Shifted labor market risks? The changing economic consequences of job loss in the United States and western Germany *

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This article analyzes how institutional changes influence income mobility around job loss in the United States and western Germany. Drawing both on an analysis of changes in provisions for the unemployed and on panel data from the Panel Study of Income Dynamics (PSID) and the German Socio-Economic panel (GSOEP), I demonstrate that the material well-being of American households hit by job loss has decreased substantially over time because of retrenchment, while unemployed German households have experienced only little deterioration of their economic well-being despite worsening labor market circumstances. The analysis also reveals that women in the United States are especially disadvantaged by job loss because, in their case, the withdrawal of the state has not been counteracted by an increase in influence on the part of the family.

1 Introduction

In contemporary Western societies, labor income is the primary source of income for most households. However, labor markets are volatile places and prone to generate risks such

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as job loss. Many countries have created institutions to counteract these risks. Although all such institutions have the same goal, their actual set-up varies tremendously across nations. Together with the market and the family, these institutions form nation specific "regimes" that govern material well-being in the event of job loss (Esping-Andersen, 1990; Gallie and Paugam, 2000).

These regimes are changing over time, however. The changing distribution of market risk has played a prominent role in recent debates about the development of welfare regimes. Breen (1997) argues that the "hedging" of labor market risks through the welfare state, the family, and firms has declined. Individuals now have to bear more of the consequences than in the past. The same line of argument was followed by Hacker (2006) and extended beyond the labor market. According to his research, a "great risk shift" has decreased public coverage of basically all the risks faced by households in the United States.

Hacker's notion of the "great risk shift" comprises the claim that existing institutions in cushioning the consequences of the risks have been retrenched. Although his work is limited to the United States, similar observations have also been made in Germany. Seeleib-Kaiser (2002), for example, shows that the coverage of "old" risks like unemployment has been gradually decreased and replaced by the coverage of "new" risks such as family break-up (also see Alber, 2003). This parallel development has led some to suggest that the American and German social models are converging (Gilbert, 2002).

The aim of this paper is to ascertain whether these propositions are true. I want to investigate how institutional change in the realm of unemployment protection has affected the way the market, the state, and the family influence people's economic well-being in the United States and Germany. In the comparative literature these two countries have been described as exhibiting strongly differing welfare state regimes. The American "liberal" regime builds more on individual responsibility while in the German "conservative" regime, the state does much more to offset risks (DiPrete and McManus, 2000; Gangl, 2003). Both welfare states however have to face similar developments on the labor market and in family composition. In the United States, the number of insecure and precarious jobs is growing (Farber, 2008; Kalleberg, 2009). In Germany, too, employment insecurity has been increased by the growth of temporary employment (Leschke, 2008). In addition, households are changing in both countries. The number of male-breadwinner families is declining, while dual-earner and single-person households are gaining in importance (Jacobs and Gerson, 2001; Daly, 2005). Hence, this allows me to investigate the effects of institutional changes in two differing welfare states that are faced with similar challenges.

This work builds on recent comparative literature that traces the influence of institutions on income instability and social stratification (e.g.: Fritzell, 1990; Goodin et al., 1999; McManus and DiPrete, 2000; Gangl, 2005). This longitudinal perspective on income inequality highlighted the importance of "trigger events" DiPrete (2002) such as job loss or divorce in individual life courses for social stratification. Previous research demonstrated that each country has a distinct way to moderate the effects such disruptive events (DiPrete and McManus, 2000; Gangl, 2006). The market, the state, and the family shape the incidence as well as the short- and long-term consequences of

events during the life course. For example, the labor market governs the incidence of job loss and its consequences through re-employment probabilities; the state buffers income losses due to job loss through benefits; and the family buffers the same income losses through the income of other earners. The effects are obviously interconnected through the behavioral responses they generate. If, for example, state protection is weakening, as is supposed under the concept of the "risk shift", people might return to the labor market more quickly or other family members might have to increase their working hours in order to maintain household income. Hence, all three factors have to be considered if we want to understand if and why the economic consequences of job loss have changed.

There has already been much research on the economic consequences of job loss and on the influence of institutions in comparative perspective. However, some have focused mainly on poverty rates or entry into poverty (Nolan et al., 2000; McGinnity, 2004). This perspective ignores those who lose their jobs without entering poverty. Hence, the state, market, and family buffering mechanisms are not captured for the whole population. The literature on earnings mobility (e.g., Gangl, 2004, 2006), by contrast, has shown how post-unemployment wages are influenced by different institutional structures but has not linked this to household income with a view to estimating the impact on overall material well-being. These important approaches are combined in the work of DiPrete and McManus (2000), who decomposed the income package around job loss and other trigger events into labor earnings, pre-government (pre-tax/transfer) household income, and post-government (post-tax/transfer) household income. As a result, the specific influences of the state, the market, and the family in shaping income mobility could be determined. However, the authors compared the configurations of these three factors only between two countries. The discussion above has shown, however, that the regimes themselves are also likely to change over time. This paper therefore goes beyond previous work by studying how the influence of the state, the market, and the family on the economic consequences of job loss has changed over time. This approach allows me to judge if reforms have reduced the public coverage of this risk and thus changed the regimes.

The paper proceeds as follows. First, I provide an overview of the social protection of unemployment in Germany and the United States and its changes since the 1980s. On the basis of this information, I formulate hypotheses about consequences for the unemployed. To test these, I then model how job loss affects the economic well-being of households and how the losses in income due to job loss are buffered by the market, the family, and the welfare state. A discussion of the results concludes the paper.

2 The social protection of unemployment in the United States and Germany

The welfare states in the United States and Germany differ fundamentally. The former is often seen as the prototype of a "liberal" welfare regime. Here, the state does little to offset the risks generated by the labor market. The main consideration behind this approach is that people should primarily help themselves in times of need; only those

who cannot do so deserve public assistance. Germany, on the other hand, represents the ideal type of the "conservative" regime, where state influence is greater and is especially tailored to preserve status differences through extensive and long-lasting benefits (Esping-Andersen, 1990). In the following, I elaborate how these approaches are reflected in the public coverage of unemployment. I then show how these institutions have changed and formulate hypotheses about the impact of the institutions on the well-being of households in the case of job loss.[1]

United States

In the United States, there are two types of public programs which may protect against the economic consequences of unemployment: unemployment insurance and targeted minimum income schemes. Unemployment insurance 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[2] — leading to a wide variety of unemployment compensation policies throughout the country. There are no federal standards on duration of regular benefits (from state programs), benefit amounts, or qualifying requirements. In all but two states, the maximum duration of regular benefits is 26 weeks. In times of recession and particularly high unemployment, the state programs can be extended by the federal government.

Replacement rates vary strongly across the United States. Although the benefit formulas of most states are geared to replace about one half of lost wages, the actual aggregate wage-replacement rate was around 35% between the 1980s and the 2000s.[3] The individual states have also developed diverse and complex methods for determining eligibility. The most important qualifying criterion for unemployment insurance is total wages previous to job loss. These qualifying wages vary in terms of both their amount and their definition across the different states. In 2008, the average amount of the required total earnings in the year previous to unemployment was around $2,000. In some states, however, the required sum is more than twice this amount. This can be a huge barrier 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 earning the federal minimum wage did not satisfy the earnings requirement in 8 states (Wenger, 2001).

In addition to unemployment insurance, there are targeted programs that are not directly connected to job loss but provide a minimum income to those with no job and to low-wage earners. Among these programs, food stamps have the widest coverage. The benefit amount of this in-kind transfer is rather low, however. Single mothers with children can apply for the Temporary Aid for Needy Families (TANF) (pre-1996: Aid to Families with Dependent Children, AFDC), which also provides rather low benefits.

[1] This section is based on summaries of the two systems and their changes between the early 1980s and 2007 by Grell (2010) and Wörz (2010).

[2] Exemptions are all seasonal and agricultural workers employed on small farms, workers who are classified as self-employed, household workers with very low wages, and employees of religious organizations, who enjoy a general tax exemption in the United States.

[3] The wage-replacement rate is the average weekly benefit as a percentage of the average wages of covered workers.

Finally, there is federal housing assistance, but this program has always remained quite small in terms of coverage. Furthermore, unemployed workers are also not protected against the loss of health insurance and other fringe benefits formerly provided by their employers. Nonetheless, if income falls below a certain threshold, Medicaid, a public health insurance for the poor, might be available. When talking about American 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.

This basic structure of unemployment insurance remained largely unaltered from the beginning of the 1980s to the mid-2000s. Changes were, however, made with respect to benefit generosity and eligibility criteria. During the 1980s, the federal government tightened the policy regarding loans to states in cases of depleted unemployment trust funds. This forced many states to cut the costs of their programs by tightening eligibility criteria and reducing expenditure (US General Accounting Office, 1993). In 1986, all unemployment benefits became subject to federal income tax, which further reduced the amount paid out. In the 1990s, the eligibility criteria of many states were tightened again. In particular, the wage and work-tenure requirements for accessing the programs were raised. In addition, active job search was made compulsory. On the other hand, a few states actually raised the maximum benefits, thus increasing the variety of the programs across the states.

The targeted minimum income scheme for families subject to a retrenchment in 1996 with the so called "welfare reform". The introduction of TANF meant much stricter eligibility and work requirements for those applying for benefits. Moreover, the maximum duration for receipt of TANF was limited to five years. At the same time, the government raised benefits for those in low-wage employment. Most notably, the EITC was expanded, while access to food stamps was also facilitated for low-wage earners. These measures shifted the American welfare state in the direction of "work conditioned public support," as Blank (2010) puts it.

In sum, the American system of social protection for the unemployed is characterized by rather low benefits and strict eligibility criteria, mirroring the "liberal" conception of the welfare state. Earnings requirements stand out, especially, as a huge barrier for many unemployed. But beyond that, the system also lacks a safety net at the bottom. For many, failure to receive unemployment compensation thus means no cash benefits at all. At best, food stamps might be available in these cases. Over time, the institutions have also lost protective power through tightened eligibility criteria and reduced benefits, which have made the programs less accessible and less attractive for the unemployed. This is visible in the beneficiary rate of all programs for the unemployed, which fell from around 50% at the beginning of the 1980s to around 35% in the 1990s and 2000s (Committee on Ways & Means, 2008). At the same time, public benefits have been tied to work to a greater extent.

Germany

In Germany, we find a much more uniform institutional set-up, given that unemployment insurance is administered at the federal level. However, there has been a structural change over time. In 2004, the government transformed the formerly three-tier system into a two-tier system by means of the *Hartz Reformen* (Hartz reforms), which revised the second two tiers. The first tier, unemployment benefits (*Arbeitslosengeld*) remained largely unchanged during our observation period. Unemployment benefits cover all those previously in dependent employment with the exemption of people aged 65 years or older, civil servants, and people in marginal employment. It provides the unemployed with an earnings-related benefit. Since 1998, the unemployed receive 67% of their former net wages if they live with children and 60% if they live without children.[4] The normal duration of benefits is one year after having worked in insured employment for about two years. The minimum work history that grants eligibility for a reduced duration of unemployment benefits is one year. Hence, in contrast to the United States, eligibility in Germany is based on the length of the spell of insured work previous to unemployment.

The second tier that existed until 2004 was unemployment assistance (*Arbeitslosenhilfe*), which was paid to those unemployed who had exhausted their benefit claims or did not qualify for the first tier.[5] Here, the benefits were still wage-related, but they were lower. Before the reform of unemployment assistance, unemployed with children received 57% and those without children 53% of their former income. In contrast to unemployment benefits, this benefit was means tested and the duration of the benefit was unlimited. The third tier was social assistance (*Sozialhilfe*). This universal minimum income scheme had never been conceived as a social protection in cases of unemployment, but unemployed people whose benefits from the first two tiers were below the *Sozialhilfe* level because of low pre-unemployment wages were able to claim it. Unlike in the United States, in this and all other programs, the unemployed remain covered by public health insurance.

The 2004 reforms among other things abolished unemployment assistance and established a new benefit for those unemployed who are not entitled to unemployment benefits and called it "unemployment benefits II" (*Arbeitslosengeld II*). This institution accommodates all recipients of unemployment assistance and those on social assistance who are able to work. Although, like the former unemployment assistance, it is directly targeted at the unemployed, its benefits are equal for all recipients, as in social assistance. Hence, the wage-related benefit was replaced by a flat-rate benefit for the long-term unemployed.[6]

Apart from this major change in the social protection of unemployment, there were more minor changes in eligibility criteria and benefit generosity. Benefit cuts in 1994 reduced the replacement rates for both unemployment benefit and assistance by one to

[4] The maximum payout is limited by an upper ceiling in the assessment basis. In 2007, the ceiling for gross earnings amounted to €5,250 per month.

[5] The receipt of unemployment assistance without prior receipt of unemployment benefits was called *originäre Arbeitslosenhilfe* (original unemployment assistance). It required 150 days of insured employment.

[6] In 2009, €359 for single households plus accommodation costs.

three percentage points. This reform and the 2004 reform also strengthened sanctions for those unemployed who did not take up work and extended the definition of suitable work. In 2000, as a forerunner of the 2004 reforms, the possibility of receiving unemployment assistance without the prior receipt of unemployment benefits was discontinued. Hence, those unemployed not qualifying for unemployment benefits eventually had to rely on social assistance.

This overview shows that the social protection of the unemployed in Germany reflects the conservative welfare regime. The more generous system especially benefits those in standard, long-term employment and provides benefits for a long period. Unlike in the United States, there is a safety net at the bottom in the form of an unlimited benefit scheme. This safety net was heavily cut back in 2004, however. The reforms of the first tier were minor in comparison. The new system especially disadvantages unemployed people who did not achieve the necessary time in insured employment.

Summing up the institutional description for the two countries, there are different degrees of a "risk shift" in the form of retrenchment. The generosity of the unemployment insurances has declined in both countries since the 1980s. The magnitude of this retrenchment was much greater in the United States than in Germany, however. These developments have been rather minor in comparison to the retrenchment in the minimum income schemes in both countries. The 1996 welfare reform in the United States and the 2004 Hartz reforms in Germany both substantially cut the existing provisions in this respect. Despite this common trend, there are still huge differences in the level of protection. In Germany, replacement rates are much higher and there is also a universal minimum income scheme unlike in the United States. Thus, instead of becoming more alike or even converging toward one model, the two systems actually seem to have moved in the same direction without converging. The gap between the two systems seems to be more or less constant over time.

So far, the institutional analysis has shown that the protection against the risk of job loss differs much between the two countries and has changed over time. From this, I formulated the following hypotheses about differences and changes in the economic consequences of job loss.

Hypotheses

The hypotheses are divided into cross-country and within-country hypotheses. First, the A hypotheses formulate expectations about country differences:

- A1: The influence of the welfare state on disposable household income following unemployment is greater in western Germany than in the United States (because of the more generous welfare-state benefits).

- A2: The influence of the welfare state is declining over time in both countries but is not converging (because of retrenchments in both countries and persisting differences in public coverage of the risk).

The B hypotheses formulate expectations regarding only the United States over time:

- B1: The influence of the welfare state on disposable household income *in the year of the event* declined between the 1980s and the 2000s (because of the retrenchments in unemployment insurance and the taxation of benefits).
- B2: The gain in disposable household income following a return to work has increased over time (because of the expansion of the EITC).
- B3: The influence of the welfare state on the disposable household incomes of female-headed households hit by unemployment decreased after 1996 (because of the welfare reform).

The C hypotheses formulate expectations regarding only western Germany over time:

- C1: The influence of the welfare state *in the year of the event* decreased after 1994 (because of the reductions in the replacement rate).
- C2: The influence of the welfare state on post-government household income decreased for the long-term unemployed after 2004 (because of the Hartz reforms).

3 Data and operationalization

The analyses are based on microdata from two household panels – the "Panel Study of Income Dynamics" (PSID) for the United States and the "German Socio-Economic Panel Study" (GSOEP) for Germany. For both data sets, a set of comparable variables is available through the "Cross-National Equivalent File" (CNEF) (Frick et al., 2007). The PSID was initially a yearly survey, but after 1997 the data has been collected biennially. Although information was also gathered in the off years, the conductors of the survey advise against its usage because of differing non-response patterns. Hence, from 1997 onward, only two-year changes in income can be measured. The GSOEP, on the other hand, offers yearly data from 1984 to 2008, all of which is available in the CNEF. I restrict the analysis in Germany to the pre-unification territory, thus excluding the new states (*Neue Bundesländer*) after 1990 so as to avoid changes in the population over time. With a view to roughly covering the same period in the two countries, I use PSID data from 1980 to 2007

In order to measure the influence of the market, the family, and the welfare state on the economic well-being of households, I decompose the households' income packages into three components, as proposed by DiPrete and McManus (2000). The first is *individual labor earnings*. The second is *household pre-government income*. This is defined as the sum of all market incomes in a household. The third measure is *household post-government income*. This is equal to disposable household income, defined as pre-government income with public transfers added and taxes subtracted.

The income variables used are from the CNEF. They contain information about yearly income in the year prior to the interview. 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 income for household size using the new OECD equivalence scale.[7]

Job loss is defined as moving from work to unemployment. This definition deviates from the work of DiPrete and McManus (2000), who used the transition from work to no-work as an indicator. In this way, however, they capture all types of job exits, which means they also include persons who leave the labor market for reasons other than job loss, for example because of childcare responsibilities. I focus on job loss in this paper because I want to measure the changing effects of welfare-state institutions that safeguard against this type of event only. The transition from work to unemployment is a good indicator for this because, in this case, a person exits from a job but still remains on the labor market. To further exclude transitions to unemployment that are not due to job loss, I only included persons aged 25 to 55. Before and after this age bracket, unemployment may occur because of transitions from or to education or because of early retirement.

Detailed information about labor force status is not provided in the CNEF. Hence, we revert to the original data sets. The most detailed and longitudinally consistent information about labor force status in the PSID is the time in work and unemployment. Respondents were asked for how many weeks of the previous year they were working or not working and actively looking for a job. To construct a comparable measure in the GSOEP, data from the activity calendar is used. 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, p. 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 summed up the number of months each year. This obviously removes the information about the timing of job loss, but because this information is not available in the PSID either, the comparable measure I chose seems the best compromise.

Using the variables described above, I defined the event as more than two months of unemployment in year t and more than seven months of work in year t-1. I deliberately excluded shorter spells because they are likely to be labor market churning and not a risk. Because of the above-mentioned data limitations, I cannot ensure that the months in work or unemployment are consecutive. This implies for example that three measured months in unemployment could be individual spells separated by spells of work during a year. Also, I cannot detect in which year the spell began[8] However, since the income data are only available for whole years, the coarseness of the indicator is presumably not of great significance.

Both data sets offer weights that account for sample stratification and attrition bias. The methods for deriving these weights differ, however, between the two surveys. To

[7] 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.

[8] This 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. I deleted the second event in such cases.

US Men

Year	N	Avg. LE	Δ LE	Avg. PrG	Δ PrG	Avg. PoG	Δ PoG	Var PoG	Δ PoG
-1		35101		28265		22533		.66	
0	2090	22805	-12296	21942	-6324	19889	-2644	.77	.11

US Women

Year	N	Avg. LE	Δ LE	Avg. PrG	Δ PrG	Avg. PoG	Δ PoG	Var PoG	Δ PoG
-1		21256		29139		23395		.61	
0	1729	12880	-8376	25631	-3508	21994	-1400	.81	.2

Western Germany Men

Year	N	Avg. LE	Δ LE	Avg. PrG	Δ PrG	Avg. PoG	Δ PoG	Var PoG	Δ PoG
-1		27621		23539		18029		.46	
0	1132	13275	-14346	14890	-8648	15937	-2092	.51	.05

Western Germany Women

Year	N	Avg. LE	Δ LE	Avg. PrG	Δ PrG	Avg. PoG	Δ PoG	Var PoG	Δ PoG
-1		18258		25396		19433		.49	
0	952	7822	-10436	19004	-6392	18068	-1365	.52	.03

Table 1: Average incomes and variation of incomes around job loss. LE: Labor earnings; PrG: Pre-government equalized household income; PoG: Post-government equalized household income. Var.: Coefficient of variation. Sources: CNEF, PSID, and GSOEP, weighted.

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account for this, a set of "comparability optimized weights" was created by Kohler (2009). These weights consist of the original sampling weights and longitudinal weights based on staying probabilities that were similarly calculated. All results are generated using these weights.

4 Empirical Results

4.1 Descriptives

Table 1 summarizes the variables described above. In the United States, there are about 2000 job-loss events for men and women, respectively. In western Germany, the number amounts to about 1000 for each gender. In both countries, men had higher average labor earnings previous to the event. The equalized household incomes are quite similar between the sexes, however. Losses in all income categories are greater among men in both countries. This shows that women's incomes are frequently not the main source of income in a household. Men's unemployment damages the economic well-being of households much more than does that of women.

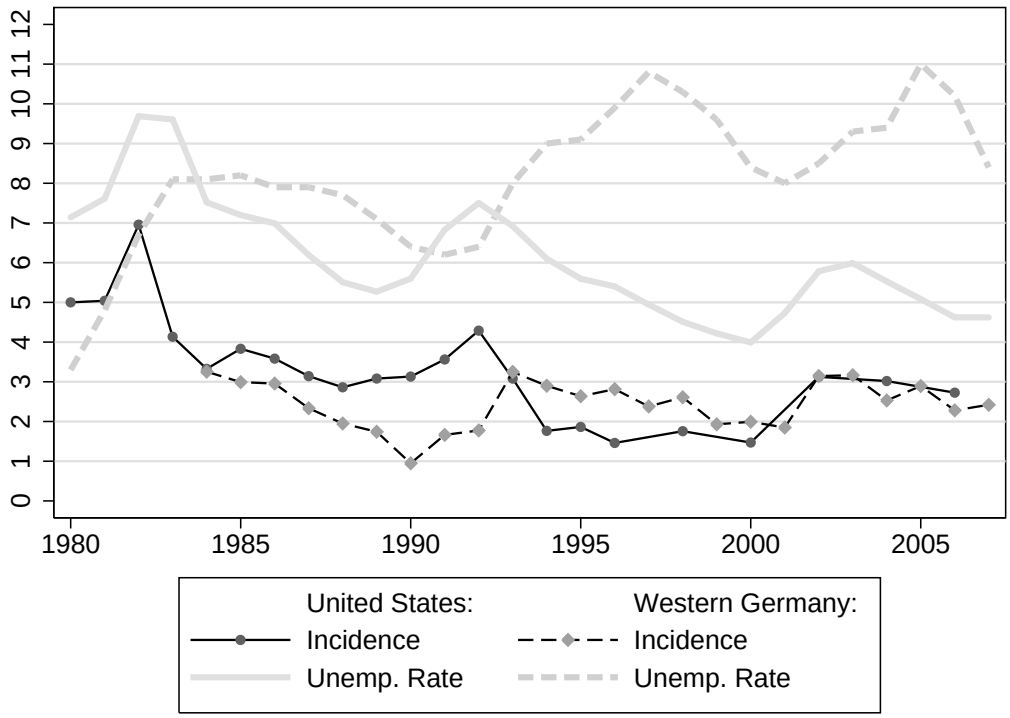

Figure 1: Unemployment incidence (>2 months) and prevalence in the United States and western Germany as a percentage of the labor force 25-55. Sources: incidence: PSID and GSOEP, author's calculations, weighted; prevalence: OECD.Stat & Bundesagentur für Arbeit.

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Generally, the variation of post-government household income is greater in the United States than in Germany. This mirrors the greater income inequality in the United States (Smeeding, 2005). Table 1 also shows a result of the differing institutional set-up between the two countries. The variance of post-government income grows much more after job loss in the United States than in Germany. This is likely to be because of the less uniform unemployment insurance system. The differing American insurance schemes on the state level generate a greater variety of outcomes than the uniform German system.

Figure 1 shows the incidence of the event indicator over time, i.e. the percentage of the 25 to 55 year olds moving from employment to unemployment during a year. It reveals that in the United States slightly more employees experienced job loss as defined here than in the western part of Germany until about the beginning of the 1990s. Later, western Germany showed a greater incidence rate – during the recession in the 1990s – until the rates converged at about 3% in the 2000s.

The gray lines in the background in Figure 1 show the yearly unemployment rates, i.e. the stock of unemployment in a year. The comparison between the two measures

reveals the different dynamics of unemployment in the two countries. In the United States, falling unemployment rates were accompanied by falling incidence rates until the 2000s. In the latest decade however, the incidence increased stronger than the stock. In western Germany, even with falling or stagnating incidence rates, the unemployment rate soared after the mid-1990s. This reflects the steady rise of long-term unemployment in western Germany. Hence, the risk of becoming unemployed has not changed much, but the risk of staying unemployed has risen considerably.

4.2 Modeling the effect

In this section, I use multiple regression to estimate income losses due to unemployment as well as the family and state buffering effects. The dependent variable is log income. Job loss is an event that can occur several times during the life course. The years around the events may overlap and it is thus not easy to ascertain which event led to which outcome. I therefore extracted panels of seven years (three before, three after) for each event[9] and added a comparison group containing those who did not become unemployed. To account for unobserved heterogeneity on the individual level, I use a fixed-effects model that removes all variation between the event panels and the persons in the control group. Because the observations in the panels and within the persons are correlated, I used clustered standard errors on the level of the primary sampling units. Control variables include household size, labor force status of the partner, and year dummies to control for macro-level changes. The independent variable "job loss" is entered as a 0/1 dummy indicating the year of the event and subsequent years (Allison, 1994). The coefficients of the models therefore indicate the loss in log income in the respective years after job loss compared to the time previous to job loss and to the control group who did not become unemployed. The losses are thus relative to the hypothetical situation where the person did not become unemployed.

Following the approach of DiPrete and McManus (2000), I estimate the family effect and the state effect using the coefficients for job loss from the models described above. First, I transformed the coefficients into percentage losses (here termed $\widehat{\delta}$)[10]. The family effect is defined as the difference of the percentage loss from the model of labor earnings and the percentage loss from the model of pre-government household income as a percentage of the percentage loss from the model of pre-government household income:

$$\widehat{\text{Family effect}} = \frac{\widehat{\delta}^{LE} - \widehat{\delta}^{PrG}}{\widehat{\delta}^{LE}}$$

The state effect is likewise calculated with the estimated losses from the models of pre-government household income and post-government household income:

$$\widehat{\text{State effect}} = \frac{\widehat{\delta}^{PrG} - \widehat{\delta}^{PoG}}{\widehat{\delta}^{PrG}}$$

[9] This means that if a person lost his job three times there will be three (possibly overlapping) panels containing his data.

[10] $\widehat{\delta} = ((\exp^{\widehat{\beta}} - 1) * 100)$ where $\widehat{\beta}$ are the coefficients from the models.

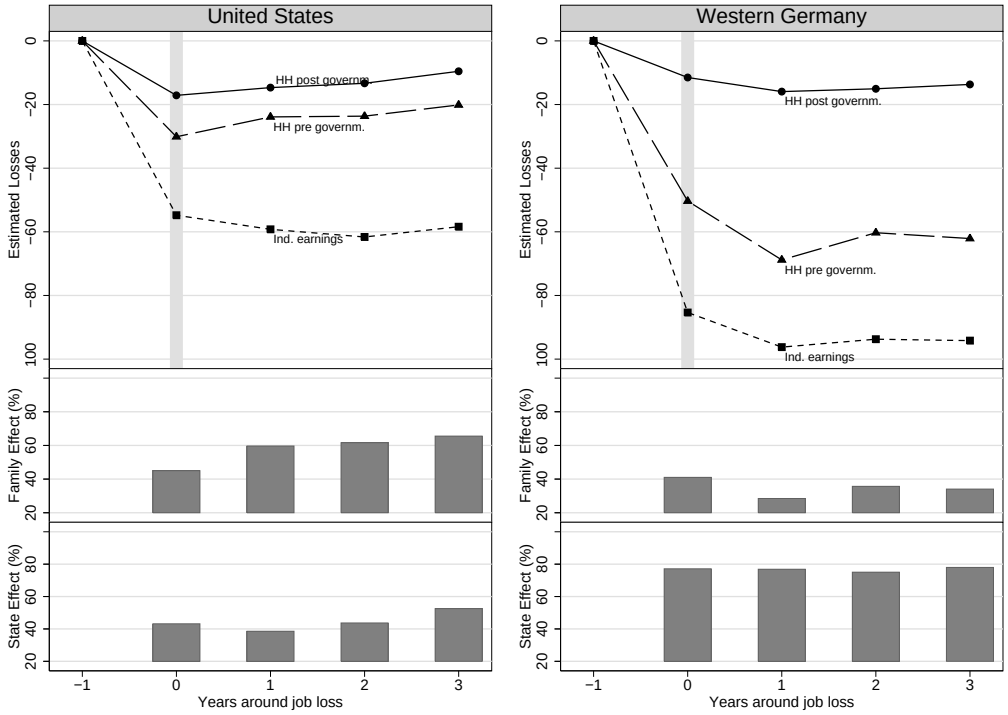

Figure 2: Coefficients from the pooled model, family effect, and welfare-state effect. Estimated losses are in log $ or €. Sources: CNEF, PSID, and GSOEP, author's calculations.

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In other words, these effects signify which proportion of the $ or € lost through job loss is buffered by the family and the state.

So, what do these effects look like in the two countries? In Figure 2, I graphed the percentage losses from the models and the buffering effects for the years around job loss. The cross-country hypothesis A1 – that the influence of the welfare state is weaker in the United States – can be confirmed looking at the lower panels of Figure 2. The American system buffers about 40% of the losses on average, whereas the German state ameliorates about 80%. This confirms the findings by DiPrete and McManus (2000). There is, however, a increase in the state effect in the United States between the first and the third year after job loss. This may be due to the EITC, which amplifies income gains through re-employment.

Overall, there are greater market-income losses in western Germany. Individual earnings, especially, fall much more sharply after job loss. This can be explained by the longer unemployment durations in western Germany since the 1990s, as described in Section 4.1. Both countries exhibit only a weak upward trend for individual earnings, and people affected by job loss do not return to the earnings level they would have had

without job loss within three years on average. Germans, however, face much higher earnings losses in the long run after job loss. After taxes and transfers, the losses are much more similar, but still families do not recover within three years. These findings do not support the results by DiPrete and McManus (2000), who calculated that Germans recover from job loss within three years and Americans within seven. However, these authors used a different estimation technique, which compared income over the whole life cycle with the income at the time of the event. My analysis, by contrast, focuses on the direct comparison with pre-unemployment income. Since lifetime incomes are presumably lower on average than income prior to the event, changes become more pronounced. My analysis therefore more directly captures the situation the households are in.

The family plays a different role in alleviating the losses in the two countries, as Figure 2 shows. In the United States, the family is much more important than in Germany. In addition, the American family effect actually becomes stronger in the years after job loss. This indicates a growth in labor supply by other household members. In western Germany, the family effect is lower, and there is no increase in the impact. Thus, Americans on average benefit from the rising income of a second earner, while in western Germany there is a constantly lower effect.

The question now is whether these effects changed over time. Hypotheses B1 and C1 stated that the influence of the welfare state directly after job loss deteriorated over time in both countries because of retrenchments in unemployment insurance. In the United States, I expected to find decreases over the whole period of observation. In western Germany, replacement rates were cut in 1994. Figure 3 shows the estimated state effect in the year of job loss in the three decades. In the United States, the state effect decreased between the 1980s and the later decades, as Figure 3 shows. This confirms hypothesis B2: The cuts in unemployment insurance are visible here. In western Germany, the state effect does not decrease as expected but rather increases slightly. Hypothesis C1 can therefore not be confirmed, there seems to be no real change in the way the state influences household income in the year of job loss in Germany.

Section 4.1 showed that re-employment dynamics vary both between the countries and over time. This clearly influences the calculations above since average losses in the years after job loss also depend on the share of people who returned to employment. But how do those who did not return to work fare and how does the state cater for them? To answer these questions I used a modified model that also differentiates between those who returned to the labor market and those who stayed unemployed.[11] The job-loss variable is now coded as one in all years after the event, thus yielding a permanent effect in the three years following job loss. Also, the effects for men and women are separated because of the differing labor market behavior.

Table 2 shows the coefficients from this model. Note that the effects of job loss are now for those who did not return to employment within three years, i.e. the long term unemployed. The changes over time are displayed as interaction effects, i.e., they must

[11] I set the re-employment variable to one if more than six months of work are reported in the year following job loss. This implies that the effect of returning in the year of job loss cannot be captured.

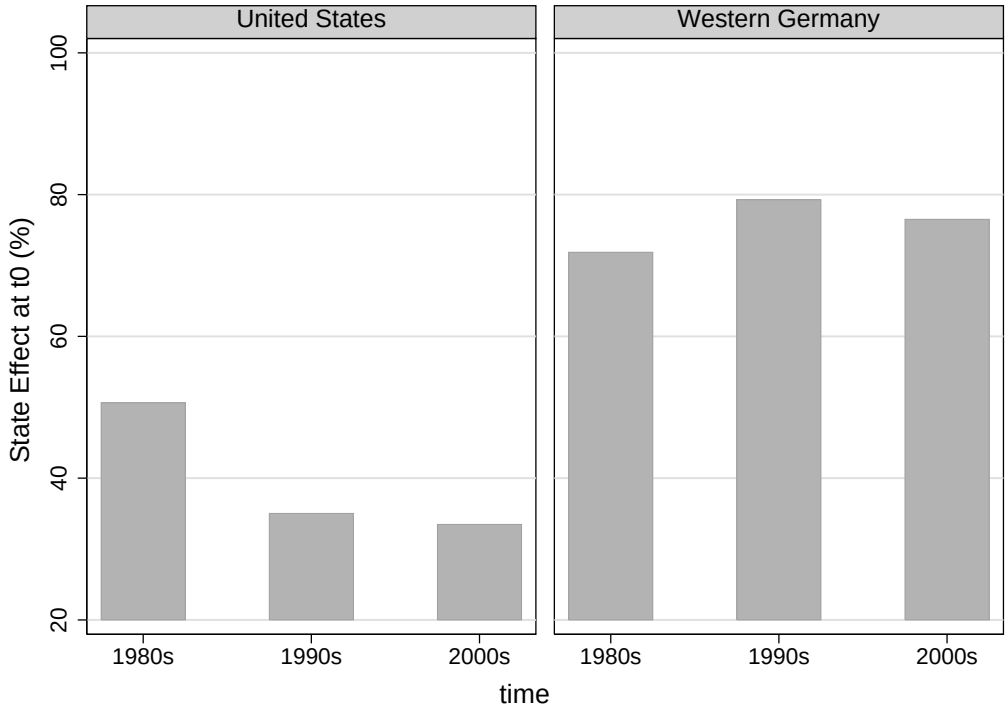

Figure 3: Estimated welfare-state effect in the year of job loss. Sources: CNEF, PSID, and GSOEP, author's calculations.

Do-File: *model_spells_dec_coeffs.do*

	Men					
	United States			Western Germany		
	(1)	(2)	(3)	(4)	(5)	(6)
	Ind	PrG	PoG	Ind	PrG	PoG
Unemployment	-1.309***	-0.652***	-0.250***	-2.667***	-1.298***	-0.194***
	(-24.68)	(-14.43)	(-16.81)	(-8.44)	(-5.31)	(-4.78)
Re-Employment	-0.0745**	-0.0815***	-0.0585***	-0.207	-0.108	-0.0249
	(-3.00)	(-4.58)	(-4.26)	(-1.37)	(-0.97)	(-0.49)
Unemployment * 1990s	0.440***	0.230***	-0.00607	-1.129**	-0.403	-0.0326
	(4.10)	(4.73)	(-0.23)	(-2.64)	(-1.27)	(-0.68)
Re-Employment * 1990s	-0.101	-0.00612	-0.0570*	-0.569**	-0.241	-0.0455
	(-1.19)	(-0.19)	(-2.20)	(-2.72)	(-1.79)	(-0.78)
Unemployment * 2000s	-0.678	-0.106	-0.256	-1.339**	-0.640	-0.0729
	(-1.95)	(-0.58)	(-1.86)	(-2.92)	(-1.84)	(-1.36)
Re-Employment * 2000s	-0.405*	-0.0291	0.00396	-0.589*	-0.313	-0.0866
	(-2.29)	(-0.40)	(0.06)	(-2.45)	(-1.85)	(-1.46)
Person-years	53129	53129	53129	27813	27813	27813
Avg. obs. per resp./episode	9.4	9.4	9.4	11.7	11.7	11.7
R-Sq. (within)	0.02	0.03	0.06	0.12	0.12	0.16

	Women					
	United States			Western Germany		
	(1)	(2)	(3)	(4)	(5)	(6)
	Ind	PrG	PoG	Ind	PrG	PoG
Unemployment	-1.721***	-0.411***	-0.147***	-5.173***	-0.676***	-0.186***
	(-12.03)	(-3.63)	(-3.99)	(-12.31)	(-6.08)	(-5.53)
Re-Employment	-0.220**	0.0837	0.0204	-1.161***	0.0263	0.00516
	(-3.02)	(1.55)	(1.10)	(-3.95)	(0.33)	(0.12)
Unemployment * 1990s	0.0671	0.0767	-0.0394	0.998*	-0.227	0.0494
	(0.44)	(0.62)	(-0.67)	(2.04)	(-1.19)	(0.95)
Re-Employment * 1990s	0.0406	-0.0673	-0.0589*	0.0885	-0.113	-0.0441
	(0.36)	(-1.11)	(-2.02)	(0.26)	(-1.00)	(-0.79)
Unemployment * 2000s	-0.336	-0.490	-0.405*	1.402**	-0.707**	-0.0131
	(-0.92)	(-1.81)	(-2.56)	(2.62)	(-2.61)	(-0.23)
Re-Employment * 2000s	0.129	-0.258	-0.187	0.368	-0.345*	-0.101
	(1.46)	(-1.51)	(-1.58)	(1.06)	(-2.49)	(-1.68)
Person-years	68119	68119	68119	28326	28326	28326
Avg. obs. per resp./episode	10.1	10.1	10.1	11.8	11.8	11.8
R-Sq. (within)	0.03	0.01	0.04	0.09	0.06	0.11

Table 2: Estimated income losses after unemployment at different points in time. Men and women 25-55. Sources: CNEF, PSID, and GSOEP.

Do-File: *modelovertime_sex.do*

be interpreted as changes compared to the effect in the 1980s. In the first decade, there is basically the same pattern as in the previous analyses: the losses in labor earnings and pre-government income in the United States are lower than in western Germany but post-government losses are much more similar. Household income losses through female unemployment are lower, reflecting the lower share of income women contribute on average.

The coefficients for re-employment show the difference between the incomes in the old and the new job. In the United States, those returning to work come closer to the labor earnings they would have had without job loss than in western Germany. This implies that there are greater earnings-scarring effects through job loss in western Germany – a result that is contrary to the findings by Gangl (2004, 2006), who calculated that income scarring is greater in the United States than in western Germany. The method used here is less suited to estimating scarring effects, however, since I cannot distinguish between individual jobs.

In the 1990s in the United States, the losses in pre-government household income declined, while the losses in post-government income stayed the same for both men and women. In the 2000s, all interactions of job loss with the decade are negative, hence losses increased. If no new job was found, household income remained at a much lower level than before. In the models of post-government income, the coefficient for re-employment in the 2000s did not change as much as the coefficient for unemployment. This shows that the relative gain in post-government income through re-employment increased. This confirms hypothesis B2 which stated that the expansion of the EITC would increase the re-employment gains in post-government income[12]. Hence, this analysis shows the increasing importance of labor earnings for household income in the United States (Blank, 2010). Long term unemployed in the United States are much worse off in the 2000s than in the 1980s.

In western Germany, household pre-government income losses increased for both sexes, as Table 2 shows. Job loss seems to affect total household incomes more in the later decades. Post-government household income losses, however, do not change as much. Only the coefficient for job loss of males in the 2000s comes close to having a substantial effect. Long-term unemployed males in the 2000s had about seven percentage points less disposable income than in the 1980s. Women on the other hand did not fare worse over time.

How are these losses shaped by the family and the state? Figure 4 shows that the family effect increased over time in the United States for men. This may be due to the growing labor market participation of women, which has increased the number of earners in households. For German men in contrast, the family effect remains on a very low level and even declines slightly. Thus, they do not seem to benefit from the increase in womens employment. An explanation for this may be that wifes in Germany often work part time and thus do not contribute much to household income. But for women, the family effect decreased over time in both countries. This is presumably due to the

[12]The results are not due to the change to biennial interviews. A model using only every other year in the years before the change yielded the same results.

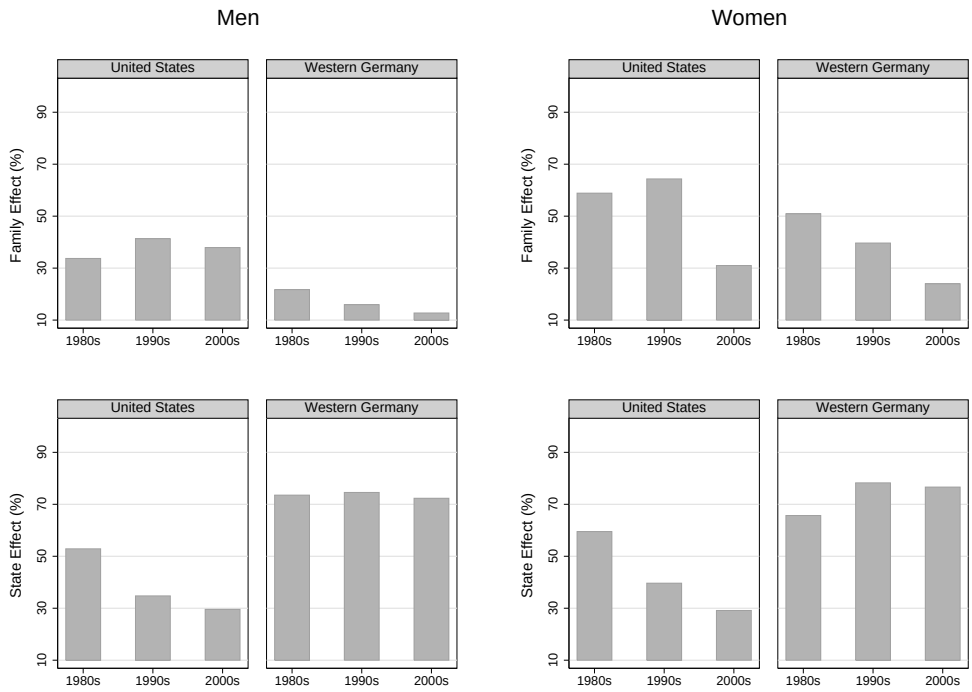

Figure 4: Estimated family and welfare-state effects for persons remaining unemployed. Sources: CNEF, PSID, and GSOEP, author's calculations.

Do-File: *modelovertime_coeffs.do*

growing number of single female-headed households.

Figure 4 also shows that, as expected, the state effect clearly decreased in the United States for both sexes over time. For men, the lower influence of the state is counteracted by the growing influence of the family. For women, however, both state and family influence decrease, which leads to the huge increase in post-government losses for them reported in Table 2. The growth of single female-headed households and the retrenchment of cash welfare has generated a precarious situation for many unemployed women.

In western Germany, the state effect was stable for men and grew slightly for women in comparison to the 1980s. This clearly refutes hypothesis C2, which stated that the state effect should decrease because of the Hartz reforms[13]. The growth of the state effect for women presumably counteracted the decreasing influence of the family. In the 1980s, more women lived in households where a husband could help them in the event of unemployment, so the state did not have to step in. Gradually, however, more women became the sole earners in their households, which then needed help from the state if they lost their jobs. Hence, the total losses in post-government income do not change for them as Table 2 showed. The stagnating state effect for men poses a puzzle, however, since the Hartz reforms clearly cut benefits for the long-term unemployed.

So, why is there no Hartz Reform effect visible in the state effect? A possible explanation is the composition of the unemployed. Previous research showed that unemployment is increasingly concentrated among the lowly educated, and hence lowly payed in Germany (Erlinghagen, 2006; Giesecke and Heisig, 2010). Since the German welfare state has a universal minimum income, there is a floor effect for losses in post-government income. This can influence the welfare state effect since pre-government income can still fall while post-government income already reached the floor level. Here the indicator by DiPrete and McManus (2000) meets its limits. Actually, households with unemployed males faced somewhat higher losses in the 2000s as shown in Table 2. But looking at the state effect and the family effect, it seems to be more the slightly declining support of other household members – presumably because of the bad labor market circumstances – that causes the losses. Unfortunately, there are very few data available for after the reform. Thus, the results for the influence of the Hartz Reform are preliminary and require further examination as soon as more data is available.

Thus, these analyses suggest that while the American welfare state lost protective power, the German system largely remained powerful at smoothing income after job loss. The trend toward female employment and dual-earner couples somehow alleviates the retrenchment for men in the United States. But for American women, the family became less efficient and could not counteract the decreasing state protection. The following analysis therefore focuses on female household heads to show the impact of the reform on this vulnerable group.

The welfare reform in the United States affected female-headed households the most because the reformed AFDC was especially tailored to help them. Table 3 displays the above model for female-headed households only. As in Table 2, there is a negative inter-

[13]Even if only years after the reform are considered, no effect is visible.

	United States Female HH heads		
	(1) Ind	(2) PrG	(3) PoG
Unemployment	-1.451***	-0.990***	-0.276***
	(-10.49)	(-5.00)	(-9.09)
Re-Employment	0.255*	0.109	0.00921
	(2.63)	(1.09)	(0.43)
Unemployment * post-1996	-0.740*	-0.242	-0.536**
	(-2.20)	(-0.68)	(-3.01)
Re-Employment * post-1996	-0.408*	-0.283	-0.233
	(-2.59)	(-1.64)	(-1.82)
Respondents	3306	3306	3306
Obs. per resp.	6.1	6.1	6.1
R-Sq. (within)	0.02	0.03	0.03

Table 3: Estimated income losses after unemployment at different points in time. Female household heads 25-55. Sources: CNEF, PSID, and GSOEP.

Do-File: *modelovertime_ffh_us.do*

action effect in the 2000s, but here it is even stronger. When female-headed households are hit by job loss and longer unemployment they already lose more because there is presumably no-one else in the household who can find a job. While these losses were somewhat buffered by the state in the period previous to the welfare reform, now these households face much deeper drops in post-government income. The change in post-government income exceeds the change in pre-government income. Hence, hypothesis B4 is confirmed: The welfare reform reduced the influence of the state on the disposable income of female-headed households hit by job loss.[14]

Re-employment hence became more important after the reform. But there is more income scarring than before as the coefficient for re-employment in the model of post-government income shows. The coefficients for re-employment are much more negative after 1996. Presumably, the welfare reform pushed unemployed women into worse jobs. The welfare reform was praised by some commentators for its achievements in integrating more single mothers into the labor market and thus alleviating child poverty (Haskins, 2004). This analysis shows the dark side of this development, however. If a job is lost, losses are enormous and state help is small on average. As a result, the families depend more on market income than before. This poses a great problem for single mothers who face barriers to the labor market (Blank, 2010).

The comparison of the two countries over time reveals that there is no convergence. Instead, the United States clearly reduced state influence, while western Germany maintained a high level of influence, as the previous analyses showed. Hence, hypothesis D2, stating that the two systems are moving in the same direction, cannot be confirmed. Instead, the American system became even more strongly based on market and family

[14] Again, this also holds when biennial data is used in the whole sample.

solutions to job loss. In Germany, the state even increased its influence on the incomes of unemployed women. Only long-term unemployed men seem to be slightly worse off. Summing up, the two systems actually moved further away from each other.

5 Discussion

This analysis adds to the growing literature about how the market, the family, and the state shape social stratification in cross-national perspective (e.g., Fritzell, 1990; Goodin et al., 1999; DiPrete and McManus, 2000; McManus and DiPrete, 2000; DiPrete, 2002; Gangl, 2005). I extended this line of research by including institutional change over time. I showed how changes in the institutions within a country influence individual economic well-being around job loss. My analysis also revealed how the market, the state, and the family interacted if one of these institutions changed.

My point of departure was the claim by observers of social policy that the burden of life-course risks like job loss was being shifted away from public to private coverage through retrenchments of social policy. From the analysis of the institutions, I concluded that there has been a decrease of the public coverage of unemployment in both countries. But how did these changes translate in terms of the material well-being of individuals? To work this out, I tested several hypotheses with household panel data.

First, I inspected differences between the two countries. In line with DiPrete and McManus (2000), I could confirm the hypothesis that the influence of the welfare state is generally greater in western Germany than in the United States. The support of other household members, on the contrary, is more important in the United States to offset the earnings losses. In sum, the average losses in disposable income are roughly equal, but American households have to rely more on private strategies.

But how have these effects changed over time within the two countries? I showed that the retrenchments in unemployment insurance are visible in a decreased influence of the state on income in the year of the event in the United States. On the other hand, the gain of returning to work increased over time as the negative income tax EITC was expanded. This is especially visible for female household heads, which was the only group that could claim an unlimited minimum income in the United States previous to welfare reform. Thus, the burden of unemployment was clearly shifted away from public to private coverage in the United States. As an effect, households affected by unemployment face bigger income losses in the 2000s than in the 1980s.

In western Germany, I could not find changes in the state influence on the incomes of the unemployed contrary to the expectations derived from the analysis of the institutions. Neither did I find that the cuts in unemployment insurance in 1994 affected households, nor was there an impact of the shift from earnings-related to flat-rate benefits for the long-term unemployed in 2004. Nevertheless, households in which a man becomes long term unemployed are somewhat worse off in the 2000s than in the 1980s. But the analyses suggested that this likely to be due to decreased support by other household members.

Finally, I tested the hypothesis that there is a convergence between the United States

and western Germany in terms of the state influence on the economic consequences of unemployment. However, the analyses showed that the two countries actually grew apart over time. While the influence of the state on the effects of job loss clearly decreased in the United States, I found no such development in western Germany. Although the labor market circumstances worsened in western Germany and long-term unemployment grew over time, the state largely had the same influence on the incomes of households affected by unemployment. It may be that the full effect of the Hartz reforms in 2004 cannot yet be measured, so further analyses are needed as more data become available.

The analysis thus showed how retrenchments in the welfare state in the United States influenced the effects of job loss on individuals. The market gained importance as the state retreated, confirming the notion of a "risk shift" (Hacker, 2006). For unemployed men, this was somewhat offset by the increased labor force participation of wives. For long-term unemployed women, especially those in single-headed households, the retrenchment of the welfare state had devastating effects. In western Germany, I did not find a decrease in the state influence on household incomes after job loss. But the changing role of the family is clearly visible. Hence, the two regimes changed into two directions: In the United States, private strategies became even more important even as changes in household composition made this more difficult for some women. In Germany, the changes in household composition and on the labor market were buffered by the state. Hence public programs became more important for the economic well-being of Germans.

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