

Intergenerational Class Mobility of Labour Market Entrants in Germany and the UK since the 1950s

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Abstract

This study examines over-time trends in intergenerational class mobility based on cohorts of labour market entrants in Germany and the UK since the 1950s. We calculate absolute and relative mobility rates, separately for men and women, using the German Socio-Economic Panel (1984–2016), the UK Household Longitudinal Study (2009–2016), and the UK Labour Force Survey (2014–2017). Regarding absolute mobility, we find marked country differences in upward and downward rates. In Germany, downward mobility decreased, while upward mobility rose. In the UK, downward mobility increased, while upward mobility declined. We provide evidence that these differences can be linked to contrasting changes in the distribution of origin and destination classes. Regarding relative mobility, striking country similarities appear. For both countries, we observe increases in social fluidity for respondents entering the labour market during the 1950s and 1960s that cease to continue for cohorts thereafter. Comparisons between adjacent cohorts do not provide evidence that social fluidity follows cyclical developments of the economy or shorter-term volatilities in the labour market.

Introduction

For almost a century, scholars examine to what extent the association between individuals' class origins and class destinations changes over time to further our understanding of the pattern and determinants of the intergenerational transmission of inequality. Conceptually derived from employment relations, social class predicts individuals' level of wealth as well as income stability, security, and prospects due to stratified remuneration schemes and risks of unemployment (Bukodi and Goldthorpe, 2018). A class gradient in individuals' livelihoods and opportunities has thus been shown to exist in many countries (e.g. Lareau and Conley, 2008; Groh-Samberg, 2009; Bukodi and Goldthorpe, 2018).

There is now general agreement that absolute class mobility, i.e. the proportion of individuals who attain a different class position compared to their parents, displays significant variation over time, and that this variation is primarily driven by changes in the form of class structures (e.g. Erikson and Goldthorpe, 1992; Breen and Luijkx, 2004; Bukodi, Paskov and Nolan, 2020). Regarding trends in relative class mobility or social fluidity, i.e. the strength of the association between individuals' and their parents' class positions net of distributional differences, the literature has yielded much less consistent results.

Studies that find gradual increases in social fluidity during the twentieth century suggest that relative

mobility rates largely follow structural developments induced by modernization (Treiman, 1970; Bell, 1972; Ganzeboom, Luijckx and Treiman, 1989). In contrast, studies that find increases in social fluidity only for individuals born before the 1950s link these to educational expansion and reductions in educational inequalities that slowed down for individuals born thereafter (Breen and Müller, 2020). Others, again, focus on the notion of cohort replacement that is thought to be shaped by the entry and exit of cohorts with varying levels of social fluidity (Ryder, 1965; Breen and Jonsson, 2007; Mayer and Aisenbrey, 2007); while those who find relative mobility to remain stable, being at most subject to ‘trendless fluctuation’, stress the ability of families at the top of the class hierarchy to pass on their advantage to the next generation regardless of societal change (Featherman and Hauser, 1978; Erikson and Goldthorpe, 1992; Bukodi and Goldthorpe, 2018).

Most studies cited above rely on ‘quasi’-birth cohorts, or simple age groups, to map trends in absolute and relative mobility. This approach can be problematic for two reasons.

First, using quasi-birth cohorts inevitably confounds inter- and intragenerational mobility. Due to the limited availability of prospective cohort studies, researchers often construct birth cohorts from surveys that are representative of an entire population at a given point in time. Consequently, members of older cohorts are observed at later stages, while members of younger cohorts are observed at earlier stages in their careers. This introduces bias to the estimation of over-time trends. Setting a minimum age for individuals to be included in the analysis controls for this only to a limited extent, since ‘occupational maturity’, i.e. the point at which job changes no longer entail changes in class positions, likely varies across time and across cohorts (see Bukodi and Goldthorpe, 2009 for Britain).

Second, due to differences in educational attainment and educational trajectories, members of the same birth cohort begin their employment careers at different points in time. If some start working after completing compulsory schooling while others pursue a tertiary degree, labour market entries can lie up to 10 years apart. Members of the same cohort are thus likely to start their careers under quite different economic, labour market, and institutional conditions that could affect later mobility prospects. Therefore, quasi-birth cohorts do not allow to precisely determine the timing of change and to account for the opportunity structures its members are faced with.

Against this background, the objective of the present study is to use cohorts of labour market entrants to

investigate trends in both absolute and relative class mobility. Our approach addresses both critiques of the quasi-birth cohort approach: individuals who enter the labour market at the same time are always at comparable career stages and by definition exposed to the same conditions at the start of their working lives. The approach can therefore map long-term trends in intergenerational class mobility more accurately, helping to evaluate the inconclusive findings of prior work on trends in relative mobility described above. Moreover, it can shed light on the relationship between class mobility and the business cycle as well as other short-term changes occurring to the labour market. Past research shows that entering the labour market under adverse economic conditions has strong and enduring ‘scarring’ effects on future trajectories and class attainment in a number of European countries, and differently so for individuals from different social backgrounds (Blossfeld, 1986, 1987; Barone and Schizzerotto, 2011; Bukodi and Goldthorpe, 2011).

We hence see our contribution as twofold: focussing on the association between class origin and class destination at labour market entry, we first estimate long-term trends since the 1950s that purely result from cohort differences in intergenerational mobility and are thus ‘adjusted’ for intragenerational mobility. Second, we examine short-term changes between labour market entry cohorts over the same period to understand how far mobility chances can be systematically linked to conditions of the economy or the labour market, under which individuals embark on their careers.

Evidently, it is possible that the long-term trends that we observe for labour market entrants differ from those observed for individuals at later career stages. Over the course of their working lives, individuals tend to move between different class positions, which may also entail quite substantial mobility intergenerationally. Moreover, patterns of labour market entry and career progression unfold very differently, depending on the institutional context in which they occur (Blossfeld *et al.*, 2005; Scherer, 2005; Wolbers, 2007; Barbieri, Cutuli and Passaretta, 2016). Differences between trends in intergenerational class mobility based on class destination measured at labour market entry vis-à-vis later career stages could hence depend on a country’s level of career mobility.

For this reason, we adopt a comparative perspective and conduct our analyses for Germany and the United Kingdom. The two countries figure prominently in the intergenerational mobility literature. In addition, distinct institutional arrangements lead to maximally different levels of career mobility (Blossfeld *et al.*, 2008).

Our results can therefore be meaningfully contrasted with prior work that focuses on individuals at more advanced career stages. Doing so allows us to explore how far differences in trends of intergenerational class mobility between labour market entrants and individuals at more advanced career stages may result from differing levels of career mobility.

The next section reviews in greater depth past research on Germany and the UK and discusses to what extent our results using labour market entry cohorts can add to existing evidence that is based on quasi-birth cohorts and individuals at more advanced career stages. We then elaborate on our data and key variables and present the empirical results in the following sections. The article ends with a summary of our findings and discussion of their implications for future research.

Past Research and Theoretical Expectations

Absolute Mobility

Absolute mobility refers to the proportion of individuals who attain different class positions compared to their parents, which might be at higher, lower, or broadly similar levels. Absolute mobility can therefore be divided into upward, downward, and horizontal components. Past research finds quite similar trends for Germany and the UK. In both countries, overall mobility levels remained generally stable throughout the twentieth century, that is around 70–80 per cent of individuals ended up in different class positions from that of their parents (Breen, 2004). Likewise, similar developments can be observed with regard to the long-term trends in the upward and downward components of absolute mobility. For Germany, Mayer and Aisenbrey (2007), Müller and Pollak (2015) (see also Pollak and Müller, 2020) as well as Hertel (2017) report increasing upward mobility for cohorts born in the first half of the twentieth century, and a decline in these rates for cohorts born thereafter. By contrast, downward mobility fell among earlier cohorts before starting to rise among later cohorts. For the UK, a similar reversal of trends in upward and downward mobility can be observed when comparing studies covering cohorts born before (Goldthorpe, Llewellyn, and Payne, 1987) and after 1950 (Goldthorpe and Jackson, 2007; Paterson and Iannelli, 2008; Bukodi *et al.*, 2015; Buscha and Sturgis, 2018).

These developments in absolute mobility were driven by common class structural changes that occurred simultaneously in Germany and the UK as well as in other industrialized countries (Erikson and Goldthorpe, 1992;

Breen, 2004; Breen and Müller, 2020). Cohorts born in the first half of the twentieth century experienced a period of occupational upgrading, primarily due to the stark rise of skilled service jobs alongside the decline of the agricultural sector and unskilled manual work. Greater room at the top improved chances for upward mobility and made downward mobility less likely. However, for cohorts born thereafter occupational upgrading came to a halt and as the proportion of individuals with higher class origins had been rising, so did the proportion of men and women ‘at risk of downward mobility’ (Bukodi, Paskov and Nolan, 2020).

Changes in the distributions of origin and destination classes may look different depending on the point at which individuals are observed in their careers, and differently so in Germany and the UK. Germany’s combination of an occupation-specific education and training system with a tightly regulated labour market facilitates stable labour market entries and high degrees of job continuity (Scherer, 2005; Leuze, 2007). Levels of career mobility are therefore relatively low, and individuals tend to stay in similar class positions throughout their working lives. As a result, class distributions are likely to be quite similar for individuals at different career stages. We therefore expect trends in absolute mobility for labour market entrants in Germany to resemble those observed in past research.

By contrast, in the UK, the coordination between educational and labour market institutions is weak. Combined with high labour market flexibility, labour market entries are unstable and levels of career mobility high (Scherer, 2005; Leuze, 2007). Individuals from more advantaged backgrounds are thus more likely than their German counterparts to experience some turbulence in their early careers, possibly leading to intergenerational downward mobility before settling in more stable employment. This phenomenon where individuals regain similar class positions like their parents through upward career mobility is known as ‘counter mobility’ (Bukodi and Goldthorpe, 2018). Accordingly, class distributions may look quite different depending on when individuals are observed in their careers. We therefore expect trends in absolute mobility for labour market entrants in the UK to differ from those observed in past research, and thereby to also be different from trends observed for labour market entrants in Germany.

Relative Mobility

Relative mobility or social fluidity refers to the strength of the association between individuals’ class origins (their parents’ class) and class destinations (their own

class) net of differences in the class distributions between the two generations. For our two countries, previous studies find different trends in relative mobility. In Germany, increasing rates were observed for cohorts born in the first half of the twentieth century, which then levelled off and remained stable for cohorts born during the second half of the twentieth century (Hertel, 2017; Pollak and Müller, 2020). In the UK, by contrast, constant rates were found for individuals born over the same period of time (Goldthorpe and Jackson, 2007; Paterson and Iannelli, 2008; Bukodi *et al.*, 2015).

To account for these patterns, the literature refers to processes affecting the associations summarized in the so-called ‘OED triangle’ between individuals’ class origin (O), educational attainment (E), and class destination (D) that appear to have unfolded differently in the two countries. Besides some small decrease in the strength of the ED association, cohorts born in Germany before the 1950s experienced a decline in the strength of the OE and the direct OD associations. In other words, the expansion of education reduced class-based educational inequalities and increased the proportion of the higher educated, for whom a weaker origin–destination association exists. As a result, social fluidity increased. However, as the population became increasingly educated, opportunities for a further weakening of these associations diminished and relative rates ceased to rise for cohorts born thereafter (Müller and Pollak, 2004; 2015; Hertel, 2017; Pollak and Müller, 2020).

In the UK, trends in these associations were much more stable despite educational expansion. If any, only a slight weakening in the OE association could be observed (Jonsson and Mills, 1993; Breen *et al.*, 2009). However, this was likely counteracted by a simultaneously weakening in the ED association (Breen and Luijkx, 2004; Goldthorpe and Mills, 2004; Jackson, Goldthorpe and Mills, 2005), primarily due to overqualification and ‘credentials inflation’ (Bukodi and Goldthorpe, 2018). Furthermore, Bukodi and Goldthorpe (2016) show that when measuring education in relative terms, the associations between OE and ED remained essentially unchanged. With no further weakening in the direct OD association (Gugushvili, Bukodi and Goldthorpe, 2017), social fluidity stayed constant for cohorts born across the twentieth century.

Again, it is possible that trends in the associations captured by the OED triangle differ for individuals at different career stages, i.e. they may depend on when we measure D, and that these differences in turn depend on levels of career mobility. If career mobility is low, changes in class positions are rare so that the OE, ED, and OD associations are unlikely to vary in any great

strength over the course of individuals’ working lives. We thus expect trends in relative mobility for labour market entrants in Germany to resemble those observed in past research. Relatively high levels of career mobility in the UK, on the other hand, mean that changes in class positions occur more frequently, leading to variation especially in the ED and direct OD associations over the life course. The prevalence of counter mobility further implies that the ED and direct OD associations could be particularly weak at labour market entry for individuals from high class backgrounds.¹ Focussing on first job may then reveal more variation in relative mobility than previously reported, which would be in line with Bukodi *et al.* (2015), who find social fluidity to increase when members of birth cohorts are observed at a younger age. We therefore expect trends in relative mobility for labour market entrants in the UK to differ to some extent from those observed in past research.

As mentioned in the Introduction, using cohorts of labour market entrants complements prior work on long-term trends in intergenerational class mobility and allows to investigate whether short-term changes in relative mobility can be systematically linked to changes in the economy or labour market. There is evidence suggesting that individuals whose labour market entries coincided with a period of severe economic difficulties, continuing high levels of unemployment, and labour market re-structuring experienced significantly slower improvements in earnings and occupational status compared to those who started their careers under more favourable conditions (Blossfeld, 1986, 1987; Barone and Schizzerotto, 2011; Bukodi and Goldthorpe, 2011). Also, such adverse economic conditions seem to disproportionately affect individuals from lower class origins. For the UK, Bukodi and Goldthorpe (2011) find that coming from more advantaged backgrounds helps to offset the relatively low earnings and occupational returns obtained from high-level qualifications during periods of unfavourable labour market conditions. This advantage was still apparent at later career stages. Given these findings, we expect periods of economic ‘bust’ to be associated with decreases in social fluidity, and periods of ‘boom’ to be associated with increases in social fluidity.

Data and Variables

The main objective of the present study is to examine long- and short-term trends in intergenerational class mobility since the 1950s using cohorts of labour market entrants. For Germany, our analyses are based on waves 1984–2016 of the Socio-Economic Panel (SOEP, v33)

(Goebel *et al.*, 2019). The SOEP is Germany's largest representative, longitudinal survey, interviewing each year around 30,000 respondents in ca. 11,000 households on matters relevant to social inequality research. To ensure comparability over time, we only work with the West German sample.²

For the UK, we use two datasets. Our primary dataset is the UK Household Longitudinal Study (UKHLS, End User License version), also known as Understanding Society (University of Essex, Institute for Social and Economic Research, 2017). Like the SOEP, the UKHLS is the largest representative, longitudinal multi-topic study that is annually conducted in the UK. It covers roughly 145,000 respondents in ca. 40,000 households. We use waves 2009–2016. Our secondary dataset consists of the 2014–2017 UK Labour Force Survey (UKLFS, Secure Access version) (Office for National Statistics, Social Survey Division, Northern Ireland Statistics and Research Agency, Central Survey Unit, 2018). The UKLFS collects representative information on current employment conditions on a quarterly basis and is currently the UK's largest household survey. Since 2014, the UKLFS also collects data on the characteristics of parents' employment during respondents' childhood, which makes it suitable for our purposes. It is based on a rolling sample of around 100,000 respondents in ca. 40,000 households, who are interviewed in five consecutive quarters.

There are two reasons for using the UKLFS alongside the UKHLS. First, with the UKLFS we can extend our observation window almost up to date and include respondents who entered the UK labour market until 2017. Second, the UKLFS helps us to resolve certain methodological issues that we face when constructing our measure of social class as discussed below.

We understand social class as deriving from employment relations. Individuals' class position therefore depends on their employment status, i.e. whether they are employed, employing others, or are self-employed, and the type of contract governing their employment if they work as employees. Different employment contracts exist because of different skill requirements and monitoring problems arising from the specific work tasks to be performed. It has been shown that type of occupation is a reliable proxy for employment contracts and can therefore be used to identify class positions. Given their strong association with socio-economic outcomes such as unemployment, income security, income stability, income prospects, and wealth (Bukodi and Goldthorpe, 2018), social classes can be hierarchically ordered.

For the UK, the National Statistics Socio-Economic Classification (NS-SEC) has been conceived to construct social class in exactly this way. We therefore use NS-SEC to operationalize social class in the UKHLS and UKLFS. For Germany, we use its closest equivalent, the European Socio-economic Classification (ESeC). ESeC has the same theoretical underpinning as NS-SEC and has been developed to facilitate comparative research across European countries (Rose and Harrison, 2010). Table 1 presents the seven-class version of the two schemes.

Given our focus on the intergenerational class mobility of labour market entrants, respondents' origin class and class at labour market entry are our two key variables. In the SOEP and UKHLS, we use the dominance approach to construct origin class, which takes the higher class if father's and mother's class differ (Erikson, 1984). Since the UKLFS only asks about the occupation of the main wage earner during childhood, we take this as approximation. In all three surveys, class of origin is established at respondents' age 14.

Due to their longitudinal design, the SOEP and UKHLS have information, even if in part retrospectively, on respondents' full employment trajectories, including first job based on which class at labour market entry is constructed. The UKLFS does not ask respondents about their first job but provides information on the date when they completed full-time education. Based on this, we select respondents who completed full-time education within 1 year of the interview and are in employment when surveyed. Given that in the UK average job tenure amongst individuals below age 35 is around 3 years (OECD, 2019), these respondents are likely to work in their first job. To minimize the risk of capturing casual jobs during the school-to-work transition and re-entries into the labour market after periods of continuing education, we exclude respondents who started their first jobs before age 14 or left full-time education after age 35 in all surveys.

For Germany, the SOEP provides ISCO88 3-digit occupational codes as well as information on employment status, number of employees and supervisory functions for respondents and their parents. We are hence able to construct the 'full' version of ESeC based on the official crosswalk for both class origin and class at labour market entry according to Rose and Harrison (2010).

For the UK, we use the official NS-SEC crosswalk that relies on the national occupational classification, i.e. SOC10 4-digit codes, alongside information on employment status, number of employees, and supervisory functions. The UKLFS has all this information for the respondents. We can therefore construct the 'full' version of NS-SEC to measure class at labour market entry.

Table 1. The seven-class version of the ESeC and the NS-SEC

	EseC	NS-SEC
Class 1	Large employers, higher managers, and professionals	Higher managerial, administrative, and professional occupations
Class 2	Lower managers and professionals, high-level supervisors	Lower managerial, administrative, and professional occupations
Class 3	Intermediate occupations	Intermediate occupations
Class 4	Small employers and own account workers	Small employers and own account workers
Class 5	Lower supervisors and technicians	Lower supervisory and technical occupations
Class 6	Lower service, sales, and technical occupations	Semi-routine occupations
Class 7	Routine occupations	Routine occupations

Note: The dotted lines indicate the hierarchical ordering of classes in the respective scheme.

For class of origin, we revert to the ‘simplified’ version since only the occupation of the main wage earner in the parental household is known. Yet, as [Supplementary Table A4](#) shows, the allocation of NS-SEC according to the ‘full’ and ‘simplified’ method for class at labour market entry overlaps to a large extent. In the UKHLS, SOC10 codes are only provided in 3 digits for both respondents and their parents. We therefore create our own crosswalk between SOC10 3-digit codes and NS-SEC classes based on the relevant distributions in the UKLFS, which are then used in the UKHLS to measure class origin and class at labour market entry according to the simplified version.³

To map trends over time, we follow the literature and adopt a cohort approach. Contrary to most of past research that relied on quasi-birth cohorts, we use labour market entry cohorts and define these as narrowly as possible to give a detailed picture of change. In the SOEP, labour market entry is defined as the year in which respondents start their first job after having completed full-time education. In the UKHLS and UKLFS, we take the year in which respondents first left full-time education as a proxy, since no information on the precise date when respondents entered the labour market is available.⁴ In our two primary datasets, the SOEP and UKHLS, we then create 16 4-year cohorts, comprising of respondents who entered the labour market between 1950 and 2013. Given the UKLFS’s large sample size, we work with four annual labour market entry cohorts (2014–2017) in our secondary dataset for the UK.

As explained, the operationalization of class origin and class at labour market entry is somewhat different in the two UK surveys. Class mobility rates may therefore

differ to some extent. Particularly, rates of relative mobility could be over-estimated in the UKLFS due to attenuation bias, because class origin is measured less precisely based on the main wage earner and using an occupation-only approach.⁵ Despite these measurement problems, we regard using the UKLFS as important to provide an up-to-date account of UK trends in intergenerational class mobility. Although mobility levels might be slightly different from those in the UKHLS, a close inspection of the UKLFS suggests that the size of the measurement error described above does not differ between survey years, or labour market entry cohorts, within the UKLFS. Thus, the estimates of over-time change yielded by the two datasets can be regarded as comparable.

Finally, we perform multiple imputation by chained equations, separately for men and women, on all three datasets to adjust for systematic missingness in class origin.⁶ In line with previous research ([Berthäuser, 2017](#)), we find that individuals with lower class destinations are more likely to have missing information on their origin class than individuals with higher class destinations. After imputation, our analytical samples contain 31,885 (SOEP), 37,847 (UKHLS), and 6,770 (UKLFS) observations. [Supplementary Tables A1, A2, and A3](#) show the distributions of class origin and class at labour market entry by cohort and gender for each survey. All results presented draw on the multiply imputed datasets.

Empirical Results

Absolute Mobility

We calculate rates of total, upward, and downward mobility for each of our labour market entry cohorts in

Germany and the UK, separately for men and women. Total rates are calculated as the percentage of individuals who were in a different class at labour market entry than that of their parents based on the seven-class version of ESeC and NS-SEC. For upward and downward mobility, we use a 5-class collapse of both schemes since Classes 3, 4, and 5 cannot be hierarchically ordered (see Table 1). Upward (downward) rates are calculated as the percentage of individuals, who started their careers in a higher (lower) class position than their origin class.

Figures 1 and 2 show the absolute mobility rates with 95 per cent confidence intervals. Like previous research based on quasi-birth cohorts and individuals at more advanced career stages, we generally observe no significant change in total mobility for labour market entrants in either country. We also find similar levels of total mobility (70–80 per cent) as reported by prior studies. Country differences, however, emerge with respect to changes in the relative importance of upward and downward mobility. In Germany, upward mobility steadily increased, while downward mobility steadily decreased. From the 1960s onwards, the proportion of those starting their careers in a higher class than their class of origin gradually exceeded the proportion of those starting their careers in a lower class. In the UK, we see an opposite pattern. Upward mobility was in constant decline, while downward mobility constantly rose. Starting one's career in a lower class than that of one's parents became increasingly common since the

1970s. Data from the UKLFS confirms that this trend persisted for the most recent cohorts.

The continuity in the trends of upward and downward mobility, which we observe for labour market entrants in both countries, stands somewhat in contrast to our expectations. For Germany, we expected to see similar trends to what was observed in past research, chiefly because class distributions should look similar for individuals at different career stages in a context of low career mobility. Our results of increasing upward mobility and decreasing downward mobility are in line with the findings of prior studies for individuals born during the first half of the twentieth century, most of whom entered the labour market between the 1930s and 1970s. However, we fail to discover a reversal of trends, i.e. increases in downward mobility and decreases in upward mobility for later cohorts. This suggests that career mobility might have become more important for members of later labour market entry cohorts relative to earlier cohorts. In fact, Becker and Blossfeld (2017) show that in Germany, increases in occupational prestige across individuals' working lives became increasingly steeper for those who entered the labour market from the 1970s onwards. Differences in class distributions depending on when class destination is measured may therefore be larger for later cohorts. Nevertheless, our expectation about country differences appears confirmed as we see divergent trends in the upward and downward rates of labour market entrants in Germany and the UK.

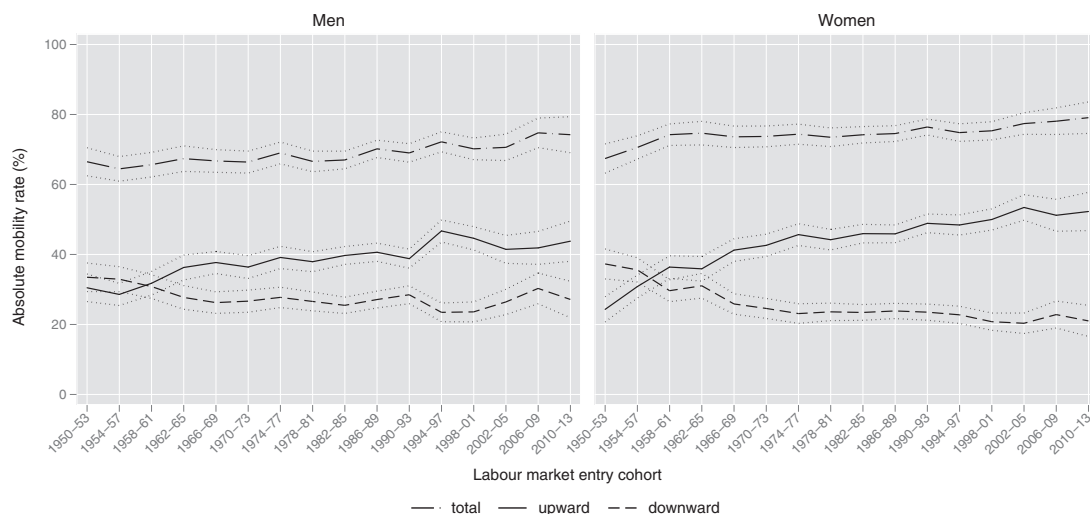


Figure 1. Absolute mobility rates (per cent), with 95 per cent confidence intervals, by labour market entry cohort, Germany

Note: $N_{\text{men}} = 15,607$; $N_{\text{women}} = 16,278$. Source: SOEP 1984–2016.

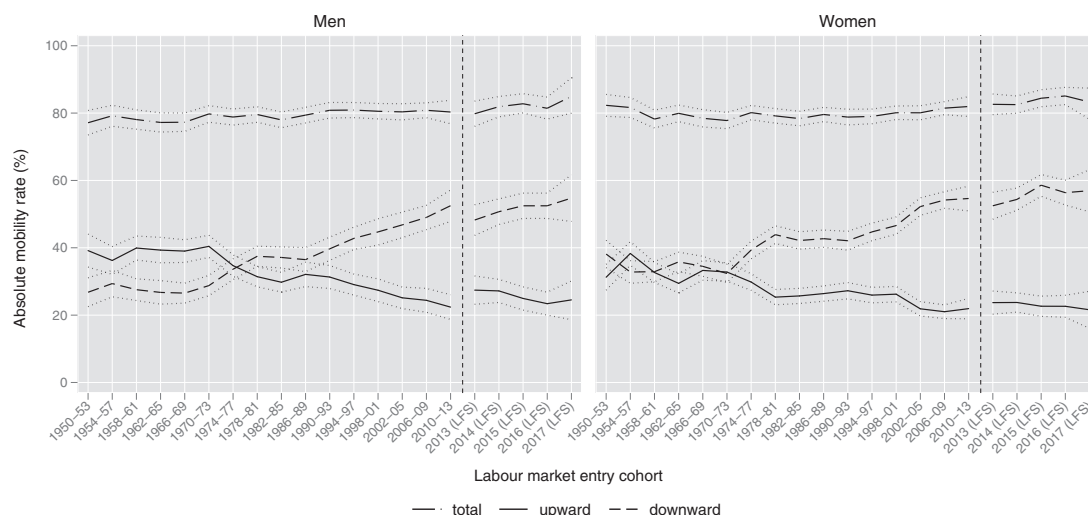


Figure 2. Absolute mobility rates (%), with 95% confidence intervals, by labour market entry cohort, UK

Note: $N_{men} = 17,019$ (UKHLS) / 3,025 (UKLFS); $N_{women} = 19,687$ (UKHLS) / 3,745 (UKLFS). *Source:* UKHLS 2009–2016 End User License; UKLFS 2014–2017 Secure Access.

To see whether these divergent trends result from contrasting changes in the distribution of origin and destination classes, Figure 3 plots the proportion of respondents from salariat (Classes 1 and 2) origins and the proportion of respondents in salariat destinations for each labour market entry cohort in Germany and the UK.⁷ Although more pronounced in the UK, we observe for both countries a growing proportion of respondents with more advantaged class backgrounds, corroborating previous findings. In Germany, however, not only the proportion of respondents from salariat origins increased, but also the proportion of respondents in salariat destinations. The latter even started to overtake the former in the mid-1960s, improving chances for upward mobility and making downward mobility less likely for labour market entrants over time.

In the UK, only cohorts entering the labour market during the 1950s and 1960s—a period of exceptional economic growth and prosperity⁸—saw an expansion in the proportion of salariat destinations that paralleled increases in the proportion of salariat origins. From the 1970s onwards, the proportion of respondents that began their careers in salariat destinations remained more or less stable. As the proportion of respondents coming from salariat origins yet continued to rise, so did the proportion of labour market entrants ‘at risk of downward mobility’ (Bukodi, Paskov and Nolan, 2020).

The observed country differences in absolute mobility can therefore be attributed to divergent class structural changes for labour market entrants in Germany and the UK.

Relative Mobility

Since relative mobility considers the chances of individuals coming from different class origins being found in different class destinations net of class structural change, we use (log) odds ratios to measure relative rates. For a mobility table that is based on a seven-class scheme like ESeC or NS-SEC, $21^2 = 441$ odds ratios can be calculated as there are $(7 \times 6)/2 = 21$ pairs of origin and destination classes each. Given 16 mobility tables for Germany and 16 (UKHLS) + 4 (UKLFS) tables for the UK for each gender, we must deal with 31,752 odds ratios in total. Two different approaches are chosen to navigate such complexity that come with their own strengths and shortcomings.

Our first approach is adapted from Cox, Jackson and Lu (2009), and is based on ‘average global log odds ratios’ (AGLORs) (see also Dale, 1984; Bukodi, Paskov and Nolan, 2020). The main advantage of AGLORs is that they provide a single summary measure of social fluidity for each mobility table and thereby enable straightforward cross-cohort comparisons. However, they require fully ordered class categories. We thus

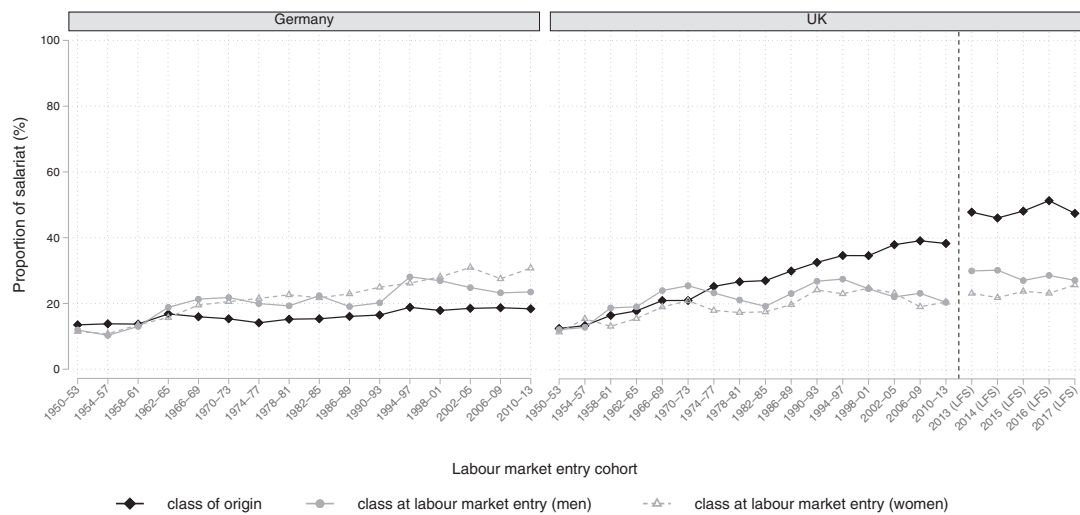


Figure 3. Proportion of respondents from salariat origins and proportion of respondents in salariat destinations at labour market entry by labour market entry cohort, Germany and the UK

Source: SOEP 1984–2016, UKHLS 2009–2016 End User License, UKLFS 2014–2017 Secure Access.

work with the five-class versions of ESeC and NS-SEC (see Table 1). The first step is to partition each 5×5 mobility table into 16 2×2 sub-tables to calculate global log odds ratios. The first global log odds ratio is calculated based on the table being divided between the first row and first column. The second is calculated based on the table being divided between the first row and first and second columns. The third is calculated based on the table being divided between the first row and first, second, and third columns and so on. We then average across all 16 global log odds ratios. Formally,

$$AGLOR_k = \frac{1}{16} \sum_{i=1}^4 \sum_{j=1}^4 \ln \left[\frac{\text{odds}(\text{destination} \leq \text{Class}_j | \text{origin} \leq \text{Class}_i)}{\text{odds}(\text{destination} \leq \text{Class}_j | \text{origin} > \text{Class}_i)} \right]$$

where $AGLOR_k$ is the average global log-odds ratio for labour market entry cohort k based on a 5×5 mobility table. The higher the $AGLOR$, the stronger the net origin–destination association, i.e. the lower relative mobility.

Based on our primary datasets, Figure 4 plots the $AGLOR$ for each labour market entry cohort by country. Especially for men, the origin–destination associations are generally stronger in Germany than in the UK. This is in line with previous research that identifies Germany as a low and the UK as a high fluidity country (Bukodi, Paskov and Nolan, 2020). More important for our purposes is yet the indication of a slight increase in social fluidity. In both countries, the origin–destination

association seems to have weakened over the considered period, especially for women, as suggested by the downwardly sloping trend lines. However, we also see, especially for men, some levelling off of these increases for cohorts that entered the labour market from the mid-1970s onwards.

Although easy to calculate and interpret, AGLORs are based on collapsed versions of ESeC and NS-SEC. They therefore mask horizontal mobility, which could bias the estimation of over-time trends if movements between Classes 3, 4, and 5 differed between cohorts. Our second approach follows more established sociological practice and fits two log-linear models on the seven-class version of ESeC and NS-SEC (for further elaboration see Breen, 2004). The model of ‘Constant Social Fluidity’ (CnSF) assumes that the net origin–destination association does not differ across labour market entry cohorts and so remains constant over time:

$$\log F_{ijk} = \mu + \lambda_i^O + \lambda_j^D + \lambda_k^C + \lambda_{ik}^{OC} + \lambda_{jk}^{DC} + \lambda_{ij}^{OD},$$

where F_{ijk} is the expected frequency in cell ijk of a three-way table including origin i (O), destination j (D) and labour market entry cohort k (C), μ is a scale factor, $\lambda_i^O, \lambda_j^D, \lambda_k^C$ are the main effects of the distributions of individuals over origins, destinations, and cohorts, and λ_{ik}^{OC} and λ_{jk}^{DC} refer to the association between origin and cohort and destination and cohort, respectively. Finally, λ_{ij}^{OD} represents the net association between origin and

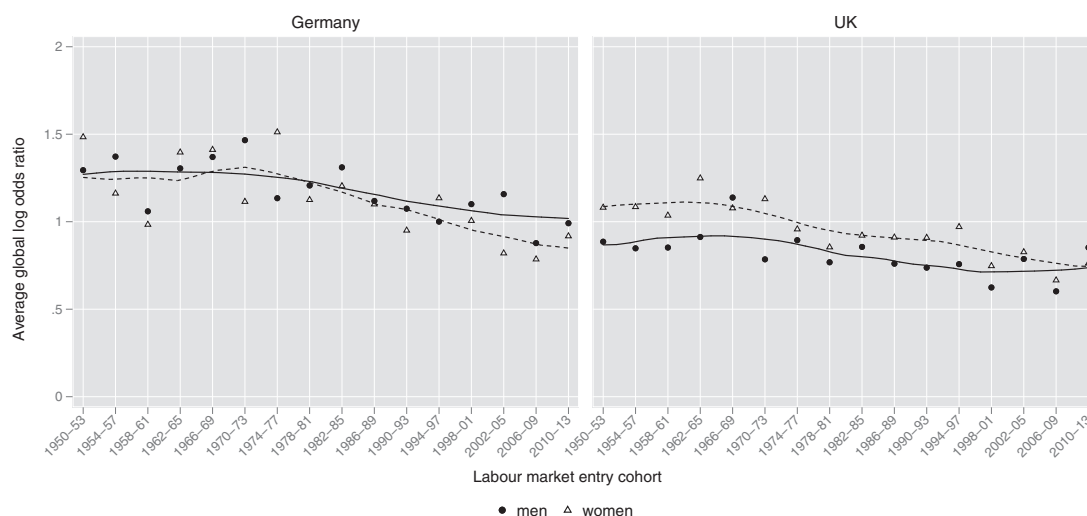


Figure 4. Average global log odds ratios by labour market entry cohort, Germany and the UK

Note: Local polynomial smoothing applied for men (solid line) and women (dashed line). *Source:* SOEP 1984–2016, UKHLS 2009–2016 End User License.

destination, for which the defining log odds ratios are assumed to be the same across cohorts.

By contrast, the model of ‘Uniform Differences’ (UNIDIFF), also known as the log-multiplicative layer effects model (Erikson and Goldthorpe, 1992; Xie, 1992), allows the log odds ratios to differ by a common cohort-specific factor β_k —the UNIDIFF parameter:

$$\log F_{ijk} = \mu + \lambda_i^O + \lambda_j^D + \lambda_k^C + \lambda_{ik}^{OC} + \lambda_{jk}^{DC} + \beta_k X_{ij}^{OD},$$

where X_{ij}^{OD} refers to the general pattern of the association between origins and destinations across cohorts. If $\beta_k < 1$, the origin–destination association is weaker and relative mobility rates are higher in cohort k compared to a given reference cohort ($\beta_{\text{reference}} = 1$). If $\beta_k > 1$, the origin–destination association is stronger and relative mobility rates are lower. The UNIDIFF thus accounts for cohort-specific differences in the origin–destination association that apply uniformly to all underlying log odds ratios. Put differently, it allows cohorts to have consistently higher or lower levels of social fluidity. Being limited to capturing only uniform differences in social fluidity across cohorts is a disadvantage of the UNIDIFF. However, as [Supplementary Tables A5 and A6](#) show, the model fits well on the observed data in both countries for almost all cohorts.

To give a thorough account of long-term trends, we apply what we call a ‘moving windows’ approach. Starting with the earliest labour market entry cohort (1950–1953) as reference, we fit the CnSF and UNIDIFF models to compare its relative mobility rates to those of

all subsequent cohorts. We then repeat this exercise using the next cohort (1953–1957) as reference and so on until the relative rates of the 2006–2009 cohort are compared to those of the 2009–2013 cohort. In total, we have 15 comparisons. Setting up the cross-cohort comparison in this way allows us to see how far trends in relative mobility depend on the cohorts considered. We can thus more precisely identify the timing of change.

The results are shown in [Figure 5](#) for Germany and in [Figure 6](#) for the UK. When we compare cohorts that entered the labour market in the 1950s and 1960s with cohorts that entered the labour market in the 1970s and later, we again find evidence for increasing social fluidity, i.e. the UNIDIFF improves on the CnSF in both countries for both genders. Yet, when we only focus on those who started their careers *after* 1970, the picture is clearly different. The UNIDIFF no longer improves consistently on the CnSF, suggesting that increases in relative rates at labour market entry came to a halt. For German men and women as well as for British men, relative mobility essentially stopped increasing for those who entered the labour market since the first half of the 1970s. For British women, increases in relative mobility ceased to continue from the late-1990s onwards.

Regarding long-term trends in relative mobility, both of our methodological approaches then paint a picture of striking similarity for Germany and the UK: an overall increase that levels off for individuals who entered the labour market after the mid-1970s. How far are



Figure 5. UNIDIFF parameters for labour market entry cohorts, 'Moving windows approach', Germany

Note: Fit statistics are presented in [Supplementary Table A5](#). Source: SOEP 1984–2016.

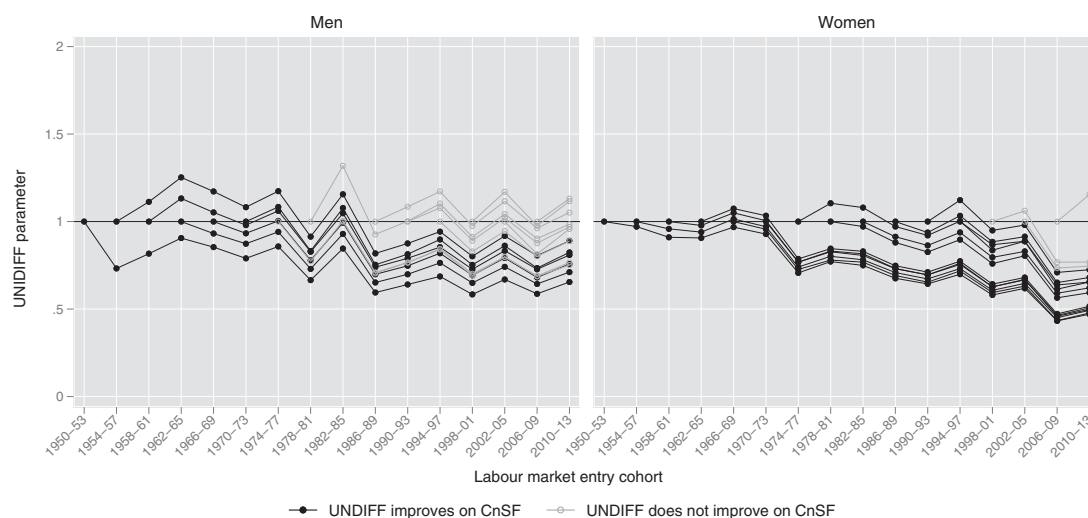


Figure 6. UNIDIFF parameters for labour market entry cohorts, 'Moving windows approach', UK

Note: Fit statistics are presented in [Supplementary Table A6](#). Source: UKHLS 2009–2016 End User License.

these results in line with our expectations set out earlier? For Germany, we expected trends in social fluidity to look similar regardless of when class destination is measured due to relatively low levels of career mobility. For the UK, we expected trends in social fluidity to differ when class destination is measured at labour market entry as compared to more advanced career stages due to relatively high levels of career mobility. Both of these expectations are confirmed by our results. In line with

past research, we find a 'halting increase' in social fluidity for Germany ([Hertel, 2017](#); [Pollak and Müller, 2020](#)). The same trend is observed for the UK, which, however, is at odds with previous studies that report either overall stability or trendless fluctuation ([Bukodi and Goldthorpe, 2018](#)).

As discussed above, by studying mobility rates over a 70-year period, we contribute to the literature on long-term trends. However, we also aim to explore whether

changes in social fluidity may be linked to short-term volatilities or cyclical changes in the economy and labour market. Past research already provided evidence for a negative impact of adverse economic conditions at labour market entry on future career progression that seems to vary for individuals from different social backgrounds (Blossfeld, 1986, 1987; Barone and Schizzerotto, 2011; Bukodi and Goldthorpe, 2011). In a last step, we perform significance tests for differences in average global log odds ratios (Figure 7)⁹ and fit the CnSF and UNIDIFF models to mobility tables of adjacent cohorts (Figure 8). If relative mobility followed periods of ‘boom’ and ‘bust’, these should appear when looking at more granular cross-cohort comparisons.

Despite visible fluctuations, we do not find consistent differences in relative mobility rates between pairs of adjacent cohorts.¹⁰ Insofar as there are significant differences, these show up in a rather unsystematic way and can neither be related to periods of growth nor crisis. For example, the UK was hit by a severe recession at the beginning of the 1980s and privatization, extensive deregulation, and labour market re-structuring further contributed to soaring unemployment rates and economic inequality throughout the decade. Based on past research (Bukodi and Goldthorpe, 2011), we expected individuals who entered the labour market during this time to experience decreases in social fluidity as class origin appears to matter more when economic conditions are critical. However, we do not observe a

strengthening in the origin–destination association between the 1978–1981 and 1982–1985 cohorts. Likewise, the 2008 financial crisis had a large impact on the economies of Germany and the UK, leading to negative growth rates in both countries. We nevertheless see no decline in the level of social fluidity for the 2006–2009 cohort compared to the 2002–2005 cohort in either country. Short-term changes in economic conditions and labour market volatilities therefore do not seem to be associated with significant changes in relative mobility for labour market entrants. Notwithstanding, entering the labour market under unfavourable conditions may still have detrimental effects on individuals’ career progression as indicated by past research.

Auxiliary Analyses on Relative Rates

We focus on individuals’ first job to examine ‘career mobility-adjusted’ long-term trends in intergenerational class mobility and to explore the degree to which conditions at labour market entry shape chances for relative mobility. To take account of cross-national differences in the extent to which first job is predictive of subsequent class destinations, we conduct our analyses for Germany and the UK. The two countries are known for their contrasting patterns of career mobility due to distinct institutional arrangements (Blossfeld *et al.*, 2008). However, labour market entries and the nature of first jobs do not only differ between countries but are also changing over time. To assess how far these changes

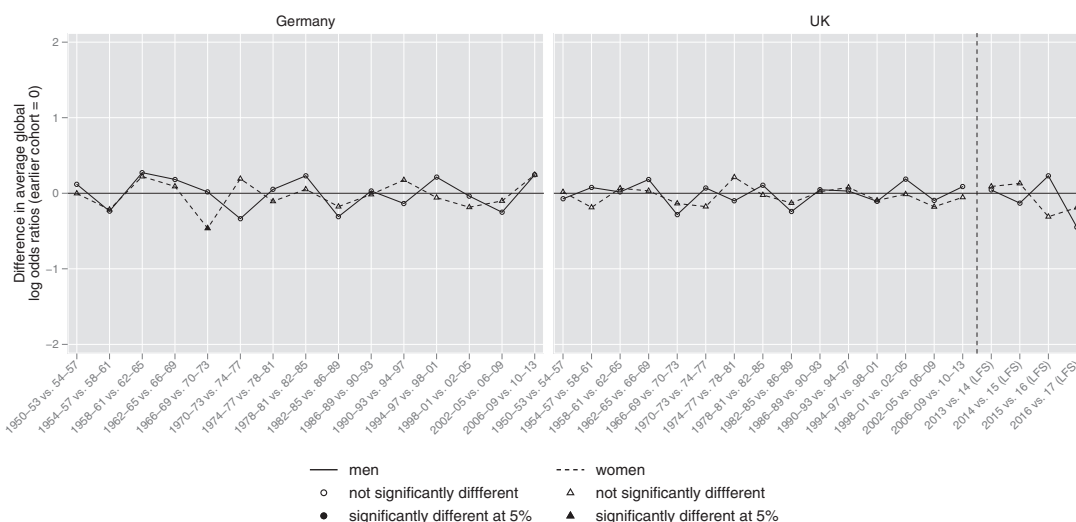


Figure 7. Significance test for differences in average global log odds ratios between adjacent labour market entry cohorts, Germany and the UK

Source: SOEP 1984–2016, UKHLS 2009–2016 End User License; UKLFS 2014–2017 Secure Access.

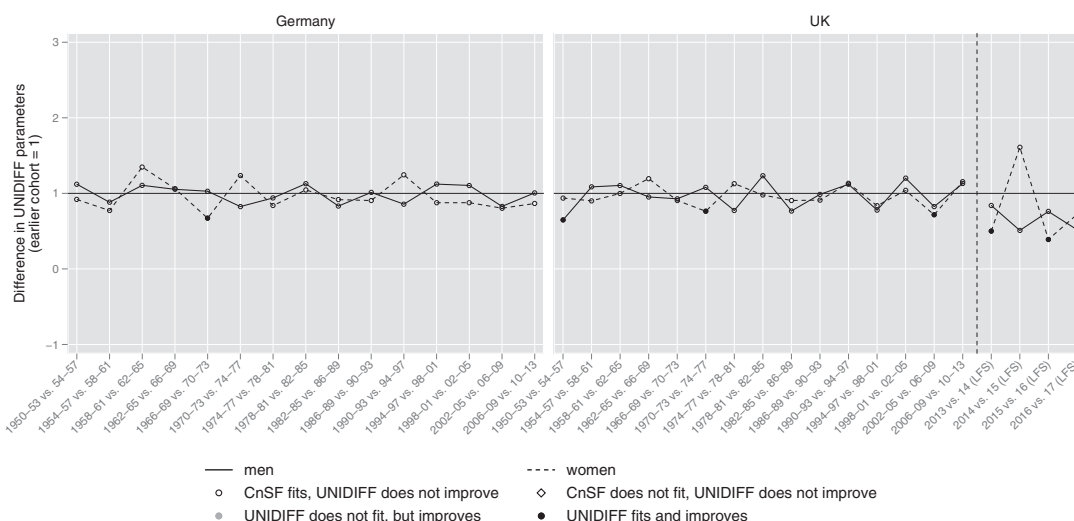


Figure 8. Fitting the CnSF and UNIDIFF models to adjacent labour market entry cohorts, Germany and the UK

Note: Fit statistics are presented in [Supplementary Tables A7 and A8](#). Source: SOEP 1984–2016, UKHLS 2009–2016 End User License; UKLFS 2014–2017 Secure Access.

affect our trend estimates, we conduct an additional set of auxiliary analyses.¹¹

As shown in [Supplementary Figures B1 and B2](#), the proportion of young workers found in some kind of ‘non-standard’ job, such as part-time or temporary employment, considerably increased over the past decades in our two countries (see also [Allmendinger, Hipp and Stuth, 2013](#); [Bachmann, Felder and Tamm, 2018](#); [Passaretta and Wolbers, 2019](#)). This growing flexibility may not only change patterns of labour market entry but can also affect over-time changes in relative mobility rates, if the strength in the origin–destination association differed for individuals in standard and non-standard employment.

Indeed, we observe some significant differences in the origin–destination association between the two groups that is particularly pronounced for younger respondents in the UK ([Supplementary Tables B1 and B2](#)). However, due to longer educational trajectories ([Bachmann, Felder and Tamm, 2018](#)), labour market entrants have become older over time. This effect can therefore be expected to be negligible. Nevertheless, we further check for systematic differences in relative mobility rates between older and younger labour market entrants. As no differences appear in both countries ([Supplementary Table B3](#)), we are confident that the growing proportion of non-standard employment

among labour market entrants is unlikely to affect our findings.

Conclusion

Focussing on cohorts of labour market entrants, our goal was to offer a refinement of the study of over-time trends in intergenerational class mobility. We believe that this approach pinpoints changes in absolute and relative mobility more precisely than approaches relying on quasi-birth cohorts for two reasons. First, members of different cohorts are compared with each other when they are at similar stages in their careers. Cohort differences can therefore be unambiguously attributed to differences in intergenerational class mobility rather than also involving differences in intragenerational class mobility. Second, members of the same labour market entry cohort start their careers under similar institutional and economic conditions. The approach thus exactly accounts for the opportunity structures cohort members are faced with, allowing to further scrutinise how far conditions at labour market entry shape chances for intergenerational class mobility.

To gauge the degree to which differences in observed trends in intergenerational class mobility between individuals at different career stages depend on levels of career mobility, we study men and women who entered

the labour market between the 1950s and 2010s in Germany and the UK. As expected, our results for Germany show great similarity with those of previous studies, while our findings for the UK are somewhat different. It therefore seems that in contexts with low levels of career mobility, such as in Germany, trends in intergenerational class mobility based on labour market entrants provide a reliable prediction of trends in intergenerational class mobility at all career stages. This implies that scholars do not necessarily need to ‘wait’ until survey respondents spent certain amounts of time in the labour market as chances for intergenerational class mobility seem to be determined from the very start. An important assumption is yet that levels of career mobility remain constant over time. By contrast, in contexts with high levels of career mobility, such as in the UK, the timing when to measure class destination appears quite consequential. Compared to previous studies that measure individuals’ class destination at later career stages, we ‘overestimate’, at least to some extent, the decrease in upward mobility, the increase in downward mobility as well as the increase in relative mobility. In other words, we ‘underestimate’ the persistence in intergenerational class inequality when focussing on those who just embarked on their careers.

Our results highlight how observed patterns of change in social fluidity crucially depend on the design of the cross-cohort comparison. When looking at the entire period covered by our study, we do observe a weakening of the origin–destination association for both Germany and the UK. However, our ‘moving windows’ approach reveals that earlier increases in social fluidity levelled off for cohorts who entered the labour market since the mid-1970s. More fine-grained comparisons between adjacent labour market entry cohorts also do not provide evidence that social fluidity follows cyclical developments of the economy or short-term volatilities in the labour market. In both countries, increases in social fluidity appear to progress rather slowly and came to a halt towards the end of the twentieth century.

The finding of very similar trends in social fluidity for labour market entrants in Germany and the UK warrants further reflection. It raises the question to what extent initial increases that are followed by stability can be explained by historic idiosyncrasies of the two countries that simply coincided in their timing or are in fact related to a common factor. Our results cast some doubt on the universal applicability of an education-based explanation (Breen and Müller, 2020). In the UK, contrary to Germany, the strength of the OE and ED associations did not change much in the second half of the twentieth century. Moreover, the OED interaction that allows to

assign education a central role in increasing social fluidity does not appear to be significant either (Bukodi and Goldthorpe, 2016).

An alternative explanation for the lack of sustained increases in relative mobility rates in both countries, but particularly in the UK, may be found in the possibility of a structural ‘limit’ in social fluidity as suggested by Bukodi and Goldthorpe (2018). In societies with a capitalist market economy, nuclear family system and liberal-democratic policy, such limit could exist as more advantaged families always seek to use their superior resources—economic, cultural, or social—to maintain their children’s greater chances of success relative to those of children from less advantaged families. Beyond a certain point, parents may therefore block policy interventions aimed at creating greater educational equality or find some other ways for their children to avoid intergenerational downward mobility. This may become especially pressing at times when there is less ‘room at the top’, making it more difficult for children from advantaged backgrounds to maintain their parents’ class positions. As we are unable to provide further evidence on the existence of such a limit, we leave its exploration to future research. Nevertheless, our results underline that explaining stability in relative rates may be one of the major puzzles to be solved by mobility scholars of the twenty-first century.

Notes

- 1 Bukodi (2017) shows that in the UK further education serves as a channel through which individuals from high class backgrounds strengthen the OD association and achieve counter mobility.
- 2 That is, only respondents who entered the labour market in West Germany are included. However, 7.22 per cent of respondents who entered the labour market in West Germany after 1989 were born in East Germany. We run robustness checks to account for selective migration from East to West Germany after 1989. Our results remain unchanged when excluding respondents born in East Germany (see [Supplementary Appendix C](#)).
- 3 More precisely, we take the full sample of the pooled 2014–2017 UKLFS July–September Quarters and construct the seven-class version of NS-SEC for respondents’ current employment and the main wage earner during childhood as outlined. Respondents’ last employment is taken if information on current employment is missing. We then turn the SOC10 4-digits into 3 digits and determine for each of the latter the most common NS-SEC

class position, separately for men, women, and the main wage earner. Our gender- and generation-specific crosswalks thus rely on the mode NS-SEC constructed from SOC10 4-digits by SOC10 3-digits in the UKLFS.

- 4 For 688 observations (1.8 per cent) in the UKHLS, year of leaving full-time education is missing. For these cases, we approximate year of labour market entry using mean age of leaving full-time education of those respondents, who have similar educational qualifications and were born within the same 5 years.
- 5 If class origin is measured with greater error, its ‘predictiveness’ regarding class destination decreases and the association between class origin and class destination weakens. Thus, rates of relative mobility will be upwardly biased showing greater social fluidity than is actually the case (Erikson and Goldthorpe, 2010). This is exactly what we observe as presented in [Supplementary Figure A1](#).
- 6 Besides year and class at labour market entry, we use available information on individuals’ highest educational attainment, age at labour market entry, class at age 36 or older, (log) income as well as parental education and labour market participation to predict missing information on class of origin. Class origin is imputed for 18.59, 10.31, and 5.30 per cent of the analytical sample in the SOEP, UKHLS, and UKLFS, respectively.
- 7 We only show the development of salariat origin and destination classes across labour market entry cohorts. A more or less ‘mirrored’ picture of these developments can be observed when looking at the working class (Classes 6 and 7). The results are available upon request.
- 8 The reason why this period is sometimes referred to as Britain’s ‘golden age’ of intergenerational mobility (Bukodi and Goldthorpe, 2018).
- 9 More precisely, we divide the difference in the average central 4 of global log odds ratios by the standard error of this difference as described by Cox et al. (2009). According to the authors, using the central set of global log odds ratios is preferable as they give a more precise result.
- 10 We obtain similar results, if we compare cohorts over a period of 16 years by replacing the 4-year labour market entry cohorts by 8-year cohorts. The results are presented in [Supplementary Figures A2 and A3](#).
- 11 Due to space limitation, we can only give a brief summary, but detailed elaboration on what we do

and all results from this exercise are presented in full in [Supplementary Appendix B](#).

Supplementary Data

[Supplementary data](#) are available at ESR online.

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