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The Intergenerational Transmission of Occupational Preferences, Segregation, and Wage Inequality – Empirical Evidence from Europe and the United States

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Abstract

Based on longitudinal data (CNEF 1980 – 2010) the paper analyzes the structuring effects of individual and family background characteristics on occupational choice in Germany, the United States, and Great Britain. We start from the hypothesis that the intergenerational transmission of occupational status promotes persistent occupational segregation and gender wage differentials. We suppose country differences due to the existing institutional settings of the labor markets, educational systems, and family role models. The results confirm that parental characteristics significantly influence occupational preferences, and provide an explanation of persistent gender differences in economic and social status. The gender wage-gap is mainly determined by gender differences in the occupational categories. Female dominated occupations are characterized by a high 'pure' wage-gap which supports the crowding hypothesis.

JEL-Classifications: J24, J31, J62, J90

1. Introduction

Notwithstanding the converging labor market behavior, and the equal pay legislation the tendency for women and men to work in separate occupations and gender differences in social and economic status seem to be universal and enduring in many industrialized countries. Occupational choice plays a crucial role in determining economic and social stratification, and is shaped by individual decisions, social norms, the educational system, social and tax policy, the existing family role models, the institutional settings of the labor markets, and

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employer attitudes in a country. The neoclassical human capital approach offers a rational choice based explanation for gender differences in labor market behavior. Persons decide their occupational choice, and income profiles in (i) maximizing the discounted present value of potential lifetime earnings, (ii) entailing the lowest training costs, and (iii) offering the lowest discounted present value of expected earnings forgone due to unemployment (Becker, 1964; Mincer, 1974; Boskin, 1974; Becker, 1991). If women anticipate their lifetime preferences to reconcile work and family, they choose occupations that require less human capital investment and that impose the smallest penalty for employment interruptions. In this way women are self-segregated into female dominated jobs, they are confronted with wage disadvantages and limited opportunities for career progression (Blackwell, 2001; Budig/England, 2001; Hakim, 2002; Karlin et al., 2002). Additionally, persistent gender differences in labor market behavior and social and economic status may be due to employer attitudes (Polachek, 1981), social norms, and the intergenerational transmission of social and economic status. Attitudes, preferences, and social skills are molded in early socialization when growing up, and influenced by gender-specific family ambitions and social norms. Parents continue to influence the employment behavior of their children directly through genetic endowment, wealth, social capital environment, and family role patterns, and indirectly through their investment in the education and shape the children's taste and perception of what is an appropriate educational and professional career (Benewitz/Zucker, 1968; Acemoglu/Pischke, 2000; Constant/Zimmermann, 2003; Black et al., 2005; Escriche, 2007) and even how to succeed in the marriage market (Pencavel, 1998).

The paper focuses on these questions and analyzes in how far individual and family background characteristics affect occupational preferences, and contribute to persistent occupational segregation and gender earnings differentials in Germany, Great Britain, and the United States. We expect country differences concerning the structuring effects of individual and family background characteristics on occupational choice due to the existing welfare state regimes (Esping-Andersen, 1990; Esping-Andersen, 1999) characterized by the institutional settings of the labor markets, the traditions with respect to vocational training and higher education, the tax and family policy incentives to balance family and work, and the family role models.

The conservative-corporatist welfare state regime in Germany guarantees that the government protects those who are unable to succeed in the market place. The labor market institutions and policies ensure high employment stability. Health care, welfare, social insurance, national assistance, and old age pensions, and higher education are publicly provided. The liberal welfare state regime in the United States and Great Britain stresses the sense of individualism. The public philosophy is grounded on the idea of opportunity, and the success of individual effort. The distributional consequences of the market forces are

accepted, and induce a flexible labor market (Dustmann, 2004; Hall / Soskice, 2001; Gornick / Meyers, 2003).

In Germany, the vocation-oriented educational "dual system" relies on occupation-specific credentials, and results in socially stratified and sex segregated outcomes. The federal states have the primary responsibility for organizing the educational system, which results in a high level of standardization, and constitutes the mechanisms for perpetuating social inequalities (Mortimer / Krüger, 2000; Charles et al., 2001; Trappe / Rosenfeld, 2004; OECD 2012). In the United States and the United Kingdom the educational systems are less stratified and standardized which may induce a higher social mobility. At the other hand higher education is privately financed, which suggests intergenerational social immobility.

The social and family policies in Germany facilitate the incorporation of women into the labor force (e.g. child care, paid maternity leave, job return guarantees) and support the transition from the traditional male bread-winner model to the adult worker model. At the other hand tax policy measures (e.g. tax splitting) favor men as breadwinner and women foremost as mothers, which reinforce traditional family role patterns (Charles et al., 2001; Lewis, 2006). We suppose a higher impact of family background characteristics on occupational choice and a higher intergenerational persistence of economic and social status in Germany than in the United States and in the United Kingdom.

The paper is organized in four sections. Section 2 reports the data base and the methodological issues. In section 3 the empirical results are discussed. Section 4 concludes with a summary of findings and a discussion of policy implications. We discuss the implications for the stability of gender segregation and policies aimed at alleviating gender inequality.

2. Data

The empirical analysis is based on data from the German Socio-Economic Panel (SOEP), the British Household Panel Survey (BHPS), and the US Panel Study of Income Dynamics (PSID), which were made available to us by the Cross-National Equivalent File (CNEF) project at the College of Human Ecology at Cornell University, Ithaca, N.Y.[1] The data do not provide a sufficiently long time horizon to observe parents and children at identical life cycle situations, but cover an adequately long period to allow monitoring socioeconomic characteristics, employment and occupational status, income situation of children living in the parental household and when becoming members of other family units. In this way the data allow to draw inferences about the effects of

[1] For a detailed description of the data bases see Frick et al. (2007).

being exposed to different life situations in the parental household on the economic and social situation as young adults. The sample is restricted to persons aged 14 to 20 years, and co-resident with their parents in the 1990ies, we choose the observation periods 1987 – 1993 (United States), 1988 – 1994 (Germany), and 1991 – 1997 (GB). We define 'parents' as adults, whose marital status is 'married', or 'living with a partner' and who are living in households with persons indicated as 'children'. The young adults are at least 24 years old when we observe their economic and social situation in 2005 – 2009 (Germany), in 2003 – 2007 (USA), and in 2004 – 2008 (GB) in their own household. We exclude persons in full-time education. The selection process leads to a sample of 2,128 persons out of the children's generation in the former West Germany, because the SOEP does not cover former East German households until the reunification in 1989. The US sample considers 2,585 US women and men. Due to the organization of the British Household Panel Survey, we observe 1,840 women and men from Great Britain.

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 accounts 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 persons live in the parental household we construct a set of weights

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

with x the parents' 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 gender, age and educational attainment as well as their squares of the household head. We suppose these variables to affect the attrition propensities. The weights w(x,z) are multiplied with the household weights, which yields a set of weights that apply to the household of the children as adults. The 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. Occupational Segregation

A traditional approach to quantify occupational segregation is to classify the occupations according to the proportion of women. "Typically female" occupations feature a proportion of women of 60 percent and more, "integrated" occupations are characterized by a well-balanced gender-ratio, and "typically male" occupations show a proportion of women of at most 35 percent (Heintz et al., 1997). To consider structural differences between the occupations we employ the Karmel-Maclachlan (Karmel / Maclachlan, 1988) segregation index indicating the proportion of employed persons who must be relocated to achieve the sex-ratio of total employment in each particular occupation

$$(1) \qquad KM = \left(\frac{1}{N}\right) \sum |M_i - a(M_i + F_i)| \; = \left(\frac{1}{N}\right) \sum |(1-a)M_i - aF_i|$$

with the total number of employees (N), the proportion of men in total employment (a), and the number of men (women) in occupation i (M_i (F_i)). For a particular year, under zero segregation, the number of (fe)male employees in a particular occupation would be equal to the overall (fe)male share of employment multiplied by the number of employees in this occupation. The absolute difference between the number of (fe)male persons required for zero segregation and the actual number of (fe)male persons in the occupation i, represents the number of (fe)male persons who must relocate to other occupations from this (fe)male-dominated occupation to achieve zero segregation.

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 a 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. The ISCO-88 is a nested classification of four levels with nine major groups[2] and 28 sub major groups provided by the database, 116 minor groups, and 390 unit groups. To evaluate the segregation level we rearrange the 1-digit occupational categories 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'.

[2] 1 legislators, senior officials and managers, 2 professionals, 3 technicians and associate professionals, 4 clerks, 5 service workers and shop and market sales workers, 6 skilled agricultural and fishery workers, 7 craft and related trades workers, 8 plant and machine operators and assemblers, 9 elementary occupations.

3.2. Determinants of Occupational Choice

The human capital approach suggests that an individual i (i=1,…,N) maximizes her utility when preferring one out of M+1 occupations j (j=0,1,…M). The utility depends on a set of characteristics (X_i) and can be approximated by the linear relation

$$u_{ij} = u(X_i) = X_i\beta_j + \varepsilon_j \,, \tag{2}$$

where β_j is a 1xK vector of (unknown) parameters and X_i is the i-th observation on the Kx1 vector of explanatory variables. The disturbances ε_j indicate the random error associated with occupation j, which are assumed to be independently and identically distributed as a log Weibull distribution. The estimated equations provide a set of probabilities of M+1 occupational choices $P_0, P_1, \ldots, P_M$. We assume that the outcome categories "can plausibly be assumed to be distinct and weighted independently in the eyes of a decision maker" (Mc Fadden 1973) and employ a discrete choice model (Boskin, 1974; Heckman, 1981; Maddala, 1983). We introduce the response variable Y for occupational choice, which takes the value 1 if $u_{ij} > u_{ik} \quad \forall j \neq k$, and 0 else. The probabilities of Y=j given the covariates X_i are

$$P(Y = j|X_i) = \frac{e^{X_i\beta_j}}{1 + \sum_{k=1}^{M} e^{X_i\beta_k}}. \tag{3}$$

To remove the indeterminacy in the model we impose the normalization of $\beta_0 = 0$. Because the probabilities sum to one, we need M parameter vectors to determine the M+1 probabilities for $j = 0, 1, 2, \ldots, M; k = 0, \ldots, M; ß_0 = 0$. The log-odds ratios that an individual i will choose occupation j over occupation k can be written as the natural logarithm of an occupation j to the probability of the reference category k as

$$\ln\left(\frac{P_j}{P_k}\right) = X_i(\beta_j - \beta_k) = X_i\beta_j \text{ if } k = 0\,. \tag{4}$$

The odds ratio P_j/P_k does not depend on the other choices, which follows from the independence of disturbances in the model. The relative risk ratio for the occupational category (Y=j) and the predictor variable X_k (rrr_{jk}) equals the amount by which the predicted odds favoring occupation j compared to the predicted odds favoring the reference occupational category (Y=base) are multiplied, per one unit increase in X_k, other things being equal

$$rrr_{jk} \cdot \frac{P(Y=j|X_k)}{P(Y=base|X_k)} = \frac{P(Y=j|X_k+1)}{P(Y=base|X_k+1)}. \quad (5)$$

The dependent variable (OCC) captures the occupational status in 2009 (GER), 2007 (US), and 2008 (GB). We rearrange the 1 digit occupational categories into four aggregated occupational 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 explanatory variables in X_i include a set of individual and family background characteristics that are expected to affect the individual´s probability to prefer a given occupation. In general, these variables are observed in the last year of the observation period. We include age (AGE) to consider the impact of on the job training on labor market outcome. We suppose that higher education enables persons to choose occupations with higher social status and include the years of education (EDU). We control for differences in occupational choice by gender (GEN) and marital status (MAR).

To capture the direct and indirect effects of parental investments on the occupational decision we include the parents´ average years of education (EDUp). We introduce the real equivalent post-government household income (pre-government household income plus household public transfers, plus household social security pensions, deducting household total family taxes) as a proxy for the parents' income status (STATp). We use the referred income variables from the data bases, thus the results make not allowance for the bias of imputed values (Frick / Grabka, 2005). To consider the family structure we adopt the 'modified' OECD-equivalence scale (Hagenaars et al., 1994), and we deflate the income variable with the national CPI (2001=100) to reflect constant prices. To exclude transitory income shocks and cross-section measurement errors we use moving averages. Additionally, we introduce the number of children less than 16 years in the parental household (CHILp) to control for the impact of household size on occupational choice. To consider the impact of the occupational structure in the parents' generation on the children's occupational choice we introduce the proportion of women in the parents' occupational distribution (SEGp). Finally, we introduce two dummies of the parents' occupational status to capture social class origin ($OCC1_P$ "academic, scientific and managerial occupations, professional and technical occupations", $OCC2_P$ "craft, operating, and elementary occupations"). In "two-parent"-families we consider the occupation of the father, in "single-parent"-families the occupation of one of the parents is included. To evaluate whether occupational choice differs systematically between countries we introduce a welfare state regime dummy (WELF) along with its interaction terms indicating the segregation level in the parents' occupational distribution and the parents' social status. (Table 1)

Table 1

Variable description

Variable	Description
OCC	"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".
GEN	gender of the individual: 1 male, 0 female
AGE	Age of the individual
EDU	Educational attainment is measured in school years. In the case of missing values the years of education are set equal to the amount reported in the next year, for it is possible to increase the number of schooling but impossible to decrease it.
MAR	marital status: 1 married, 0 else
$CHIL_p$	number of children < 16 years in the parental household
EDU_P	Average school years of father and mother. In the case of missing values the years of education are set equal to the amount reported in the next year, for it is possible to increase the number of schooling but impossible to decrease it.
$STAT_p$	Relative income situation of the parental household: 1 real equivalent post-government household income > median, 0 real equivalent post-government household income < median
SEG_F	Proportion of women in the father's occupational distribution
OCCF1	1 "academic / scientific professions / managers"; "professionals / technicians / associate professionals", else 0
OCCF2	1 "craft and related workers"; plant and machine operators / assemblers"; elementary occupations", else 0
WELF	1 conservative-corporatist welfare state regime (Germany), 2 liberal welfare state regime (Great Britain, United States)

Source: GSOEP, BHPS, PSID 1980 – 2010, author's calculations

3.3. Occupational Segregation and Gender Earnings Differentials

To quantify the contribution of the employment structure to the gender earnings differentials we employ a decomposition approach (Zveglich / van the Meulen Rodgers, 2004). This approach addresses to the link between the shifts in the relative importance of the occupations and the changes in the relative wages. The overall gender wage-gap can be written as

$$W_{mt} - W_{ft} = \sum\nolimits_i \left(\alpha_{mit} w_{mit} - \alpha_{fit} w_{fit}\right) \tag{6}$$

with W_{mt}, W_{ft} denoting the mean of the log hourly wages for men and women in period t, and w_{mit}, w_{fit} representing the corresponding mean of the log wage

in the i-th occupation in period t, which is weighted with the proportion of women and men in these occupations $(\alpha_{mit}, \alpha_{fit})$. We rearrange the equation and decompose the overall gender wage-gap into two components

$$W_m - W_f = \sum\nolimits_i (\alpha_{mi} - \alpha_{fi}) w_{mi} + \sum\nolimits_i \alpha_{fi} (w_{mi} - w_{fi}). \tag{7}$$

The first term shows the effect of gender differences in the employment structure across occupations, given male wages ("wage-gap between occupations"), and represents the portion of the gender wage gap that is explained by the women's relative concentration in certain occupations. The second term quantifies the "pure gender wage-gap" and shows the effect of gender pay differences within the occupations, given the female occupational structure ("wage-gap within occupations").

4. Empirical Results

4.1. Occupational Segregation

The countries differ concerning the gender distribution in the occupational structure. 'Typically female' occupations characterized by a proportion of women of 60 percent and more are '1 academic / scientific professions / managers', and '2 professionals / technicians / associate professionals' (USA), and '3 trade / personal services' (GER, GB). In the parents' occupational distribution the categories '2 professionals / technicians / associate professionals' (GER, USA), and '3 trade / personal services' (GER, USA, GB) are female dominated occupational categories.

In Germany and Great Britain, the KM-index suggests that about 16 percent of the employees must be relocated to achieve the sex ratio in total employment. In both the countries occupational segregation decreases from the parents' to the children's generation indicating increasing gender equality in the labor market. In the United States the KM-index indicates increasing occupational segregation from 16.6 percent in 1993 to 18.3 percent in 2007. The countries significantly differ with regard to the contribution of the occupations to the overall segregation level. The most segregated occupational categories are '4 agricultural / fishery workers' (GER, GB), '5 craft and related workers' (GER, GB), '6 plant and machine operators / assemblers' (USA, GB), and '7 elementary occupations' (USA). In the parents' occupational distribution more than 30 percent of the employees in the categories '6 plant and machine operators / assemblers', and '7 elementary occupations' should be relocated to achieve the sex ratio in total employment (GER, USA, GB) (Table 2).

Table 2

Occupational segregation

OCC	Germany				United States				Great Britain			
	Children 2009		Parents 1994		Children 2007		Parents 1993		Children 2008		Parents 1997	
	%fem	KM-index	%fem	KM-index	%fem	KM-index	%fem	KM-index	%fem	KM-index	%fem	KM-index
1	.275	.213	.434	.013	.609	.120	.583	.086	.576	.086	.564	.079
2	.542	.054	.606	.185	.693	.204	.631	.170	.532	.042	.588	.102
3	.724	.236	.641	.220	.581	.092	.596	.058	.781	.291	.696	.210
4	.385	.103	.374	.047	.265	.224	.236	.258	.145	.345	.216	.269
5	.114	.373	.337	.084	.350	.138	.507	.173	.030	.460	.311	.175
6	.169	.318	.121	.300	.138	.351	.105	.385	.117	.373	.119	.366
7	.548	.060	.143	.279	.160	.329	.181	.363	.390	.100	.090	.396
total	.488	.164	.421	.195	.523	.183	.489	.166	.490	.167	.485	.180

Note: occupational 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", "7 elementary occupations"

Source: GSOEP, BHPS, PSID 1980 – 2010, author's calculations

4.2. Determinants of Occupational Choice

Table 3 presents the relative risk ratios and the significance level of the t-ratios for the six unique and distinct comparative occupational choices, indicating $u_{ij} > u_{ik} \quad \forall j \neq k$. The results reveal country differences concerning the influence of individual and family background characteristics on occupational choice. In the United States, increasing age makes it more likely to be occupied in the category '3 agricultural / fishery workers, craft and related workers' than in other categories. The preponderance of positive and significant coefficients of education (GER, US) is congruent with the findings of Schmidt and Strauss (1975) that higher education increases the probability to choose occupations with a higher social prestige, and to move "up" the occupational ladder. German and British women more likely prefer female dominated occupations in the category '2 trade / personal services' compared to other categories. There is only weak statistical support for the influence of marital status on occupational preferences. In Germany and Great Britain married persons experience a higher probability to be engaged in the occupational category '1 academic / scientific professions / managers, professionals / technicians / associate professionals' compared to other categories.

The relative risk ratios reveal country differences concerning the influence of parental background characteristics on occupational choice. In Germany and

the United States the parents' educational attainment and financial status not significantly affect the children's occupational choice. In Great Britain, living in low income households in childhood makes it more likely to choose occupations in the category '3 agricultural / fishery workers, craft and related workers' than other categories. There is only weak empirical evidence that the number of siblings interfere with one's occupational success: in Germany, a higher number of children in the parental households makes it more likely to choose occupations in '3 agricultural / fishery workers, craft and related workers' compared to '4 plant and machine operators / assemblers, elementary occupations'.

The segregation level of the parents' occupational distribution significantly influences the occupational preferences of the children. Persons whose parents are engaged in segregated occupations have a significant higher probability to choose the occupational categories '1 academic / scientific professions / managers, professionals / technicians / associate professionals', and '2 trade / personal services' compared to other occupations. In Germany and Great Britain the relative risk ratios corroborate the empirical evidence of low intergenerational occupational mobility (Lentz / Laband, 1989; Hellerstein / Sandler Morill, 2011). Persons whose parents are occupied in 'academic, scientific and managerial occupations, professional and technical occupations" ($OCC1_P$) more likely prefer occupations in the categories '1 academic / scientific professions / managers, professionals / technicians / associate professionals' and '2 trade / personal services' compared to other categories. Persons whose parents are engaged in the occupational categories 'craft, operating, and elementary occupations' ($OCC2_P$) are more likely occupied in '3 agricultural / fishery workers, craft and related workers' (GER), and '4 plant and machine operators / assemblers, elementary occupations' (GB). Occupational choice is likely to differ systematically among countries with different welfare state regimes. In Great Britain and the United States, women and men more likely prefer occupations in the categories '4 plant and machine operators / assemblers, elementary occupations', but they are less likely occupied in the occupational categories in '3 agricultural / fishery workers, craft and related workers'. The significant relative risk ratios for the interaction term 'occupational structure' indicate that the segregation level of the parent's occupational distribution plays a different role in determining the occupational choice in the analyzed countries.

Table 3

Occupational choice, relative risk ratios

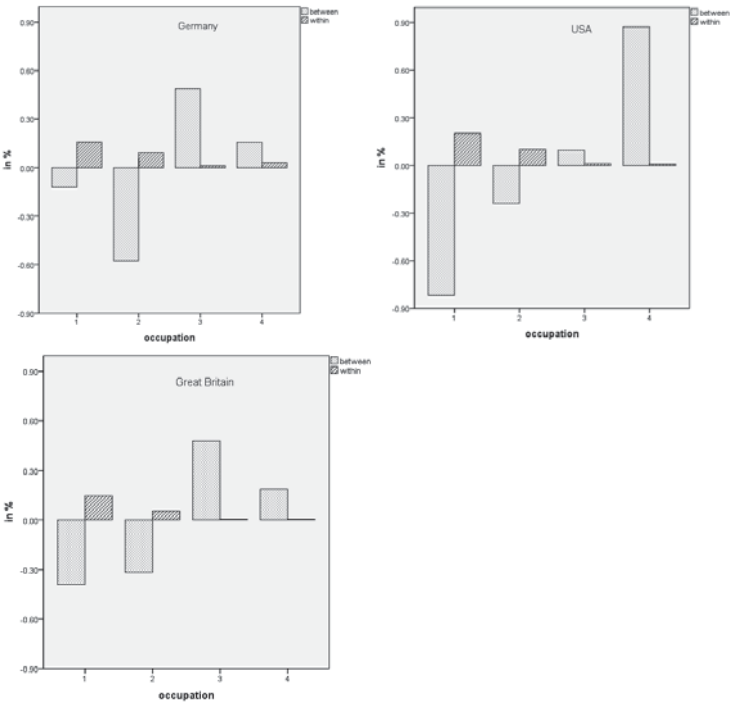
Germany	$\ln(P_1/P_2)$	$\ln(P_1/P_3)$	$\ln(P_1/P_4)$	$\ln(P_2/P_3)$	$ln(P_2/P_4)$	$ln(P_3/P_4)$
GENDER	**.541***	**2.174***	2. 316	**1.559***	**4.125***	.641
AGE	.961	1.241	.863	1.129	.899	.696
EDU	**1.040***	**1.189***	**1.084***	**1.143***	**1.042***	.911
MAR	.837	**.050***	.651	.059	.777	**1.088***
$CHIL_p$	.935	**.**679	1.071	. 726	1.145	**1.577***
EDU_p	.963	1.027	1.013	1.067	1.053	.986
SEG_P	.765	**2.085***	.678	**2.955***	.847	**.106***
$STATUS_p$	.810	.575	1.791	.710	1.209	2.112
OCCF1	1.667	**.345***	2.557	**.116***	1.534	1.982
OCCF2	1.204	**1.447***	**1.176***	**2.018***	**1.080***	**.039***
	LL –154.855		χ^2 102.87	N 302		Pseudo R2 .249
USA	$\ln(P_1/P_2)$	$\ln(P_1/P_3)$	$\ln(P_1/P_4)$	$\ln(P_2/P_3)$	$\ln(P_2/P_4)$	$\ln(P_3/P_4)$
GENDER	**1.343***	**2.995***	**1.549***	**2.719***	**2.089***	**2.712***
AGE	.994	**.852***	.969	**.858***	.972	**1.133***
EDU	**1.215***	**1.682***	**1.505***	**1.385***	**1.239***	.894
$CHIL_p$	.979	.903	.973	.922	.994	1.078
MAR	.800	1.162	**.553***	1.450	.689	.476
EDU_p	1.009	1.022	1.029	1.012	1.019	1.007
SEG_P	1.121	**1.929***	**1.754***	**1.721***	**1.565***	.909
$STATUS_p$	1.237	.665	1.303	.538	1.053	1.958
OCCF1	1.095	1.858	1.362	1.697	1.244	.733
OCCF2	1.401	1.007	1.052	.719	.751	1.045
	LL -649.004		χ^2 249.74	N 1,021		Pseudo R2 .199
Great Britain	$\ln(P_1/P_2)$	$\ln(P_1/P_3)$	$\ln(P_1/P_4)$	$\ln(P_2/P_3)$	$\ln(P_2/P_4)$	$\ln(P_3/P_4)$
GENDER	**.354***	**2.834***	**1.025***	**2.566***	**2.899***	**1.036***
AGE	1.014	1.021	1.039	1.006	1.024	1.017
MAR	**.349***	.567	1.755	1.623	1.888	2.860
$CHIL_p$	1.066	.905	1.149	.849	1.078	1.271
SEG_P	1.029	**1.027***	1.205	**1.969***	1.171	**.595***
$STATUS_p$	1.497	.642	1.503	**.429***	1.004	**2.342***
OCCF1	1.707	1.097	**.403***	.406	**.149***	**.368***
OCCF2	**1.357***	**1.517***	**1.805***	**1.963***	1.644	.103
	LL –362.34		$\chi^2$246.46	N 741		Pseudo R2 .254

Germany	$\ln(P_1/P_2)$	$\ln(P_1/P_3)$	$\ln(P_1/P_4)$	$\ln(P_2/P_3)$	$ln(P_2/P_4)$	$ln(P_3/P_4)$
GER/GB/USA	$\ln(P_1/P_2)$	$\ln(P_1/P_3)$	$\ln(P_1/P_4)$	$\ln(P_2/P_3)$	$\ln(P_2/P_4)$	$\ln(P_3/P_4$
GENDER	**1.130***	**1.022***	**2. 020***	**3.418***	**4.696***	**2.194***
AGE	.993	.993	.973	.929	.981	1.055
EDU	**1.356***	**1.356***	**1.364***	**1.141***	**1.147***	1.006
MAR	.679	.679	**.529***	.857	.669	.780
$CHIL_p$	.870	.870	1.008	. 880	1.020	1.159
EDU_p	1.032	1.032	1.027	1.027	1.022	.995
SEG_P	.398	**2.745***	**1.433***	**2.700***	**1.409***	**.522***
$STATUS_p$	1.158	.813	1.424	.695	1.217	1.752
OCCF1	1.132	**1.545***	1.357	**1.171***	1.279	.207
OCCF2	1.477	1.585	.718	1.206	.546	.453
WELF	.789	**2.188**	**.515***	**2.755***	**445***	**.162***
WELF_SEGp	1.693	.726	**2.261***	**.429***	1.383	**2.139***
WELF_STATUSp	1.029	.993	.992	.965	.971	1.006
	LL -824.456		χ^2 333.15	N 1,874		Pseudo R2 .175

Note: *indicates significance at the 5percent level in a two-tailed test ($p < 0.05$) Source: GSOEP-BHPS-PSID 1980–2010, author's calculations

4.3. Occupational Segregation and Gender Wage Differentials

The evaluation of the contribution of the employment structure to the gender wage-gap is based on the log hourly wages in 2007 (USA), 2008 (GB), and 2009 (GER). On average, the gender wage gap is significantly lower in Great Britain (16.5 percent) compared with Germany (24.5 percent) and the United States (23.7 percent). In all the countries the Pearson coefficient indicates a positive correlation between the proportion of women in the occupational categories and the gender wage-gap. The decomposition analysis shows that the gender wage-gap is mainly explained by gender differences in the employment structure. In the occupational categories '1 academic/scientific professions/managers, professionals/technicians, associate professionals' and '2 trade/personal services' the negative 'wage-gap between occupations' indicates the relative concentration of women. In these occupational categories the 'pure' (wage-gap within occupations) contributes to a higher extent to the total wage gap, which supports the crowding hypothesis (Figure 1).



Source: GSOEP-BHPS-PSID 1980–2010, author's calculations.

Figure 1: Decomposition of the gender wage-gap Note: Occupational categories "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".

5. Conclusions

The paper analyzed in how far occupational status is transmitted between generations, and contributes to persistent occupational segregation and gender earnings differentials in Germany, the United States, and Great Britain. Due to the existing welfare state regimes, institutional settings of the labor markets, educational system, tax and social policies, and family role models we supposed a higher intergenerational social mobility in the United States and Great Britain than in Germany. The empirical results partly confirm these hypotheses:

The results do not corroborate the hypothesis of a higher segregation level in Germany compared to Great Britain and the United States. In Germany and Great Britain the KM-index indicates a lower segregation level than in the United States. In both the countries the children's occupational distribution is

less segregated than the parents' occupational distribution which may refer to the changing labor market behavior of women, and the effective social policy measures to improve gender equality in the labor market.

The results of the multinomial logit model confirm that individual occupational decisions are gender specific, women prefer female dominated occupations. Education significantly determines occupational choice and contributes to social stratification. Higher education increases the probability to choose occupations with a higher social status. In Great Britain the relative risk-ratios reveal a significant influence of the parental economic status on the children's occupational status.

In all the countries the empirical results document the significant influence of parental background characteristics on economic and social status. Persons whose parents work in segregated occupational categories more likely choose segregated occupations. Persons whose parents are engaged in occupations with high social status ($OCC1_P$) more likely choose occupations in the categories '1 academic/scientific professions/managers, professionals/technicians, associate professionals' and '2 trade/personal services'. The results show that occupational choice differs significantly by the existing welfare state regime. The segregation level of the parents' occupational distribution works differently in determining occupational preferences.

In Great Britain the gender wage-differentials are significantly lower than in Germany and in the United States. In general, the gender wage-gap is mainly explained by gender differences in the occupational structure (wage-gap between occupations). Female dominated occupations are characterized by a relatively high contribution of the 'pure' (wage-gap within occupations) which supports the crowding hypothesis.

The influence of family background characteristics on occupational choice promotes the intergenerational transmission of occupational status, and perpetuates gender differences in employment behavior, earnings, and family role patterns. Economic and social policy is forced to continue the efforts to promote equal opportunities in the family and the labor markets to provide support essential to a person's favorable economic and social development and to foster social mobility.

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