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Penalties and Rewards of Family
Formation: Poverty Risk and
Status Passages in the Low
Income Sector in Germany

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Biographical Information

Silke Aisenbrey is a Postdoctoral Associate at the Center for Research on Inequality and the Life Course at Yale University. She obtained her PhD at the Ludwig-Maximilians University at Munich (Germany). Her dissertation, “Risks of Poverty: Education, Occupation and Family Status as Protection Against Poverty?” examines the characteristics and structures that either protect individuals and households from remaining in the low-income sector or keep them paralyzed in poverty. Her research interests lie in the areas of social inequality, sociology of education, gender inequality, welfare states and the life course. She works with quantitative methods, with a particular interest in longitudinal data analysis (especially optimal matching analysis and panel regression).

**Penalties and Rewards of Family Formation: Poverty Risk and Status Passages in the Low
Income Sector in Germany**

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Abstract:

This article examines the differential effects of changes in family structure on men's and women's economic vulnerability. The motivating question is whether investments in human capital provide sufficient resources to escape the risks of poverty or if changes in household characteristics, defined in terms of the entry and exit of partners with different labor market profiles, are more important determinants of one's economic status. The analysis focuses on households in the low-income sector in Germany, a population that is at high risk of poverty in a social welfare state that is expected to mitigate the effects of changes in family structure independent of gender. Findings from panel regression analysis demonstrate that women, in contrast to men, benefit as much as or more from investing in traditional family formations than in their own labor market position. This is especially the case for women with lower levels of education.

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INTRODUCTION

Recent research on inequality has challenged us to examine different conceptualizations of family structure, as well as the role of education, in accounting for the accumulation of life chances of women and men throughout the life course. Most of this work, however, focuses either on the effects of family disruption defined narrowly (e.g., marriage, divorce, childbearing) or individual investments in education and labor market experience. However, this dichotomy makes little sense when we recognize that families are composed of individuals who themselves carry different levels of human capital and who therefore enter and exit households with different bundles of chances for (positive and negative) welfare attainment. This distinction becomes especially problematic when considering individuals at risk of poverty, whose chances of economic stability or upward mobility are much more uncertain than those at the higher end of the income spectrum (DiPrete 2002). And, as we know, this vulnerability is even more pronounced for women than for men, especially for those women who choose to live in nontraditional family structures.

One framework for understanding these different aspects of economic vulnerability is the concept of cumulative dis/advantages, introduced first by Merton (1968) to explain inequality in science and, more recently, to the vocabulary of life course research by O’Rand (1996). Cumulative dis/advantages in the life course, the accumulation of value and rewards, are generated as a result of the interaction between institutional arrangements and individual trajectories over the life course, “with advantages going to those with early and sustained attainments within institutional contexts that assign value and extend protection and reward” (O’Rand 1996: 231). Specific settings—that vary over time and states—influence the

determinant effect of interrelated institutional arrangements on the accumulation of dis/advantages over the life course. More recently, DiPrete (2006) discusses the concept of cumulative advantages in the social sciences and summarizes different empirical approaches to operationalizing the concept.

Another perspective on these issues can be derived from research on the welfare state and its influence on gender relations (see, e.g., Orloff 1993). Rewards and penalties in welfare status that are related to choices about, and changes in, family structure are embedded in the context of the welfare state. This approach focuses on the question of how support for women by the welfare state to establish and maintain a household independent of a male breadwinner influences women's life chances. Does the welfare state protect women from economic danger outside of the traditional family, or is it still the case that "women are 'a husband away from poverty'" (Orloff 1993:319)?

This article attempts to integrate the human capital and family formation perspectives in the context of gendered welfare state policies by examining whether investing in one's own education protects against or promotes the risks of poverty more effectively than investing in partners who have the ability to significantly alter one's own life chances. The focus is on the rewards and penalties stemming from cumulative advantages over the life course in the setting of the German welfare state for cohorts born over the second half of the 20th century. The analysis starts in an early phase of the life course, with primary and secondary education, and points out how this "early institutional attainment" is rewarded or penalized, especially in terms of the accumulation of dis/advantages at later stages in the life course resulting from family structure and occupation. The analysis centers on households in the low-income sector in Germany, a population at high risk of economic instability in the context of a protective social welfare state.

The results demonstrate that women who find new partners have a good chance of escaping their economically vulnerable positions; in particular, finding an employed partner brings more economic resources into their households than finding employment themselves. Men's welfare status is more immune to changes in family structure.

CUMULATIVE DIS/ADVANTAGES: EDUCATION, FAMILY FORMATION, AND THE WELFARE STATE

Economic vulnerability and returns to education

Even though there is very little empirical research on the interplay of family changes with other traditionally important sources of economic mobility, we do know a lot about the forces that drive individual economic mobility: Gender, education and employment status, especially in interaction, are some of the most promising sources of economic standing and therefore also the best predictors of economic well-being and mobility.

Human capital theory suggests that economic rewards for employment depend on skills, which are represented by factors like education and former work experience. Education in that sense can be interpreted as an investment to increase productivity. The implicit assumption is that education has an increasing effect on productivity and therefore on economic rewards (Becker 1964). Educational attainment serves as a fairly good guarantee for higher wages, upward mobility and a higher standard of living, as well as a protection mechanism against poverty in general (Klemm 2000; Bowles, Gintis 2000). The concepts of education and mobility are tightly linked through occupation. Education as a resource is accumulated on the individual level and is, in comparison to other resources, a persistent, lifelong capital for individuals (Ashenfelter, Rouse 2000). From an international perspective, both the lifelong effect and the

tight link, are especially strong in Germany. Because of the early selection in the life course toward academic or vocational educational tracks and the low permeability between these tracks for future education (Shavit and Mueller 2000; Henz 1997), early schooling has lifelong effects. Educational certificates structure access to further education and to the occupational system to a much higher degree than this is the case, for example, in the United States. As a result, the educational system and the occupational system in Germany are highly coupled. Education determines occupational success more than in other countries (Allmendinger 1989) and education plays a lifelong and decisive role for the interplay of occupation, income and mobility.

At the same time that education is a guarantee for higher occupational and economic status, studies show that educational poverty comes with the great danger of being paralyzed in economic poverty in Germany (Hacket et al. 2001). Other studies, however find evidence that education plays a role in keeping poverty a short-term experience, independent of occupation. Empirical research on these indirect educational effects finds different strategies for dealing with poverty, depending on the educational level (Leisering and Leibfried 1999).

Research also consistently shows that these mechanisms are not gender blind at either the individual or institutional level. There is little doubt about the greater economic vulnerability that women face over their life course compared to men, but there is also no doubt that this greater vulnerability is contingent on individual levels of human capital. At the macro level, men receive greater employment payoffs with higher education than do women in the industrialized world (Nickell and Bell 1996). The extent of the gender wage gap might differ from country to country, but not its significance: women receive fewer economic rewards for their skills. We also know that the gender wage gap can't be explained away solely with skills, or

with work experience and educational differences between men and women (see e.g. Brueckner 2005, Aisenbrey and Brueckner 2006).

Research on the effects of education focuses almost exclusively on individual wage attainment. In this paper, I look at returns from education from a different perspective. Returns from education are examined in the context of overall household income. This approach builds on research on family formation and the assumption that concentrating on individual wages overlooks the influence of household changes on welfare status (see e.g. DiPrete 2002, DiPrete and McManus 2000, Duncan et al. 1993).

Economic vulnerability and family structure

Determining family change as a crucial event for the welfare status of individuals goes back to the beginning of the 20th century. In 1901, Rowntree concluded that “the great opportunity for a labourer to save money is after he reached manhood, and before marriage” (Rowntree, 1901: 188). Which types of changes in family structure lead to positive or negative changes in the living standards of individuals has changed over the last century and varies across countries. Despite Germany’s elaborate system of public transfers and family policies, there is still evidence for the persistent pattern of men’s higher economic gains and women’s higher economic losses from family formation and disruption (Burkhauser et al. 1991, DiPrete 2002). In a comparative study of Germany and the US, Burkhauser et al. (1991) demonstrate the failure of the German welfare state in preventing women from economic threats due to family disruption. They provisionally conclude that “Germany appears less able than the United States to protect divorcing women from reductions in relative income status” (Burkhauser et al. 1991: 358). Looking at the same two countries, DiPrete and McManus (2000) demonstrate that women in

both countries are more influenced by changes in family formation than men. Men in both countries experienced no significant decrease in their economic status from union dissolution. Looking at the effects of the welfare state, DiPrete and McManus find that, in contrast to Burkhauser, the welfare state reduces the negative economic consequences of union dissolutions for women.

In a recent analysis of Germany, Andress and Guellner (2001) show that the danger of poverty doubles after a couple separates, especially for women and children. Sørensen (1994), in a comparative study between Germany, the US and Sweden, demonstrates that women experience higher income declines after a separation than do their former partners, even after including financial support paid by former partners. In a study comparing eight different countries, Duncan et al. (1993) discover that separation for a German couple is nearly as dangerous as losing a job for dropping into poverty. In all of the other countries examined, job loss is the more crucial event. Although Duncan et al. don't estimate separate effects for men and women, these outstanding results for Germany could be driven by the disadvantages the women face due to their low employment rates (DiPrete 2000).

For the United States, McManus and DiPrete (2001) suggest a temporal shift in the implications of divorce for men, due to the increasing diversity of couple-headed households (decline in marital fertility, rise in cohabitation, stepfamilies), the increase of the female labor force participation, the decline of the gender gap in earnings and the enforced decrease in child support. They show that "most men do not experience gains in their living standards. In fact, men's economic outcomes following separation and divorce are heterogeneous, with a majority of losers but a sizeable core of winners"(McManus and DiPrete 2001: 266).¹

Other studies do not focus on family formation and welfare status in the same sense, but concentrate on wage penalties for motherhood. Budig and England (2001), for example, demonstrate that, overall, the wages for mothers in the US are seven percent lower compared to women with no children. This difference increases with the number of children. Women with three children earn 22 percent less than women with no children. In addition, Waldfogel (1997) finds that the wage penalty for children is highly dependent on race and education.

Combining the results from research on family formation—which suggests that the economic situation of women is more sensitive to family formation—and research on education—which finds that lower education makes one’s economic situation more vulnerable, especially for women—a puzzle still remains: What is the effect of educational returns for men and women, especially education in combination with employment, in comparison to the economic consequences of family formation? How the economic consequences of family formation vary across the educational and income distribution remains an open question (DiPrete and McManus 2000). I approach these questions with a focus on the low-income sector and compare welfare rewards and penalties of changes in family structure across different educational levels in Germany.

Economic vulnerability in the German Welfare State

European welfare states are often expected to mute the effects of extreme economic crises on an individual level, such as family disruption or unemployment. However, with respect to the economic threat of family disruption, research reveals the opposite; the German welfare state seems to be much more efficient in reducing threats to the standard of living of traditional (not single headed) families in comparison to non-traditional families (Hauser and Semrau 1990,

Buchhofer 1980, Burkhauser et al. 1991). German welfare policy concentrates on traditional family formations with one main breadwinner (male or female) and one homemaker (e.g. Maier 1993, Holst and Maier 1998). Models where both members of a couple share an equal workload in and out of the household are hardly supported by the state. Women's employment is not actively supported by the state in the same way that it is, for example, in the Swedish welfare model (Stier 2001, Maier 2002).

Supporting traditional family formation/the main breadwinner model is a double-edged sword for women: In an ongoing relationship, women have no incentives to support their own careers by participating in the labor force; and, after a breakup, women are left with less labor market experience and therefore fewer chances for earning higher wages. By supporting traditional family formations, the German welfare state makes it difficult for women to support children outside of marriage and without access to the income of a male breadwinner. In this context, Orloff (1993) introduces a new dimension to the, historically gender blind, welfare state research, i.e., the "capacity to form and maintain an autonomous household" (319) for women outside the traditional family models.

The combination of Germany's tax and educational system provides an incentive structure rewarding family decisions in favor of traditional family models: "Marriage tax splitting" offers savings for married couples; the savings are smallest for couples with the most equal incomes. In the case of divorce, the main breadwinner is punished with a loss of tax benefits, even though he or she has to support the former partner and children. In addition to the incentives set by the tax system, the lack of an affordable childcare system, with few childcare options for children under three and half-day kindergarten and school makes a dual earner

household even less attractive. By offering fewer services, “Germany promotes housewives” (Orloff 1993: 312).

In addition to an incentive structure supporting traditional families, the core of the German welfare system is based on an insurance principle: state benefits such as unemployment and retirement are distributed according to former contributions. Besides insurance-based benefits such as unemployment support, there are multiple subsidy mechanisms that are independent of prior contributions, so called universal benefits. These benefits, which are independent of employment status and prior employment, are either meant to protect citizens from poverty or support them, for example, in improving their own education or raising their children. In general, all state benefits are meant to loosen individual dependency on the labor market (Esping-Andersen and Korpi 1987).

In short, family politics in Germany mainly supports traditional male-dominated family models. There is no active support for non-traditional models, such as active labor market integration for women; there is an incentive structure for the main breadwinner model in the family; there are a number of insurance-based state subsidies; and there is a tax penalty for family separation. For women, these features of the German welfare state are expected to increase the incentives and rewards attached to establishing or maintaining traditional family structures rather than investing in education, especially for that sector of the population that is more dependent on state support. In other words, the German welfare state keeps women’s capacity to establish and maintain an autonomous household low.

Summary

Based on this brief review of the literature on education, family formation and welfare state incentives, the expectation is that educational returns on the labor market mute the effects of changes in family structure on welfare status. How these factors cumulate to advantages or disadvantages for a stable or improving welfare status remains to be demonstrated. Education is expected to raise labor market returns; these returns should work as a protection against economic disruption stemming from the dissolution or formation of family structures. Taking into account the smaller labor market returns of women compared to men, these mitigating effects are expected to be smaller. Women's welfare status, on the other hand, is expected to be more vulnerable to changes in family structure. These changes in family structure include not only coupling and decoupling with partners but also changes in the labor market status of partner. If the results demonstrate that educational returns on the labor market are an instrument that protects women from dropping into poverty due to family disruption, this would have important implications for welfare state policies. Especially if one aim of welfare policy is to enable women's right to establish and maintain a household independent of a partner, investing in women's education and supporting their labor market participation would have to become a priority over investing in policies intended to keep traditional families intact.

ECONOMIC VULNERABILITY AND THE LOW INCOME SECTOR

Most research on economic mobility in relation to changes in family structure uses population data and concentrates on economic gains and penalties throughout the general population. This study focuses on the "low income sector" in Germany. Even though research suggests that the steepest decrease in the standard of living after a family disruption occurs for women with the highest family income (Weiss 1983, Duncan and Hoffman 1985, Weitzman 1985), the poverty risk is highest in the low-income sector. Research on the short term effects of divorce, for example, shows that women in the low income sector suffer a disproportionate risk

of poverty: 20 percent of white and 33 percent of black women with incomes below the median end up in poverty a year after marital disruption (Duncan and Hoffman 1985). In a simulation study using data from Duncan et al. (1993), DiPrete (2002) demonstrates the high poverty risk of German women after union dissolution compared to women in Sweden and the US.

As a further point, in the low income sector, the percentage of universal benefits net of former payments makes up a little over 25 percent of overall income and 60 percent of all state subsidies (Aisenbrey 2005). It is noteworthy that the other forty percent is comprised of insurance-based payments that are not independent of prior contribution, which thereby minimizes state support in cases of crisis for the member of the couple who is not the main breadwinner, i.e., the insured person. This turns family disruption into even more of a threat for women who are more likely than men to have interrupted employment histories, are unemployed or only employed part time (Mayer and Blossfeld 1990, Mayer 1990).² In general, if benefits are insurance-based, women are disproportionately disadvantaged (Orloff 1993).

Taken together, these findings suggest that the standard of living in the low-income sector can be expected to be more sensitive to changes in family structures. This is especially true for women, because the structure of the German welfare state reinforces the main breadwinner model and therefore women's dependency on their partner.

DATA AND METHODS

The Low Income Panel (Niedrigeinkommenspanel, NIEP) is a survey study designed as a panel over six waves between 1999 and 2002. Included in the first wave were 2,867 individuals living in 1,922 low-income households; in the final wave, 1,763 individuals in 1,212 households were surveyed. Included in the study are only low-income households, defined as households

with income either below the low-income line (defined below) or with the main breadwinner obtaining state subsidies, such as unemployment assistance or social welfare.³

Following Infratest (2002) and Aisenbrey (2005), panel mortality in the NIEP does not bias the variables of interest. The probability of remaining in the sample is independent of the variables commonly used to analyze systematic failure in panel studies, such as education, age, region, type of household or occupational status. The median of the post-government adjusted household income is 736 Euros for the first wave and 876 euros for the last.

For the analyses, individuals living in households are excluded if one of the following combinations is true: a) both partners are retired, b) one partner is retired and one is a housewife or c) retired singles. Furthermore, in order to increase variation in the variables under study, individuals older than 50 and younger than 18 are excluded. To avoid misinterpretation of the results, individuals who still are in the educational system at the time of the first observation are excluded.⁴ Also excluded are households with an income that is higher than 1.2 times the low-income margin.

Conducting research in the low-income sector is normally based on population survey data. A primary problem with estimating multivariate models restricted to the low-income subgroup in population survey data is that the sample size becomes too small. One advantage of the NIEP data is that it provides sufficient data to estimate effects in the low-income sector. Another advantage of the NIEP is its longitudinal design and the relatively short time between waves, which makes it possible to analyze changes occurring in very short time intervals. At the same time, the NIEP design has some crucial limitations. The NIEP is based on a one time cross sectional sample. Such a research design is known to have problems. First, it is only representative at the time the sample was drawn, in this case, for the households living in the

low-income sector in 1999. Second, there is a tendency to over sample individuals who have been in the low-income sector for a long period compared to individuals who were in the low-income sector only for short time (Aisenbrey 2005). Because of the conditional nature of the analysis used here, results presented are not affected by this effect. Third, “regression to the mean” could be a source of biasing the sample. Regression to the mean or “regression towards mediocrity” occurs if “your sample is very extreme relative to the population (e.g., the lowest or highest x%), their mean is further from the population's and has more room to regress” (Trochim 2002: 3). Because the NIEP sample was drawn based on low income, the income distribution will, following the logic of regression to the mean, increase toward the mean income of the general population. For analysis of the NIEP data this implies that, by default, the chances for economic upward mobility are higher than for downward mobility. Again, because of the conditional nature of the analysis with a focus on events that trigger a change in welfare status, the results aren't affected by regression to the mean. Nevertheless, interpreting the overall increase in welfare status has to be done carefully and overall economic gains should not be over interpreted.

Modeling Strategy

Following the twofold research question the modeling process has two steps. The first models the question of who is most or least able to undergo any change during the period of study and the second models the question of how these changes effect ones welfare status. The former is a question of behavioral tendencies, i.e., how many people change from status from A to B, and the latter is a question of what influence this has on their welfare status. The issue of different behavioral tendencies in groups focuses on the following questions: Do people avoid choices that come with a constraint on their welfare status? Is there a deterrent effect for disadvantageous choices that might be accompanied by economic

penalties? And, on the other hand, is there a draw toward advantageous choices that have a higher probability of leading to economic rewards? Do these behavioral tendencies differ by educational groups? It goes without saying that these behavioral tendencies can only be interpreted as embedded in their interaction with institutional arrangements and in their structural context. For modeling this part of the analysis, I use descriptive measures that present the distributions of the variables of interest at the first and last wave of the study and the entry and exit rates in and out of these different states.

For modeling the question of the welfare consequences of these changes, I use regression models for panel data. Panel regression models can either be estimated with fixed (FEM), random effects (REM) or between effects (BEM). The decision about which model to use can either be made in terms of the research question or based on statistical testing. Models should be estimated with random effects if the joint explanation of time variant and time invariant effects is of interest. If the research question focuses on the separation of time variant and time invariant effects, it is necessary to estimate separate models with fixed and between effects. A fixed effects model estimates the effect of change in an independent variable on the dependent variable, what has also be referred to as a trigger event (Dannefer and Snell 1988; DiPrete and McManus 2000). The statistical basis for deciding between models with either random or fixed effects depends on the outcome of the Hausman test (Hausman 1978, Gujarati 2003, Halaby 2004). Unobserved attributes have no biasing effect on parameters estimated with fixed effects (Veerbeek 2000).⁵ This is not true for estimates with random effects. By having at least two observations per individual and including dummy variables for each individual, implicitly fixed effects models control for unobserved differences between individuals. By testing for significant differences in the estimation of the parameters with fixed or random effects, the Hausman test takes advantage of this limitation for models estimated with random effects. A significant

difference in the model estimated with fixed and random effects makes it very likely that the unobserved effects in the model are correlated with the independent variables and therefore lead to biased estimates in the random effect models.

With regard to the research question of changes in welfare status, my primary interest is to identify trigger events for changes in the welfare status. Therefore, I estimate fixed effects models. In order to see differences in the average welfare status over time between groups, I also estimate models with between effects. The Hausman test supports the decision of not using models with random, but with fixed, effects. Because of the presence of heteroscedasticity and autocorrelation in the models with fixed effects, all models are estimated with the Hubert White estimator and are corrected for autocorrelation.

The effects of family formation and labor market events are estimated in different models stratified by educational level. Because education doesn't change over time, the alternative modeling strategy is to include educational effects as interaction variables in the fixed effects models. For reasons of clarity and easier interpretation, I chose the first approach and present different models for educational levels.⁶ The same procedure is used for men and women.

MEASUREMENT

Dependent Variable: Welfare Status

In much of the last century, the wage income of the male breadwinner has been the dominant predictor of the standard of living for a family. This was not true in the beginning of the last century and it has changed again in the last 15 years. The occupational status and income

of the dominant breadwinner seems no longer to be the best predictor for the standard of living of all family members (DiPrete and McManus 2000).⁷ The income of the dominant breadwinner does not include contributions from other family members and it does not take the household composition into account. In addition, it exclusively considers one work force income as relevant for economic standing, even though other incomes, including state subsidies, are more and more likely to supplement household income. As McManus and DiPrete (2001: 252) put it: “Nominal income is an important indicator of the economic status of a household, but an imprecise measure of living standards.” The living standard, here referred to as the welfare status, also includes all welfare state subsidies and can therefore be interpreted as a measurement for welfare state policies. Welfare state policies are expected to empower women in the same way as men to establish and keep their own household and, at the same time, to mitigate the effects of changes in occupational status or family structure.

I concentrate on welfare status as a predictor variable for household standard of living, operationalized as the ratio of post-government household income to the adjusted low-income line. Post-government household income includes all forms of income: earnings from labor market and social welfare benefits such as child allowances or unemployment support, as well as financial support from former partners. The adjusted low-income line is measured as the household size adjusted eligibility for social welfare (adjusted yearly for inflation) multiplied by 1.5 (Aisenbrey 2005). By using the ratio of these two, the value of one implies a welfare status that is equivalent to the low-income line. This ratio is what I refer to as *welfare status*.⁸

Independent Variables

Education. Education is measured by a single variable indicating if a person attended the Gymnasium and reached their Abitur, which is the qualification needed for admission to the university. The lifelong effects of an early selection process into vocational or academic tracks and the low permeability between these tracks (Henz 1997) make the Abitur a valid indicator for educational careers. Between the age of ten and twelve, children are divided into three different educational tracks. The longest track, the “Gymnasium” takes thirteen years, and opens up the possibility for higher education; the shortest track, the “Hauptschule,” leads to a degree after nine years and in between is the ten-year education in the “Realschule.” In recent years, these tracks have become less exclusive and it is possible to make changes from a lower track to a higher one. However, the Abitur is still the primary road to higher education. Empirically, using this single measure of education is also justified by the persistent, determinant effect of educational degrees in Germany on economic returns. This is especially true if comparing the Abitur to all other educational degrees. In Germany, average monthly economic returns for individuals with an intermediate school degree are only two thirds compared to those with Abitur. In comparison, the distance between intermediate and lowest schooling degrees is only marginal (Appendix A).

Employment. Employment status is captured in three dummy variables for full time employment, part time employment and no employment.

Family Structure. I include two dummy variables to measure the effects of having children on welfare attainment: a variable coded 1 for having one child and an indicator for having two or more children. The indicator for “partner” follows from an interest in household formation and it is measured with respect to cohabitation, not legally defined marriage.⁹ Because

the effects of partners on welfare status are expected to be highly dependent on their occupational status, these factors are estimated as three interaction variables (a) partner with full time employment, (b) partner with part time employment, and (c) unemployed partner, with the reference category being no partner.

SAMPLE DESCRIPTION

Because the analysis concentrates on the low-income sector, a short description of the relevant attributes of individuals in this sector is relevant. Describing the sector is most informative in comparison to the overall population. Table 1 summarizes differences between the individuals in the NIEP and the German General Social Survey (ALLBUS). The ALLBUS data used here are driven from the ALLBUS 2000. The same demographic exclusion criteria used for the NIEP sample are also used for the ALLBUS sample.¹⁰

[Table 1 about here]

For men, educational differences on the level of schooling concentrate on the lower and upper end of the degree distribution. On the upper end, as expected, fewer individuals in the low-income sector have an Abitur and more have the lowest or non schooling degree (Table 1). These differences are somewhat less pronounced for women. The differences between the general population and the low income sector nearly disappear looking at the youngest age group—those under 26; one third of this group in the NIEP have an Abitur, which mirrors the distribution of this age group throughout all income ranges (results not shown).

The full time employment rate for women is four times higher in the general population than it is in the low-income sector; for men, the rate is one third higher. Looking at family formation, gender differences are even more pronounced. More men in the low income have a

partner than in the general population. This relationship is the opposite for women, with more women in the low-income sector being single than in the general population. In other words, we can find here a first implication, that the risk of being in the low-income sector is more distinct for men with a partner and for women without one.

RESULTS

The results are presented in two parts. The first part concentrates on the behavioral tendencies and the second focuses on the effects that these tendencies have on the welfare status.

Table 2 summarizes the distributions of the variables of interest at the first and last wave and the entry and exit rates into the different states. Entry and exit rates measure if at least one change happened during the time of observation. The time comparison and especially these rates of change can be interpreted as behavioral tendencies for the different groups. It goes without saying that these behavioral tendencies are not unconstrained by the structural context. For example, it is not voluntarily chosen behavior if women without higher education do not enter full time employment.

[Table 2 about here]

Men with an Abitur have the highest rates of labor market entries, women with no Abitur the lowest. Men's chances for entering full time employment rise with higher education, whereas this is hardly the case for women. Women, on the other hand, have much higher rates of entering part time employment. Again, for women, the differences over the two educational levels are not tremendous.

The entry and exit rates into and out of a relationship with partner in a specific employment status can be either driven by a partner entering or exiting the household or by a

partner, e.g. changing from the status of not working to being employed. Looking at the changing rates for singles, it is obvious that the most variation stems from changes in the employment status of partners. Men and women both have higher entry rates into the labor market compared to exit rates and the same is true for partners. Roughly half of the population has two or more children and a third has one child. Men without an Abitur have the highest welfare status at the first wave. Men with an Abitur also have the highest welfare gains over the observation period, followed by women with Abitur.

To model the effects of these differences, I estimate fixed effects for the welfare status from changes in family structure or/and labor market status in a panel regression (Table 3). Four different models are estimated, for men and women without the Abitur (Column 2 and 3) and for men and women with the Abitur (Column 4 and 5). Each variable—except children—is presented twice in the model, first as an “entry” and second as an “exit” variable. For example, a person “enters” full time employment or “exits” full time employment, or a partner with part time employment “enters” the household or “exits” the household. The latter can imply two things, either the partner leaves the household or a partner changes his or her employment status.¹¹ The reported coefficients can be interpreted as trigger effects for a change in welfare status. By way of illustration, looking at column three shows that when women without Abitur find a part time job, this triggers an increase of 0.12 in their welfare status.

[Table 3 about here]

Starting with higher educated women, we can see that, overall, this group is kept in the low-income sector by not finding new employment, having children and not finding employed partners. If these women were able to use their education on the labor market for full time employment, the increase in welfare status triggered by this new employment would make them

less vulnerable to changes in family formation. Their income would be well above one and a half times over the low-income line. Even having a partner who is not working or a first child would not, under the scenario of new full time employment, decrease their welfare status under the low-income line. At the same time, the welfare returns for women finding a fulltime-employed partner are higher than finding fulltime employment themselves. As long as these better-educated women do not find new employment, their economic status is highly sensitive to changes in family structure. The welfare status of these women is also highly sensitive to the presence of children in the household—with an increasing negative effect as the number of children increases.

In contrast, there are important differences for the male comparison group. For the group of higher educated men, only two trigger events can be identified that significantly influence their living standards: finding full time employment or losing an unemployed partner. Both of these events raise their welfare status over the low-income margin: Men in this group appear to be relatively immune against other changes in family structure.

Looking at lesser-educated women, the picture is very different. The standard of living of lower-educated women is even more sensitive to changes in family structure. Partner's employment (either part-time or full-time) triggers higher welfare increases than does finding part-time or full-time employment themselves. Women's vulnerability to changes in family formation in this educational group can be best illustrated by the loss in welfare that is triggered by a partner who is not working leaving the household. Overall, the welfare status of this group stays below the low-income line if they don't experience any changes in family structure or labor market status. This is not true for women with an Abitur: even if nothing changes in their family structure or labor market status, their welfare status rises over time.

For men, the main difference that comes with education is in the returns for their own employment. Better-educated men experience a rise in welfare status triggered by fulltime employment that is nearly double compared to lesser-educated men.

In the low-income sector, the costs for children only trigger a welfare status decrease for well-educated women and low-educated men. Two or more children also trigger a negative change in welfare for lower educated women.

To get a sense of average effects of being in and out of the labor market or cohabiting relationships across the observation period, the results from between effects model are presented in Table 4. The coefficients can be interpreted as the effects of the average status over the time in study. If effects are significant in the fixed effects model but not in the between effects model, there is a high probability that the effects estimated in the fixed effects model are more transitional than long-term.

The between effects model gives more evidence for the immunity of better-educated men to changes in their family structure. The only significant change in the welfare status for better-educated men is triggered by changes in their own employment status. Neither having a partner enter or exit the household nor children has a significant influence. Education seems to shield these men from any influence of family structure on their welfare status.

[Table 4 about here]

In most cases, having a partner with full time employment is sufficient to raise one's welfare status over the low-income level. However, this is not true for higher educated men; even a full time employed partner doesn't raise their welfare status significantly. For higher educated women, the welfare returns for choosing a full time employed partner are only slightly

lower than finding full time employment themselves. This result holds whether we look at trigger events or at average effects over the entire observation period.

Compared to the short-term trigger effects, children have the same influence on average welfare status. Only for higher educated women are the number of children significant in the fixed effects model, and not in the between effects model, which suggests that this is a transitory effect.

In both models, the constant is highest for women with the Abitur. This could be interpreted as an indication that, for women, education provides additional welfare returns beyond labor market and family formation effects. Education seems to somehow protect women from dropping further into the low-income sector, independent of the factors analyzed here.

DISCUSSION AND CONCLUSION

A major contribution of this study is its effort to cumulate different bundles of factors derived from research on changes in family composition, human capital theory and research on gender and the welfare states, and its empirical evaluation of these different factors in terms of their influence on economic stability and vulnerability. Taken together, these two approaches suggest that returns to education on the labor market should diminish the influence of changes in family structure on welfare status. Following from this, higher levels of education should improve labor market returns, operating as a protection against economic disruption caused by changes in family formation. Given that women have smaller labor market returns compared to men, these mitigating effects are expected to be smaller. Women's welfare status, on the other hand, is expected to be more vulnerable to changes in family structure.

Empirically, the results presented in this paper provide support for these expectations. Education does matter for men and women. Women profit more from a new full-time employed partner than from their own new full time employment. This difference is lessened for women by their education. This finding can be taken as evidence that education empowers women to make choices about their living arrangements independent of economic needs and independent of a male breadwinner in a traditional family structure. Nonetheless, the chances for women to enter full time employment over the observation period are roughly the same as entering a relationship with a full-time employed partner. Even though the analyses demonstrate that education does pay off for women, it barely raises their chances of entering a full time employment. This is in stark contrast to men, for whom education raises the chances of entering new employment significantly. This implies that education empowers women's welfare gains, but women hardly choose to—or have the choice to—enter full time employment, which would empower them to be independent. Economically, the best choice for women is to participate in traditional family structures as they are supported by the welfare state; women who are both in couples and have a part time job are better off than women who only rely on their own ability to translate their education on the labor market into welfare status. By supporting traditional family formations, the German welfare state counteracts the independence that women could gain through education. These results are even more disturbing in light of the fact that they take into account subsidies and payments from the welfare state and/or former partners.

Further research is needed on the implication that women, even without any changes in family structure or occupational status, seem to profit from education. Although occupation and family status are the main variables in classic stratification research, these factors turn out not to be sufficient for estimating women's rewards and penalties. The cumulative advantages of

education for women appear to operate both independently of, and in interaction with, the cumulative advantages gained on the labor market and in family relationships—much more so than is the case for men.

These results are not only important with respect to understanding how education and family transitions influence the life chances of individuals in the low-income sector, but they also point in the direction of an obvious policy implication. Given that education and employment provide at least as much protection against poverty as does being in a traditional couple, an alternative solution for the government would be to invest more in labor force programs and education than simply supporting traditional marriage through the variety of policy-based incentives that currently make up the German welfare state. The cost differentials between a “human capital” versus a “marriage capital” policy regime would clearly need further analysis. Regardless, due its emphasis on the empowerment of women and men as individuals, the former is more consistent with the idea of a “gender-blind” welfare state. Women in Germany are still only ‘a husband away from poverty’ but, at the same time, women are also only a job away from poverty.

ENDNOTES

¹ Some of the divorce literature concentrates on socioeconomic predictors of divorce rates. An empirically well-established argument in the German literature shows the negative effect of complimentary education of both partners on divorce rates (Diekmann and Klein 1991, Hartmann and Beck 1999). Numerous studies of the US present both educational attainment and employment status as good predictor variables for the risk of divorce. There is evidence for a positive relationship between being economically disadvantaged and the probability of getting divorced. Especially lower education and/or unemployment increases the risk of marital disruption; men and women, who are already economically vulnerable, are selected into family disruption (Martin and Bumpass 1989; Hurd and Wise 1989; Holden and Smock 1991). Methodologically speaking, this mechanism is referred to as a selection effect: Women and men who get divorced are distinct in their economic vulnerability from women and men who don't get divorced (Smock et al. 1999). Despite this "preselection" of economically disadvantaged, research on divorce and family disruption often argues in favor of marriage because of its presumably better economic standing; as Smock et al. summarize: "Some even advocate for more restrictive divorce laws to encourage people in their marriages" (Smock et al. 2001: 795).

² These economic disadvantages have not only short time, but continuous effects for the life courses of women, that even effect retirement. (Allmendinger, E. Brueckner and H. Brueckner 1993, Allmendinger 1994)

³ For a detailed description of the operationalization see Aisenbrey 2005.

⁴ These cases were excluded because there is no data in the following waves about further education.

⁵ Under the assumption that these unobserved effects do not change over time.

⁶ Both approaches lead to the same results.

⁷ As early as 1901, Rowntree provided us with an indicator for the "standard of comfort attainable" that reaches over the boundaries of narrow definitions that concentrate on the dominant breadwinner: "The family income includes-total wages of father, total wages of mother, total wages of any children (...) payments by lodgers for board and lodging (...) In estimating the family income, the aim has been to show the total sum which, upon the above-named basis, can (emphasis in original) find its way into the family purse" (Rowntree 1901, 29).

⁸ One underlying assumption in this approach is the equal distribution of different sources of income within the family. The validity of this assumption is equivocal, to say the least (Piachaud 1992, Daly 1992 uvm). In the last decade, researchers have provided evidence of the unequal distribution of money in households (Pahl 1989, Glendinning and Miliar 1992, Jenkins 1991). Nevertheless, in most empirical research on the economic standing of families the assumption is still one of a shared household income. This assumption is derived less from ignorance, than from practical reasons in quantitative empirical research: the standard of living in a household is determined by the income of all persons living in the household and this income is an empirically measurable value, whereas the willingness to share income is not (or at least not in quantitative studies).

⁹ The analysis is only focused on heterosexual cohabitation; in the entire dataset there were only three same sex couples, which were excluded for technical reasons.

¹⁰ Individuals are excluded if they are retired, over 50 and or still in the educational system. I also excluded individuals under 18 from the Allbus sample to correspond with the minimum age of individuals in the NIEP sample.

¹¹ If the partner changes employment status he/she shows up as an entry in one and an exit in another status.

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TABLES

Table 1: Comparison of the low-income population to the overall population

	Percentage			
	NIEP sample		ALLBUS 2000	
	analysis		analysis	
	Men	Women	Men	Women
Education				
Abitur	19	18	27	24
Mittlere Reife	34	46	39	45
Hauptschule	43	34	31	28
No Certificate	5	3	2	2
Employment				
Full time	54	12	87	48
Part time	3	12	1	19
Not employed	43	76	12	33
With partner	82	58	68	73
One child	24	30	21	27
Two or more children	51	53	31	36
N	779	1192	1033	1058

Source: NIEP (Infratest 2002) and ALLBUS (2000)

Table 2: Changes in family structure and occupational status (Percentages)*

	No Abitur		Abitur	
	Men	Women	Men	Women
Full time employment				
wave 1	59	11	41	9
wave 6	72	22	67	22
enter	25	18	37	21
exit	17	11	16	8
Part time employment				
wave 1	<i>1</i>	12	10	17
wave 6	2	22	6	29
enter	3	16	8	23
Exit	2	10	11	13
Not employed				
wave 1	39	77	48	74
wave 6	26	56	27	49
enter	18	13	17	13
Exit	22	15	24	13
Partner with full time employment				
wave 1	8	37	6	28
wave 6	15	47	13	40
Enter	13	18	13	15
exit	8	12	8	9
Partner with part time employment				
wave 1	7	<i>1</i>	6	2
wave 6	18	<i>0</i>	15	5
enter	12	2	12	4
exit	5	2	5	2
Not employed partner				
Wave 1	71	21	61	23
Wave 6	52	14	48	10
Enter	10	11	11	6
Exit	22	15	24	13
Single				
Wave 1	15	41	27	47
Wave 6	15	38	24	45
Enter	<i>1</i>	6	6	5
Exit	2	4	5	3
One Child				
Wave 1	26	31	22	27
Wave 6	21	32	22	27
Two or more Children				
Wave 1	55	56	41	49
Wave 6	60	56	48	53
Welfare status				
Wave 1	0.90	0.85	0.85	0.84
Wave 6	1.06	1.01	1.17	1.14
N				
wave 1	621	961	106	173
wave 6	363	597	67	116

* n<10 = italic; enter/exit occurs at least once

Table 3: Trigger Effects on Welfare Status (regression with fixed effects)

	No Abitur		Abitur	
	Men	Women	Men	Women
Full time employment				
enter	0.230**	0.220**	0.401**	0.374**
	(0.023)	(0.017)	(0.074)	(0.046)
Exit	-0.063*	-0.067**	-0.016	0.003
	(0.025)	(0.022)	(0.094)	(0.065)
Part time employment				
Enter	0.050	0.116**	0.187	0.212**
	(0.057)	(0.017)	(0.128)	(0.038)
Exit	0.048	-0.009	-0.018	0.028
	(0.090)	(0.023)	(0.144)	(0.057)
Partner with full time employment				
Enter	-0.052	0.368**	-0.099	0.438**
	(0.049)	(0.027)	(0.179)	(0.064)
Exit	-0.067	-0.124**	-0.196	0.136
	(0.048)	(0.030)	(0.170)	(0.099)
Partner with part time employment				
Enter	-0.095	0.186**	-0.179	0.002
	(0.050)	(0.056)	(0.190)	(0.117)
Exit	0.078	-0.021	0.135	-0.068
	(0.048)	(0.067)	(0.183)	(0.136)
Not employed partner				
Enter	-0.007	0.054	-0.060	-0.233*
	(0.047)	(0.033)	(0.152)	(0.103)
Exit	0.249**	-0.194**	0.488**	-0.132
	(0.048)	(0.031)	(0.182)	(0.084)
Children				
One	-0.145**	-0.069	0.045	-0.340**
	(0.046)	(0.035)	(0.149)	(0.080)
two or more children	-0.179**	-0.090*	0.070	-0.556**
	(0.053)	(0.040)	(0.185)	(0.100)
Constant	1.094**	0.980**	0.906**	1.349**
	(0.029)	(0.022)	(0.083)	(0.041)
Observations	2210	3535	403	690
Number of id	535	844	98	160
R-squared within	0.211	0.220	0.260	0.325

Standard errors in parentheses, * significant at 5%; ** significant at 1%

Table 4: Average Effects on Welfare Status (regression with between effects)

	No Abitur		Abitur	
	Men	Women	Men	Women
Full time employment	0.269** (0.453)	0.277** (0.393)	0.314** (0.419)	0.339** (0.363)
Part time employment	-0.028 (-0.011)	0.159** (0.224)	0.255* (0.203)	0.185** (0.226)
Partner with full time employment	0.259** (0.304)	0.269** (0.498)	0.119 (0.101)	0.289** (0.393)
Partner with part time employment	0.210** (0.246)	-0.005 (-0.002)	-0.076 (-0.063)	0.208 (0.108)
Not employed Partner	0.062* (0.110)	0.012 (0.016)	-0.098 (-0.132)	0.017 (0.016)
One child	-0.101** (-0.155)	-0.033 (-0.057)	0.153 (0.175)	-0.061 (-0.134)
Two or more children	-0.130** (-0.233)	-0.031 (-0.058)	0.063 (0.083)	-0.095 (-0.077)
Constant	0.793** (2.878)	0.755** (2.820)	0.793** (2.130)	0.850** (2.406)
Observations	2835	4503	509	863
Number of id	625	968	106	173
R-squared between	0.34	0.41	0.24	0.29

Normalized beta coefficients in parentheses, * significant at 5%; ** significant at 1%

APPENDIX A: Educational tracks and income

Educational track	Income before taxes
College track (Abitur)	3187 Euro
Intermediate track	2132 Euro
Lowest track	2118 Euro
No Certificate	1742 Euro
N	1441

Source: ALLBUS (2000)