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**Social Exclusion, Occupational Dynamics, and Intergenerational  
Income Mobility – Germany and the United States Compared**

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***Social Exclusion, Occupational Dynamics, and Intergenerational  
Income Mobility – Germany and the United States Compared***

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## **1. Introduction**

In many industrialized countries economic and social inequality increased in recent years. From the socio-political point of view the widening of the income distribution directs the attention to the inequalities that arise from the intergenerational transmission of low income, social isolation, personality traits or genetic attributes.

Poverty and social exclusion are analytically separated, but some definitions of poverty include social exclusion. Social exclusion is multi-dimensional, it reflects a combination of inter-related factors resulting from a lack of the capabilities (Sen 1985, 1992, 1999) required to participate in economic and social life, poor skills, labor market exclusion, including living in a jobless household, service exclusion (public transport, play facilities, youth clubs, gas, electricity, water, telephone), exclusion from social relations (participation in common activities, and of social networks, exclusion from support available in normal times and in times of crisis, exclusion from engagement in political and civic activity, poor housing, high crime environment, disability, health problems, family breakdown (Social Exclusion Unit 1997, Saunders 2007, Saunders et al. 2007, Saunders 2008). Social exclusion affects both the quality of life of individuals and the equity and cohesion of society as a whole (Levitas et al. 2007), and it is a dynamic process limiting a person's future prospects (Atkinson 1998). If poverty is understood as a lack of participation in the key activities in social, political, and cultural life (Townsend 1979, United Nations 1995, Duffy 1995, Walker and Walker 1997, Burchard et al. 2002) or the inability to do things, that are in some sense considered normal by society as a whole (Howarth et al. 1998), or the insufficiency of different attributes of well-being (e.g. housing, literacy, health, provision of public good, income, etc.), then the concept of poverty becomes very close to the concept of social exclusion (Bourguignon and Chakravarty 2003).

The intergenerational aspect of poverty and social exclusion can be deduced from the logic of the neoclassical human capital approach (Becker 1964, Mincer 1974). In this setting, the parental investments increase the children's human capital, which in turn may positively affect their earnings capacity (Becker and Tomes 1986, Solon

1992, Solon 1999, Corak and Heisz 1999, Solon 2002, Chadwick and Solon 2002, Solon 2004, Mazumdar 2005) or their ability to gain non-labor income, or even their success in the marriage market (Pencavel 1998). The structural hypothesis of intergenerational economic and social mobility emphasizes the view that limited parental resources during childhood can restrict the economic status, stability and mobility of adult children. There is an implicit stress on human capital development with poorer families lacking sufficient resources for investments in children (Cameron and Heckman 2001, Carneiro and Heckman 2002, Blanden et.al. 2004, Mayer and Lopoo 2005). Among the endowment conditions parental education, employment behavior, occupational choice, the family role modeling, as well as the social capital environment are of importance (Stevens 1999, Finnie and Sweetman 2003).

The paper aims at identifying the factors adding to the process of the intergenerational transmission of chances and disadvantages. The paper contributes to the literature in to quantify the impact of individual and family background characteristics and social exclusion features on intergenerational economic and social mobility to produce a better understanding of the policies needed to break the cycle of disadvantage across generations and to prevent the development of a self-replicating underclass.

The analysis focuses the situation in Germany and the United States. Both the countries differ with regard to the institutional labor market settings, as well as the family role patterns, and concerning the welfare state regime, which denotes the ways in which the state, the market and households interact in the provision of welfare. According to the welfare state regime social policies not only reflect but also reproduce "stratification" outcomes in terms of social and economic inequalities (Esping-Andersen 1990, 1999). The German society is more likely molded by traditional social role patterns, in the American Society the public philosophy is more grounded in the idea of opportunity (Dustmann 2004). Americans believe more strongly that success reflects individual effort. In Germany, the educational system is more formal and coordinated, and higher education is provided at government expense, whereas the higher education is financed privately in the United States (Couch and Dunn 1997). The liberal welfare state regime in the United States promotes the market, rather than the state in guaranteeing the welfare needs of the

citizens and stresses the sense of individualism, laissez-faire, and a punitive view of poverty. The state reacts only in case of social failures and limits the help only to special groups in terms of minimal assistance. The labor market policies offer less protection for workers and thus induce a more flexible labor market. The German conservative-corporatist welfare state regime guarantees that the government protects those who are unable to succeed in the market place. The labor market institutions and labor market policy ensure a high employment stability, and health care, welfare, social insurance, national assistance, or old age pensions are publicly provided.

This paper addresses the following questions:

- To what extent individual and family characteristics and social exclusion features determine intergenerational income mobility ? To what extent do childhood experiences of family disruption, unemployment situation in the parental household, parental disability or health discontent link to the economic and social outcome as adult?
- To what extent intergenerational economic and social disadvantages determine the risk of poverty as adults.
- Do the transmission pattern differ according to the underlying welfare state regime?

We start from the hypothesis that the link between social stratification, income mobility, poverty inheritance works differently according to the social role models in a society and the welfare state regimes:

- We hypothesize that countries with a liberal welfare state regime (USA) have a lower intergenerational income mobility at the bottom of the income distribution than countries with a conservative welfare state regime (Germany).
- Due to the more traditional role patterns, in Germany we expect a stronger connection between the generations and suppose that family background characteristics exert a more pronounced influence on the economic situation of the children.
- In both the countries we expect that economic and social disadvantages in childhood as human capital characteristics, instable family structures, non-

employment, health dis-satisfaction boost the intergenerational persistence of poverty.

The empirical analysis is based on longitudinal data (GSOEP-PSID CNEF 1980-2008) providing nationally representative socioeconomic data of individuals and households. In the analysis of the determinants of the intergenerational income mobility we employ regression approaches on the permanent post-government income (Solon 1999, Björklund and Jäntti 2000, Hertz 2004, Couch and Lillard 2004, Grawe 2004). We focus on transition matrices to capture the probability of intergenerational income and occupational mobility. To analyze the determinants of the risk to be poor we employ a binomial logit model (Mc Fadden 1973, Maddala 1983, Heckman 1981). The explanatory variables contain a set of human capital variables and family background characteristics, and social exclusion features as control variables.

The paper is organized in 5 sections: section 2 reports the data and sample organization, section 3 outlines the methodology of intergenerational economic and social mobility and the specification of the binomial logit model of the risk of intergenerational poverty persistence conditional to the individual and family background characteristics, and social exclusion variables, section 4 presents the empirical results and section 5 concludes with a a summary of findings and discussion of some stylized facts about the intergenerational heritage of economic and social disadvantages to derive policy implications and directions for further research.

## ***2. Data Base and Sample Organization***

The empirical analysis is based on data from the German Socio-Economic Panel (GSOEP), and the US Panel Study of Income Dynamics (PSID), which were made available by the Cross-National-Equivalent-File 1980–2008 (CNEF 1980-2008) project at the College of Human Ecology at Cornell University, Ithaca, N.Y. The PSID started in 1980 and contains a nationally representative unbalanced panel of about 40,000 individuals in the United States. From 1997 on the PSID data are available bi-yearly. The GSOEP started in 1984 and contains a representative sample of about 29,000 German individuals that includes households in the former East Germany since 1990.

Both the surveys track the socioeconomic variables of a given household, and each household member is asked detailed questions about age, gender, marital status, educational level, labor market participation, working hours, employment status, occupational position, income situation, as well as household size and composition.<sup>1</sup> The data allow monitoring the employment and occupational status, the earnings situation, and the socio-economic characteristics of the individuals in their life-cycle. The gross and net income variables in the data are reported retrospectively.

We analyze the economic and social situation of children living in the parental household and as adults in their own households. The data cover a sufficiently long period to observe the socioeconomic characteristics of the parental household and to link these data with the children's socioeconomic characteristics when becoming members of other family units. Thus, the data can be used to draw inferences about the effects of being exposed to different life situations in the parental household on the economic and social situation as young adults.

The sample selection in the underlying analysis includes children co-resident with their parents in 1987-1991 (United States), or 1988-1992 (Germany). The data base does not allow identifying parents - children relations exactly: for this analysis "fathers" and "mothers" are adults who are living in households with persons with the marital status "child". We use family (household) identifiers and relationship codes to match sons and daughters to their fathers and mothers within each data set. We allow families to contribute as many parent-child pairs to each data sets as meet our screening rules. To avoid overrepresentation of children staying at home until a late age our sample is restricted to children aged 14 to 20 years. A great deal of teenagers at this age still lives in the parental household. The children are at least 26 years old when we observe their economic and social status in 2004-2008 (Germany) or 2003-2007 (USA). We do not consider the former East Germans, for they are not included in the GSOEP sampling frame before 1990. The selection process leads to a sample of 2,128 German, and 2,585 US women and men out of the children's generation.

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<sup>1</sup> For a detailed description of the data bases see Burkhauser et. al. 2001.

We follow the standard conventions and assume that income is shared within families and thus household income is arguably a better measure of the economic and social status than individual income variables (Mazumdar 2005). The study is based on the equivalent post-government household income, which equals the pre-government household income plus household public transfers (social benefits: dwellings, child or family allowances, unemployment compensation, assistance, and other welfare benefits), plus household security pensions (age, disability, widowhood), deducting household total family taxes (mandatory social security contributions, income taxes, or mandatory employee contributions). We use the referred income variables from the data bases, thus the results make not allowance for the bias of imputed values on income inequality and income mobility (Frick and Grabka 2005). To consider the family structure we adopt the OECD-equivalence scale to calculate the permanent household income per adult equivalent. The household income variables is deflated with the national CPI (2001=100) to reflect constant prices.

To exclude transitory income shocks and cross-section measurement errors we use 5-year moving averages of the real equivalent post-government household income variables. The income situation of the persons when living in the parental household is captured in 1988-1992 (Germany), or 1987-1991 (USA). The economic and social situation of these persons living in their own households is observed in the periods 2004-2008 (Germany), or 2003-2007 (USA).

A major factor that will lead to changes in the quality of mobility data is that response rates tend to decline over time and so the representativeness of mobility tables derived from survey data may worsen. As the income variables highly determine survey-attrition we follow Fitzgerald et. al. (1998a, 1998b) to construct a set of sample specific weights to address to the non-random sample attrition bias, that do not account for attrition in general, but for attrition among the particular groups under study We estimate a probit equation that predicts retention in the sample (i.e being observed as an adult) as a function of pre-determined variables measured during childhood. Presuming that the samples are representative when the children are still children we construct a set of weights



$$w(z, x) = \left[ \frac{\Pr(A = 0; z, x)}{\Pr(A = 0; x)} \right]^{-1} \quad (1)$$

where  $x$  denotes the parental income as primary regressor, and  $z$  is a vector of covariates to predict attrition, indicated by  $A=1$ . Thus  $w(z,x)$  will take higher values for people whose characteristics  $z$  make them more likely to exit the panel before their adult income can be measured. The variables considered in  $z$  are the child's gender, the parental age and education and their squares. We suppose these variables to affect the attrition propensities, to be endogenous to the outcome, that is to have an effect on the children's income as adults conditional on the parental income. The weights  $w(x,z)$  are multiplied with the parental household weights, which yields a set of weights that apply to the household of the children as adults. The parental household weights are assumed to capture the attrition effects and the weights,  $w(z,x)$ , compensate for subsequent non-random attrition.

### **3. Methodology**

#### **3.1 Intergenerational Income Elasticity**

The most common approach to quantify how economic (dis)advantages are transmitted across generations is to estimate the intergenerational income elasticity applying ordinary least squares (OLS) to the regression of a logarithmic measure of the children's income variable ( $y_c$ ) on a logarithmic measure of the income variable of the parental household ( $y_p$ )

$$y_c = \beta_0 + \beta_1 y_p + \varepsilon_c \quad (2a)$$

$$y_c = \beta_0 + \beta_1 y_p + \sum_{c=2}^n \beta_c X_c + \varepsilon_c \quad (2b)$$

The constant term  $\beta_0$  represents the change in the economic status common to the children's generation. The slope coefficient,  $\beta_1$ , is used as a measure of intergenerational mobility and expresses the elasticity of the children's income variable with respect to the parents' income situation. The larger  $\beta_1$  the more likely an individual as an adult will inhabit the same income position as her parents, which

implies a greater persistence of the intergenerational economic status. A  $\beta_1$  close to zero bears evidence of an open society in which the economic situation of the parents has no impact on the economic success of the children. The random error component  $\varepsilon_c$  is usually assumed to be distributed  $N(0, \sigma^2)$ . The inclusion of a set of control variables ( $X_c$ ) in (2b) allows to account for the individual characteristics of the children which partly express the indirect effects of the parental income on the children's income. To the extent that these variables lower the coefficient  $\beta_1$  compared to (2a) these other effects "account for" the raw intergenerational income elasticity.

In the empirical specification the dependent variable is the logarithm of the average equivalent post-government income (2001=100) of the children's generation. The independent variables ( $X_c$ ) are observed in the last year of the observation periods in the relevant households. In model (2a) the independent variable is the logarithm of the average equivalent post-government income (2001=100) in the parental household. In model 2b(a) we include variables focusing on individual and family background characteristics. The gender dummy (GEN) takes the value 1 for men and the value 0 for women and controls for gender differences on intergenerational income elasticity. We include the years of education of the individual (EDUC<sub>CHIL</sub>) to capture the human capital level. In the case of missing values the educational attainment is set equal to the amount reported in the previous year. The educational attainment of the parents (EDUC<sub>PAR</sub>) is included with the average schooling years of the parents to capture the human capital hypothesis that the higher the income of the parents the higher their investment in the education of the children, which in turn causes a higher income of the children. The number of children (CHILD<sub>CHIL</sub>) in the household is included to consider the effects of care requirements on the disposable household income. To capture unemployment phases in the parental household we consider the variable EMP<sub>PAR</sub>, which takes the value 1 if the father is employed less than half the observation period, and 0 else. We include four occupational dummies to capture the social status of the individual and her father. The empirical specification of the occupational status is oriented at the ISCO-88 (International Standard Classification of Occupations). ISCO-88 aggregates the occupations into broadly similar categories in an hierarchical framework according to the degree of complexity of constituent tasks and skill specialisation, and essentially

the field of knowledge required for competent performance of these tasks. We rearrange the 2-digit occupational categories provided by the database into 7 categories "1 academic/scientific professions/managers", "2 professionals/technicians/ associate professionals", "3 trade/personal services", "4 agricultural/fishery workers", "5 craft and related workers", "6 plant and machine operators/assemblers", and "7 elementary occupations". There is a distinctive ranking of the occupational dimensions: lower-numbered categories offer a higher prestige and a higher social status. This is particularly true for countries, where economic and social hierarchies are salient. In model 2b(b) we consider three social exclusion aspects that are known to have adverse effects on one's life: family disruption, disability and discontent with health in one's own and in the parental household. We include a dummy variables for family disruption, which takes the value 1 if the marital status of the person or of her father/mother is "widowed", "divorced", or "separated", and 0 else. The disability status dummy variable takes the value 1 if the person respectively the father is disabled, and 0 else. Finally, we consider the health status dummy variable, which takes the value 1, if the person respectively her father is in good health, and 0 else. The variables in  $(X_c)$  are observed in the last year of the observation period of each of the samples. (Table 1)

### **3.2 Intergenerational income and occupational transitions**

The intergenerational income elasticity measures average income mobility but does not shed important light on the probabilities of economic success conditional upon the economic background of the parents. The movement from one income position to another and the factors that influence it are the key issues from a welfare point of view (Heckman 1981). The transition matrix allows to analyze the intergenerational persistence of income positions at different points of the income distribution.

To evaluate the intergenerational income mobility we use the log of the permanent real equivalent income [2001=100] of the parents' and the children's households. The persons are allocated to five equally populated ranked income groups indexed by  $i$  and  $j$  (Formby et al. 2004). The elements  $p_{ij} \geq 0$  of the transition matrix indicate the probability (in percent) that a person belongs to the  $j^{\text{th}}$  quintile of the income

distribution given that she belongs to the  $i^{\text{th}}$  quintile of the income distribution of the parental household with  $\sum_j p_{ij} = \sum_i p_{ij} = 1$ . The elements on the diagonal ( $p_{ii}$ ) represent the stayers and the off-diagonal terms ( $p_{ij}$ ) represent the movers. The difference between the subscripts represents the distance from the diagonal, further away from the diagonal, the greater is the mobility. The more independent the income variables of both the households, the greater the likelihood that the elements of the transition matrix are close to 0.2, representing an equal distribution across all quintiles.

To evaluate the intergenerational occupational mobility we rearrange the occupations into 4 groups: "1 academic/scientific professions/managers, professionals/technicians/associate professionals", "2 trade/personal services", "3 agricultural/fishery workers, craft and related workers", "4 plant and machine operators/assemblers", elementary occupations". The elements  $p_{ij} \geq 0$  of the transition matrix indicate the probability (in percent) that a person belongs to the  $j^{\text{th}}$  occupation of the occupational distribution given that her father belongs to the  $i^{\text{th}}$  occupation with  $\sum_j p_{ij} = \sum_i p_{ij} = 1$ . The greater the elements of the transition matrix differ from 0.25 the greater is the intergenerational similarity of the occupations.

To evaluate the dimension of the intergenerational economic and social mobility we employ the Bartholomew index (Bartholomew 1982), which expresses the mobility in terms of average income boundaries crossed over the observation period. The Bartholomew index sums up the moves across income classes, i.e. outside the main diagonal

$$B = \frac{1}{m} \sum_{i=1}^m \sum_{j=1}^m p_{ij} |i - j| \quad (3)$$

where  $p_{ij}$  is the proportion of children in position (income, occupation)  $j$  with a position (income, father's occupation)  $i$  in the parental household (Bartholomew 1982, Dearden, et al 1997). The further the move the greater the weight assigned to it. In the case of no mobility the Bartholomew index takes the value of 0. The more

mobility, the higher the value of the index. The value of the Bartholemew index depends on the order of the transition matrix. The values of the index based on a matrix of five groups will be different from that based on a matrix consisting of ten groups. Hence, this index will not be comparable across countries based on transition matrices of different orders (Börklund and Jantti 2000).

### 3.3 The risk of poverty and social exclusion

To evaluate the extent to which individual and household characteristics determine the probability to have an income position at the bottom of the income distribution we employ a binomial logit model (Mc Fadden 1973, Heckman 1981, Maddala 1983). Other than the standard poverty we post-government income definition we assume a person to be poor if she is positioned in the first or the second income quintile of the real (2001=100) equivalent post government household income. The dependent variable (*pov*) takes the value 1, and it takes the value zero if the individual has an economic status in the middle or the top of the income distribution. The probability that the individual is potentially socially excluded then is estimated to be

$$P(pov = 1) = \frac{e^Z}{1 + e^Z}. \quad (4)$$

The  $Z$  characterizes the linear combination  $Z = B_0 + \sum_{c=2}^n B_c X_c$  with  $X_c$  the independent variables and  $B_c$  the regression coefficients. In general, if the probability is greater than 0.5, we predict poverty, and if the probability is less than 0.5, we predict that the individual is better off. The interpretation of the regression coefficients  $B_c$  is based on the odds, that is the ratio of the probability that the person is in a poverty situation and the probability that the household is well off.

$$\frac{P(pov = 1)}{P(pov = 0)} = e^{B_0 + \sum_{c=2}^n B_c X_c}. \quad (5)$$

The  $\exp(B_c)$  are the factors by which the odds change when the  $c$ -th independent variable increases by one unit, e.g. this value expresses the relative risk ratio of poverty or social exclusion with a one-unit change in the  $c$ -th independent variable.

For the underlying analysis the variables in  $(X_c)$  contain a set of individual and family background characteristics as well as a set of variables that are expected to affect the probability of being potentially poor. These variables are the same for all alternatives, but their effects on the probability are allowed to differ for each alternative income quintile. The variables in  $(X_c)$  are observed in the last year of the observation period of each of the generational samples. (Table 1)

[Table 1 near here]

## **4 Empirical Results**

### **4.1 Intergenerational Income Mobility**

The regression of the real equivalent post-government household income of the children's generation on the real equivalent post-government household income of the parents' generation (2a) reveal a higher intergenerational income elasticity in the United States (.678) than in Germany (.484). The results corroborate the findings of various studies reporting a range of intergenerational income elasticity of 0.4 or even higher according to the chosen countries, sample designs, time windows, age cohorts, or income variables (Becker and Tomes 1986, Solon 1992, Solon 1999, Solon 2002, Fertig 2003/04, Solon 2004, Mayer and Lopoo 2005, Mayer and Lopoo 2008).

In Germany, individual and family characteristics lower the raw intergenerational elasticity by more than 10percent from .484 to .377. The social exclusion features count for 3 percentage points of the raw intergenerational elasticity. The US sample experiences a higher intergenerational income immobility than the German sample. Individual and family characteristics contribute more than 21percent to the raw intergenerational income elasticity. Including social exclusion features the intergenerational income elasticity decreases by 8 percentage points to .385.

In both the countries to be female as well as to have children have significantly negative effects on the household's disposable income. Educational attainment significantly increases the household's financial well-being which corroborates the human capital hypothesis. At the other hand, the parental educational endowment does not significantly contribute to the household's income situation. In Germany, social origin matters: the father's academic occupation has a significantly positive effect on the household's income situation. In contrast, the father's occupational status has no significant influence on the income situation of the children's household in the United States. The results of model 2b(b) reveal the effect of social exclusion features on intergenerational income mobility. In both the countries family disruption has a significantly negative impact on the disposable income, the negative influence of family break-down in the parental household is not significant. In Germany, the father's disability has a significantly negative effect on the disposable household income. (Table 2)

[Table 2 near here]

## **4.2 Economic and Social Dynamics**

In Germany, the income transition matrix reveals a higher intergenerational income mobility of persons in the lower income quintiles than in the United States. This might corroborate that the social policy, the institutional labor market settings, or the public financed educational system succeed to contribute to a higher permeability of the social system. In the United States, the intergenerational income immobility is highest in the upper income quintiles. The Bartholomew index indicates a higher intergenerational income mobility in Germany than in the United States.

The Bartholomew index indicates a higher occupational mobility for the US sample than for the German sample. In both the countries the occupational transitions conditional to the father's occupational status reveal the highest intergenerational occupational persistence at the top and at the bottom of the intergenerational occupational distribution: more than 68% of the children follow their fathers in the

“managerial and professional” categories.<sup>2</sup> The probability that a child ends up in an occupational category different from the one occupied by her father shed light on the occupational distance between fathers and children, but do not support the hypothesis of a higher social permeability in the United States and more traditional patterns in Germany. German children experienced the highest intergenerational occupational persistence in the “academic/scientific professions/managers”, and “professionals/technicians/associate professionals” categories (72.6 percent). This finding corroborate the human capital theory and confirm that the intergenerational immobility of social status is more pronounced at the top of the income distribution (Lentz et al. 1989, Mazumdar 2005). In both the countries, children engaged in “elementary” occupations experience an intergenerational occupational persistence of about 35percent. (Table 3)

[Table 3 near here]

### **4.3 Relative Risk of Poverty**

Table 4 presents the relative risk ratios ( $\exp(B_c)$ ) and the significance level for each of the explanatory variables  $X_c$  of the binomial logit model to quantify the probability to be in a potential social exclusion situation. In both the countries, women experience a higher probability to be poor. An increasing number of children significantly increases the risk of poverty. In the United States, a higher educational attainment as well as a higher parental education significantly lower the probability of poverty, in Germany we find no significantly negative effects. In both the countries social class origin matters: to be engaged in academic/scientific/manager occupations or professional occupations significantly lower the risk of poverty, whereas persons with an elementary occupation have a higher risk of poverty persistence. In the United States the relative risk ratios indicate a significantly higher

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<sup>2</sup> The degree of immobility at the top and at the bottom of the distribution might be exaggerated, for upward mobility is not possible for those performing the highest occupational category, and downward mobility is not possible for persons in the lowest occupational category.



risk to be poor for persons in trade/personal service professions. The significant effects of the father's occupational status on the relative poverty risk underlines the intergenerational class persistence. In both the countries, social exclusion features significantly determine the relative risk of poverty. In Germany, an unemployment situation in the parental household and parents in poor health condition significantly increases the relative risk of poverty. In the United States, instable family relations have a negative impact on the income situation and increase the poverty risk.

[Table 4 near here]

## **5 Conclusions**

We started from the hypothesis that country differences in family role patterns and welfare state regimes entail different effects on the intergenerational transmission of economic and social (dis)advantages. The empirical results for Germany and the United States partly support these hypotheses:

- The US-sample experienced a higher intergenerational income elasticity than the German sample. In the United States, the inclusion of family background variables contribute more than 20 percentage points to the raw intergenerational income elasticity. In Germany, individual and family background variables lower the intergenerational income elasticity by about 10 percentage points. Social exclusion features, too, contribute to a higher extent to the raw intergenerational income mobility in the United States than in Germany. These results point out a lower permeability of the social system in a liberal and market oriented welfare state regime. The results do not corroborate the hypothesis of a higher intergenerational social cohesion due to traditional role patterns in Germany.

- In both the countries, gender, educational attainment, and the number of children in the household significantly determine the intergenerational income mobility as well as the risk of poverty.
- Regardless to the different welfare state regimes, the highest intergenerational income and occupational persistence is evident in the tails of the income and occupational distributions. These findings corroborate the results of Atkinson et. al. (1983), Dearden et. al. (1997), and Corcoran (2001) and imply a high class persistence, an increasing intergenerational transmission of poverty and social exclusion, a widening of the wealth gap and a deepening of economic and social inequality across generations which produces economic inefficiencies imposing economic and social costs.

Face to the significant contribution of individual and family background characteristics and social exclusion features to intergenerational income persistence and the relative poverty risk in both the countries, social and welfare policy is forced to encourage human capital investments onto future generations to break the intergenerational transmission of disadvantages. Preventing intergenerational disadvantage involves the provision of support and opportunities essential to a person's favorable personal and economic development, especially to recognize the potential of education to be a means to advance the social ladder regardless of the welfare state and social policy regime. The results call for broader thinking on the mechanisms how families, labor markets and social policy interact in determining the intergenerational transmission of economic and social disadvantages.

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## Tables

**Table 1: Description of the variables**

Variables	Definition
$Y_{CHIL}$	$\ln(\text{permanent real equivalent post-government income (2001=100, OECD equivalence scale, 5-year average)})$ of the children's household
$Y_{PAR}$	$\ln(\text{permanent real equivalent post-government income (2001=100, OECD equivalence scale, 5-year average)})$ of the parental household
GEN	1 male, 0 female
$EDUC_{CHIL(t)}$	Educational attainment (school years)
$EDUC_{PAR(t)}$	Average years of education parents
$CHILD_{CHIL(t)}$	number of children in the household
$EMP_{CHIL(t)}$	Unemployment 1, 0 else
$EMP_{PAR(s-t)}$	1 father is employed less than half the observation period, 0 else
$OCC_{F(t)}$	Occupational categories (father, children)
$OCC_{CHIL(t)}$	1 "1 academic/scientific professions/managers", 0 else 1 "2 professionals/technicians/ associate professionals", 0 else 1 "3 trade/personal service", 0 else 1 "7 elementary occupations", 0 else
$DISRUPT_{PAR(s-t)}$	Family disruption : 1 widowed, divorced, separated, 0 else (parental household, situation in t-s years)
$DISRUPT_{CHIL(t)}$	
$DISABIL_{F(t)}$	Disability status : 1 disabled, 0 else
$DISABIL_{CHIL(t)}$	
$SATHEALTH_{F(s)}$	Satisfaction with health: 1 excellent, good, fair; 0 poor, very poor
$SATHEALTH_{CHIL(t)}$	

s=the first observation year in the relevant household (parents, children);

t=the end of the observation period in the relevant household (parents, children)

Source: GSOEP, PSID, BHPS, author's calculations.

Table 2 : Intergenerational income mobility

Model specification	GERMANY			USA		
	(2a)	(2b(a))	(2b(b))	(2a)	(2b(a))	(2b(b))
Constant	5.002**	6.181**	6.312**	3.346**	4.647**	5.579**
$y_p$ post-gvt income, parental hh	.484**	.377**	.374**	.678**	.465**	.385**
$X_2$ GEN 1 male 0 female		-.149**	-.123**		-.128**	-.120**
$X_3$ EDUC <sub>c(t)</sub>		.017**	.019**		.088**	.087**
$X_4$ CHILDREN <sub>c(t)</sub>		-.149**	-.162**		-.171**	-.197**
$X_5$ EDUC <sub>p(s)</sub>		.004	.005		.009	.003
$X_6$ OCC <sub>p(t)</sub> 1 academic/scientific/managers, 0 else		.126*	.144*		.084	.048
1 professionals, 0 else		.087	.099		.069	.044
1 trade/personal service, 0 else		.004	.013		.008	.020
1 elementary occupations, 0 else		-.121	-.114		-.074	-.103
$X_7$ EMP <sub>p(s-t)</sub> 1 unemployed, 0 else			-.031			-.055
$X_8$ DISRUPT <sub>c(t)</sub> 1 family disruption, 0 else			-.162**			-.322**
$X_9$ DISRUPT <sub>p(s-t)</sub> 1 family disruption, 0 else			.089			.089
$X_{10}$ DISABILITY <sub>p(t)</sub> 1 disabled, 0 else			-.219*			-.003
$X_{11}$ DISABILITY <sub>c(t)</sub> 1 disabled, 0 else			-.081			-.447**
$X_{12}$ HEALTH STATE <sub>p(t)</sub> 1 excellent, good, fair; 0 poor, very poor			.119			.190
R <sup>2</sup> adj	.130	.356	.394	.229	.289	.365
RMSE	.458	.347	.338	.815	.708	.651
LL	-584	-120	-106	-1310	-790	-686
Mean VIF		1.23			1.30	

Source: GSOEP, PSID, BHPS, author's calculations.

\* p&lt;0.05; \*\* p&lt;0.01

Table 3 : Economic and Social Dynamics

(a) Income Dynamics

Origin		Destination				
		1	2	3	4	5
Germany	1	<b>.4397</b>	.1986	.1560	.1206	.0851
USA	1	<b>.3756</b>	.3032	.1403	.1267	.0543
Germany	2	.3273	<b>.2545</b>	.1758	.1212	.1212
USA	2	.2081	<b>.2308</b>	.2353	.1674	.1584
Germany	3	.1309	.3037	<b>.2147</b>	.1728	.1780
USA	3	.1131	.2308	<b>.1900</b>	.2398	.2262
Germany	4	.1520	.1324	.2353	<b>.2598</b>	.2298
USA	4	.0888	.1075	.2009	<b>.3364</b>	.2664
Germany	5	.0550	.1330	.2018	.2798	<b>.3303</b>
USA	5	.0248	.1040	.1485	.2624	<b>.4604</b>

Pearson Chi2(16)=163.99 (Germany), 245.91 (USA); Pr=0.000 (Germany, USA)  
 Source: GSOEP-PSID 1980-2008, author's calculations

(b) Occupational dynamics

Origin		Destination			
		1	2	3	4
Germany	1	<b>.7256</b>	.2012	.0305	.0427
USA	1	<b>.6807</b>	.1807	.0181	.1205
Germany	2	.4381	<b>.3429</b>	.0667	.1524
USA	2	.5217	<b>.2826</b>	.0290	.1667
Germany	3	.2439	.2927	<b>.2683</b>	.1951
USA	3	.4576	.2881	<b>.1017</b>	.1525
Germany	4	.2778	.2444	.1222	<b>.3556</b>
USA	4	.4275	.1487	.0743	<b>.3494</b>

Pearson Chi2(9)=115.53 (Germany), 85.61 (USA); Pr=0.000 (Germany, USA)  
 Source: GSOEP-PSID 1980-2008, author's calculations

(c) Mobility measures

country	Income dynamics		Occupational dynamics	
	Bartholemew-Index	total immobility (%)	Bartholemew-Index	total immobility (%)
Germany	1.1486	.2948	.8545	.4694
USA	1.1205	.3263	1.0873	.4574

Source: GSOEP-PSID 1980-2008, author's calculation



Table 4: Relative risk ratios

	Germany	USA
GEN 1 male 0 female	2.365*	1.863*
EDUC <sub>CHIL(t)</sub>	.989	.627*
CHILD <sub>CHIL(t)</sub>	2.457*	2.082*
OCC <sub>(t)</sub>		
1 academic/scientific/managers, 0 else	1.148*	1.811
1 professionals, 0 else	1.249*	1.094
1 trade/personal service, 0 else	.887	3.029**
1 elementary occupations, 0 else	.099	.106
EDUC <sub>PAR(t)</sub>	.989	.967*
OCC <sub>PAR(t)</sub>		
1 academic/scientific/managers, 0 else	1.115*	1.333
1 professionals, 0 else	1.905	1.004
1 trade/personal service, 0 else	.999	.996
1 elementary occupations, 0 else	.364*	.996*
EMP <sub>PAR(s-t)</sub>	.166*	.796
1 unemployed, 0 else		
DISRUPT <sub>CHIL(t)</sub>	.566	.808***
DISRUPT <sub>PAR(t)</sub>	.891	.824
DISABILITY <sub>CHIL(t)</sub> 1 disabled, 0 else	.277	.865
HEALTH STATE <sub>PAR(t)</sub>	3.287*	.841
1 excellent, good, fair; 0 poor, very poor		
L	-111.262	-252.429
$\chi^2$	97.79	139.59
Pseudo R2	.3053	.2166
N	257	517

NOTE: \*indicates significance at the 5percent level in a two-tailed test ( $p < 0.05$ ),

\*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

SOURCE: GSOEP-PSID, author's calculations