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The Impact of Social Origin on Graduates' Early Occupational Destinations—An Anglo-German Comparison

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Abstract

This article examines the impact of social origin on tertiary graduates' labour market outcomes in Germany and the United Kingdom, two distinct countries in terms of higher education systems, labour market structures, and their linkages. Data from the 2005 REFLEX survey, OLS regression and linear probability models are used to analyse the effect of parental education on graduates' occupational destinations at two time points: at labour market entry and five years after graduation. We test various hypotheses on country variation (i) in the strength of association between origin and occupational destinations, (ii) in the mechanisms by which social origin affects occupational destinations (i.e. via qualitative education differences), and (iii) in the extent to which social origin matters at different career stages. The results show that parental education effects are similar in the two countries when occupational destinations are analysed using the International Socio-Economic Index of Occupational Status (ISEI). They substantially differ when the analyses focus on entry into the higher-service class. In this latter case, both the gross and the net effects of parental education are stronger in the United Kingdom than in Germany. However, country differences in parental education effects reduce when graduates' occupational outcomes are analysed 5 years after graduation.

Introduction

Several studies in social stratification research have shown that social origin influences a child's occupational position, and that this effect holds over and above educational attainment (Breen, 2004; Iannelli and Paterson, 2007). However, in some countries the influence of social class origin on social class destinations is weaker among the highly educated than among the lower educated (Hout, 1988; Iannelli and Paterson, 2007; Breen and Jonsson, 2008). This comparison *between* educational groups indicates that the acquisition of a tertiary qualification may reduce social class differences in occupational outcomes and increases the chances for social mobility. Social stratification researchers warn, however, that differentiation within the education system may continue to reproduce *within*-group differences: even when students from lower classes achieve access to tertiary education, qualitative differences, such as field of study and type of institution attended, matter in the reproduction of social inequalities (Lucas, 2001, called this process 'Effectively Maintained Inequality'). In our article, we look at

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within-group differences among tertiary graduates in Germany and the United Kingdom. We focus on the most educated individuals (i) to examine whether and to what extent social origin still matters for labour market outcomes in this group, and (ii) to analyse the mechanisms by which social origin may influence labour market allocation net of educational attainment.

Moreover, by comparing Germany and the United Kingdom, we gain a better understanding of the role of national institutional differences in shaping the transition from education to the labour market (e.g. Breen, 2010; Triventi, 2013). Social origin might be particularly relevant if competition among graduates is fierce and if there is an absence of tight links between the higher education (HE) qualification achieved and the labour market destination. In such a situation, the family of origin may provide useful resources which help graduates from more privileged backgrounds to acquire higher status and remunerative occupations. We test this idea by comparing Germany and the United Kingdom, two countries that show considerable differences in the degree of signalling capacity of education, competition among graduates, and occupational-specific allocation.

We further pursue a life course perspective, looking at both labour market entry and early career development five years later. Distinguishing between the position at immediate labour market entry and developments in early working careers has been proven to be fruitful, particularly in comparative research (Scherer, 2001; Jacob and Weiss, 2011). Assuming that one's own labour market-related resources and work experience gain importance in people's occupational career, social origin effects visible at labour market entry may decrease across the career and country differences in social differentials become smaller.

Against this background, the article investigates the following questions:

1. *Does social origin affect graduates' outcomes at labour market entry in Germany and the United Kingdom? If so, do Germany and the United Kingdom vary in the extent to which social origin matters?*
2. *Do qualitative differences, such as the field of study chosen and the type of HE institution attended, explain the social origin effect more in one country than in the other?*
3. *Do country differences in the effect of social origin persist five years after graduation?*

We discuss potential mechanisms that may explain the impact of social origin on labour market outcomes among tertiary graduates in our theoretical considerations. The following section describes differences in the institutional setting of HE and graduate labour market structures between Germany and the United Kingdom. Thereafter, we formulate hypotheses on country differences in social origin effects on graduates' occupational outcomes. Subsequently, we present data, methods, and the empirical results. In the concluding section, we will discuss the results in light of the formulated hypotheses.

Class of Origin and Graduates' Labour Market Outcomes: Theoretical Considerations

Labour market allocation can be thought of as a process of matching applicants to vacancies that depends upon applicants' assets, the degree of job competition, and employers' hiring decisions. Various theories have been proposed to explain this process. Particularly relevant for this article are two sets of theories. Credentialist and signalling theories focus on meritocratic mechanisms of job allocation that would predict little or no effect of social origin among HE graduates. Social reproduction theories, on the other hand, would predict the persistence of social inequalities in graduates' labour market outcomes due to institutional differentiation within the HE sector and due to the role that parental resources continue to exercise among graduates.

Credentialist and Signalling Theories

According to *credentialist* approaches, allocation into the labour market is organized by credentials (e.g. Collins, 1979). From this perspective, formal educational qualifications and occupational positions are closely linked and serve occupational and social closure. Credentialist allocation may be particularly salient in the graduate labour market. On the one hand, the traditional professions collectively maintain barriers by legal constraints of certification and fine traditions (Bol and Van de Werfhorst, 2011). On the other hand, allocation into the public sector and into large-scale organizations is highly formalized, managed, and bureaucratically organized by personnel departments that consider only educational levels for choosing among applicants (Mastekaasa, 2011). Hence, individual ascriptive characteristics—among them social background—should have no or only a minor effect on labour market outcomes. National labour markets can be more or less organized by credentials: the stronger the linkages between educational qualifications and occupational

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positions, the less (social) variation in graduates' labour market outcomes exists.

Signalling approaches assume that education serves as a signal of expected future productivity (e.g. Spence, 1973; Stiglitz, 1975). The signalling capacity of education varies between education systems according to 'stratification', i.e. the extent to which secondary education is divided into distinct tracks, and 'standardization', i.e. the degree of uniformity in the school-leaving examination, curricula, HE entry requirements, and other educational features. In highly stratified and standardized education systems, qualifications are more reliable signals for employers than in less stratified and standardized systems. Employers might further assume that unobserved characteristics such as motivation, the ability to learn, or occupational aspirations are at a similar level among graduates who have already mastered several previous transitions and exams. This equalizing effect of graduation is particularly strong if previous transitions have been (socially) selective (Mare, 1980). The credentialist and signalling arguments particularly matter at the beginning of the working career when unknown applicants are hired for the first time whereas, later in one's career, observable productivity and working experience become more important for promotion or job mobility.

Social Reproduction Theories

Social reproduction theorists argue that, despite educational expansion and the significant role education has for job allocation, social origin continues to matter. This is because individuals from more advantaged family backgrounds are able to adopt new strategies to ensure that their offspring will maintain their status. Several studies have shown evidence for such qualitative differences within the education system. For instance, students from different classes vary in their educational pathways and attainment prior to HE (Iannelli, Gamoran, and Paterson, 2011; Schindler, 2014), the chosen field of study (Van de Werfhorst, Sullivan, and Cheung, 2003; Reimer and Pollak, 2010), the chosen type of tertiary institution (Boliver, 2011; Iannelli, Gamoran, and Paterson, 2011; Schindler and Reimer, 2011), or labour market participation during their studies (Jacob and Weiss, 2012). These differences may lead to diverse outcomes among students with the same level of education but different origin class, so-called *Effectively Maintained Inequality* in education (Lucas, 2001). Hence, part of social inequalities in graduates' labour market outcomes might be due to these qualitative differences. From this perspective, a more inclusive system of HE may reinforce the importance of qualitative distinctions within HE and reproduce social inequalities.

Besides formal qualifications, students may take an advantage from parental resources, such as cultural and social capital that are directly or indirectly transmitted from parents to children (Bourdieu, 1986; Coleman, 1988). However, the extent to which cultural and social resources are important may depend on employers' demands and the labour market structure. If competition among graduates for favourable labour market positions is high, any other differentiating factor beyond the degree may serve as a competitive advantage. Endowment with social and cultural capital and above all soft skills might be particularly helpful for entering high managerial positions or services (Jackson, Goldthorpe, and Mills, 2005). This direct influence of parental background via cultural and social capital is assumed to be particularly relevant for early labour market allocation, but to a lesser extent later in the life course as own resources accumulate during one's working life.

An Anglo-German Comparison

In the following, we discuss both sides of the institutional conditions of the matching process (educational system and labour market structures) and their linkages to deriving hypotheses on country differences in the allocation process of graduates into the labour market and early career development.

Educational System: Selectivity and Differentiation

In the highly differentiated tripartite system of Germany, pupils are selected into different school tracks early, commonly at the age of 10 in most *Länder*. Access to HE is determined by the acquisition of the *Abitur*, the upper-secondary school graduation certificate. Among those who are entitled to enter HE, a considerable number of students prefer to enrol in the dual system of apprenticeship (Schindler and Reimer, 2011). Due to the early selection points and the 'diversion' into vocational training, *selectivity of tertiary students* in Germany is comparatively high.

In the United Kingdom, selectivity of graduates is much weaker than in Germany: secondary education in the United Kingdom mostly comprises comprehensive schools where pupils are taught together until the age of 16.[1] The low selectivity in the United Kingdom is further strengthened by the fact that there are no formal restrictions to accessing upper-secondary education at the end of compulsory schooling.

With regard to educational expansion, a much higher percentage of young people graduate from tertiary

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education in the United Kingdom than in Germany: recent OECD figures show that 55 per cent of the individuals at the typical graduation age graduate from ISCED 5A level (largely theoretically based tertiary programmes) in the United Kingdom, in contrast to only 30 per cent in Germany (OECD, 2013, p. 56).[2] Due to these differences in access and participation in HE, heterogeneity of tertiary students is lower in Germany than in the United Kingdom, and the signalling capacity of educational credentials is likely to be weaker in the United Kingdom than in Germany.

Moreover, *differentiation* within HE differs between the two countries: Germany has kept its binary system of HE differentiating between university (offering more academic curricula) and *Fachhochschule* (providing more practical training). The United Kingdom moved from a binary to a diversified system when polytechnics gained university status in 1992. This has not ended stratification in the UK HE sector, as a large differentiation in prestige and student composition exists between Russell Group universities, pre- and post-92 universities, and further education colleges (Boliver, 2011; Iannelli, Gamoran, and Paterson, 2011). Due to the variety of secondary qualifications which allow entry into HE (e.g. A-Levels/Highers, National Vocational Qualifications/Scottish Vocational Qualifications, Business and Technology Education Council (BTEC) qualifications, or International Baccalaureate) and the lack of standardized entry requirements into HE, admission criteria strongly vary between HE institutions in the United Kingdom (Cheung and Egerton, 2007). The more diverse institutional features in the United Kingdom may affect the relation between social origin and labour market returns in two ways. First, with regard to access and choices within HE, the more diversified system in the United Kingdom allows students from higher family backgrounds to distinguish themselves from lower backgrounds by choosing more prestigious fields of study and institutions. Second, from the employer's perspective, these less standardized features of the UK system deliver less distinct and clear information to future employers who in turn may use other criteria, beyond the degree, for selecting applicants such as the aforementioned criteria field of study and HE institution. In the recruitment process, an applicant's social origin might additionally be used as a proxy for inherited social and cultural capital, or employers may simply prefer graduates from higher classes if they perceive them to be more alike to themselves (Kanter, 1977). In a field experiment, Jackson (2009) shows that UK employers take into account indicators of higher-class backgrounds and discriminate in favour of offspring from higher classes.

Education–Labour Market Linkage: Occupational versus Internal Labour Market

Germany is usually described as the prototype of a labour market that is *occupationally segmented* (Marsden, 1990; Gangl, 2003). In occupational labour markets, employers strongly rely on labour market entrants' educational certificates in their hiring decisions. The prevalence of occupationally segmented labour markets in Germany is predominantly attributed to the dual system of apprenticeship (Marsden, 1990). However, strong linkages between HE and the graduate labour market exist as well (Leuze, 2007). Entry into professions and the high ranks of public sector is strongly linked to university education (Klein, 2011). For the traditional professions, such as medicine or law, both universities and the state are responsible for professional training, and examinations and certification are state-controlled.

The United Kingdom is often classified as a *firm internal labour market* (e.g. Gangl, 2003). In such labour markets, employers fill high-skilled vacancies from the existing pool of employees, who have already acquired firm-specific skills and expertise. The United Kingdom has a less credentialist tradition than Germany. The professions developed outside the universities and the state was completely absent in the organization and certification of modern professions (Abbott, 1988, p. 202). Each profession developed a system of self-training and self-certification which differed from one professional association to another. Although professional training is increasingly integrated into postgraduate programmes (e.g. Master of Laws, Master of Sciences), professional associations are still regarded as responsible for professional development and training outside academia (Leuze, 2007). Even for access to managerial positions, educational certificates tend to be less important in the UK than in the German labour market (Stewart *et al*., 1994). Overall, linkages between HE and occupational destinations are clearly less pronounced in the United Kingdom than in Germany.

Hypotheses

Based on theories reviewed and country institutional differences discussed in the previous sections, we hypothesize that:

(1) Social inequalities among graduates in occupational destinations are higher in the United Kingdom than in Germany due to the lower social selection in education, higher competition among

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graduates, and weaker links between education and labour market (*gross effect*).

(2a) In both countries, social inequalities in occupational outcomes are mostly explained by qualitative education differences.

However, the mediating role of qualitative differences is expected to be larger in the United Kingdom than in Germany due to the lower signalling capacity of the educational level and the stronger competition among graduates in the United Kingdom. Students from higher social origins need to differentiate themselves more strongly from students from lower social origins in the United Kingdom than in Germany.

(2b) Taking into account qualitative differences, the remaining *net effect* of social background is expected to be larger in the United Kingdom than in Germany. Social origin has a stronger impact on job allocation, as UK employers need to distinguish between the greater and less socially selected number of graduates and they have more scope to decide which characteristics to regard as important in the selection process.

(3) Country differences in the *gross and net effect* of social origin become smaller five years after graduation because graduates' productivity is now observable and further occupational destinations are more likely to be acquired through graduates' own resources and work experience.

Data and Methods

For our empirical analysis, we use harmonized cross-sectional data from the 'Research into Employment and Professional Flexibility' (REFLEX) survey.[3] This survey interviewed individuals who graduated from tertiary institutions in 1999/2000 five years after their graduation (2005/2006) in 16 European countries, including Germany and the United Kingdom. It contains detailed and comparable information about graduates' social origin, their studies, the transition from school to work, and current labour market situation. Graduates from postsecondary vocationally oriented study programmes (ISCED 5B) were excluded from the sampling population.

We restrict our sample to individuals under the age of 30 in the United Kingdom and 35 in Germany at the time of graduation. For Germany, we consider a higher age ceiling, as graduates tend to stay longer in HE than UK graduates.[4] In addition, we exclude those individuals who lived abroad at the time of the interview. The number of cases analysed are 1,548 for Germany and 1,155 for the United Kingdom.

We use two different measures of occupational position for the first stable job (i.e. the first job lasting for >6 months) as well as the job occupied five years after graduation. The *International Socio-Economic Index of Occupational Status* (*ISEI*) (Ganzeboom, De Graaf and Treiman, 1992) is a continuous measure of occupational positions in terms of average earnings and education. Additionally, we use the EGP class schema (Erikson and Goldthorpe, 1992) and concentrate the analysis on access to the *higher-service class* (EGP I) versus all other classes.

With regard to *social origin*, the REFLEX data do not provide information on parents' social class or occupation. Thus, we have to rely on mothers' and fathers' highest educational attainment. We distinguish three categories: both parents with an ISCED 1–4-level qualification (below tertiary level), one parent with an ISCED 5–6-level qualification (tertiary programmes), and both parents with an ISCED 5–6-level qualification (tertiary programmes). We are likely to overestimate the effect of parental education, as we lack measures of class origin or parental status, while, at the same time, we underestimate the full extent of social inequalities in labour market returns among graduates (Bukodi and Goldthorpe, 2013).

We control for a range of potentially mediating factors. *Field of study* is classified into nine categories: Teaching, Medicine/Pharmacy, Law, Economics/Business, Science, Technical subjects, Social sciences, Humanities, and Welfare/Agriculture (e.g. social work and counselling, forestry). The *HE institution* is operationalized as a binary variable in Germany differentiating between university and Fachhochschule. In the United Kingdom, we distinguish between old universities, pre-92 and post-92 universities: the 'old universities' are the oldest and most prestigious universities, holding high international reputation and attracting most of the research funding; the 'pre-1992 universities' include all the universities which were created in the 1960s and before; and the 'post-1992 universities' are composed of the ex-polytechnics, which in 1992 were given the status of HE institutions, and other universities founded after 1992.[5]

Although tertiary graduates should be more homogeneous in terms of ability and motivation than secondary school leavers, we control for the *final grade upon graduation*. For the United Kingdom, this is operationalized by the class of degree which comprises the categories first class honours, upper second (2:1), lower second (2:2), and third or pass. For Germany, we have

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information on the average grade which is a continuous measure ranging from 1.0 to 4.0. In order to make performance comparable to the British undergraduate classification, we grouped the average grade as follows: grades 1.0–1.5: first class; grades 1.6–2.0: second class, upper division; grades 2.1–2.5: second class, lower division; grades 2.6–4.0: third or lower.

Because graduates from different social origins may have different enrolment patterns into postgraduate programmes and a *PhD* is accompanied by specific labour market outcomes, we differentiate between 'being enrolled in a PhD program or acquired a PhD' and 'acquired no PhD' both at the stage of the first job and five years after graduation. Finally, we control for *age*, *gender*, and *ethnic origin* in all analyses.[6]

Appendix Table A1 reports country differences in the distributions of the relevant variables. The proportion of graduates in the United Kingdom who originate from parents with lower educational attainment is substantially larger than in Germany. More than two thirds of German graduates studied at university rather than Fachhochschule. Almost half of the UK graduates were enrolled in post-92 universities, while old and pre-92 universities are almost equally attended. German graduates more frequently studied technical disciplines, medicine, and law. By contrast, UK graduates were more often found in science, humanities, and social sciences. Final grades are rather concentrated in the middle categories in the United Kingdom while grades in Germany are distributed almost evenly across the grades' range. A larger share of graduates pursues a PhD in Germany than in the United Kingdom.

Regarding labour market outcomes, a higher proportion of graduates in Germany attain service class positions in their first job than in the United Kingdom. Average ISEI is larger in Germany as well. While there seem to be only few changes in terms of labour market returns in Germany during the first five years after graduation, there is a clear improvement in occupational positions among HE graduates in the United Kingdom.

In our multivariate analyses, we conduct OLS regression models on ISEI-score for both countries separately. In the analysis of the binary outcome 'higher-service class vs. all other classes', we run linear probability models with heteroskedasticity-robust standard errors in order to compare social origin estimates across nested models and between the two countries.[7] A comparison of coefficients from non-linear probability models across nested models or different subsamples would not be appropriate, as these coefficients may be biased due to differences in unobserved heterogeneity (Mood, 2010). To avoid an excessive reduction in the number of cases analysed, we imputed missing values by multiple imputation via 'chained equations' (Rubin, 1996) using STATA module 'ice' (Royston, 2005).

Results

Occupational Position

Figure 1 shows the effects of parent's education on graduates' first job and their job five years after graduation, both measured by the ISEI. Coefficients and 95% confidence intervals are presented.[8]

The first model in each figure (M1) shows the gross effect of parental education after controlling for gender, ethnic origin, and age. Comparing the estimates across countries, we are able to evaluate the first hypothesis. In the second model (M2) the information on 'HE institution' and in the third model (M3) 'field of study' are included. The final model (M4) introduces graduates' 'final grade' and 'PhD status'. Changes across models (M1–M4) in both countries provide insights on hypothesis 2a. In order to draw conclusions regarding hypothesis 2b, we compare the net effect in the fourth model across the United Kingdom and Germany. For evaluating the third hypothesis, we need to compare the association between social origin and ISEI in the first job (left-hand side) with the one 5 years after graduation (right-hand side).

Looking at Figure 1, the first impression is of striking similarities between the two countries. Focusing our attention on the first job (the upper and lower graphs on the left-hand side), the results show that parental education significantly (and to a similar extent) affects graduates' occupational status in both countries (M1). In the United Kingdom and Germany, highly educated parents (ISCED $5+6$) are able to transmit a similar advantage to their graduate children compared to lower educated parents (ISCED 1–4). In Germany, graduates with medium educated parents (one parent with ISCED $5+6$) have significant occupational advantages as well. However, these advantages are of modest magnitude, the occupational status of children of highly educated parents being between 4 and 2 points higher (on a scale ranging from 16 to 90) than children of lower educated parents.

Introducing 'type of HE institution' slightly reduces the effect of parental education in both countries (M2). Most of the effect of parental education is mediated by 'field of study' in both countries (M3) and high parental education becomes insignificant. In the United Kingdom, this effect decreases further when taking into account 'final grade' and 'PhD status' (M4). In both

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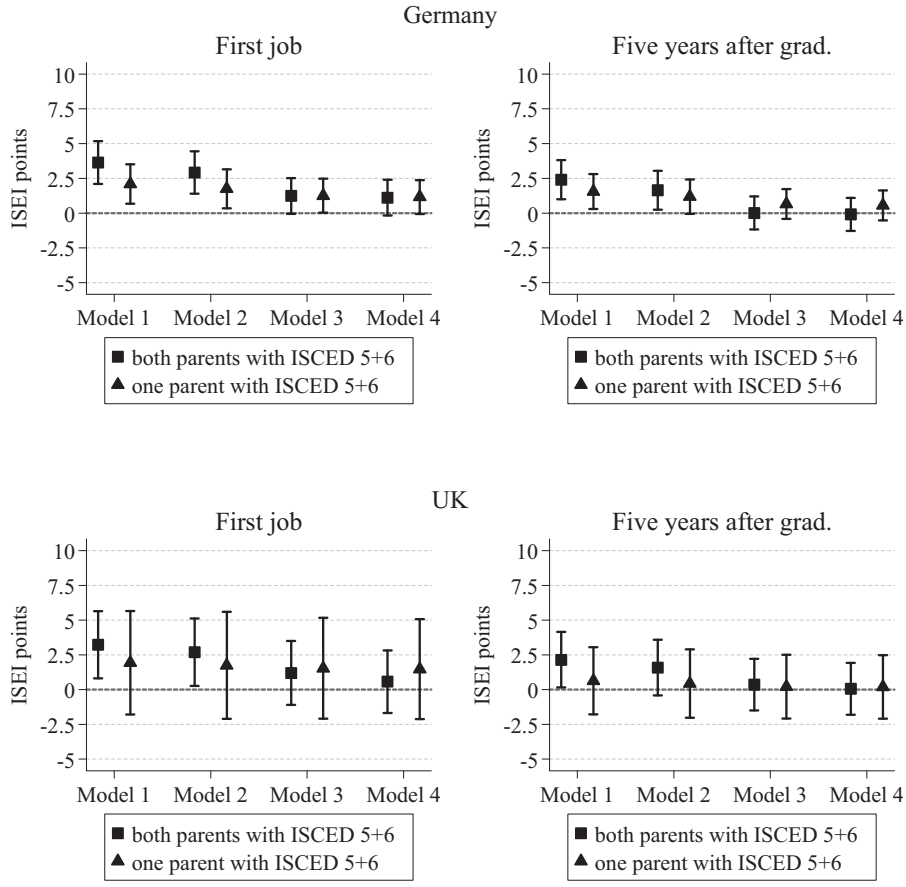

Figure 1. Parental education effects on occupational destinations measured by ISEI in Germany and the United Kingdom (OLS regressions)

Source: REFLEX, 2005, own calculations; *Notes:* $N = 1{,}548$ for Germany and $N = 1{,}155$ for the United Kingdom; multiple imputation via chained equations; ranges within capped spikes indicate 95% confidence intervals; M1 controls for gender, ethnic origin, and age; M2 = M1 + HE institution; M3 = M2 + field of study; M4 = M3 + final grade and 'PhD status'. For the full set of estimates see Tables S1 and S2 in the Supplementary Material.

countries parental education has no net effect on the occupational status of their children's first job after taking qualitative educational differences into account.

When looking at the influence of parental education on graduates' occupational status five years after graduation (the upper and lower graph on the right-hand side), these effects are reduced in both countries and they are mediated by HE institution (M2) and particularly by field of study (M3). Overall, the impact of social origin on the socio-economic status weakens throughout the career in both countries.

In order to test whether country differences are significant, we pooled the data from the two countries and included interaction terms between country and parental education.[9] Confirming the results presented in Figure 1, no significant differences were found between Germany and the United Kingdom when occupational destinations were measured by the ISEI (see Appendix Tables A2 and A3).

Access to the Higher-Service Class

Figure 2 presents the results of the analyses on the effect of parental education on accessing the higher-service class. The nested linear probability models follow the same structure for estimation and layout of display as in Figure 1.[10]

This time the results show some important differences between Germany and the United Kingdom. While both gross effects of high parental education on service-class attainment are significant, the effect is much stronger in the United Kingdom than in Germany

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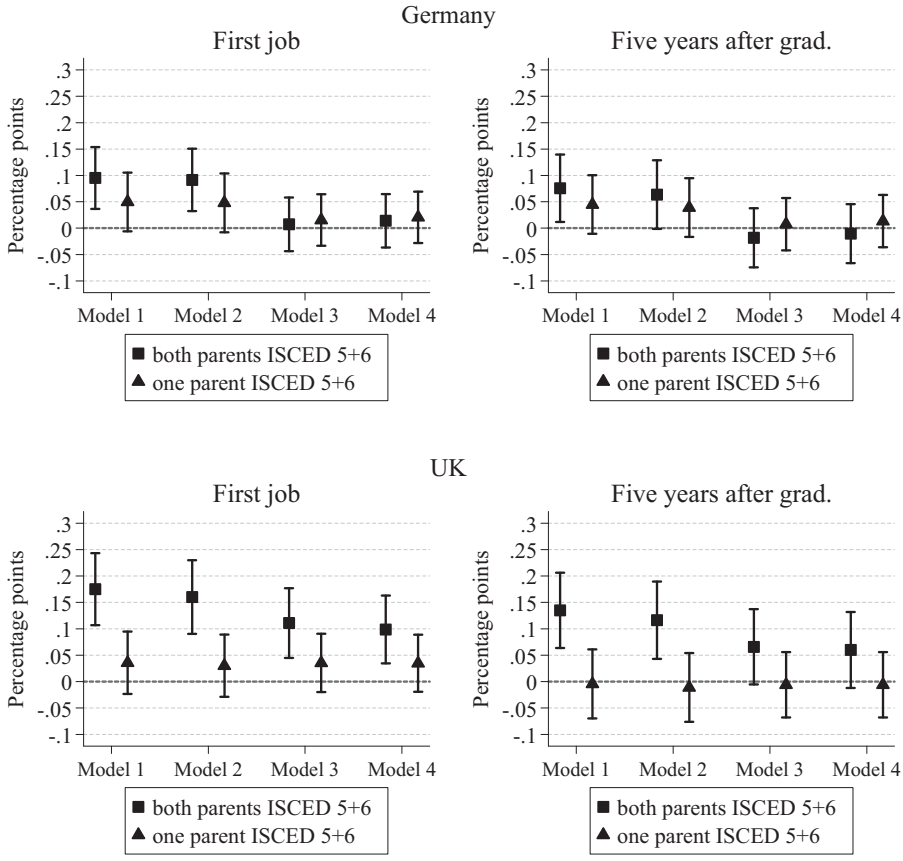

Figure 2. Parental education effects on accessing the higher-service class in Germany and the United Kingdom (linear probability models)

Source: REFLEX, 2005, own calculations; *Notes:* $N = 1{,}548$ for Germany and $N = 1{,}155$ for the United Kingdom; multiple imputation via chained equations; ranges within capped spikes indicate 95% confidence intervals; M1 controls for gender, ethnic origin, and age; M2 = M1 + HE institution; M3 = M2 + field of study; M4 = M3 + final grade and 'PhD status'. For the full set of estimates, see Tables S3 and S4 in the Supplementary Material.

(M1). In the United Kingdom, graduates from a high parental education background have a probability of attaining a service class that is 18 percentage points higher than the probability of those with low educated parents. The same figure in Germany is 10 percentage points. The gross effect of medium educated parents is insignificant in both countries. When controlling for HE institution (M2), the effect of high parental education is only slightly reduced in both countries, more so in the United Kingdom than in Germany. When controlling for field of study (M3), the effect of having 'both parents with ISCED 5 + 6' becomes insignificant and almost cancels out in Germany. In the United Kingdom, it becomes smaller but remains substantially large and significant at the 5 per cent level. This suggests that 'field of study' is a less important mediator for parental education effects in the United Kingdom than in Germany for entry into higher-service class. The effect of high parental education on accessing the higher-service class is somewhat further reduced in the United Kingdom, when 'final grade' and 'PhD enrolment' are included (M4). However, in contrast to Germany, a net effect of high parental education (10 percentage points and thus as strong as the gross effect in Germany) on attaining top-level occupations persists in the United Kingdom after controlling for qualitative education differences.

Five years after graduation, the gross effect of parental education on graduates' chances of a higher-service class position reduces in both countries (M1). Although still stronger in the United Kingdom, parental education effects become more similar. In Germany, the effect of parental education becomes insignificant when HE institution is taken into account (M2). Again, 'field of study' is a strong mediator for the association

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between parental education and higher-service class.[11] In contrast to the first job, no net effect of parental education in the UK labour market prevails when graduates move on in their working career. More meritocratic recruitment or promotion criteria seem to have replaced ascriptive forms of job allocation.

In our pooled analysis, country differences in the association between high parental education and higher-service class in the first job are confirmed in statistical terms in the third model and are close to be significant at conventional criteria in the fourth model (see Appendix Table A4). Overall, country differences in both gross (M1) and net effects (M4) of high parental education are large (difference of 8 percentage points). For the job five years after graduation, we do not see any significant differences in the gross (M1) and net effect (M4) of parental education on higher-service class attainment (see Appendix Table A5).[12]

We run a fifth model (see Appendix Tables A3 and A5) in the analysis on occupational position five years after graduation to account for ISEI or higher-service class in first job. Holding the occupational position in the first job constant does not alter the conclusions regarding parental education effects. However, the first job is a much stronger predictor of the job five years after graduation in Germany than in the United Kingdom. This confirms that occupational destinations are determined at labour market entry in Germany due to much tighter links between education and the labour market while graduates in the United Kingdom are more likely to experience career advancement having started from a lower level occupation. We conducted analyses differentiated by gender to investigate whether these patterns hold for both men and women (see Supplementary Material, Tables S7–S10).

Overall, country differences as well as the role of mediating factors are confirmed for both men and women. Interestingly, we find that social origin effects on entry into the higher-service class are larger among women than men in both countries. However, this result should be considered with caution due to the low number of cases.

Discussion

This study aimed to provide a better understanding of the relationship between social origin (measured by parental education) and the transition from HE to the labour market and of the role of national education and labour market systems in shaping this relationship. Our first research question asked whether, and the extent to which, social origin affects graduates' occupational outcomes in Germany and the United Kingdom. Given the different institutional settings in these two countries, namely differences in selectivity and differentiation of the education system at secondary and tertiary levels as well as differences in the degree of education–labour market linkage, we expected social differentials to be greater in the United Kingdom than in Germany (hypothesis 1). Our results only partly confirmed our first hypothesis. When looking at the full range of occupations that graduates entered (measured by the ISEI), differences between social groups were small and no significant country variation emerged. However, our first hypothesis was confirmed when entry into the higher-service class was analysed. Parental education had a positive effect on this outcome in both Germany and the United Kingdom, but its effect was stronger in the United Kingdom (in particular in relation to having two highly educated parents which would require further investigation). We explained this result by the lower selectivity of the HE system, the lower signalling power of higher educational credentials, and their weaker links with the labour market in the United Kingdom than in Germany. These results also show that different measures of occupational outcomes can lead to different results. In our analysis, the use solely of the ISEI would have concealed important national differences.

Our second research question asked about country variation in the role of qualitative education differences (measured by field of study and HE institution) in explaining the social origin effect on graduates' occupational destinations. As expected we found that field of study is an important mediator of social inequalities in labour market outcomes in both countries. This finding stresses the importance of analysing the role of 'fields of study' in social mobility studies. However, contrary to our expectations (hypothesis 2a), the mediating role of field of study was found to be stronger in Germany than in the United Kingdom. It is particularly evident when entry into the higher-service class was analysed. This may be explained by the stronger credentialist system and the stronger linkage between education and labour market in Germany than in the United Kingdom. The labour market advantage of children from highly educated parents in Germany is mostly explained by their choice of more rewarding fields of study (such as medicine and law).

In agreement with our hypothesis 2b, we found that in the United Kingdom a net effect of parental education on attaining a first job in the higher-service class persists after controlling for qualitative education differences. While in Germany social inequalities are transmitted mainly via education (both vertically through early selection and horizontally through field of study)

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inequalities are only partly transmitted via education in the United Kingdom. Social reproduction theories highlight that the advantages of family of origin can be transmitted through resources other than education, for example cultural and social capital and 'soft' skills such as communication skills, influencing skills, and personal effectiveness. Many years ago Turner (1960) described the United Kingdom as a 'sponsored' mobility system (in contrast to the 'contest' mobility system of the United States). Although as a whole, the United Kingdom is a more fluid society compared to Germany (Breen and Luijkx, 2004, p. 72), our results show that the importance of having a 'sponsor' to enter the top-level occupations may still be a feature of UK society (Tholen *et al*., 2013). The 'sponsor' could be drawn from the family social and occupational networks or simply embodied in the educational institutions (e.g. private schools) attended by socially advantaged children. Of course, these resources can be more easily activated in a labour market where jobs are less tightly linked to education qualifications and less strongly regulated, such as in the UK labour market.

Our data, however, suggest that more meritocratic criteria are at work after the time of labour market entry. In our third question, we asked whether country differences in the effect of social origin persist five years after graduation. The answer is negative: country differences were considerably smaller and not significant at this later point in the occupational career. As expected (hypotheses 3) the influence of social origin was found to be stronger at labour market entry than five years after graduation. Gross effects of parental education on entry into the higher-service class still existed even five years after graduation, but no direct effect remained after taking into account qualitative differences between graduates in both Germany and the United Kingdom. Five years after graduation, the significant advantage associated with highly educated parents could be explained by graduates' field of study.

Our analysis was confined to studying the effect of parental education on occupational destinations. Future research could improve upon our study by using other measures of social background characteristics (such as social class of origin and parental income), by analysing an array of labour market outcomes and a longer time span in individuals' occupational careers.

Notes

1 Different education systems have developed in the United Kingdom over time. In the 1960s, the comprehensive re-organisation of secondary schools was more widespread in Scotland and Wales than in England. In England grammar schools have continued to exist and the private fee-paying sector has always had a more conspicuous presence than in Scotland. This has led to a different degree of differentiation among schools in Scotland, England, and Wales.

2 The graduation rates reported by the OECD for the cohort analysed in this article, that is those graduated in 1999/2000, are about 15% in Germany and 35% in the United Kingdom (OECD, 2001, p. 159).

3 For detailed information on the methodology of the REFLEX survey, see the Supplementary Material and Allen and Van der Velden (2007).

4 The typical graduation age from ISCED5A was 25 in Germany and 21 in the United Kingdom (OECD, 2002). In the Reflex data, 72% of UK graduates were aged 20–24 on graduation while 64% of German graduates were aged 25–29.

5 Information on HE institutions in the United Kingdom is not included in the publicly available REFLEX dataset. We thank Rolf Van der Velden and Jim Allen for kindly providing us with this aggregate measure for the United Kingdom.

6 In additional models we control for *duration of study*, participation in a *mandatory internship*, or any other *work experience* before and during graduates' studies. The results related to social origin effects did not change with the inclusion of these activities.

7 In the Supplementary Material (Tables S5 and S6), we also show estimates as average marginal effects (AMEs) in our models on access to the higher-service class. Regarding the association between social origin and top-level positions across nested models, we arrive at the same substantive conclusions.

8 For the full set of estimates, see Tables S1 and S2 in the Supplementary Material.

9 Because HE institution is not directly comparable between countries, we reduced the three UK categories to a binary variable differentiating between universities established before 1992 and the post-92 universities (similar to Fachhochschule).

10 For the full set of estimates, see Tables S3 and S4 in the Supplementary Material.

11 The changes in the estimates of 'both parents with ISCED 5 + 6' on higher-service class (M1 to M4) are significant at the 0.01% level at both labour market stages in both countries.

12 As a robustness check we also recoded respondents' ISEI into a binary variable using the upper decile of each country's ISEI distribution vs. all

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others. The results are similar to those for access to higher-service class positions, confirming this approach (results upon request).

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Supplementary Data

Supplementary data are available at *ESR* online.

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Appendix

Table A1. Descriptive characteristics of graduates

	Germany		United Kingdom	
	Mean	SD	Mean	SD
Parental education				
Both parents with ISCED 1–4	0.32		0.55	
One parent with ISCED 5 + 6	0.36		0.23	
Both parents with ISCED 5 + 6	0.32		0.22	
Age at time of the survey	32.58	2.62	27.61	1.77
Gender (Ref. Male)				
Female	0.49		0.60	
Ethnic origin (Ref. Native)				
Foreign	0.07		0.15	
HE institution				
University/Old university	0.69		0.28	
Pre-92 university			0.24	
Fachhochschule/Post-92 university	0.31		0.48	
Field of study				
Teaching[a]	0.15		–	
Medicine/Pharmacy	0.08		0.05	
Law	0.07		0.03	
Economics/Business	0.13		0.13	
Science	0.09		0.24	
Technical disciplines	0.23		0.07	
Social sciences	0.04		0.13	
Humanities	0.12		0.26	
Welfare and social services	0.09		0.10	
Class of Degree				
Master			0.05	
First class (1st)	0.21		0.08	
Second class, upper division (2:1)	0.31		0.49	
Second class, lower division (2:2)	0.25		0.29	
Third (3rd) or ordinary (pass)	0.23		0.09	
PhD enrolment/acquisition	0.15		0.04	
Labour market outcomes				
First job				
Service class I	0.31		0.25	
Service class II	0.46		0.37	
Class III-VII	0.23		0.38	
ISEI	67.48	11.73	57.54	20.90
Job five years after graduation				
Service class I	0.32		0.31	
Service class II	0.48		0.48	
Class III-VII	0.20		0.21	
ISEI	67.92	10.84	61.56	14.91

[a]Graduates from teaching training programmes in Germany could be identified thanks to the availability of further information on their teaching certificate (*Lehramt*). Unfortunately, such information is not available for the UK and future teachers are categorised according to their subject of specialisation.

Source: REFLEX, 2005, own calculations.

Notes: $N = 1{,}548$ for Germany and $N = 1{,}155$ for the United Kingdom; multiple imputation via chained equations. Survey weights were used to correct for over- or under-representation of certain levels or fields of higher education according to population figures.

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Table A2. Country differences in parental education effects on occupational destinations measured by ISEI in first job (OLS regressions)

	Model 1	Model 2	Model 3	Model 4
Country (Ref. Germany)				
United Kingdom	−44.95*** (9.99)	−48.06*** (10.28)	−20.43* (9.48)	−15.36 (9.77)
Parental education (Ref.: Both parents ISCED 1–4)				
Both parents ISCED 5 + 6	3.64*** (0.78)	2.92*** (0.77)	1.24 (0.65)	1.11 (0.65)
One parent ISCED 5 + 6	2.10** (0.72)	1.75* (0.72)	1.25* (0.62)	1.16 (0.62)
UK * both par. ISCED 5 + 6	−0.41 (1.48)	−0.05 (1.48)	0.00 (1.35)	−0.57 (1.33)
UK * one par. ISCED 5 + 6	−0.16 (2.04)	0.05 (2.10)	0.29 (1.96)	0.31 (1.94)
HE institution (Ref.: University)				
FH/Post-92 university		−3.56*** (0.62)	−0.47 (0.72)	−0.12 (0.74)
UK * FH/Post-92		1.65 (1.58)	0.49 (1.70)	1.15 (1.75)
Field of study (Ref.: Science)				
Teaching[a]			3.01** (1.12)	3.93*** (1.14)
Medicine/Pharmacy			18.48*** (1.15)	18.77*** (1.18)
Law			16.83*** (1.42)	18.12*** (1.54)
Economics/Business			−2.94* (1.27)	−2.03 (1.28)
Technical disciplines			3.87*** (1.13)	4.58*** (1.15)
Social science			0.47 (1.56)	0.65 (1.54)
Humanities			−3.96** (1.32)	−3.50** (1.33)
Welfare and social services			−0.55 (1.37)	−0.17 (1.34)
UK * med.			4.55* (2.10)	6.29* (2.45)
UK * law			−14.61*** (2.82)	−14.78*** (2.80)
UK * econ.			−2.50 (1.98)	−3.04 (1.97)
UK * tech.			−2.94 (2.63)	−3.92 (2.63)
UK * soc.			−7.49*** (2.19)	−6.78** (2.16)
UK * hum.			−0.09 (2.12)	−0.12 (2.06)
UK * welf.			−8.23*** (2.33)	−7.77** (2.31)
Grade (Ref.: 3rd or less)				
First class (1st)				1.59 (0.87)
Second class, (2:1)				1.28 (0.78)
Second class, (2:2)				−0.35 (0.83)
UK: Master[b]				6.57** (2.20)
UK * first c.				0.98 (1.90)
UK * second c., (2:1)				−0.11 (1.98)
UK * second c., (2:2)				7.45** (2.50)
PhD enrol./acquis. (yes = 1)				1.77* (0.83)
UK * PhD				1.22 (2.76)
Constant	82.73*** (4.05)	84.85*** (4.03)	74.21*** (3.79)	71.67*** (3.94)
R^2	0.11	0.12	0.25	0.26

[a]Graduates from teaching training programmes in Germany could be identified thanks to the availability of further information on their teaching certificate (*Lehramt*). Unfortunately, such information is not available for the United Kingdom, and future teachers are categorized according to their subject of specialization.

[b]A small number of graduates have a Master's degree in the United Kingdom. In Germany, however, all graduates have a degree that is equivalent to a Master's degree (e.g. *Diplom*).

Source: REFLEX, 2005, own calculations.

Notes: Pooled model with $N = 2{,}703$; multiple imputation via chained equations; controlling for gender, ethnic origin, age, and respective interactions with country; standard errors in parentheses.

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

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Table A3. Country differences in parental education effects on occupational destinations measured by ISEI in job five years after graduation (OLS regressions)

	Model 1	Model 2	Model 3	Model 4	Model 5
Country (Ref. Germany)					
United Kingdom	−30.81*** (8.96)	−33.94*** (9.02)	−9.76 (8.38)	−7.54 (8.62)	7.40 (7.58)
Parental education (Ref.: Both parents ISCED 1–4)					
Both parents ISCED 5 + 6	2.40*** (0.71)	1.64* (0.71)	0.01 (0.61)	−0.09 (0.61)	−0.71 (0.48)
One parent ISCED 5 + 6	1.55* (0.64)	1.19 (0.63)	0.66 (0.55)	0.56 (0.55)	−0.09 (0.43)
UK * both par. ISCED 5 + 6	−0.25 (1.24)	0.18 (1.24)	0.45 (1.12)	0.22 (1.13)	0.60 (1.01)
UK * one par. ISCED 5 + 6	−0.91 (1.39)	−0.67 (1.40)	−0.41 (1.29)	−0.34 (1.29)	−0.35 (0.94)
HE institution (Ref.: university)					
FH/Post-92 university		−3.74*** (0.56)	−1.25 (0.64)	−0.82 (0.65)	−0.75 (0.48)
UK * FH/Post-92		2.00 (1.11)	1.37 (1.16)	1.50 (1.19)	0.98 (0.86)
Field of study (Ref.: Science)					
Teaching[a]			3.71** (1.11)	4.50*** (1.10)	2.31* (0.92)
Medicine/Pharmacy			18.86*** (1.27)	18.51*** (1.26)	8.05*** (1.16)
Law			15.78*** (1.57)	16.19*** (1.62)	6.10*** (1.41)
Economics/Business			−0.59 (1.23)	0.03 (1.22)	1.16 (0.91)
Technical disciplines			4.93*** (1.08)	5.44*** (1.08)	2.88*** (0.81)
Social science			1.49 (1.45)	1.73 (1.42)	1.37 (1.18)
Humanities			−3.06* (1.36)	−2.63 (1.34)	−0.68 (1.07)
Welfare and social services			0.56 (1.31)	0.89 (1.28)	0.98 (0.93)
UK * med.			1.26 (1.84)	2.47 (2.04)	1.80 (1.86)
UK * law			−8.53** (2.85)	−8.17** (2.85)	0.44 (2.61)
UK * econ.			−4.54** (1.74)	−4.83** (1.75)	−3.71* (1.41)
UK * tech.			−5.39* (2.12)	−5.80** (2.15)	−3.54* (1.61)
UK * soc.			−7.39*** (2.04)	−7.13*** (2.01)	−4.04* (1.77)
UK * hum.			0.25 (1.83)	0.05 (1.83)	−0.29 (1.47)
UK * welf.			−8.68*** (2.12)	−8.58*** (2.12)	−5.15** (1.71)
Grade (Ref.: 3rd or less)					
First class (1st)				0.37 (0.76)	−0.51 (0.58)
Second class, (2:1)				0.24 (0.69)	−0.47 (0.54)
Second class, (2:2)				−0.82 (0.72)	−0.62 (0.56)
UK: Master[b]				2.51 (1.96)	−0.22 (1.64)
UK * first c.				1.19 (1.67)	0.90 (1.39)
UK * second c., (2:1)				−0.36 (1.76)	−0.35 (1.47)
UK * second c., (2:2)				2.09 (2.09)	−1.22 (1.80)
PhD enrol./acquis. (yes = 1)				2.26** (0.74)	1.27 (0.63)
UK * PhD				1.63 (2.37)	1.30 (2.05)
ISEI in first job					0.56*** (0.03)
UK * ISEI in first job					−0.11* (0.05)
Constant	79.20*** (3.71)	81.43*** (3.68)	70.54*** (3.48)	69.11*** (3.56)	29.17*** (3.47)
R^2	0.08	0.09	0.28	0.29	0.56

[a]Graduates from teaching training programmes in Germany could be identified thanks to the availability of further information on their teaching certificate (*Lehramt*). Unfortunately, such information is not available for the United Kingdom, and future teachers are categorized according to their subject of specialization.

[b]A small number of graduates have a Master's degree in the United Kingdom. In Germany, however, all graduates have a degree that is equivalent to a Master's degree (e.g. *Diplom*). Therefore, 'having a Master's degree' is included only in the United Kingdom as a further measure of academic performance.

Source: REFLEX, 2005, own calculations.

Notes: Pooled model with $N = 2{,}703$; multiple imputation via chained equations; all models control for gender, ethnic origin, age, and respective interactions with country; standard errors in parentheses.

$^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

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Table A4. Country differences in parental education effects on accessing the higher-service class in first job (linear probability models)

	Model 1	Model 2	Model 3	Model 4
Country (Ref. Germany)				
United Kingdom	−1.17*** (0.27)	−1.22*** (0.27)	−0.45 (0.24)	−0.48 (0.25)
Parental educ. (Ref.: Both parents ISCED 1–4)				
Both parents ISCED 5 + 6	0.10** (0.03)	0.09** (0.03)	0.01 (0.03)	0.01 (0.03)
One parent ISCED 5 + 6	0.05 (0.03)	0.05 (0.03)	0.02 (0.02)	0.02 (0.02)
UK * both par. ISCED 5 + 6	0.08 (0.05)	0.07 (0.05)	0.10* (0.04)	0.08 (0.04)
UK * one par. ISCED 5 + 6	−0.01 (0.04)	−0.02 (0.04)	0.02 (0.04)	0.01 (0.04)
HE institution (Ref.: university)				
FH/Post-92 university		−0.02 (0.03)	−0.02 (0.03)	−0.05 (0.03)
UK * FH/Post-92		−0.07 (0.04)	−0.03 (0.04)	0.02 (0.04)
Field of study (Ref.: Science)				
Teaching[a]			−0.17*** (0.04)	−0.21*** (0.04)
Medicine/Pharmacy			0.69*** (0.05)	0.75*** (0.05)
Law			0.63*** (0.06)	0.62*** (0.06)
Economics/Business			0.09 (0.05)	0.07 (0.05)
Technical disciplines			0.22*** (0.05)	0.21*** (0.05)
Social science			0.11 (0.07)	0.09 (0.07)
Humanities			−0.13** (0.04)	−0.15*** (0.04)
Welfare and social services			0.00 (0.05)	−0.01 (0.05)
UK * med.			−0.10 (0.07)	−0.10 (0.07)
UK * law			−0.66*** (0.10)	−0.62*** (0.10)
UK * econ.			−0.18** (0.07)	−0.14* (0.07)
UK * tech.			−0.13 (0.08)	−0.11 (0.08)
UK * soc.			−0.26** (0.08)	−0.21** (0.08)
UK * hum.			−0.08 (0.06)	−0.03 (0.06)
UK * welf.			−0.19** (0.07)	−0.14* (0.07)
Grade (Ref.: 3rd or less)				
First class (1st)				0.03 (0.03)
Second class, (2:1)				0.00 (0.03)
Second class, (2:2)				0.01 (0.03)
UK: Master[b]				0.21** (0.07)
UK * first c.				0.07 (0.05)
UK * second c., (2:1)				0.00 (0.05)
UK * second c., (2:2)				0.16* (0.08)
PhD enrol./acquis. (yes = 1)				−0.17*** (0.03)
UK * PhD				0.37*** (0.09)
Constant	0.56*** (0.15)	0.58*** (0.15)	0.28* (0.13)	0.36** (0.14)
R^2	0.03	0.04	0.27	0.29

[a]Graduates from teaching training programmes in Germany could be identified thanks to the availability of further information on their teaching certificate (*Lehramt*). Unfortunately, such information is not available for the United Kingdom, and future teachers are categorized according to their subject of specialization.

[b]A small number of graduates have a Master's degree in the United Kingdom. In Germany, however, all graduates have a degree that is equivalent to a Master's degree (e.g. *Diplom*). Therefore, 'having a Master's degree' is included only in the United Kingdom as a further measure of academic performance.

Source: REFLEX, 2005, own calculations.

Notes: Pooled model with $N = 2{,}703$; multiple imputation via chained equations; all models control for gender, ethnic origin, age, and respective interactions with country; standard errors in parentheses.

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

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Table A5. Country differences in parental education effects on accessing the higher-service class in job five years after graduation (linear probability models)

	Model 1	Model 2	Model 3	Model 4	Model 5
Country (Ref. Germany)					
United Kingdom	−0.89** (0.28)	−0.96*** (0.28)	−0.37 (0.26)	−0.50 (0.27)	−0.21 (0.25)
Parental education (Ref.: Both parents ISCED 1–4)					
Both parents ISCED 5 + 6	0.08* (0.03)	0.06 (0.03)	−0.02 (0.03)	−0.01 (0.03)	−0.02 (0.02)
One parent ISCED 5 + 6	0.04 (0.03)	0.04 (0.03)	0.01 (0.03)	0.01 (0.03)	0.00 (0.02)
UK * both par. ISCED 5 + 6	0.06 (0.05)	0.06 (0.05)	0.09 (0.05)	0.07 (0.05)	0.03 (0.04)
UK * one par. ISCED 5 + 6	−0.05 (0.04)	−0.05 (0.04)	−0.01 (0.04)	−0.02 (0.04)	−0.02 (0.03)
HE institution (Ref.: University)					
FH/Post-92 university		−0.06* (0.03)	−0.04 (0.03)	−0.06 (0.03)	−0.03 (0.03)
UK * FH/Post-92		−0.02 (0.04)	−0.01 (0.04)	0.03 (0.04)	0.01 (0.04)
Field of study (Ref.: Science)					
Teaching[a]			−0.18*** (0.04)	−0.22*** (0.04)	−0.09** (0.03)
Medicine/Pharmacy			0.68*** (0.05)	0.70*** (0.05)	0.22*** (0.05)
Law			0.59*** (0.06)	0.54*** (0.06)	0.15* (0.06)
Economics/Business			0.09 (0.05)	0.05 (0.05)	0.01 (0.04)
Technical disciplines			0.19*** (0.05)	0.16** (0.05)	0.02 (0.04)
Social science			0.18* (0.08)	0.16* (0.07)	0.10 (0.06)
Humanities			−0.10* (0.05)	−0.13** (0.05)	−0.03 (0.04)
Welfare and social services			−0.02 (0.05)	−0.05 (0.05)	−0.04 (0.04)
UK * med.			−0.10 (0.07)	−0.06 (0.07)	0.11 (0.07)
UK * law			−0.40*** (0.10)	−0.32** (0.11)	0.08 (0.10)
UK * econ.			−0.10 (0.07)	−0.05 (0.07)	0.04 (0.06)
UK * tech.			−0.19* (0.08)	−0.15 (0.09)	−0.06 (0.07)
UK * soc.			−0.24** (0.09)	−0.20* (0.09)	−0.08 (0.08)
UK * hum.			−0.09 (0.06)	−0.05 (0.06)	−0.06 (0.05)
UK * welf.			−0.10 (0.07)	−0.05 (0.08)	0.02 (0.06)
Grade (Ref.: 3rd or less)					
First class (1st)				−0.05 (0.03)	−0.07* (0.03)
Second class, (2:1)				−0.03 (0.03)	−0.03 (0.02)
Second class, (2:2)				−0.02 (0.03)	−0.02 (0.03)
UK: Master[b]				0.19* (0.08)	0.09 (0.06)
UK * first c.				0.10 (0.06)	0.07 (0.05)
UK * second c., (2:1)				0.03 (0.06)	0.03 (0.05)
UK * second c., (2:2)				0.09 (0.08)	0.01 (0.07)
PhD enrol./acquis. (yes = 1)				−0.13*** (0.03)	−0.02 (0.03)
UK * Phd				0.34*** (0.09)	0.14 (0.09)
Higher-service class in first job (yes = 1)					0.64*** (0.03)
UK * higher-service class in first job					−0.16** (0.05)
Constant	0.60*** (0.15)	0.64*** (0.15)	0.40** (0.14)	0.53*** (0.14)	0.29* (0.11)
R^2	0.02	0.03	0.23	0.24	0.47

[a]Graduates from teaching training programmes in Germany could be identified thanks to the availability of further information on their teaching certificate (*Lehramt*). Unfortunately, such information is not available for the United Kingdom, and future teachers are categorized according to their subject of specialization.

[b]A small number of graduates have a Master's degree in the United Kingdom. In Germany, however, all graduates have a degree that is equivalent to a Master's degree (e.g. *Diplom*).

Source: REFLEX, 2005, own calculations.

Notes: Pooled model with $N = 2{,}703$; multiple imputation via chained equations; all models control for gender, ethnic origin, age, and respective interactions with country; standard errors in parentheses.

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

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