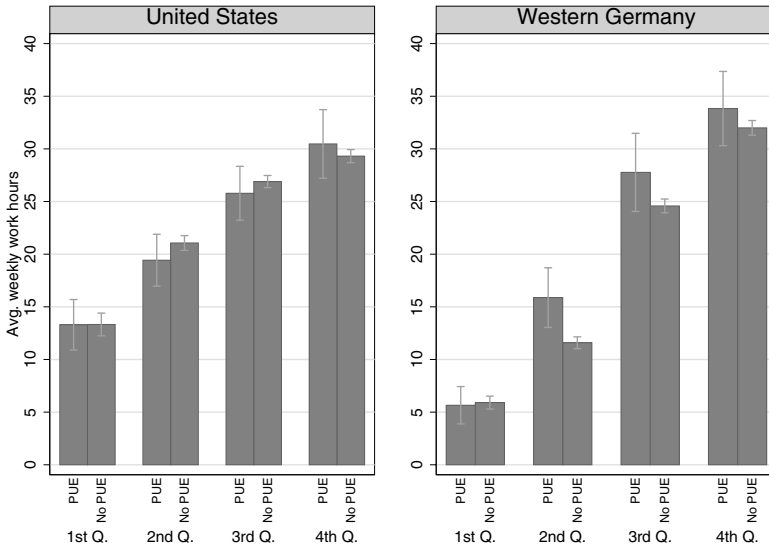


Error bars denote the 95 per cent confidence interval.  
Sources: GSOEP, PSID, and CNEF, author's calculations

Figure 7.1 shows women's average work hours two years before PUE for the group with PUE and a matched control group without PUE. As in other parts of this study, I used Coarsened Exact Matching (CEM) to find a control group that is equal on a set of relevant variables (see Chapter 4 for details).<sup>39</sup> The results in Figure 7.1 show that West German women whose partners will become unemployed contribute more than a comparable control group whose partners do not become unemployed two years later. However, the difference does not reach common levels of statistical significance. In the United States, even after matching, the share of household income women without PUE provide is larger. According to this, German women whose partners hold unstable jobs react to this by increasing their work hours

39 For this analysis I used: education; partner's education; partner's tenure; age; partner's age; presence of children under 16 and 5; work experience; race/migration background; partner's work hours; and post-government household income. Differences between the results for the group with PUE between Table 7.1 and 7.2 result from discarded cases because there is no match in the control group.

**Figure 7.2 Work hours among women before partner’s job loss and in matched control group by quartiles of post-government household income in the United States and Germany**



Error bars denote the 95 per cent confidence interval.  
Sources: GSOEP, PSID, and CNEF, author’s calculations

whereas American women do not. Thus, there is some weak support for Hypothesis S.1, which states that women anticipate their partners’ displacements in West Germany. In the United States, on the other hand, Hypothesis S.1 is not supported. A tentative explanation for this cross-national difference is that the German labor market is much more segregated into stable and unstable positions. For example, public servants have a much lower probability of job loss than people not working in the public sector. In the United States, on the other hand, almost all jobs are unstable to a certain extent, because there is little employment protection. Therefore, it is easier for German women to tell if their partner holds a risky job.

In Figure 7.2, I further disaggregated the analysis of women’s work hours prior to partner’s unemployment by quartiles of post-government household income. The results show that women’s labor force participation differs markedly between the quartiles in both countries: In high-income households, women work much more hours than in low-income households. This is not surprising given that most working age men work full-time and

thus total household income partly depends on the work hours of the second earner. The driving force behind this seems to be educational assortative mating, which leads to couples where both have high earning potential. Hence, Figure 7.2 shows one reason why the family buffering effect is larger among high-income households, as depicted in Chapter 6.

Furthermore, Figure 7.2 shows that anticipation of partner's unemployment is more likely among high-income households in both countries. In the United States, this applies only to the fourth quartile and the difference between the two groups is not large. In Germany, on the other hand, I find higher work hours among those whose partners become unemployed in all quartiles except for the first. Apparently, men in the first quintile in Germany who become unemployed face a double disadvantage in terms of family income support: they are often the sole income providers and their partners work little, regardless of job security. Hence, the poorest households in Germany are least prepared for job loss in terms of private strategies to buffer the loss.

### 7.3 Incidence of the AWE

As introduced in Chapter 4, I use Difference-in-Difference (DiD) models with a matched control group to estimate the occurrence and magnitude of the AWE. As shown above, treatment and control group differ on variables that may influence the AWE. Therefore, I apply Coarsened Exact Matching (CEM) to increase the comparability of those with and without partner's job losses in my DiD models (Iacus et al. 2012). Table 7.2 lists the used variables and respective coarsenings. These variables are also used in the analyses to differentiate the added worker effect.

Table 7.3 shows the matched treatment and control groups as well as the group with PUE that could not be matched in the two countries. The presented statistics for the matched groups are weighted in the same way as in the upcoming analyses. Therefore, the percentages in the categories that have also been used for matching are similar in the matched samples. The continuous variables, on the other hand, differ slightly, because I matched on the above mentioned coarsenings. Overall, the coarsenings produced reasonable balance on these variables. Furthermore, matching on working in the industrial sector also balanced service and public sector employment. Even average yearly labor income, on which I did not match, is quite similar in the two matched groups.

**Table 7.2 Coarsenings of variables used for CEM analyzing the occurrence and magnitude of the AWE**

<b>Variable</b>	<b>Coarsening</b>
<b>Individual characteristics</b>	
Age	25-40 vs. 41-55
Education	US: Less than High School, High School, Greater than High School Ger.: School without voc. training, Vocational training, Higher education
Minority	US: Black, non-black Ger.: Migration background, no migration background
Prev. weekly work hours	0, <30, >30
Work experience	<50% of time since left school, >50%
Income share in HH	<40%, >40%
Sector	Industrial sector and other
<b>Partner's characteristics</b>	
Partner's age	25-40, 41-55
Partner's education	US: <High School, High School, College Ger.: School w/o voc. training, voc. training, tertiary education
Partner's tenure in prev. job	Below and above 5 years
Year of partner's job loss	US: 1982-1990, 1991-2006 Ger.: 1986-1996, 1997-2008
<b>Household characteristics</b>	
Children under 16 in HH	yes, no
Children under 5 in HH	yes, no
Post-gov. household income	Above and below median

Table 7.3 also depicts the number of episodes with PUE that could not be matched to the control group because there was no similar case. This applies to about 20 per cent of the cases in both countries. The columns titled “not matched” in Table 7.3 show descriptive statistics for this group. Obviously, this group consists of more extreme cases. For example, women with a migration background in Germany and blacks in the United States are overrepresented among those without a match. Interestingly, German women in the “not matched” group work more on average, whereas American women in this group work less than the matched cases. Clearly, given the nation-specific female labor force participation rates, both are extreme cases in their respective countries.



**Table 7.3 Descriptive statistics of the matched and unmatched samples in the United States and West Germany for the estimation of the AWE. Women only**

	United States			West Germany		
	Without PUE	Matched With PUE	Not matched With PUE	Without PUE	Matched With PUE	Not matched With PUE
<i>Employment</i>						
Avg. weekly work hours	22	21.6	25.5	15.7	16	26.9
Not employed (%)	26.9	26.9	13.8	42.9	42.9	11.5
Industrial sector (%)	11.4	11.4	36.8	14.4	14.4	48.1
Service sector (%)	43.9	47.3	34.5	27.6	32.6	19.2
Public sector (%)	17.8	14.4	14.9	15	10	21.2
Avg. yearly labor income (\$)	17447	17099	20831	10585	10111	17139
Avg. HH income share (%)	23.3	23.6	35.1	17.8	18	33.9
<i>Children</i>						
w/ children <16 in HH (%)	77.8	77.8	73.6	65.2	65.2	69.2
w/ children <5 in HH (%)	39.5	39.5	36.8	25.7	25.7	9.6
<i>Education</i>						
Less than High School (%)	14.4	14.4	26.4	43.9	43.9	51.9
High School (%)	51.3	51.3	31	49.2	49.2	28.8
Greater than High School (%)	34.3	34.3	42.5	6.9	6.9	19.2

	United States			West Germany		
	Matched Without PUE	Matched With PUE	Not matched With PUE	Matched Without PUE	Matched With PUE	Not matched With PUE
<i>Sociodemographics</i>						
Avg. Age	34.8	34.8	36	37.5	37.5	38.8
Black (%)	24.4	24.4	46	38.9	38.9	50
Avg. yearly eq. hh. inc. (\$)	26379	26145	23723	17875	16822	18308
<i>Partner</i>						
Partner lt. High School (%)	17	17	35.6	31.7	31.7	40.4
Partner High School (%)	46.5	46.5	40.2	61.1	61.1	46.2
Partner gt. High School (%)	36.5	36.5	24.1	7.2	7.2	13.5
Partner's tenure (yrs.)	6.2	5.4	5.3	8.8	7.8	3.9
N Episodes	6247	501	87	7243	319	52

All variables measured two years prior to job loss.

Sources: GSOEP, PSID, and CNEF, author's calculations

To test the incidence of the added worker effect, I estimate DiD linear probability models with cluster robust standard errors.<sup>40</sup> Thus, the estimated coefficients show the difference in probabilities that the AWE occurs between the group with partner's unemployment and the group without. The estimates are controlled for the incidence of individual job loss and changes in the number of children below age five. This is done to control for possible changes within women's life courses that may influence their work hours.

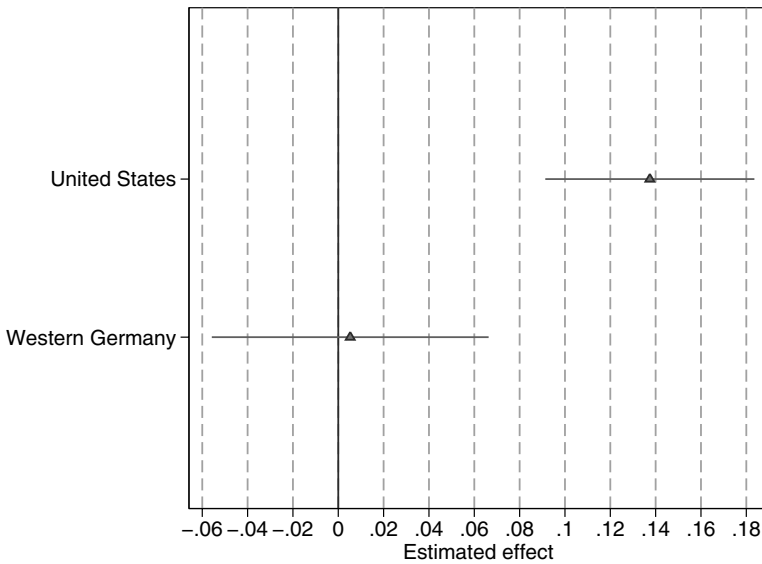
### Cross-national comparison

Figure 7.3 depicts the baseline results for the incidence of increases in women's work hours in the year of their partners' job losses or two years afterward. The magnitude of the effect can be read from the position of the triangles on the x-axis. The y-axis separates the effects in the two countries. The lines around the triangles represent the 90 per cent confidence intervals of the estimates. If the confidence intervals do not cross zero, the effect is statistically significant on the ten 10 per cent level.

The interpretation of the effects depicted in Figure 7.3 is as follows: In the United States, the probability that a woman increases her work hours because of her partner's unemployment is about 14 percentage points higher than in the matched control group. Thus, partner's unemployment causes a significant increase in the probability that women increase their work hours in the United States. In West Germany, by contrast, the incidence of the AWE is much less frequent: Partner's unemployment leads to half a percentage point increase in the probability of an increase in work hours. Yet, the effect is not significantly different from zero. Note that the large standard errors in West Germany also result from the lower sample size (see Table 7.3). This result supports Hypothesis S.8, which states that the added worker effect should occur more often in the United States than in Germany. The reason for this is, presumably, the country-specific mix of low unemployment benefits, a tax system that supports the emergence of dual-earner households, higher acceptance of employed women, and the high-turnover labor market in the United States.

40 Standard errors are clustered on the individual level because I have several observations per person within an episode, and often several episodes within one individual.

**Figure 7.3 Estimated probability of the AWE among women in the United States and West Germany**



Error bars show the 90 per cent confidence interval.  
 Sources: GSOEP, PSID, and CNEF, author’s calculations

A closer look at the data that I do not present here reveals that the results depend strongly on the behavior of the control group. West German women do increase their work hours after their partners become unemployed: about 44 per cent increase paid work by at least one hour per week. Yet, in the matched control group, about 43 per cent also work more hours than before. Thus, an increase in hours is a fairly common behavior among German women with the characteristics depicted above. Partner’s unemployment does not lead to an increase that goes much beyond this trend. Thus, the DiD estimate is small and non-significant in West Germany. In the United States, on the other hand, 64 per cent of the women who experience partner’s unemployment increase their work hours, compared to 50 per cent in the matched control group. This comparison illustrates the merits of the DiD approach: It depicts changes that are due to an event and go beyond common trends. Further robustness checks also confirm that the trends in work hours are similar in the two groups even before partner’s unemployment. Thus, the common trends assumption needed for a valid DiD design holds. In the following I only present the DiD estimates.

These considerations also explain why other researchers find an added worker effect in Germany while I do not. Previous studies by McGinnity (2002) or Prieto-Rodríguez and Rodríguez-Gutiérrez (2003) did not use a DiD design to control for trends among women who did not experience partner's unemployment. Therefore, the effects they report cannot be ascribed to partner's job loss. Instead, my results suggest that they report the effects of trends in female employment within life courses that occur independent of their partners' job losses. Yet, McGinnity (2002) only included women who are not active on the labor market before their partner's unemployment. To test whether previous work hours are important, I disaggregate the AWE in the following analysis.

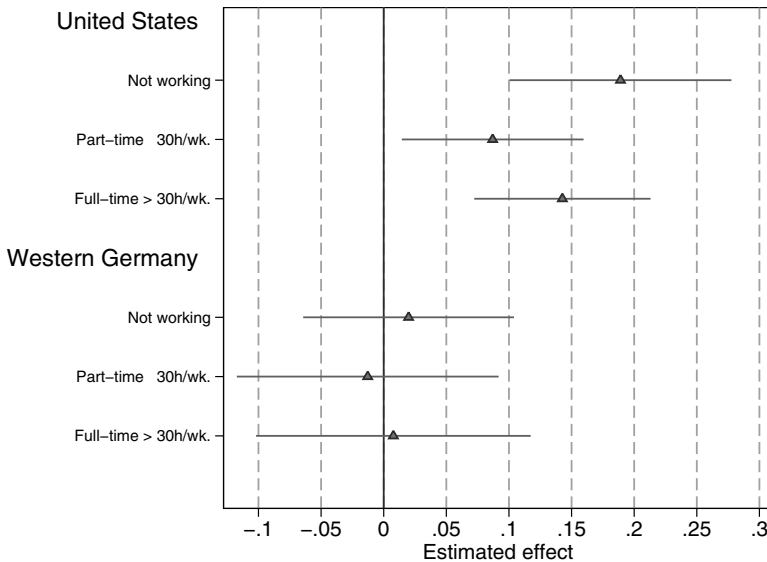
### Labor market influences

Figure 7.4 shows that women's labor market integration two years before partner's unemployment influences the occurrence of the AWE in the United States but not in West Germany. In the United States, an increase in hours is most likely if women have been inactive on the labor market two years earlier. Thus, the expectation expressed in Hypothesis S.2, that hours constraints among those who already work inhibit an increase in work hours, is supported in the United States. In West Germany, on the other hand, the estimates do not differ much and none of the coefficients are significantly different from zero. Consequently, hours constraints do not seem to be of importance for the occurrence of the AWE in West Germany.

The analysis of the occurrence of the AWE separated by previous work hours also reveals that women in the United States are able to increase their hours, even if they are currently working. This confirms Hypothesis S.2a, which states that the high-turnover labor market in the United States offers opportunities to change jobs and thereby circumvent hours constraints in the current job. Interestingly, full-time working women increase their work hours more frequently than part-time working women. This suggests a positive influence of the modernity of the couple on the AWE. I return to this point later when I analyze the impact of different intra-couple arrangements.

In Figure 7.5, I further disaggregated the effects among women with different prior labor force attachment by education. In the figure, triangles now represent the effects for the lowest education group, circles the medium group, and squares the highest group. I use the educational categories shown in Table 7.2. Overall, my expectation formulated in Hypothesis S.3, that

**Figure 7.4 Estimated probability of the AWE among women by previous work hours in the United States and West Germany**

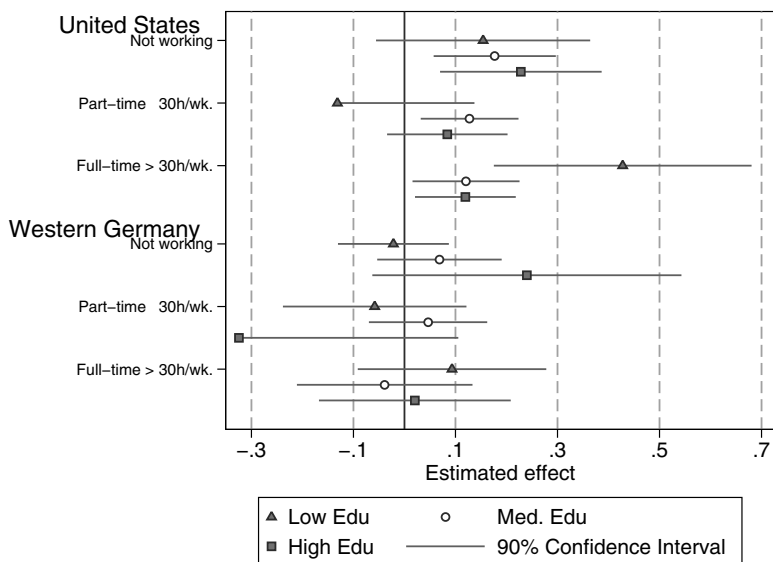


Error bars show the 90 per cent confidence interval.  
 Sources: GSOEP, PSID, and CNEF, author's calculations

higher education generally leads to a higher occurrence of the AWE, is not supported. Such a connection exists only among women who are not employed. Women who already work, however, show a different pattern. Consequently, there is also no general trend toward a steeper educational gradient in Germany. Thus, Hypothesis S.3a, which stated such a relationship, has to be rejected. I now take a closer look at the only group where such a pattern exists: women who are inactive on the labor market prior to their partners' displacements.

Among women who are not employed prior to their partners' unemployment there is a positive relationship between education and the occurrence of the AWE in both countries. Low-educated women who are not employed are less likely to increase their hours to compensate job loss in their household. This difference between the educational groups is slightly higher in West Germany. This supports Hypothesis S.5, which states that education should play a lesser role in the United States among inactive women because there are a large number of entry-level jobs for them and credentials are less important. Yet, the pattern in West Germany is not as expected: The

**Figure 7.5 Estimated probability of the AWE among women by previous work hours and education in the United States and West Germany**



Error bars show the 90 per cent confidence interval.  
 Sources: GSOEP, PSID, and CNEF, author's calculations

largest difference is between vocational training and university and not between those without a degree and the rest, as Hypothesis S.4 would have suggested. Still, women with vocational training are slightly (but not significantly) more likely to increase their work hours. Hence, Hypothesis S.4, which states that vocational training should especially increase the occurrence of the AWE among inactive women because it preserves their employability, is only partly supported. Vocational degrees seem to be important but higher education degrees seem to boost the occurrence of the AWE much more.

Interestingly, among full-time working women in both countries, the effect of education is reversed: The incidence of the AWE is higher among the low-skilled. This may be interpreted as a result of hours constraints in jobs: Increasing hours is often only possible through changing jobs. Low-skilled workers usually remain in entry level positions and a move to a job with higher hours is possible without forfeiting promotions on

the internal job ladder. For high-skilled women, on the other hand, job changes presumably do not lead to higher wages because they more often already climbed higher in the internal hierarchy. Unlike inactive and full-time working women, the results for part-time working women are inconclusive. There is a common pattern in both countries that medium education is connected to the highest occurrence of the AWE. Still, there are also outliers in both countries that are difficult to explain. Clearly, the group of part-time working women is very diverse in both countries because they contain both marginally employed women and women who work nearly full-time.

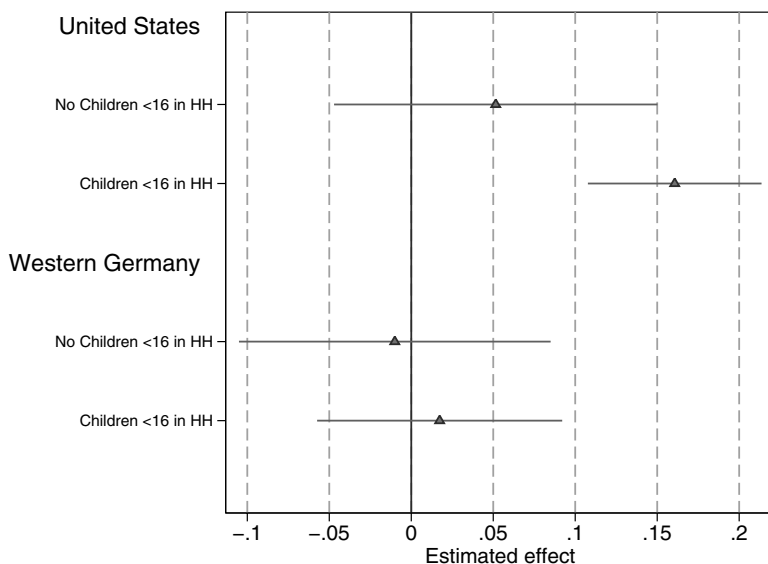
Overall, the results in Figure 7.5 provide some evidence in support of the notion that differences in the labor market structure between the United States and Germany, namely the prevalence of OLMs and ILMs, shape the effects of education on the occurrence of the AWE. However, this is restricted to non-employed women. In Germany, high education seems to be an important asset for inactive women, allowing them to increase their hours after partners' job losses. In the United States, on the other hand, the lower importance of credentials seems to level educational differences in the occurrence of the AWE among inactive women. If women are already working, however, the effects of hours constraints and achieved job positions seem to be stronger than the effects of education.

### **Household and welfare state influences**

Next, I turn to the influence of the inner-couple structure on the occurrence of the AWE. First, in Figure 7.6, I examine the effects of having children under 16 in the household. The analyses are therefore comparable to those about income losses in different household types presented in the previous chapter. There, I found that family income support after men's job losses is stronger among couples without children in the household. The results in Figure 7.6, however, depict that the AWE occurs more often in couples without children than in couples with children. This is more pronounced in the United States. Consequently, high family income support among couples without children, depicted in Chapter 6, is not due to a high occurrence of the AWE, but rather due to a partner's high previous labor force attachment.



**Figure 7.6** Estimated probability of the AWE among women with and without children under 16 in the household in the United States and West Germany. Error bars show the 90 per cent confidence interval

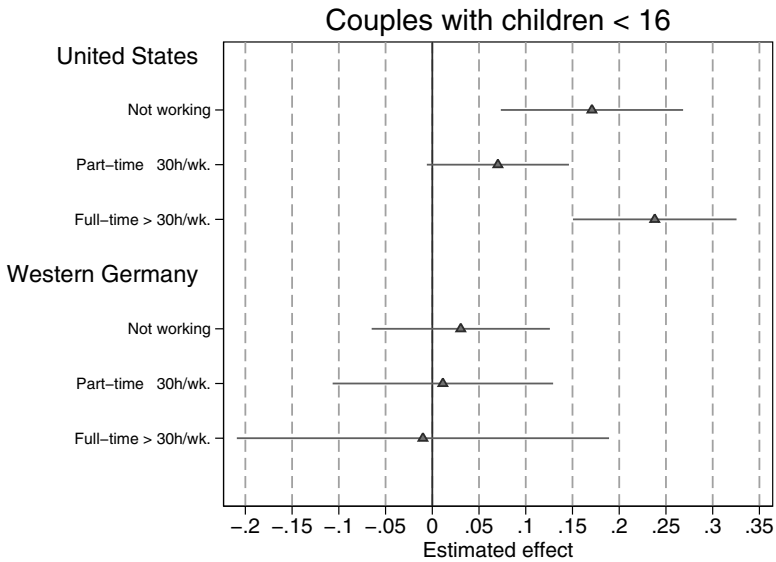


Sources: GSOEP, PSID, and CNEF, author's calculations

The strong difference between couples with and without children in the United States in Figure 7.6 appears somewhat unexpectedly. There are two possible explanations that may also have a combined effect: First, households with children have higher need than those without and, consequently, have to buffer more of the lost income to maintain their standard of living. Second, mothers often work fewer hours than women without children and therefore have greater possibilities to increase employment. In the following, I explore this further by focusing on the AWE among mothers only.

Figure 7.7 presents evidence that high previous work hours do not prevent American mothers from increasing their hours. Apparently, modern, double full-time couples with children are most likely to have the AWE in the United States. This confirms Hypothesis S.7 for the United States: Apparently, women in couples that are less affected by traditional gender role expectations and have experience in sharing paid and unpaid work are more likely to increase their work hours after their partners

**Figure 7.7 Estimated probability of the AWE among women with children under 16 in the household by previous work hours in the United States and West Germany**

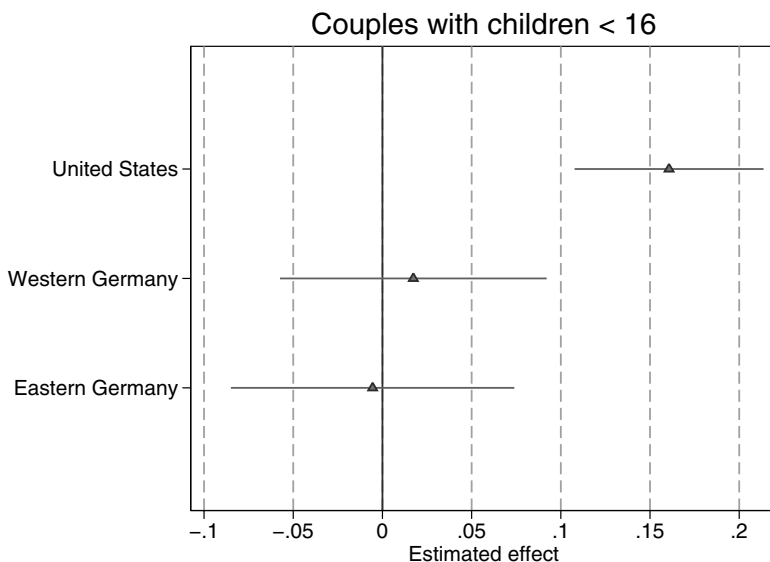


Error bars show the 90 per cent confidence interval.  
 Sources: GSOEP, PSID, and CNEF, author's calculations

become unemployed. In West Germany, on the other hand, the pattern is reversed: Non-working mothers are more likely to increase their hours after men's job losses. Yet, the differences are small and the confidence intervals are large. Therefore, being in a modern couple does not affect the incidence of the AWE in West Germany. However, this is not a proof that traditional gender role expectations have less influence on the AWE in West Germany, since the effect among non-working mothers is also small and non-significant.

Interestingly, the effect of already being employed does not seem to influence part-time employed American women in the same way. Among them, the incidence of the AWE is lowest. This may be caused by the stronger prevalence of traditional gender norms in these so called 1.5-earner couples. Here, women are often more (if not completely) responsible for domestic work (Stier and Lewin-Epstein 2000). Apparently, in these couples, an increase of women's hours, which may even make the wife the main earner, is

**Figure 7.8** Estimated probability of the AWE among women with children under 16 in the household in the United States, West Germany, and East Germany



Error bars show the 90 per cent confidence interval.

Sources: GSOEP, PSID, and CNEF, author's calculations

not desired. Inactive women with children in the United States even show a higher effect than part-time working women. This may partly be caused by the low barrier to labor market re-entry on the American labor market. Also, these couples are presumably in higher need of additional income than those where women already work.

My theoretical considerations also suggest that institutional factors shape the occurrence of the AWE in couples with children. Besides the already mentioned effects of labor market structure and the welfare state, I expect that the availability of childcare increases the occurrence of the AWE. To test this, I include East Germany in the analyses where childcare is widely available and employed mothers are more common.<sup>41</sup> The results in Figure 7.8 do not support Hypothesis S.9, which states that the occurrence of the AWE is highest in East Germany. Instead, the estimated effect in East Germany is even slightly lower than in West Germany. The reasons

41 Descriptive statistics for the East German sample are in Table A.4 in the Appendix.

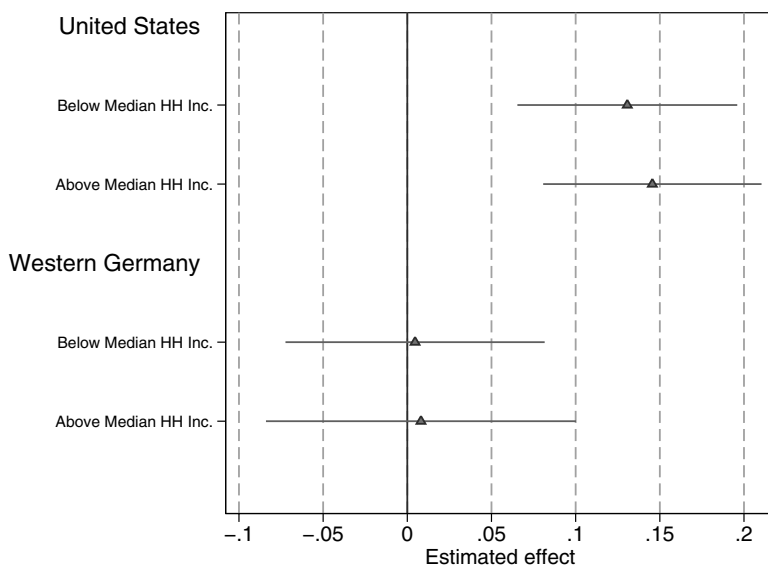
for this are unclear. Maybe the unfavorable situation on the East German labor market, with persistently high levels of unemployment, decreased the chances of East German women increasing their hours. Another possible interpretation is that availability of childcare is less important for the occurrence of the AWE. Instead, differences in the welfare state and labor market institutions are of greater importance, as the comparison to the United States shows.

Finally, I explore the question of how the AWE is distributed among the social strata. Figure 7.9 depicts that the difference in the occurrence of the AWE between households above and below the median post-government household income is not large in both countries. In Germany, there is a slight tendency toward a higher incidence in the upper strata. This supports Hypothesis S.8a, which states that means-tested benefits for the long-term unemployed, which some low-income households receive directly after job loss, have a disincentive effect on the AWE. Yet, given the large standard errors, the difference does not seem to be substantial. Clearly, the effect described in Hypothesis S.8a should only affect the lowest income groups and not all households below the median. Unfortunately, the small number of cases inhibits a further analysis of this effect. In the United States, the incidence of the AWE is also slightly larger in more affluent households. Overall, these results suggest that the incidence of the AWE does not affect the inequality of income trajectories much. Instead, it is likely that the previous earner arrangement, which I depicted in the previous section, is more important for family income support among men who become unemployed. Yet, the analysis so far has only considered increases in work hours. Whether the AWE really influences household incomes can only be ascertained by considering changes in earnings. I explore this aspect in the following section.

#### 7.4 Magnitude of the AWE

To assess the magnitude of the AWE, I now analyze changes in women's labor earnings after their partners' unemployment. As described above, I consider changes in women's wages as a percentage of prior pre-government household income. This enables me to compare the magnitude of the AWE with the effect of men's job losses on pre-government household income, depicted in the previous chapter. In doing so, I am able to show which part of the family income buffer, as introduced in the previous chapter, is due to the AWE. This is possible because the estimated changes in women's

**Figure 7.9** Estimated probability of the AWE among women above and below the median of prior adjusted post-government household income in the United States and West Germany



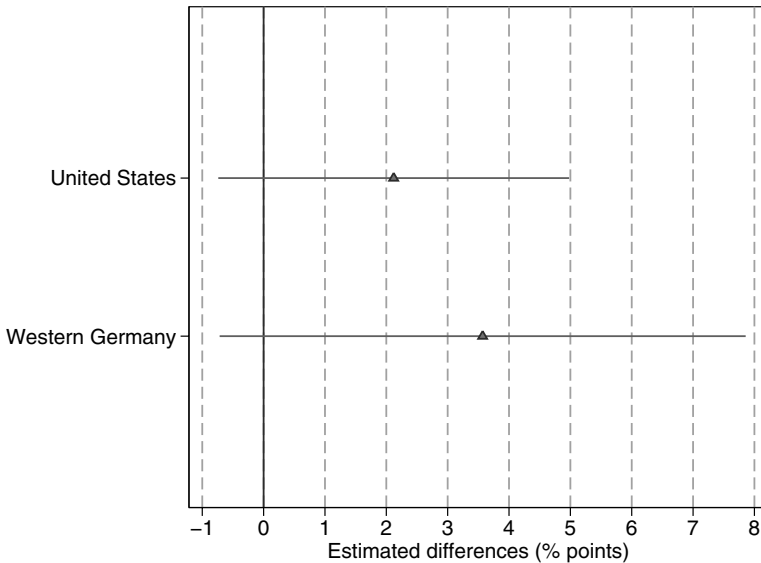
Error bars show the 90 per cent confidence interval

Sources: GSOEP, PSID, and CNEF, author's calculations

earnings calculated as percentages of prior pre-government household income can be interpreted as buffering effects. As in the other analyses, I present difference-in-difference estimates of these relative changes. Thus, the estimates in the following are differences in changes between the group with partner's unemployment and the group without.

Given the finding in the previous section that the occurrence of the AWE is unlikely in West Germany, Figure 7.10 yields a surprising result: the effect of partner's unemployment on women's earnings is positive in West Germany. Moreover, it is even slightly greater than in the United States. That said, the confidence interval around the effect in Germany is large, indicating a huge amount of uncertainty. Yet, also in the United States, the effect is not statistically significant. Therefore, this is evidence against Hypothesis S.8, which states that the AWE also has a greater magnitude in the United States compared to West Germany. Apparently, fewer German women increase their hours after their partner's job loss, but if they do,

**Figure 7.10** Estimated effect on earnings among women due to partner's unemployment as percentage of prior pre-government household income in the United States and West Germany



Error bars show the 90 per cent confidence interval  
Sources: GSOEP, PSID, and CNEF, author's calculations

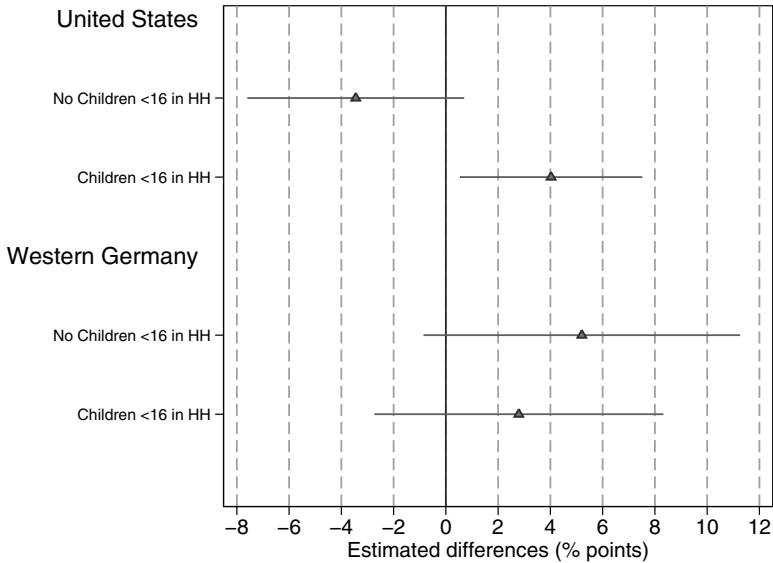
they are able to add more to household income on average than American women. On the other hand, American women add little to household income despite high commitment after their partner's job loss. This is partly accounted for by different overall trends in earnings in the two countries among women, which I have already described in the previous chapter. In the United States, earnings grow much stronger on average than in West Germany in the period of observation. Thus, for American women, it is much harder to increase their earnings beyond this trend. This has consequences for economic well-being relative to other households. In the United States, where everybody has growing income, stagnation implies relative losses. The results in the United States thus mirror the difficulties households face in keeping up with others' incomes after job loss. In Germany, on the other hand, income growth among women without partner's job loss is less pronounced. Consequently, it is easier for women to increase their earnings relative to others.

Still, both estimates in Figure 7.10 are small and not significantly different from zero. Leaving aside confidence intervals, American women are able to make up for about two percentage points of former pre-government household income. In West Germany, women increase their earnings by 3.5 percentage points of pre-government household income on average. Compared to losses of about 20 percentage points of former pre-government household income in the United States and 25 percentage points in West Germany, as depicted in the previous chapter, this analysis shows that women are a long way from offsetting men's losses in earnings through the AWE. This confirms Hypothesis S.6, which states that gender segregation on the labor market prevents a complete substitution of men's earnings through women's earnings after job loss. Clearly, this is often not necessary, because men's losses are also buffered by unemployment benefits and re-employment. Still, the low estimates suggest that a complete substitution would not be possible even if it was necessary.

To learn more about the magnitude of the AWE in different household types, I graph the results separately by the presence of children under 16 in Figure 7.11. In the United States, I find the same pattern as for the occurrence of the AWE: an increase in income on the part of women after men's job losses occurs only in couples with children. Among them, women are able to increase their earnings by more than two per cent. In couples without children, however, women's incomes even decrease on average after men's job losses. Apparently, there are different processes at work in the latter group. Several tentative explanations are possible. It could be, for example, that in some couples, both lose their jobs simultaneously because of local labor market circumstances. Unfortunately, no regional information below the state level is available in the United States. Also, if the displacement was because of health reasons, the reduction among women could be because of care responsibilities. Another explanation could be that some couples move away after men's job losses and some of the losses in earnings may originate from women's resulting job changes. Further analyses, not presented here, show some evidence in favor of the latter explanation.

In West Germany, by contrast, Figure 7.11 shows the opposite pattern: the magnitude of the AWE is larger among women in couple households without children under 16. Thus, the higher magnitude of the AWE in West Germany compared to the United States, depicted in Figure 7.10 above, is driven by couples without children. The higher magnitude of the AWE among German women without children is difficult to explain. One tentative explanation could be that a number of these women stayed at home after their children moved out and now have the capacity to increase their

**Figure 7.11** Estimated effect on earnings among women due to partner’s unemployment as percentage of prior pre-government household income by presence of children <16 in the United States and West Germany



Error bars show the 90 per cent confidence interval.  
 Sources: GSOEP, PSID, and CNEF, author’s calculations

income as their partners become unemployed. In this case, the prevalent gender role expectations about “good mothers who stay at home” do not restrain these women (anymore) and thus they can increase their earnings. This may also explain the huge difference between couples without children in the United States and Germany: In the American case, much fewer women become housewives after childbirth and stay in this role. In addition, residential mobility in Germany is much lower than in the United States, thus inhibiting wage losses among women that occur after moving away (Sánchez and Andrews 2011).

The comparison between the magnitude of the AWE in couples with children between the United States and Germany in Figure 7.11 provides further evidence of the importance of gender norms for women’s employment after men’s job losses. American women with children provide slightly more income after their partner’s job loss than German women. This happens despite the difficulties they face in increasing their earnings



beyond the overall trend, as indicated above. Thus, apparently a substantial AWE is possible in Germany, as the results for couples without children under 16 depict, but it is hampered by prevailing gender role expectations that locate mothers in the domestic sphere and men in the sphere of employment. Even as men are temporarily unable to fulfill the role as the main provider of income after job loss, gender roles remain largely stable in West Germany.

Compared to the family income buffers presented in the previous chapter, the analyses in this chapter reveal the importance of the AWE in family income support after men's job losses. In West Germany, total family income buffering after job loss amounts to about ten percentage points among men in couples with children and about 20 percentage points among men in couples without children (see Figure 6.6 in the previous chapter). As mentioned in the previous chapter, the family income buffer measures the difference between the losses in individual earnings and in pre-government household income after job loss. Thus, I can directly compare my measure of the magnitude of the AWE, which is measured as a percentage of prior pre-government household income, with the buffering effect. If German women in couples with children increase their earnings by about three percentage points of pre-government household income, this reduces their partners' losses by three percentage points. The three percentage points are thus a part of the ten percentage point family buffer. Thus, the share of the AWE in total family income buffering among couples with children is 30 per cent. Likewise, among German couples without children, the increase in incomes on the part of women after men's job losses reduce partner's losses by about five percentage points, which is about 25 per cent of the total family buffer. Thus, in West German couples with children, the AWE is more important for total buffering through the family. In the United States, the family buffer after men's job losses among couples with children is about six percentage points and among couples without children about 13 percentage points (see Figure 6.6 in the previous chapter). The AWE in couples with children decreases men's losses by about four percentage points and therefore contributes 50 per cent of total income buffering through the family. Among couples without children, on the other hand, the negative effect suggests that trends in women's earnings even reduce the family income buffer.

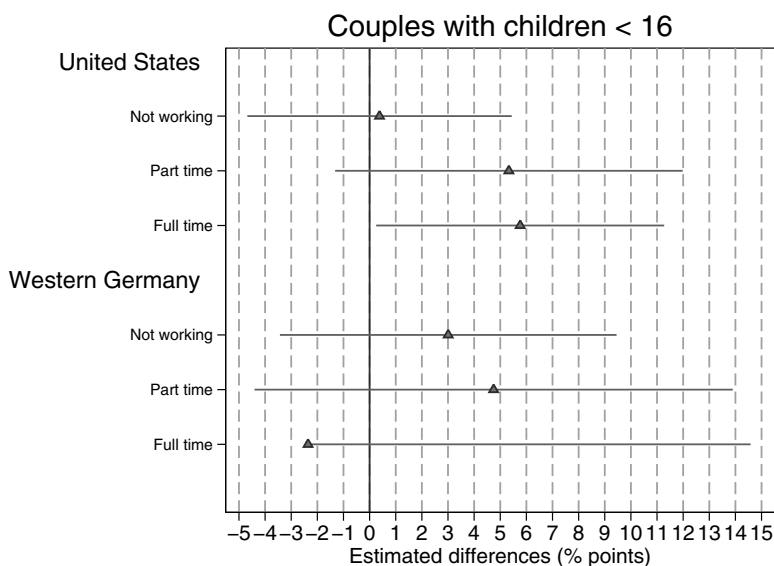
Thus, the analyses reveal that the composition of the family buffer is different in the two countries. In West Germany, existing second incomes in a household with children are more important for the family buffer than the AWE, whereas in the United States the AWE and existing incomes are

equally important. In both countries, the AWE is more important within the family buffer among women with children. This fits with the idea that mothers have greater possibilities of increasing their income, because they work fewer hours on average than women without children in the household. Also, the need for the household to increase incomes is higher in households with children, because there are more dependents and men's lost jobs are often the main income source.

To analyze the magnitude of the AWE among women with children under 16 in the household more closely, I now show the effects separated by previous work hours in Figure 7.12. The results in the United States show that modern households have the greatest income gain through the AWE. This again supports Hypothesis S.7, which states that modern norms about gender roles should facilitate the AWE, because they allow couples to switch the main earner. Interestingly, I now also find high effects for part-time working women but no effects among inactive women. This may be because being on the labor market opens up chances for wage increases. The high incidences of the AWE among inactive mothers in the United States, depicted in the previous section, apparently do not pay off. This may be due to very low wages in the entry level jobs they obtain. In West Germany, on the other hand, dual full-time couples with children do not have high wage gains. However, their number is small in West Germany. The more common dual-earner arrangement, the 1.5-earner family, has a little higher wage gain than male breadwinner households. Still, the difference is not large, suggesting a smaller influence of household structure in West Germany. That said, it may be that women in couples with more modern values still leave their jobs after childbirth in West Germany, because the possibilities for them to keep their jobs and care for children are scarce. Maybe some of those take up a job again after their partner's job losses.

Finally, I examine differences in income gains through the AWE among social strata. The results in Figure 7.13 suggest that these are higher in high-income households in both countries. Given the higher previous incomes among men in the upper parts of the household income distribution, the difference in absolute terms is even higher because one percent of high earnings is more than one percent of low earnings. The lower income gains in households below the median in West Germany is supporting evidence in favor of Hypothesis S.8a. Presumably, the means tested benefits ("Arbeitslosengeld II") that some low-income households receive immediately after job loss have disincentive effects with regard to the AWE in Germany. As in the analysis of the incidence of the AWE, however, the difference is small

**Figure 7.12** Estimated effect on earnings among women with children under 16 in the household due to partner's unemployment as percentage of prior pre-government household income by previous work hours in the United States and West Germany



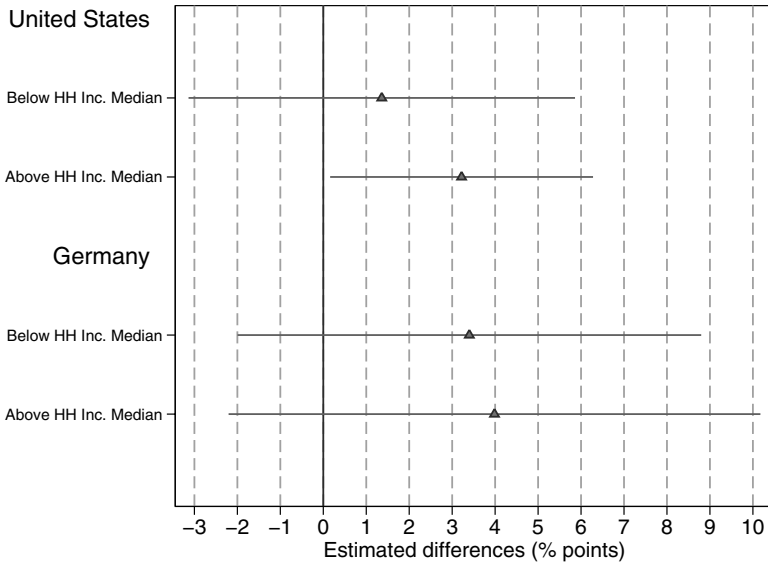
Error bars show the 90 per cent confidence interval

Sources: GSOEP, PSID, and CNEF, author's calculations

and further analyses would be needed that focus entirely on the lowest quartile. This, however, is not possible given the already small number of cases.

Thus, both components of the family buffer after men's job losses – the AWE and women's previous earnings – are larger in high-income households in both countries. Thus, the unequal distribution of family income support among men, depicted in the previous chapter, emerges from both existing incomes and the AWE in the United States and Germany. The analyses in the previous chapter yielded a family buffer of about five percentage points in households below the median and about ten percentage points above the median in the United States (see Figure 6.9 in the previous chapter). Compared to the values in Figure 7.13, this leads to a share of the AWE of one third both above and below the median in the United States. In West Germany, the family buffer is about ten percentage points below and 15 percentage points above the median. This

**Figure 7.13** Estimated effect on earnings among women due to partner’s unemployment as percentage of prior pre-government household income above and below the median of prior adjusted post-government household income in the United States and West Germany



Error bars show the 90 per cent confidence interval.  
 Sources: GSOEP, PSID, and CNEF, author’s calculations

implies that the AWE is more important among low-income households where it accounts for about 35 per cent, compared to 25 per cent in high-income households. Thus, low-income households in West Germany can somewhat ameliorate the lower prevalence of second incomes through the AWE.

**7.5 Summary: The added worker effect in linked life courses**

In this chapter, I analyzed the family income buffer after men’s job losses in greater detail. I considered two paths through which the partner of an unemployed man may stabilize household income. The first path is providing additional earnings before partner’s job loss, i.e. forming a dual-earner couple. The second path is increasing work hours and earnings after

partner's job loss. The latter path is known as the "added worker effect" (AWE). The analysis served two aims: first, to analyze the embeddedness of the added worker effect after men's job losses in (linked) life courses; and second, to gauge the impact and the relative importance of these two paths of income buffering through the family. In the following, I discuss the results generated in this chapter in the light of the life course perspective.

Building on the life course perspective, I identified influences on the added worker effect on three levels: the individual, the household, and the state, all of which are connected. Among these levels, influences on the household level have often been overlooked in previous analyses of private income buffering strategies. This is surprising given that these strategies originate from within the household. I argue that the structure of the household has important effects on how women's incomes buffer men's income losses after job loss. Previous analyses show that women's employment behavior is strongly affected by the household context while men's employment behavior is not (Blossfeld and Drobnič 2001a). This is because women in most couples undertake more of the domestic duties, like childcare, than men, even if they are employed (Shelton 1990). Thus, women have to reconcile the sphere of employment and the sphere of the family in their life courses whereas men are less constrained by the sphere of the family in their employment behavior. The origin of these household arrangements is usually ascribed to traditional gender role expectations that regard women as responsible for domestic work and men as responsible for market work. These considerations suggest that the AWE should be influenced by the household context: the more a household follows traditional gender roles, the less likely the AWE is if the roles are stable. It is of special interest to study the AWE in households that adhere to traditional gender roles, because when men lose their jobs the legitimization of their roles as "breadwinners" is taken away.

My analyses found evidence in favor of the hypothesis that household structure influences the AWE. Yet, this influence is mediated by individual and institutional factors. In the United States, the influence of the couple context is strong: modern dual-earner couples with children both have higher incidences of the AWE and higher income gains through the AWE than traditional male-breadwinner households. This supports my expectation that couples who are experienced in jointly combining work and family have a higher AWE because it is easier for them to switch earner roles. In male-breadwinner households, on the other hand, a change in roles between the former breadwinner and the homemaker is presumably inhibited by gender norms.

In West Germany, institutional differences and the higher prevalence of traditional gender role expectations presumably lead to different patterns. The data suggests that the AWE is strongest in couples without children in West Germany. I interpret this as the result of strong gender role expectations if there are children in the household: Mothers who do not stay at home with young children are often regarded as “bad mothers” in West Germany. Couples without children, on the other hand, are not restricted by this normative pressure. In contrast, among mothers, I found a slight positive effect of already working part-time on the AWE compared to non-working mothers. This may also be interpreted as an effect of modern gender roles in the household. Yet, full-time working mothers do not show the same effect. It has to be kept in mind, however, that full-time working mothers are rare in West Germany because of normative pressures, a tax system that favors 1.5-earner families, and the lack of childcare facilities. Thus, in comparison with the United States, it is less the earner configuration that drives the results and more the presence of children: Mothers always have a lower AWE than women without children in West Germany. One possible interpretation of this finding is that a couple’s adherence to modern gender roles cannot be interpreted from the earner configuration in West Germany, because the institutional circumstances generate high incentives for women to be inactive on the labor market, even though the couple has a modern approach to sharing paid and unpaid work.

Beyond the reported variance of the AWE on the household level, I found further differences between individuals as well as between the two country cases. Firstly, I found that women in West Germany, unlike their American counterparts, do not increase work hours after their partner’s job losses. In terms of increases in earnings, however, they even surpass American women. Apparently, it is easier in Germany to increase earnings without increasing hours. A tentative explanation could be that job changes to higher paid jobs are easier in West Germany than in the United States. Maybe occupational labor markets in Germany offer this possibility. Another possible explanation is that overall wage growth in the United States is higher, which makes it more difficult for women to increase their earnings beyond this trend.

Despite lower increases in earnings in the United States, the estimates of the incidence and the magnitude of the AWE are more often statistically significant or closer to statistical significance than in West Germany. This confirms my expectation that the AWE is a more common phenomenon in the United States than in West Germany. There are several reasons for this that cannot easily be disentangled in a two-country comparison. First,

**Table 7.4 Summary of hypotheses and results about household strategies to buffer job loss**

	<b>Hypothesis</b>	<b>Result</b>
S.1	Women increase their incomes before partner's job loss	Confirmed in West Germany, not confirmed in the United States
S.2	The AWE is most likely among women who are inactive on the labor market	Confirmed in the United States, not confirmed in West Germany
S.2a	The AWE should occur more often in the United States than in West Germany among those who already work	Confirmed
S.3	High education should lead to high incidence of the AWE	Not confirmed, only among inactive
S.3a	The positive educational gradient in the occurrence of the AWE is steeper in West Germany than in the United States	Not confirmed, only among inactive
S.4	Among inactive women in Germany, the occurrence of the added worker effect is higher for those with at least a vocational training degree compared to less educated women	Confirmed, but weak evidence
S.5	The occurrence of the AWE among low-skilled women who are inactive on the labor market does not differ much from high-skilled inactive women	Confirmed
S.6	The income gain through the AWE is lower on average than men's losses due to job loss	Confirmed
S.7	The AWE is more likely in modern couples than in traditional couples	Confirmed in the United States, not confirmed in West Germany
S.8	The AWE occurs more often and with greater magnitude among women in the United States than in Germany	Confirmed for occurrence, not confirmed for magnitude
S.8a	In West Germany, low-income households have a lower AWE than high-income households	Confirmed, but weak evidence
S.9	The AWE among couples with children should occur most often in East Germany followed by the United States and West Germany	Not confirmed

the labor market in the United States provides more job offers, which are obviously needed for the AWE to occur. Second, welfare state benefits are lower in the United States, which increases the need for the AWE. Third, the normative acceptance of working mothers is higher in the United States. The strong influence of the third factor is visible in the difference

between couples with and without children in West Germany, as reported above.

The impact of labor market structure becomes visible in the analysis of the influence of education. In the United States, non-employed women have high incidences of the AWE almost regardless of education. Hence, there is a high number of job opportunities for re-entrants to the labor market. In West Germany, on the other hand, only women with a vocational or university degree are able to increase their hours after partner's job loss. This evidence supports the idea that the American labor market structure seems to promote the occurrence of the AWE. Among women who are already working, however, I could not find the same effects of education. Apparently, their possibilities to increase hours are mainly influenced by the characteristics of the jobs they hold.

In sum, the AWE is a much more complex phenomenon than suggested by previous analyses, which assumed a simple connection between men's job losses and women's work hours or earnings. Individual level characteristics like employment and education interact with couple and country level influences in shaping this income buffering strategy. These findings are not only interesting for analysts of income mobility, but also yield insights into the mutual influence of life courses within couples. There seem to be couples with a higher flexibility of roles in the household than others. Especially if they pursue already dual-earner arrangements, couples seem to be willing to assign the role of the main earner to women. In more traditional households, on the other hand, this does not seem to be possible. Clearly, my analyses presented here only scratch the surface of these issues and further analyses that include values and detailed information about domestic work are needed to prove my point. Unfortunately, my data does not provide such information. Therefore, future research should address this topic in greater detail.

Beyond these insights about the embeddedness of the AWE in the life course, the analyses also showed that the AWE has a considerable impact on household income after job loss. In West Germany, the AWE accounts for 20 to 30 per cent of the family income buffer after men's job losses. In the United States, the AWE adds nothing to the family buffer among couples without children but accounts for about one half of family income support among couples with children. Thus, women's existing incomes in the household are more important for the buffering of income losses through men's unemployment in West Germany and among American couples without children.

Higher family buffers in the upper half of the household income distribution seem to be connected to earner configurations in households. In the



United States, dual-earner households with children profit most from the AWE. In West Germany, couples without children have the highest income gains after partner's job loss. This is the group in West Germany that is most likely to be a dual-earner couple, since couples with children have difficulties establishing such an earner configuration given low institutional support and normative barriers. Also, in both countries, dual-earner couples are likely to be in the upper part of the household income distribution before men's job losses. Besides educational homogamy, which leads to couples where both have high earning potential, modern gender roles seem to be of importance here. Households that do not adhere to the traditional segregation of paid and unpaid work between men and women are better off before and after job loss.

Thus, the growth in the number of dual-earner couples experienced over the recent years and the accompanying change in gender role expectations smooth couples' income trajectories. Yet, as mentioned before, it also makes the couple vulnerable to women's job losses. Maybe this leads to an AWE among men after their full-time working partners lose their jobs. It is beyond the scope of this study to analyze this. Also, the number of cases where women in dual full-time couples lose their jobs is very small, especially in West Germany. Yet, as mentioned earlier, especially in the United States female breadwinner households are growing in numbers (Wang et al. 2013). An analysis of men's behavior after their partner's job losses in those couples would be interesting to learn more about inner couple processes after job loss. Do those men take the chance to restore their traditional roles? An analysis of time diaries in these households would presumably yield many insights into the couple level processes here as well. These questions may serve as a starting point for future research. In the following chapter, I sum up the findings of the present study and draw conclusions.

## 8 Conclusion

This book contributes to the growing literature on economic insecurity (Western et al. 2012). This dynamic perspective on inequality provided many insights about the stability of positions within the social stratification. Furthermore, this line of research showed how institutional arrangements shape social mobility over the life course (Fritzell 1990; McManus and DiPrete 2000). Research on trigger events over the life course proved to be an especially fruitful approach to understanding the mechanisms through which institutions influence economic insecurity (DiPrete 2002). This literature identified job loss as one of the main causes of downward social mobility (Burkhauser and Duncan 1989; DiPrete and McManus 2000a; McKernan and Ratcliffe 2005, Brand 2015). However, despite obvious connections to life course research in this literature – and especially “life course regimes” (Mayer 1997, 2001) – scholars often analyzed trigger events independent of the life courses they occurred in. I argue that this omission limits the insights about economic insecurity that this approach can yield. Therefore, I proposed to extend the trigger events framework by embedding it into the sociology of the life course. In the present study, I analyzed the economic insecurity due to job loss and unemployment in the United States and Germany with special focus on group differences that follow from the life course perspective. In this concluding chapter, I first recapitulate the proposed enhancements of the trigger events approach. Second, I summarize key findings from the empirical analyses and show the extent to which the extended trigger events approach leads to new insights about economic insecurity. Finally, I discuss how my findings relate to debates about the increase in economic instability, the diffusion of risks, and welfare state policies directed at the unemployed that I sketched in the introductory chapter of this study.

The trigger events approach suggests that there are three important aspects of economic insecurity due to job loss: first, the incidence of job loss; second, the economic consequences of job loss and factors that buffer the consequences; and third, “counter-mobility strategies” that individuals and households pursue to offset the consequences. Previous studies building on this framework mainly considered institutional influences on the three aspects. DiPrete (2002) argues that institutions influence the rate at which trigger events occur, for example through employment protection legislation. Also, institutions influence the consequences, for example by providing welfare state benefits. Furthermore, through the amelioration of

the consequences they set incentives for counter-mobility strategies, such as re-employment or employment of other household members. However, I argued that this perspective is too narrow to fully understand economic insecurity due to job loss. Following the comparative literature on welfare states, I expected that this phenomenon is jointly influenced by the market, the family, and the welfare state (Esping-Andersen 1999; Sainsbury 1999). While the focus on institutions captures some market and welfare state influences, it misses the influence of the family and the household. Clearly, the notion of counter-mobility strategies includes some of the influence that families have on economic insecurity, for example through additional incomes in a household triggered by job loss. This phenomenon is also known as the “added worker effect” (Lundberg 1985). However, to explain the occurrence of the added worker effect, the trigger events approach reverts to institutional differences again. Yet, I argue that the influence of the family is more complex. To include this and to broaden the scope of the trigger events approach, I embedded it in the sociology of the life course.

The life course framework offers three heuristics that aid the analysis of life courses (Mayer 2004; Huinink and Feldhaus 2009): First, life courses are self-referential processes. This suggests that life courses have to be analyzed in their entirety, because each state within a life course is influenced by previous states. Second, life courses are multilevel processes. This points to the different levels in which life courses proceed, for example, families, firms, or countries. Each of these levels has distinct influences on the life course. Third, life courses are multidimensional processes because they encompass different life domains, such as work and family. Using these heuristics, I situated job loss and unemployment within the life course. The self-referentiality of the life course suggested the need to consider the previous life course up to job loss. The life course as a multilevel process helped to structure market, family, and state influences. And finally, the multidimensionality of the life course aided the analysis of family influences because it pointed to frictions at the interface between work and the family that shape the impact of job loss.

To derive theoretical expectations about the influence of the family and the household on economic insecurity due to job loss, I resorted to the large literature about family influences over the life course. The key concept in this literature is that life courses are linked within the household (Elder 1994; Moen 2003). That is to say, they exert mutual influence on each other. However, this mutual influence is not symmetrical: men’s life courses have different influences on women’s life courses than vice versa. Thus, gender is an important dimension in this regard (Krüger and Levy

2001). Also there are different levels on which the household influences life courses: the external-couple level and the inner-couple level (Rusconi and Solga 2008). The external-couple level comprises all factors that shape lives because someone is in a couple, such as tax law or role expectations. The inner-couple level, on the other hand, includes decision-making processes within the household, such as deciding who is employed and who does the housework. Although much of the literature on the family and the life course mainly deals with couple households, I argue that the same categories may also be applied to single adult households. This literature showed several channels through which the family influences employment. Therefore, I concluded that there are differences in economic insecurity due to job loss between household types.

Furthermore, I also considered theories about unemployment dynamics over the life course to refine the expectations about the effects of job loss on economic well-being. I concluded that it is important to consider labor market structure to understand economic insecurity due to job loss. Educational systems play an important role in shaping this structure by allocating different types of skills and thus defining nation-specific pathways of labor market mobility (Marsden 1990). Additionally, there are also interactions with social policy (DiPrete et al. 1997; Estevez-Abe et al. 2001). Welfare state institutions shape the occurrence of job loss through, for example, employment protection legislation. They also influence the choices available to the unemployed, such as unemployment insurance. Because of these factors, unemployment dynamics differ strongly both between and within countries (DiPrete et al. 1997; Keys and Danziger 2008; Giesecke and Heisig 2010). Especially among the lower strata, the incidence and duration of job loss and unemployment proved to be higher in general. Therefore, I expected differences between the social strata in economic insecurity due to job loss.

Taken together, the theoretical considerations suggested that there are differences between individuals, households, and countries in the economic insecurity that job loss causes. Going beyond previous research, which mainly dealt with cross-national differences, I also expected differences between social strata and household types in nation-specific patterns. These differences surface in all three aspects that the trigger events approach considers: the incidence of job loss, the consequences of job loss, and counter-mobility strategies. By showing the stratification of economic insecurity, I linked the dynamic with the traditional perspective on social stratification in this study.

To measure economic insecurity, I analyzed household panel data from the United States (PSID) and Germany (GSOEP). In these data sets, I identified involuntary job losses followed by at least one month of unemployment to gauge the incidence of job loss. Then, I estimated the consequences by looking at relative changes in post-government household income adjusted for household size. To uncover the effect of job loss, I used a Difference-in-Difference design with statistical matching. To assess the capacity of welfare state programs and the household in buffering income losses due to job loss, I disaggregated post-government household income into its sources (DiPrete and McManus 2000a). The impact of the welfare state was measured by considering the impact of job loss before and after taxes and transfers. Likewise, the family income buffer was measured by comparing the impact of job loss on individual labor earnings with the impact on total private household income. The last step of analysis took a closer look at the family income buffer by analyzing the added worker effect.

## 8.1 Key findings

In this section, I summarize the main findings of this study and discuss the broader picture of economic insecurity due to job loss that emerges from the results. This is followed by a discussion of the significance of the findings for current debates about job loss and economic insecurity in the following section. The results for Germany apply only to West Germany unless stated otherwise. For the sake of brevity, I only use “Germany” in the following.

Generally, the findings about the incidence of job loss and unemployment in Chapter 5 confirmed earlier results that already disadvantaged individuals are more likely to be affected. This includes, among others, low-skilled workers, ethnic minorities, and people with low household income. This polarization of employment instability seems to be more pronounced in Germany, where it grew even after the 1980s. Re-employment probabilities are stratified in the same way: Lower strata have higher chances of remaining unemployed than higher strata in both countries.

Yet, beyond these results, I also found differences in the incidence of job loss and unemployment between household types. This aspect has not received much scholarly attention so far. Single adult households – including single parents – face much higher rates of job loss than couple households. This was in line with my expectations that men and women in couple households should have more stable employment careers than singles. Furthermore, male singles and mothers in couple households have lower

re-employment probabilities. Thus, the household type a person lives in is connected to economic insecurity.

To look into the causes of the connection between household type and the occurrence of job loss, I conducted further analyses. The theoretical considerations suggested that there are several possible reasons for this finding. First, this may be due to selection into single adult households of people who have lower chances on the labor market. Second, singles may sort into unstable jobs because of preferences or employer discrimination. Third, there may be discrimination in lay-off decisions. The results show that all three factors contribute to the higher incidence rate of job loss among single adult households. Yet, the importance of the factors differs between the type of single adult household and between the two countries. Single men without children have the highest probabilities of job loss in both countries. This remains even after controlling for job characteristics to rule out selection into unstable jobs. Yet, in the United States, this type of selection explains a considerable fraction of the difference; this is not the case in Germany. Nevertheless, in both countries, single men without children are laid off more often than comparable men in couple households even after controlling for all of this. One tentative explanation for this may be that employers dismiss them more often because they do not have to care for a family. Among single women without children, I only find higher incidences of job loss in the United States. Single mothers, on the other hand, differ less from women in couple households once selection into these households is controlled for.<sup>42</sup> Also, selection into unstable jobs appears to be common among them in both countries. Further analyses of risk aversion among single men and the importance of work among single mothers suggest that the taking of unstable jobs is not due to preferences. Instead, singles and single mothers presumably obtain fewer offers for stable jobs. An explanation for this could be that they are considered less productive, and in the case of single mothers also less flexible, than women and men in couple households.

Thus, the analysis of the incidence of job loss and unemployment showed that already disadvantaged individuals are more often affected. Consequently, the previous life course clearly influences economic insecurity due to job loss. This does not only apply to the previous labor market career. Household formation over the life course is also connected to these processes. People with precarious careers less often form a family, as previous research depicted (Oppenheimer 2003). My results showed that not being in

42 There are too few single fathers in the data sets to draw conclusions about them.

a couple household further increases instability because of lowered chances of obtaining a stable job and employer discrimination in lay-off decisions. The direction of causality is unclear: Do people remain single because of the unstable careers or does being single lead to unstable careers? Further research should address this issue. However, regardless of the direction of causality, singles and single mothers are faced with higher economic insecurity than women and men in couple households. This issue is of growing importance because both the US and Germany experience an unprecedented growth of single adult households (Eckhard 2014; Kreider and Elliott 2009)

Chapter 6 showed that income trajectories after job loss differed markedly between the United States and Germany. Among men, Americans have higher relative losses in post-government household income than Germans, both in the year of job loss and in the subsequent years.<sup>43</sup> The results confirm earlier findings by DiPrete and McManus (2000a). Yet, unlike their results, I found that German men still face losses four years after job loss. Thus, in both countries, job loss leaves scars in post-government household income trajectories on average. However, these scars are much larger in the United States than in Germany. The processes that generate this outcome differ fundamentally between the two countries. In the United States, lower welfare state benefits lead to high initial losses. In the long run, individual earnings recover, but not fast enough to keep track with the overall upward trend in earnings among those who did not become displaced. Thus, among men in the United States, the scars are largely due to foregone earnings that they would have realized if they had remained employed. In Germany, on the other hand, the welfare state buffers much more of the lost earnings, both initially and in the long run, than in the United States. Individual earnings recover more slowly than in the United States, which reflects the higher incidence of long-term unemployment. Yet, the large degree of government help ameliorates this. Other household members' incomes – the “family buffer” – proved to be an important factor reducing economic insecurity due to job loss in both countries. Yet, as expected, the family buffer is more important for income stability for American men than for German men.

The analysis at different points in historical time revealed that the long-term consequences of job loss among German men became more severe over time. While they completely recovered within two years during the 1980s, they face persistent scars in their income trajectories thereafter. Thus,

43 Note that all income losses I refer to in this study are relative losses, measured as a fraction of prior income.



the finding by DiPrete and McManus (2000a) that German men rapidly return to their previous household incomes after job loss applied only to the favorable labor market circumstances during the 1980s. Subsequently, long-term unemployment increased and, consequently, many were not able to offset income losses through entering a new job. The measured welfare state buffer even increased during this time, indicating that more people relied on welfare state benefits. Unexpectedly, after the Hartz Reforms in 2004, which lowered benefits for the long-term unemployed, the welfare state buffer and losses in post-government household income remained almost the same. Yet, I found an indirect effect of the reforms: Despite growing re-employment rates, losses in individual earnings remained high. Thus, presumably, the Hartz Reforms pushed more unemployed into new jobs. However, most of these jobs paid so little that the overall situation did not improve.

In the United States, on the other hand, economic well-being of those who became displaced even improved slightly between the 1980s and 2007. Despite cut-backs in unemployment insurance, which are visible in a reduced welfare state buffer, American men were able to offset income losses after job loss to a larger degree, because of more rapid recovery in earnings and an increasing family buffer. The latter finding reflects the growing number of dual-earner couples in the United States. Thus, men in the United States became more reliant on private sources of income buffering and thus on a functioning labor market. Although my data does not span the Great Recession after 2009, it is plausible that the accompanying breakdown of the labor market reversed this trend. Presumably, the consequences of job loss during the Great Recession were larger than in previous recessions, not only because the magnitude of the downturn was greater, but also because welfare state protection was lower.

Women's income trajectories after job loss differ considerably from men's. First, their job losses affect post-government household income, on average, much less in both countries. This is because the majority of employed women are additional earners in couple households with a male main earner. However, in the United States where female labor force participation is higher, women's job losses affect household income to a greater degree than in Germany. Consequently, American women's income trajectories after job loss are more similar to men's than those observed in Germany. This became even more pronounced over time as the number of households with two full-time employed adults grew. Thus, the decrease in household income losses among American men was accompanied by an increase among women. Yet, these analyses proved to be less meaningful for women



because their employment participation is much more diverse than among men. Whereas most men are the prime earners in their households, working women's roles vary between marginal employment and being the main breadwinner. This clearly depends on the household type: For example, mothers in couple households are often additional earners, whereas single mothers are the main earners. Therefore, women's household income trajectories after job loss can only be understood taking the household context into account.

Analyzing income trajectories after job loss separately by household type provided further evidence that the family buffer has an important impact on economic insecurity due to job loss. Single adult households who do not have this income buffer fare significantly worse than couple households after job loss in both countries. Interestingly, this does not differ much between singles without children and single mothers, except in West Germany where single mothers have the highest household income losses due to job loss, by far. I expected that single mother's losses may be ameliorated through widespread availability of childcare facilities, because they increase the flexibility single mothers have when searching for a new job. Consequently, they should more often find a well-paid job after displacements. A comparison with East Germany, where the availability of childcare is greater than in West Germany, yielded some evidence in favor of this expectation. Single mother's household income losses due to displacements are smaller in East Germany.

Within the group couple households, I found differences in household income losses after men's displacements in both countries: In couple households with children, income losses are higher. This is presumably due to different intra-couple divisions of paid and unpaid work. In couple households with children, gender role expectations and institutions that follow from these often cause women to take up the role of the homemaker. Thus, these women contribute little to household income before job loss and household income mainly relies on men's earnings. The smaller family buffer in this group also suggests that the distribution of roles does not change much, even after the main breadwinner lost his job. After women's job losses, the findings are vice versa. Having children in the household decreases the household income losses their displacements cause. This is due to the same logic: women in couple households with children usually contribute less to household income.

Taking a closer look at the family income buffer in Chapter 7, the expectation that intra-household divisions of paid and unpaid work often survive the disruption generated by men's job losses was confirmed in the United

States. The added worker effect, the increase in women's work hours and incomes after men's displacements, occurred less often in couples that have a traditional division of paid and unpaid work. American mothers in couple households who are inactive on the labor market increase their hours after their partners' job losses less often than comparable mothers who already work more than 30 hours per week. Thus, the intra-household level influences economic insecurity due to men's displacements in the United States in two ways: Modern couple households where mothers are employed buffer men's losses both through higher previous earnings and higher increases in earnings on the part of the women. Thus, traditional earner arrangements are surprisingly stable, even if the man can temporarily not fulfill his role as the main breadwinner.

In Germany, on the other hand, the added worker effect occurs much less often than in the United States and contributes less to the family buffer. This finding confirmed the expectation that the mix of high welfare state benefits, a tax system that encourages the formation of male breadwinner households, and comparatively low female labor force participation leads to a lower occurrence of the added worker effect than in the United States. Nevertheless, some women increase their earnings to compensate their partners' earnings losses. Yet, I observed this mainly among women without children in the household. Mothers rarely add earnings after their partners become displaced. I interpreted this as the consequence of strong gender role expectations in Germany that mothers should mainly care for children. The finding that women without children compensate their partner's losses may be due to women who stayed housewives even as their children grew older. If their partners lose their jobs after the children become self-reliant, they have the capacity to increase their earnings unconstrained from the expectation that "good" mothers stay at home.

Beyond these couple-level and welfare state influences, the analyses also depicted that added worker effect is influenced by labor market related factors. High education proved to be connected to the occurrence of the added worker effect among women who are inactive on the labor market before their partners become displaced in both countries. Thus, education preserves labor market chances. This effect is even stronger in Germany, reflecting the higher importance of educational credentials. Among women who are already working full-time, on the other hand, the effect is reversed: Highly educated women who work full-time are least likely to increase their hours after their partners' job losses in both countries. I interpreted this as an effect of internal labor markets. Highly educated women who work full-time are usually in higher positions where they cannot change

their earnings easily. Their current job may be fixed to a certain amount of hours and changing jobs would forfeit the position they acquired within the internal hierarchy. Low-educated women, on the other hand, presumably work more often in entry-level jobs where changing jobs to increase earnings is easier.

In addition to differences between household types, I also analyzed household income trajectories after job loss in different social strata. With this perspective, I aimed at combining the dynamic and the conventional perspective on social inequality. In this study, I measured social strata as quartiles of post-government household income prior to job loss. The results confirmed the expectations that income trajectories and income buffers after displacements differ between the positions in the social stratification from which the affected originated. Among men, the results differed strongly between the two countries. In Germany, the middle quartiles fared best after job loss, whereas in the United States, the upper quartile had the lowest losses. The pattern among women, on the other hand, is more similar in the two countries: the highest strata lose most in the long run after job loss.

These differences stem from country-specific influences of the market, the family, and the welfare state in each quintile. In Germany, men in middle-class households already have the lowest losses in earnings after job loss. This is presumably due to the portability of skills in the sectors of the labor market they are in. Middle-class men are most likely to be in the occupational labor markets that the German vocational training system generates. The vocational certificates they hold enable them to find a comparably well-paid job in a different firm (Marsden 1990). Those at the margins of the income distribution, on the other hand, are presumably in different segments of the labor market with more firm-specific skills. The results for German women are similar, yet less pronounced. In the United States, there are few differences in men's earnings losses due to displacements between the quartiles. Among American women, by contrast, earnings losses are largest among the upper strata. I expected such an outcome in the United States because of the prevalence of internal labor markets. This labor market structure prohibits labor market re-entry into high positions in the new company because most skills are firm-specific. Instead, most unemployed re-enter in entry-level positions, which causes the highest losses among those who had high earnings before. It remained unclear why I only found this pattern among women in the United States.

The analysis also showed that the magnitudes of the family buffer and the welfare state buffer differ among the strata. The pattern is similar in

both countries and for both genders: the family buffer is higher among the upper strata and the welfare state buffer is higher among the lower strata. The reason for the unequal distribution of family income buffering is assortative mating (Blossfeld 2009). Men and women often form households with partners that have similar education and earnings. Thus, those who are more affluent before displacement are better protected from earnings losses through the family buffer than more deprived households. This is especially apparent among men because women's incomes, which make up the family buffer, differ much more than men's, as indicated above. Further analyses revealed that the difference in the family buffer among the strata is mainly due to existing second incomes in the household. More affluent households more often have two full-time earners. Yet, I also found a slightly higher added worker effect in the upper strata. Given the conclusions about the impact of modern arrangements of paid and unpaid work described above, this is not surprising: Modern couples are both more affluent on average because of two incomes and are more flexible in shifting earner roles between them.

The welfare state buffer is larger among low-income households, mainly because unemployment benefits are only paid relative to previous earnings up to a ceiling in both countries. Beyond a certain labor income, unemployment benefits do not increase anymore. In Germany, the difference in the welfare state buffer between the upper and the lower strata is more pronounced than in the United States. This is presumably due to the existence of a minimum income scheme in Germany. Unlike in the United States, in Germany there is an income below which no unemployed can fall.<sup>44</sup> The closer the household was already to this safety net, the higher is the welfare state buffer. In the United States, on the other hand, there is no universal minimum income scheme. Moreover, some low-income households may not even be eligible for unemployment benefits, because of earnings requirements in some states. Thus, the welfare state offsets the inequality of outcomes that higher family buffers among high-income households generates to some extent.

Overall, this study showed that embedding the trigger events approach in the life course framework leads to a number of important insights that have so far not been considered by other scholars. Most notably, the large differences between household types, both in the incidence and in the

44 Clearly this applies with the exception of sanctions imposed if the unemployed fail to comply with certain requirements such as active job search. The Hartz Reforms increased use of such sanctions.

consequences of displacements, clearly advance the knowledge about the distribution of economic insecurity. Apparently, there is a link between family formation and economic insecurity. This has so far only been analyzed with family formation as a dependent variable (Oppenheimer 2003; Kreyenfeld 2010). A notable exception is the work by Jacob and Kleinert (2014), who analyzed household influences on unemployment duration. Also, the influence of the position within the social stratification has received little attention so far. Previous work addressing this issue provided little insight into the reasons for differences between the strata (DiPrete and McManus 2000b; Vandecasteele 2011, 2015).

My analyses of incidences, consequences, buffering effects, and counter-mobility strategies showed that economic insecurity due to job loss is unequally distributed. Labor market and family influences lead to higher incidences and more severe consequences among already vulnerable groups. The welfare state offsets some of these inequalities. Yet, some groups, like single adult households, single mothers, and low-income households are more affected by economic insecurity due to job loss than others. Furthermore, the distribution of economic insecurity differs significantly between the United States and Germany. Overall, the German welfare state offsets more of the insecurity than its American counterpart. Yet, the German system seems to have blind spots since single mothers in West Germany are faced with high losses after displacements. This results presumably from the more traditional family model in West Germany.

## 8.2 Significance of the findings for current debates

As mentioned in the introduction to this study, job loss and economic insecurity are subject to a number of current public and scientific debates. These debates cover trends over time in insecurity, the distribution of risk, and the efficiency of different welfare state policies in ameliorating economic insecurity. The results of the present study address some of the issues that these debates raised. In the following, I briefly discuss the insights that the results generated in this study contribute to the debates.

In both the United States and Germany, some scholars and journalists reported a general trend toward growing economic insecurity over time (Hacker 2006; Gosselin 2009; Butterwegge 2012). My analyses show whether this increase was due to job loss and unemployment between the 1980s and the 2000s before the Great Recession. In the United States,

the answer is clear among men: Within the period of observation of this study, neither the incidence of job loss, nor its consequences became more severe on average. If anything, job loss and unemployment became less widespread and average losses decreased. This happened despite cut-backs in unemployment insurance. The reasons for this trend are improving labor market circumstances and growing female labor force participation so that fewer couple households relied on men's earnings alone. Clearly, this led to growing economic insecurity after women's job losses in the United States. Thus, the present study also points to gender differences, which have been often overlooked in debates on growing economic insecurity so far. Hence, I conclude, that women's job losses contributed a little to growing economic insecurity. Men's displacements, on the other hand, do not seem to be connected to this trend. Unfortunately, my data did not extend to the time during and after the Great Recession when job loss became a major source of economic instability again (Hout et al. 2011).

In Germany, I found evidence that economic insecurity due to job loss grew over time. However, unlike the claims of many observers this trend is not due to the Hartz Reforms but began much earlier. After reunification in 1990, the German economy entered a downturn. This increased the risk of becoming displaced and entering longer spells of unemployment. Consequently, the scars that displacements leave in household income trajectories increased between the 1980s and the 1990s and subsequently remained at this higher level. Thus, economic insecurity due to job loss grew largely because of unfavorable conditions on the labor market and not because of welfare state reforms. The Hartz Reforms in 2004 only had an indirect effect, according to the results of this study. The reforms, among other things, cut benefits for the long-term unemployed, implemented activation policies, and reduced the regulation of non-standard work. After the reforms, re-employment rates increased; at the same time, household income losses remained high. Thus, many who re-entered the labor market after the Hartz Reforms obtained low-paid jobs that did not improve their economic well-being. Therefore, after the Hartz Reforms, economic insecurity due to job loss, at least as measured in this study, remained the same. Yet, more of those affected by displacements returned to the labor market instead of becoming long term unemployed. Whether being long-term unemployed and poor or employed and poor is more beneficial for them is a different issue that is beyond the scope of the present study (for a discussion, see: Alber and Heisig 2011).

A related debate focuses on the changing distribution of risk within modern capitalist societies. Broadly speaking, there exist two conflicting

points of view: on the one hand, some claim that risks becoming detached from traditional structures of social inequality such as social classes (Beck 1986). Instead, life becomes more precarious for everyone as risks become a “temporal” phenomenon that hit everyone at some point during their life courses (Leisering and Leibfried 1999). The second perspective, on the other hand, insists that risks are still largely structured by social class (Breen 1997; Groh-Samberg 2004). Instead of growing precariousness for everyone, these scholars claim that life becomes riskier only for those who are already disadvantaged. One reason for this may be the accumulation of disadvantages over the life course (DiPrete and Eirich 2006).

The results in this study refute the hypothesis of a uniform impact of displacements regardless of social class. Job loss is a risk that occurs more often among the lower strata throughout the period of observation in both countries studied here. In Germany, there are even signs of a growing inequality in the risk of displacement. The distribution of income trajectories after job loss is also unequal. In the United States, I find that men coming from high-income households fare best after job loss. Thus, the most privileged group is also less affected in the rare case that job loss occurs among them. Among American women, the opposite is true: the upper strata lose most. These two findings are obviously connected, as discussed above: Women in the upper strata contribute more to household income on average. Therefore, their displacements are more severe for household income. In Germany, the middle strata fare best after job loss, whereas those at the margins of the income distribution experience the highest losses. Thus, I do not find the same social gradient as in the incidence of job loss. Apparently, displacements have a high impact among the upper strata in Germany. Yet, the probability that they experience this event is low. These results underscore the importance of considering both the incidence and the consequences of risks to draw conclusions about the distribution of economic insecurity.

Finally, the results in this study also provide insights about the impact of different welfare state regimes on the consequences of job loss. The policy approaches in the United States and Germany to deal with displacements and unemployment differ tremendously. In the United States, welfare state benefits only support the unemployed for a short time; consequently, rapid re-employment is important to maintaining a household's standard of living. Thus, economic well-being after job loss mainly relies on private strategies. In Germany, on the other hand, welfare state benefits are higher and more long-lasting. Even though the German system saw a major overhaul at the beginning of the 2000s with the Hartz Reforms,



as mentioned above, the difference between the two systems remained large. Previous research showed that unemployment leaves greater scars in earnings and household income trajectories in the United States than in Germany (DiPrete and McManus 2000a; Gangl 2004). The reason stated for this difference is that longer-lasting unemployment benefits enable the unemployed to search longer for suitable post-unemployment jobs. This increases the chances of finding a well-paid job. The results in this study confirm the finding that scars in post-government household income trajectories are larger in the United States than in Germany among men. Yet, the difference is no longer as big, as DiPrete and McManus (2000a) observed during the 1980s. This is due to the growth of long-term unemployment in Germany after 1990. Yet, despite this trend, German men fare better after job loss by the standards of this study throughout the period of observation. Among women, losses in post-government household income are almost equal in the two countries on average. Yet, the analyses showed that the group of women is very diverse in both countries. Some, such as single mothers, face huge losses while, for example, marginally employed women in couple households have almost no losses in household income after job loss. Therefore, it is difficult to gauge the effect of the welfare state among them.

Thus, like previous studies, my results confirm the expectation that high and long-lasting unemployment benefits are beneficial for those who lose their jobs in the long run. A welfare state that relies mainly on private initiative, on the other hand, leads to a high incidence of downward social mobility after displacements. Thus, the idea that unemployment benefits lead to rising unemployment and “poverty traps” because they set disincentives to taking up a new job is not supported (Siebert 1997). Instead, the trends over time in Germany suggest that the business cycle seems to play a larger role for the incidence of long-term unemployment than unemployment benefits: Long-term unemployment increased between the 1980s and the 1990s while unemployment benefits remained unchanged. Other studies that examined the determinants of unemployment duration draw similar conclusions (Gangl 2003; Schmieder et al. 2012).

In sum, the present study provided many insights that advance the knowledge about economic insecurity due to job loss in the United States and Germany. In particular, I included a dimension that public and scientific debates on this topic disregarded: the household and the family. This perspective pointed to a number of interesting aspects of economic insecurity that have so far been overlooked. Most notably, it showed the importance of gender and gender roles within households. The impact of



job loss proved to differ strongly among household types and roles within these households. Also, there are indications that unemployment, economic insecurity, and household formation are connected over the life course. This study provided first insights into this issue but further research is needed to ascertain this link.

# Appendix

**Table A.1 Individual characteristics of individuals with and without job loss and subsequent unemployment in eastern Germany**

	Men		Women	
	Cont. employed	Job loss & unempl.	Cont. employed	Job loss & unempl.
Avg. age	38.7	38.5	38.5	38.3
Migrants (%)	1.4	1.9	1.5	2
Avg. weekly work h. in previous job	45	42.9	38.8	35.6
Avg. tenure in previous job (yrs.)	9.1	6.9	9.2	5.7
Avg. yearly labor income (€)	27881	20810	22936	14985
Avg. yearly eq. household income (€)	18016	15469	18843	15856
Industrial sector (%)	49.1	72.8	18.5	33.4
Public sector (%)	29.3	11.8	47.1	32.7
Firm <20 empl. (%)	20.4	27.4	23	28.8
<i>Education</i>				
Without voc. training (%)	2.2	3.8	2.3	3.6
Voc. training (%)	83.6	89.4	71	84.3
Higher edu. (%)	14.1	6.8	26.7	12.1
Education total (%)	100	100	100	100
<i>Occupations</i>				
Legislators, sen. officials, & managers (%)	4.9	4.1	3	2.1
Technicians & associate professionals (%)	15.6	5.1	16.8	9.9
Professionals (%)	12	6.9	34.6	23.8

	Men		Women	
	Cont. employed	Job loss & unempl.	Cont. employed	Job loss & unempl.
Clerks (%)	3.3	2.1	18.3	15.8
Service Workers & shop & market sales w. (%)	5.9	2.7	14.7	20.5
Skilled agricultural & fishery Workers (%)	1.6	2.5	.5	4.4
Craft and related trades workers (%)	34.3	50.4	5.2	7.1
Plant and machine operators and assemblers (%)	13.9	18.7	2.1	3.3
Elementary occupations (%)	8	7.5	4.7	13
Occupations total (%)	100	100	100	100

All variables measured two years prior to job loss.

Sources: GSOEP and CNEF, author's calculations

**Table A.2 Household characteristics of persons with and without job loss and subsequent unemployment in eastern Germany**

	<b>E. Germany, Men</b>	
	<b>Cont. employed</b>	<b>Job loss &amp; unempl.</b>
Avg. household size	3.2	3.1
Avg. no. of children 0-18	1.1	1.1
<i>Household types</i>		
Single w/o kids	9.5	13.1
Single w/ kids (%)	1	1.4
Couple w/ kids (%)	64.7	65.9
Couple w/o kids (%)	14.5	12.5
Other (%)	10.3	7.2
Household types total (%)	100	100

	<b>E. Germany, Women</b>	
	<b>Cont. employed</b>	<b>Job loss &amp; unempl.</b>
Avg. household size	3.2	3.3
Avg. no. of children 0-18	1	1.1
<i>Household types</i>		
Single w/o kids	5.4	2.1
Single w/ kids (%)	6.1	10.7
Couple w/ kids (%)	58.9	63.4
Couple w/o kids (%)	15.4	12.1
Other (%)	14.1	11.8
Household types total (%)	100	100

All variables measured two years prior to job loss.

Sources: GSOEP and CNEF, author's calculations

Table A.3 Descriptive statistics of the matched and unmatched samples for the analysis of income changes in eastern Germany

	East Germany					
	Men			Women		
	Matched Cont. employed	Job loss & unempl.	Not matched Job loss & unempl.	Matched Cont. employed	Job loss & unempl.	Not matched Job loss & unempl.
Avg. age	39.1	38.7	40.1	38.6	38.9	39.1
Migrants (%)	0	0	5.6	0	0	11.6
Avg. weekly work h. in previous job	45.1	44.8	40.1	39.5	38	34.8
Avg. tenure in previous job (yrs.)	7.9	7.6	5.7	6.8	5.9	6.6
Avg. yearly labor income (€)	22436	21497	22919	16659	15808	19335
Avg. yearly eq. household income (€)	15484	15655	16611	15894	16083	17788
<i>Sector</i>						
Industrial sector (%)	73.9	73.9	57.4	28.7	28.7	44.2
Service sector (%)	14	15.4	29.6	38.3	38.2	16.3
Public sector (%)	12.1	10.6	13	33	33.1	39.5
Firm <20 empl. (%)	29.6	32.4	33.3	26.5	35.6	34.9
<i>Occupation (Selection)</i>						
Craft and related trades workers (%)	52.1	53.4	34	6.7	8.7	4.7
Elementary occupations (%)	9.7	6.5	15.1	9.7	15.5	7
<i>Education</i>						
Without voc. training (%)	2.8	2.8	9.3	1.5	1.5	11.6
Voc. training (%)	94.6	94.6	70.4	90.7	90.7	60.5
Higher edu. (%)	2.6	2.6	20.4	7.8	7.8	27.9
<i>Household</i>						
Single parent (%)	0	0	5.6	5.2	5.2	16.3
Single household (%)	6.8	6.8	27.8	1.3	1.3	4.7
N Episodes	1763	255	54	1275	163	43

All variables measured two years prior to job loss.

Sources: GSOEP and CNEF, author's calculations

**Table A.4** Descriptive statistics of the matched and unmatched samples for the analysis of the AWE in eastern Germany

	East Germany		
	Women		
	<i>Matched</i>		<i>Not matched</i>
	Without PUE	With PUE	With PUE
<i>Employment</i>			
Avg. weekly work hours	30.9	31.3	30.4
Not employed (%)	17.8	17.8	15.9
Industrial sector (%)	16	16	29.5
Service sector (%)	32.2	30.2	22.7
Public sector (%)	34	35.9	31.8
Avg. yearly labor income (€)	16976	16836	14653
Avg. HH income share (%)	34.8	36.4	34.4
<i>Children</i>			
w/ children <16 in HH (%)	61.2	61.2	63.6
w/ children <5 in HH (%)	12.1	12.1	27.3
<i>Education</i>			
Without voc. training (%)	1.1	1.1	22.7
Voc. Training (%)	79.4	79.4	47.7
Higher Education (%)	19.6	19.6	29.5
<i>Sociodemographics</i>			
Avg. Age	38.7	38.5	38
Migrant (%)	0	0	6.8
Avg. yearly eq. hh. inc. (€)	17004	16871	15165
<i>Partner</i>			
Partner w/o Voc. Tr. (%)	1.1	1.1	22.7
Partner Voc. Training (%)	94.7	94.7	59.1
Partner Higher Edu. (%)	4.3	4.3	18.2
Partner's tenure (yrs.)	7.6	7.2	8.6
N Episodes	2435	281	44

All variables measured two years prior to job loss.

Sources: GSOEP and CNEF, author's calculations



# List of Abbreviations

AFDC	Aid to Families with Dependent Children
ATT	Average Treatment Effect on the Treated
AWE	Added Worker Effect
CA	Cumulative Advantage
CEM	Coarsened Exact Matching
CIA	Conditional Independence Assumption
CNEF	Cross National Equivalence File
DiD	Difference-in-Difference
EITC	Earned Income Tax Credit
EPL	Employment Protection Legislation
FATT	Feasible Average Treatment Effect on the Treated
GDR	German Democratic Republic
GSOEP	German Socio Economic Panel
ILM	Internal Labor Markets
OECD	Organization for Economic Co-operation and Development
OLM	Occupational Labor Markets
PSID	Panel Study of Income Dynamics
PSM	Propensity Score Matching
PUE	Partner's Unemployment
SEO	Survey of Economic Opportunity
SNAP	Supplemental Nutrition Assistance Program
SRC	Survey Research Center at the University of Michigan
TANF	Temporary Aid for Needy Families
UI	Unemployment Insurance
US	United States of America





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# Index

- Added Worker Effect (AWE)  
definition 43-44, 187  
household influences on 54, 207-211, 214-217  
labor market influences on 33-34, 54-55,  
204-207  
welfare state influences on 33, 55, 207-211
- Aid to Families with Dependent Children  
(AFDC) 71, 148
- Americanization 16
- Arbeitslosengeld* *see* Unemployment benefits,  
Germany
- Arbeitslosengeld II* *see* Unemployment benefits  
II, Germany
- Arbeitslosenhilfe* *see* Unemployment assistance
- Average Treatment Effect (ATE) 84
- Average Treatment Effect on the Treated (ATT)  
85-86
- Childcare 74, 129, 137-138, 167-168
- Childbirth 45-46, 58, 61
- Coarsened Exact Matching 90-92
- Counter mobility strategies 41-42, 50, 52, 225-226
- Counterfactual approach to causality 84-85
- Credentialism 55, 76
- Cross National Equivalence File (CNEF) 95-96
- Cumulative Advantage/Disadvantage 21, 56
- Decommodification 19, 80-81
- Difference-in-Difference (DiD) estimation 87-88
- Dual-earner households *see* Household earning  
arrangements
- Earned Income Tax Credit (EITC) 71, 148
- Earnings *see* Labor earnings
- Economic  
insecurity 16-17  
well-being 36, 98-99
- Education  
effects on the added worker effect 189,  
204-207  
effects on the consequences of job loss 146  
effects on the incidence of job loss 48-49
- Educational homogamy 64, 146-147
- Employment insecurity 24-26
- Employment Protection Legislation (EPL)  
25-27, 29, 78-79
- Family *see also* Household  
break-up 61-62, 103, 120-123, 193-194  
definition of 43, 102-103  
formation 59-61  
income buffer 51-55 99-100, 157-162  
income support 51-52  
policy 74
- Female homemaker *see* Gendered division of  
labor
- Female labor force participation *see* Labor force  
participation rate
- Food Stamps *see* Supplemental Nutrition  
Assistance Program
- Foregone earnings 149
- Gender  
norms 45, 52-54  
pay gap 45
- Gendered division of labor 45, 52-54, 78-80,  
189-190
- German Reunification 77-78
- German Socio-Economic Panel (GSOEP) 94-95
- Hartz Reforms, 71-72, 178-179, 231
- Homogamy *see* Educational homogamy
- Hours constraints 54-55
- Household *see also* Family  
composition 102-103  
earning arrangements 52-53, 79-80, 220-221  
definition 43, 102-103  
dynamics 120-123  
income 36, 96-99  
types 103
- Human Capital Theory 47-48
- Income  
buffering 36, 96-100 *see also* Family income  
buffer, Welfare state buffer  
dynamics *see* Income volatility  
labor *see* Labor earnings  
sources 15, 36, 96-99  
tax 73-74  
volatility 16-17
- Income loss due to job loss  
household effects on 162-168  
stratification of 168-176  
welfare state effects on 157-162
- Individual earnings *see* Labor earnings
- Internal Labor Markets *see* Labor market  
segmentation
- Job loss  
definition 100-102  
involuntary 100-101
- Job security 24-26
- Joint taxation 73-74
- Labor earnings 28-29, 99, 157-162
- Labor force participation rate (male/female)  
78-80



- Labor market
  - segmentation 49, 75, 146
  - structure 46-50, 75-81
- Life course
  - regime 18-19, 38
  - research 17-18, 35, 37
  - sociology 18-19, 37-42, 44-46
- Linked life courses 44-46
- Male-breadwinner household *see* Gendered division of labor, Household earning arrangements
- Maternal penalty *see* Motherhood penalty
- Marital break-up *see* Family break up
- Market-family-state nexus 16, 19
- Marriage premium 56-58
- Minimum income scheme 69-73
- Mobility regime 17, 41
- Motherhood penalty 57-59
- New Home Economics 43-44
- Non-standard employment 77-78
- Occupations 104-105, 114-115
- Occupational Labor Markets *see* Labor market segmentation
- Panel Study of Income Dynamics (PSID) 92-94
- Parallel trends assumption 87, 155
- Partnership formation *see* Household dynamics
- Part-time employment 53, 79, 204-207
- Poverty
  - Dynamics 29-30, 39
  - entry due to job loss 29-30
  - measurement of 29, 71
- Precarious jobs *see* Non-standard employment
- Propensity Score Matching 88-90
- Re-employment 26, 123-127
- Risk
  - aversion 129, 134
  - management 39
- Scarring effects of unemployment 28, 63, 144, 160, 178-179
- Search Theory 47-48
- Signaling Theory 47
- Single-adult household
  - risk of job loss of 128-129, 131-134
  - income losses due to job loss of 162-168
- Single-earner household *see* Household earnings arrangements
- Single-mother household
  - risk of job loss of 128-129, 131-138
  - income losses due to job loss of 162-168
- Social Assistance 39
- Sozialhilfe* *see* Social Assistance
- Stratification
  - of welfare state benefits 19, 147
  - social 16-17, 21, 39, 55-56, 103-104
- Supplemental Nutrition Assistance Program (SNAP) 70-71
- Survey weights 91-92
- Taxation *see* Income tax
- Temporary Aid for Needy Families (TANF) 71, 148
- Trigger events approach 17-20
- Unemployment
  - Assistance (Germany) 71-72
  - Benefits (Germany) 71
  - Benefits II (Germany) 72
  - duration 26-27, 47-48, 123-127
  - insurance (UI) (United States) 69-71
  - rate 76-77
- Welfare Reform (United States) 70-71
- Welfare state
  - income buffer 36, 99, 157-162
  - influence on income losses *see* Welfare state income buffer
  - influence on the AWE 55, 190-191, 210-211
  - regimes 19, 22
- Work-family interface 44