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Spatial and Social Mobility in England and Wales: Moving Out to Move On?

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DISCUSSION PAPER SERIES

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ABSTRACT

Spatial and Social Mobility in England and Wales: Moving Out to Move On?*

Social mobility—the extent to which social and economic position in adulthood is facilitated or constrained by family origins—has taken an increasingly prominent role in public and policy discourse. Recent studies have documented that not only who your parents are, but also where you grow up, influences subsequent life chances. We bring these two concepts together to study trends in social mobility in England and Wales, in three post-war generations, using linked Decennial Census data. We estimate rates of occupational social class mobility by sex and region of origin. Our findings show considerable spatial variation in rates of absolute and relative mobility as well as how these have changed over time. While rates of upward mobility increased in every region between the mid-1950s and the early 1980s, this upward shift varied across different parts of the country, and tailed off for more recent cohorts. We also explore the role of domestic migration in understanding these temporal and spatial patterns, finding that those who stayed in their region of origin had lower rates of upward mobility compared to those who moved out, although this difference also narrowed over time. While policy discussion has focused almost entirely on national-level trends in social mobility, our results emphasise the need to also consider persistent spatial inequalities.

JEL Classification: J62, J61, J21, I24, I26, R12

Keywords: intergenerational mobility, social mobility, regional economics, spatial mobility

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1. Introduction

In recent years, the concept of social mobility has taken ever greater prominence in political discourse, appearing 3,753 times in recorded parliamentary debates in the United Kingdom, with 98% occurring after 1 Jan 2000, and 60% after 1 Jan 2015.¹ Social mobility is about movements between social and economic positions between generations: to what extent are citizen's life outcomes determined by the circumstances into which they were born and raised? A common normative interpretation is to equate social mobility with the degree of 'equity', or 'fairness', in a society. While recent public debate has often uncritically cast the UK as a distinctly 'immobile' society, with low and declining equality of opportunity over time, the academic literature paints a rather more mixed and nuanced picture. Evidence from the birth cohort studies suggests a small increase in the correlation between earnings of parents and children for the cohorts born in 1958 and 1970 (Blanden et al., 2004). On the other hand, studies using occupation-based measures of social class and status have found either static, or increasing social mobility over the middle and later decades of the twentieth century (Lambert, Prandy and Bottero, 2007; Bukodi et al., 2015; Buscha and Sturgis, 2018).

However, this focus on the national level risks obscuring important variation in patterns and trends in social mobility that derive from place; *where* you start in life may be a key determinant of your social mobility chances. An emerging literature has started to document the importance of place in conditioning economic opportunity (Chetty et al., 2014; Bell, Blundell and Machin, 2019), but less attention has been paid to the intervening mechanism of *geographic mobility*—whether and where an individual migrates during adulthood. One hypothesis is that migration to large urban centres creates an 'escalator effect', enhancing the upward mobility chances of those who move to major conurbations (Champion, Coombes and Gordon, 2013; Social Mobility Commission, 2019). Others have noted the importance of neighbourhoods in fostering the conditions that facilitate or inhibit upward mobility trajectories for disadvantaged groups (Chetty and Hendren, 2017). Better understanding of the spatial dimension of social mobility therefore seems key to improving policy design (UK Government, 2017), yet there is currently little formal analysis explicitly addressing the nexus between social and geographic mobility.

This paper addresses this evidence gap by bringing these two aspects of mobility together. We document intergenerational social class mobility by region of origin in England

¹ Authors' calculations based on 'Hansard', the record of all parliamentary debates in the UK. See Appendix Figure A1 for more detail.

and Wales, and explore how patterns and trends in social mobility vary by domestic migration. Do social mobility chances differ across regions and local authorities? Has regional variation changed or remained stable across cohorts? Does moving away from economically depressed areas facilitate upward mobility? These sub-national questions are important; even if a society is becoming more fluid at the national level, for those who are born—and remain—in areas with low levels of economic opportunity, such overall figures are of little relevance to lived experiences, or to the development of effective policy solutions. For instance, the 2019 Social Mobility Barometer survey estimated that 31% of people in the North East of England—an area with historically low growth and high unemployment—think that there are good opportunities for them to make progress in life, compared with 74% of people in the more prosperous South East of England, and 78% in London (Social Mobility Commission, 2020).

To address these questions, we use the Office for National Statistics Longitudinal Study (LS)—a 1% sample of five linked decennial Censuses in England and Wales spanning the period 1971 to 2011, also linked to administrative data on births, deaths and cancer registrations (Shelton et al., 2019). This data allows us to trace the lives of a sample of over 150,000 people, including data on class ‘origin’ (parental social class position), class ‘destination’ (social class position in adulthood), and geographic location, at multiple time-points over the life course. Using Census data mitigates problems of recall bias and survey non-response that characterise mobility analyses based on retrospective surveys, while the large sample size of the LS allows us to produce precise estimates for subsamples defined by location and geographic mobility.²

We use these data to analyse patterns of intergenerational social mobility based on the National Statistics Socio-economic Classification (NS-SEC) measure of occupational social class (Rose, Pevalin and O’Reilly, 2005). We estimate rates of absolute and relative social mobility for each of three cohorts, by gender and region. *Absolute mobility* is an unconditional comparison of origin and destination states. For instance, what proportion of the population has moved to a different class from their parents? *Relative mobility*, or ‘social fluidity’, concerns the comparison of origin and destination states, conditional on changes in the occupational structure over time. Relative mobility asks, for example, what are the relative chances of being in the highest social class for an individual born in the highest class compared to someone from the lowest social class? Finally, we break these estimates down to assess how social mobility is moderated by internal migration. Our objective in this paper is only to

² We refer to analysis of data on England and Wales as “national” analyses, and regional breakdown within those countries as “sub-national”, but we note that Scotland and Northern Ireland are excluded from our data and analyses because linked Census data are not available for these countries in the ONS LS.

describe the extent to which rates of absolute and relative social class mobility in England and Wales have varied over time and place, and according to whether individuals made long-range internal migration moves. We do not seek to provide causal explanations of the empirical regularities we observe.

Compared with previous analyses of sub-national social mobility in the UK, we offer two important contributions. First, we use a measure of occupational social class, the NS-SEC, which has long been the key measure of intergenerational class mobility in the UK. Substantial debate has emanated from conflicting time trends in social mobility that are found when using different measures of social and economic (Erikson and Goldthorpe, 2010). Notably, some analyses based on self-reported income show decreasing relative mobility between 1958 and 1970 in the UK (Blanden et al., 2004), whereas analyses based on occupational class and status have shown either static or increased fluidity (Bukodi et al., 2015; Buscha and Sturgis, 2018). It therefore seems important to consider sub-national mobility trends using a range of measures of social and economic position.

Our second novel contribution is to assess whether rates of social mobility are different for those who are geographically immobile—the ‘stayers’—compared with their counterparts who move elsewhere—the ‘movers’. It has long been thought that social mobility is related to spatial mobility (Fox, 1985; Savage, 1988), particularly given the historically uneven distribution of professional and managerial occupations across UK cities and regions. We know that birthplace is important for economic outcomes: Bosquet and Overman (2019) estimated birthplace size-wage elasticities of 4.3% for the UK, and show this link is partly explained by lifetime geographic immobility. We also know that regional migration has substantial effects on upward *intra*-generational occupational mobility (Gordon, Champion and Coombes, 2015). Yet less is known about how rates of *inter*-generational social mobility for those who stay in the area they grew up in, compare with those who make long-range moves; do people need to move out to move up?

The most similar paper to ours is Bell et al., (2019), who use the LS to estimate rates of social mobility in terms of social status, occupational average wage, education, and home ownership. They find either no change or slight increases over time in fluidity across the first three measures but markedly reduced upward mobility for home ownership. Friedman and Macmillan (2017) also consider the relation between spatial and social mobility using the UK Household Longitudinal Survey (UKHLS), finding considerable variability in rates of absolute and relative mobility across UK regions. Counter to popular belief, their analysis reveals London to have the lowest upward and highest levels of downward absolute mobility of any

UK region. This, they find, is driven by the majority of domestic migrants to London coming from affluent backgrounds in the first place, placing a ceiling on further upward mobility, post-migration. Reinforcing this ceiling effect, is the low rate of upward mobility observed among the many international migrants to London. However, because the UKHLS is a sample of the general population of adults, it can only be used to compare regional variability in mobility rates in terms of the *destination* status of individuals, because region of origin of respondents is not observed. In contrast, because the LS follows sample members from childhood to adulthood, we are able to estimate mobility rates at the sub-national level for the population that originated in each location. Given the LS' very large sample size, we can also decompose these sub-national mobility rates by the 'mover-stayer' status of individuals.

Our findings reveal considerable dependence of adult social class position on parental social position in childhood, with a strong regional patterning. Social mobility in England and Wales, whether measured in absolute or relative terms, increased in every region between the earliest cohort we consider, born between 1953-63, and the latest cohort, born between 1973-83. However, the majority of this increase occurred between the first two cohorts (1953-63 and 1963-73). The North of England and Wales had the lowest rates of absolute upward mobility in the earliest birth cohort—when labour markets in these areas were concentrated in traditional industrial and manufacturing sectors. These regions subsequently experienced a 'catch-up' in absolute upward mobility between the first and second birth cohorts, moving closer to the more affluent southern regions, as the occupational structure shifted toward a higher proportion of professional and managerial jobs. Relative mobility followed a similar pattern. However, the most recent cohort (born 1973-83) saw more variable changes in absolute mobility—typically small or negligible increases—compared with their immediate predecessors. More notably, perhaps, relative mobility declined in Northern England and in Wales, for the 1973-83 cohort, while London, the South West and South East experienced little or no change in social fluidity.

We also estimate relative mobility rates for 402 Local Authority Districts (LADs) and find significant variation within each region: every region in England and Wales contains LADs with amongst the highest and lowest rates of relative social mobility nationally. This shows that where an individual is born *within* a region is substantially more consequential for their life chances than their region of origin.

We finish by decomposing these mobility estimates into subgroups defined by whether individuals make long-range migrations. We find that 'movers' have, on average, higher rates of upward mobility than 'stayers'. Those who emigrated from the North of England or Wales over our period of interest experienced higher rates of upward absolute mobility compared with

those who remained in those regions, with this pattern especially pronounced among movers to London. This observation is consistent with the literature on migration to large urban centers conferring an ‘escalator’ effect. However, disaggregating by cohort, the ‘mover’ premium is no longer evident for the most recent cohort in our study (born 1973-83).

2. Data and measures

Data

We use the Office for National Statistics Longitudinal Study (LS), a 1% sample of decennial Censuses of the population of England and Wales spanning 1971 to 2011 (Shelton et al., 2019). The original LS sample was selected from the 1971 Census by identifying records for all individuals born on four equidistant (undisclosed) dates in the year. The study design is a continuous, multi-cohort study, where new samples are drawn in the subsequent 1981, 1991, 2001 and 2011 Censuses by adding records for all persons meeting the day of birth criteria. These records are also linked to administrative data on births, deaths and cancer registrations. Hence, study members enter via birth or immigration and can be lost to follow-up via death or emigration.

The LS has several attractive properties for our purposes here. First, it is the largest nationally representative longitudinal study in the UK, with a sample size of over 500,000 in each Census year and a follow-up duration of 40 years (1971 to 2011). Second, being based on the Census, the LS does not face the problems of high rates of non-response and attrition that characterise population-based survey and cohort studies. Linkage rates of individuals between Censuses are high in the LS, ranging from 91.3% in 1971 to 87.7% in 2001. Third, the LS includes data on people living in communal establishments, such as older adults and students, which are typically omitted from household surveys. Finally, the LS includes data on the individuals who were enumerated in the study member’s household for the Census. This means we can identify the contemporaneous occupations of the parents of study members when they were children.

Measures and definitions

The measure of social class we use is the National Statistics Socio-economic Classification (NS-SEC). The NS-SEC was created to measure social class position via occupations, recognising that employment relations and conditions, such as the degree of autonomy at work, are central in demarcating the structure of socio-economic positions in modern societies (Rose, Pevalin and O'Reilly, 2005). The NS-SEC comprises seven analytical occupation groupings: Higher managerial and professional; Lower managerial and professional occupations; Intermediate occupations (clerical, sales, service); Small employers and own account workers; Lower supervisory and technical occupations; Semi-routine occupations; Routine occupations. For those not currently in employment, we use their most recent occupation to assign NS-SEC. To measure origin social class, we take the highest parental NS-SEC—the so-called “dominance method” (Erikson, 1984).

The NS-SEC is specifically designed to measure an individual’s social class position by capturing the social relations associated with different types of labour contract. Changes in demand for specific occupations over time, for instance from coal mining to delivery work, are accommodated via their commonalities in the nature of the labour contract. The NS-SEC is also designed both practically—and conceptually—to provide coverage of the entire in-work adult population. This allows us to study mobility patterns for men and women, whereas studies based on income are often restricted to working age males, particularly when origin status is defined at periods when fewer women were in the labour market, as is the case here.

For sub-national areal units, we use the Government Office Region (GOR) geography, which yields nine regions in England, with Wales forming the tenth. We also use the 1991 Census Local Authority Districts (LAD), comprising 402 LADs operational during our study period. To account for changes to areal unit boundaries over time we use the harmonised geography indicators developed by CeLSIUS, the LS support team.

Sample construction

We construct a core sample of study members who were aged 8 to 18 years at: the 1971 Census (‘cohort 1’, born 1953-1963), the 1981 Census (‘cohort 2’, born 1963-1973) and the 1991 Census (‘cohort 3’, born 1973-1983). We follow these cohorts over time, observing their destination class 20 years later, in either the 1991, 2001 or 2011 Censuses, respectively, when the study members were between 28 and 38 years of age. Table 1 shows the structure of the

data used in the core analyses. For instance, we have 58,465 study members aged 8 to 18 years who were enumerated in the 1971 Census and who are also observed at the 1991 Census with complete data on destination NS-SEC. The smaller sample size for the 1973-83 cohort is due to a lower birth rate rather than dropout from the study. Our analysis sample comprises a total of 168,777 observations across the three cohorts.

Table 1 *Structure of analytical sample and number of complete cases*

Cohort	Origin Census year	Birth year	Destination Census year		
			1991	2001	2011
1	1971	1953-63	58,465		
2	1981	1963-73		62,112	
3	1991	1973-83			48,200

Notes: Data source is the ONS-LS restricted to study members aged 8 to 18 years at origin, with non-missing values for region at origin and destination, own NS-SEC and parental NS-SEC.

3. Empirical approach

We report estimates of absolute and relative mobility by region of origin and cohort. We are here primarily interested in ‘long-range’ social mobility, rather than movements between adjacent classes, as it is the most relevant form of mobility to public and policy debate. Therefore, we study a two-way mobility table characterising transitions between the NS-SEC categories 1 or 2 (managerial or professional) and NS-SEC categories 3 to 7. Aggregating classes in this way also serves to improve the precision of our estimates which, even with the large sample of the LS, are noisy when broken down over seven social class groups by sex and region.

NS-SEC class 4, ‘self-employed and small employers’ does not fit into an ordinal ranking. Recent studies have grouped NS-SEC classes 3, 4, and 5 into one intermediate category, which falls below classes 1 and 2 and above classes 6 and 7, such that ‘horizontal’ movements between groups 3, 4 and 5 do not contribute to upward or downward mobility (Bukodi et al., 2015; Buscha and Sturgis, 2018). By including NS-SEC 4 in the ‘lower’ group of our binary categorisation we are consistent with these studies by treating NS-SEC 4 as a lower rank than classes 1 and 2, with movements between NS-SEC 4 and the adjacent categories treated as ‘horizontal’. An alternative approach is to omit NS-SEC 4, as in Erikson and Goldthorpe (2010), on the basis that self-employed workers could fall in the higher or

lower group. We assess whether our results are sensitive to treatment of the self-employed and report the findings in the Appendix Figure A2, which shows that our main results are robust to exclusion of the self-employed.

As is standard in the sociological literature, we report rates of relative mobility using odds ratios, computed as the ratio of the odds of being in a high rather than low destination among high origin study members, to the corresponding odds among low origin study members. Odds ratios answer the question: how does being in a high origin social class change the risk of being in a high social class destination compared to someone from a low social class origin?

We report absolute and relative mobility rates separately for two groups: (1) those who are observed in the same region at both origin and destination (the “stayers”); and (2) those who have moved from their region of origin to a new region (the “movers”). To explore the importance of specific transitions, we also consider a case study of four archetypal groups, based on the subsample of study members who have the North of England or Wales as their origin region (North East, North West, Yorkshire and Humberside, Wales). The transitions we examine are those who: (1) remained in the same region in the North or Wales (‘stayers’); (2) moved to a different region in the North or Wales (‘moved within the North or Wales’); (3) moved out of the North or Wales, but not to London (‘moved elsewhere’); (4) moved to London. We report both absolute and relative mobility rates for these groups.

We report our core results pooled by sex, but we have also conducted all analyses for men and women separately in supplementary analyses. For the most part, the broad trends are similar for men and women, but we note any relevant sex differences and report selected results separately by sex in the Appendix. Because mobility rates based on LADs are less precisely estimated, we pool data across the three cohorts for the LAD-level analyses.

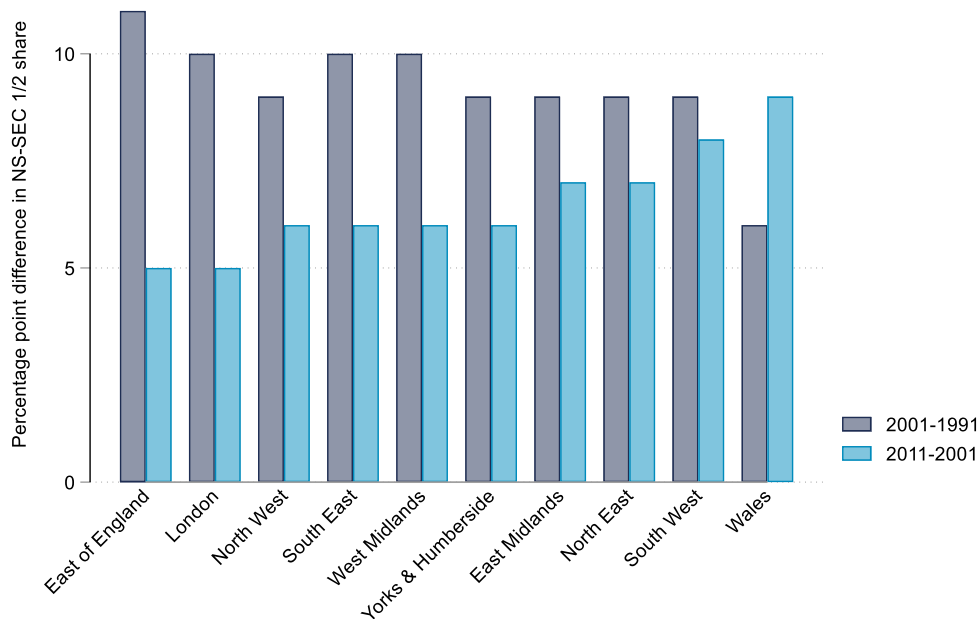
4. Results

We first examine the changing occupational structure over our time period of interest. Changing demand for managerial and professional workers—the increasing “room at the top”—represents one driver of absolute upward mobility. As reported in Bukodi and Goldthorpe (2018), in the 1951 Census the managerial and professional classes comprised about 10% of the economically active male population, a figure which had increased to 35% by the time of the 1991 Census. This tripling of the salaried professions slowed markedly

between 1991 and 2011, with 40% of men in NS-SEC classes 1 or 2 in the 2011 Census. A similar pattern is evident for women, although from a lower baseline and with a slower rate of increase, 30% of economically active women were in NS-SEC 1 and 2 by 2011.

Of central relevance for our study is the recent patterning of these changes by region. Figure 1 reports the change in the share of working-age population in the NS-SEC categories 1 or 2 between the 1991 and 2001 Censuses, and the 2001 and 2011 Censuses, respectively, using the LS data. The regions which experienced the largest increases in the share of NS-SEC classes 1 or 2 between 1991 and 2001—the East of England, London, South East and West Midlands—were also the regions which had the smallest increases between 2001 and 2011.

Figure 1 Percentage point increase in NS-SEC classes 1 & 2 between 2001 and 1991, and 2011 and 2001



Notes: Data source is the ONS-LS restricted to study members aged 16 to 64 years at destination.

Absolute mobility

Consistent with the findings of existing studies of this period, we find a small increase in absolute mobility over these three cohorts (Bukodi and Goldthorpe, 2018; Buscha and Sturgis, 2018). Appendix Table A1 reports these national-level mobility figures. The total absolute mobility rate increases from 0.32 for the first cohort, to 0.37 and 0.38 among the second and

third cohorts, respectively.³ These total mobility figures comprise an increase in both upward and downward absolute mobility at the national level, with upward mobility increasing from 0.18 to 0.23 between the first and last birth cohorts, and static downward mobility from 0.14 to 0.15. Considering men and women separately, the national estimates for total mobility are similar, though women experienced a larger increase in upward mobility than men, and men a larger increase in downward mobility.

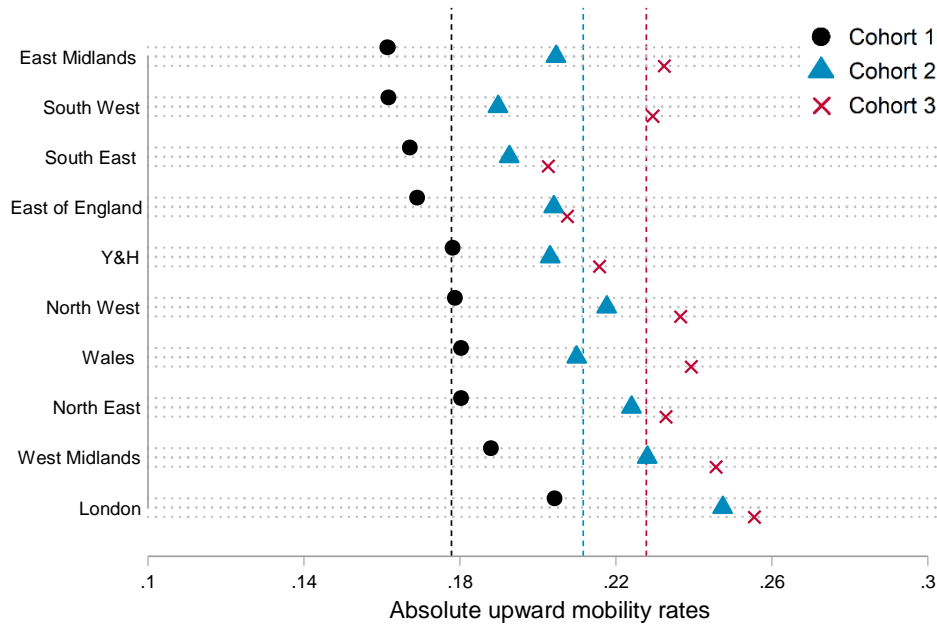
Figure 2 shows rates of upward absolute mobility by region (the underlying numbers for Figure 2 are reported in Appendix Table A2). London has the highest upward mobility rate for all three cohorts, the opposite of what Friedman and Macmillan (2017) found using the UKHLS. This shows the importance of the difference in comparisons according to region of origin and destination. For the cohorts born between the late 1950s and the early 1980s, there is a clear upward mobility advantage to starting out life in London. For the first cohort, the West Midlands has the next highest rate of upward mobility followed by the North East, Wales, the North West, and Yorkshire and Humberside, which all had similar upward mobility rates of around 18%. The lowest levels of upward mobility in the first cohort were in Southern and Eastern regions, where upward mobility rates were 3 to 4 percentage points lower than in London. All regions experienced similar increases in upward absolute mobility from the first to the second cohort, with smaller increases and more variation in the size of changes between the second and third cohorts. The South East, East of England, and Yorkshire and Humberside had the lowest rates of upward mobility for the most recent 1973-1983 cohort, with these regions now having lower levels of upward mobility than the East Midlands and the South West. The West Midlands had the second highest upward mobility rate in all three cohorts and, by the 1980s, was only 1 percentage point lower than London.

These increases in social mobility largely correspond with the regional variation in the change in the share of managerial and professional occupations reported in Figure 1: as we should expect, regions with a greater expansion in the salariat also tend to have larger increases in absolute upward mobility. However, notable exceptions are the North East and Yorkshire and Humberside, which had a relatively large increase in NS-SEC classes 1 and 2 between 2001 and 2011, but a negligible change in upward mobility. This can be compared with, for

³ In supplementary analyses based on a 5-point NS-SEC classification, not shown here, we note that the corresponding total mobility figures are essentially static over time (0.69 for cohort 1, 0.71 for cohort 2 and 0.69 for cohort 3).

instance, the East Midlands, which experienced a similar increase in NS-SEC 1 and 2 between 2001 and 2011, and a large increase in upward mobility.

Figure 2 Absolute upward mobility rates by cohort and region



Notes: Data source is the ONS-LS restricted to study members aged 8 to 18 years at origin.

Relative mobility

At the national level, relative mobility increased modestly between the first two cohorts, with the odds ratio decreasing from 2.95 for cohort 1 to 2.54 in cohort 2, and no subsequent change, with an odds ratio of 2.59 for cohort 3 (Appendix Table A1). This mirrors the findings of Buscha and Sturgis (2018) who use a 5-category version of NS-SEC and of Bell et al., (2019) who use the CAMSIS measure of social status (Stewart, Prandy and Blackburn, 1980; Lambert and Griffiths, 2018).

Table 2 reports three quantities for each GOR: (1) the transition frequencies between origin and destination social class; (2) the odds of being in the high destination category, for the low and high origin groups separately; (3) and the ratio of these odds. The odds (2) are an alternative measure of absolute mobility, while the odds ratios (3) denote relative mobility. The lowest rate of social fluidity was for the first birth cohort in the North East, with the odds of ending up in a managerial or professional occupation 3.54 times greater for those who started out in these classes, compared to an individual from social class groups 3 to 7. This contrasts

with the 1963-1973 London cohort, which had the lowest odds ratio of 2.27. The 1953-1963 cohort had the lowest rate of social fluidity in every region, though with the industrial regions of the Midlands, Wales and the North having lower relative mobility than London and the South and East of England.

All regions saw an increase in relative mobility between cohorts 1 and 2, with the largest increases in the regions with the lowest initial fluidity: Wales, the North West, the East Midlands and the North East. There seems then to have been some degree of ‘catching-up’ and evening out over time, with less variability in relative mobility across regions for the second compared to the first cohort. Between the two later cohorts, all regions bar the South West, which experienced a small continued increase in fluidity, saw either no change (East Midlands, London, South East) or a decline (North East, North West, Yorkshire & Humberside, West Midlands, East of England) in relative mobility. These regional patterns do not show notable differences by sex (see Appendix Table 3), although they are somewhat more pronounced for men. While there was, then, an increase in absolute and relative mobility in every region between the first and final cohorts, substantial inequalities persisted. In all regions of England and Wales, children born to managerial and professional parents were around two and a half times as likely to end up in those occupational groups than children born into NS-SEC groups 3 to 7.

Table 2 Transition frequencies, odds, and odds ratios of upward social mobility, by region and cohort

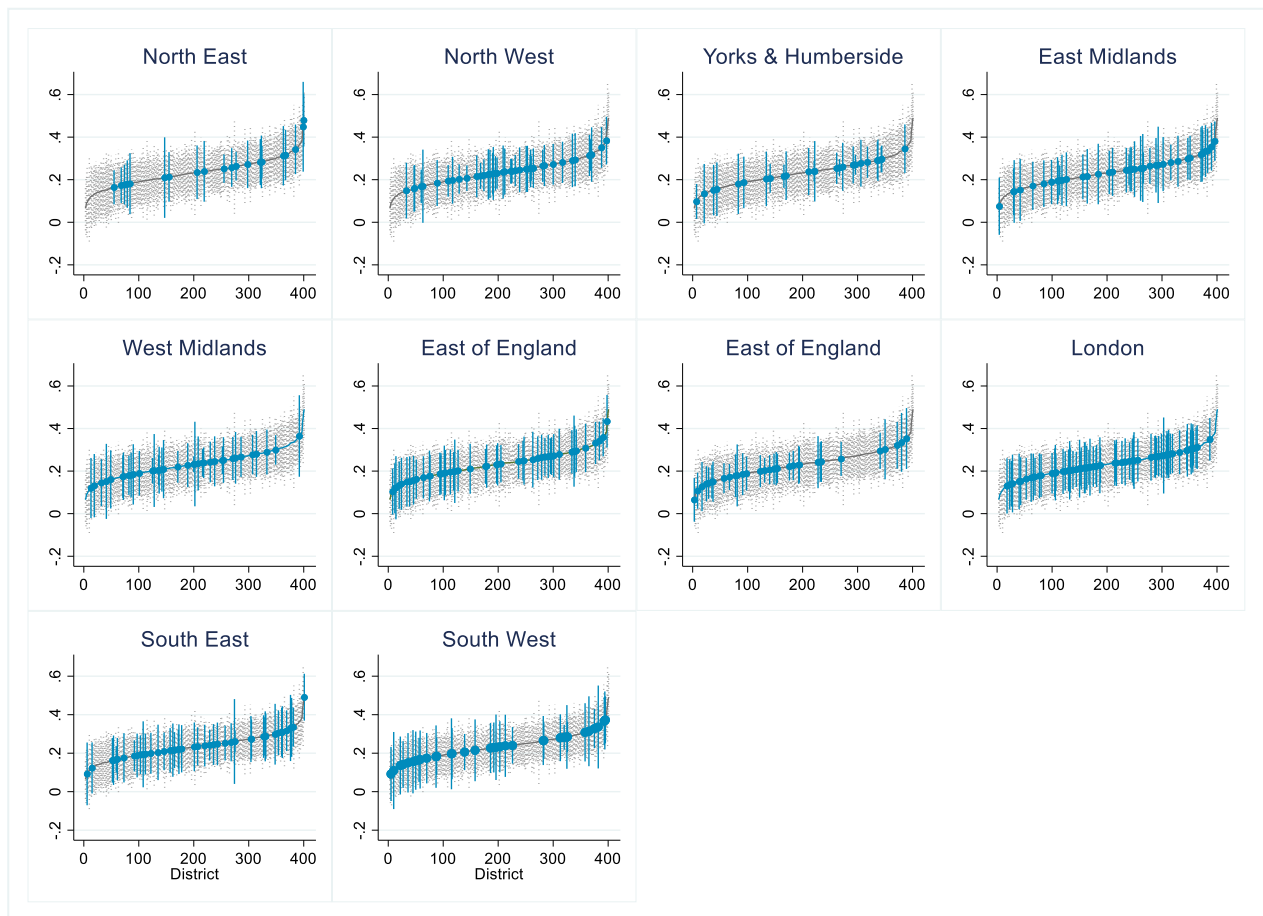
Cohort		North East			North West			Yorks & Humberside			East Midlands			West Midlands			
		0=low	1=high	Odds/OR	0	1	Odds/OR	0	1	Odds/OR	0	1	Odds/OR	0	1	Odds/OR	
Origin	1	0	2169	631	0.29	4914	1579	0.32	3569	1071	0.30	2660	742	0.28	3769	1234	0.33
		1	345	355	1.03	1150	1196	1.04	741	633	0.85	612	583	0.95	813	750	0.92
				3.54			3.24			2.85			3.42			2.82	
	2	0	1656	752	0.45	3912	1921	0.49	3194	1340	0.42	2427	1056	0.44	3190	1577	0.49
		1	454	495	1.09	1358	1635	1.20	976	1087	1.11	792	885	1.12	980	1168	1.19
				2.40			2.45			2.65			2.57			2.41	
	3	0	1048	574	0.55	2502	1498	0.60	2023	1020	0.50	1657	961	0.58	2085	1268	0.61
		1	345	500	1.45	909	1426	1.57	695	992	1.43	610	910	1.49	714	1097	1.54
				2.65			2.62			2.83			2.57			2.53	
			East of England			London			South East			South West			Wales		
			0	1		0	1		0	1		0	1		0	1	
	1	0	2848	937	0.33	3698	1509	0.41	3660	1328	0.36	2526	764	0.30	1945	603	0.31
		1	923	838	0.91	1057	1123	1.06	1483	1473	0.99	764	673	0.88	402	395	0.98
					2.76			2.60			2.74			2.91			3.17
	2	0	2446	1285	0.53	2593	1636	0.63	3339	1790	0.54	2411	1051	0.44	1723	738	0.43
		1	1118	1448	1.30	979	1405	1.44	1731	2433	1.41	943	1133	1.20	522	533	1.02
					2.47			2.27			2.62			2.76			2.38
	3	0	1863	1104	0.59	1761	1302	0.74	2420	1559	0.64	1643	1036	0.63	1136	654	0.58
1		911	1443	1.58	762	1273	1.67	1374	2344	1.71	736	1101	1.50	374	570	1.52	
				2.67			2.26			2.65			2.37			2.65	

Notes: This Table reports cross-tabulated frequencies of origin and destination status by region and cohort. It reports the odds of being in a “high” destination category for both low and high origin, and then ratio of these odds (OR). Data source is the ONS-LS restricted to study members aged 8 to 18 years at origin.

Next, we consider variation in social mobility at a lower geographical level—the Local Authority District (LAD). We do this by estimating a linear probability model with destination NS-SEC as the outcome and origin NS-SEC as the predictor within LADs. These regressions yield social mobility coefficients with interpretation analogous to the odds ratios reported earlier; a higher coefficient value indicates a stronger link between parental and child status, i.e. lower mobility. In order to maintain samples of sufficient size, we pool these estimates across cohorts, although confidence intervals are still wide. Our focus is therefore on the broad pattern across and within LADS rather than on statistical tests of differences in the point estimates for specific LADs.

Figure 3 shows the LAD-level estimates split out over Government Office Regions with LADs, and the associated 95% confidence intervals, ranked in ascending order and highlighted in blue. It shows substantial variation in social mobility across England and Wales within regions. These point estimates range from a minimum of 0.1 to a maximum 0.5, meaning there are LADs where the parental-child correlation is five times stronger than in the most socially ‘fluid’ districts. However, the majority of districts fall within a considerably narrower range than this; from the 25th to the 75th percentile, the range of parent-child correlations is between 0.20 to 0.27. London has high rates of relative mobility compared to other regions, with the majority of point estimates tending toward to the left hand—more mobile—side of the chart. Nonetheless, there are also LADs in London with very low levels of fluidity. A similar pattern is evident in the South East, which has some of the least and the most socially mobile districts in the country. In the North East, a region with low average relative mobility, we see the majority of point estimates toward to the right hand—less mobile—side of the chart. However, there are also a large number of districts in the North East which have rates of fluidity equivalent to those of the most socially mobile districts in London. Indeed, every region in England and Wales contained districts in the top and bottom 20th percentile nationally.

Figure 3 Relative mobility by district within regions (pooled over all time periods)



Notes: Data source is the ONS-LS restricted to study members aged 8 to 18 years at origin. The point estimates are estimates of relative social mobility, where a higher value indicates a stronger link between parental status and child status, and lower social mobility. The vertical lines are 95% confidence intervals.

Several factors are likely to underpin these spatial variations in mobility rates, including differences in local labour market conditions, spatial sorting by socio-economic status, variation in school quality, and so on. Here, we consider the importance of one such factor—long-range domestic migration.

Spatial and social mobility

Table 3 shows the distribution of mobility transitions, pooled over the three cohorts.⁴ Table 3 reports, for each region, the percentage of study members who, between origin and destination: (1) remained in the same district and region, (2) moved to another district within the same region, and (3) moved to a different region. 52% of study members remained in the same district between

⁴ In supplementary analyses (not shown), we find little evidence for differences in these spatial mobility patterns by gender, and a decrease in mobility rates over time.

origin and destination, and the remaining 48% moved either district within region, or to a new region. These figures are consistent with rates of internal migration documented by demographers using the LS (Shuttleworth, Cooke and Champion, 2019).

Table 3 Internal migration rates by region of origin

Region of origin	<i>Same destination region</i>		<i>Moved region</i>	<i>N</i>
	<i>Same district</i>	<i>Moved district</i>		
	<i>Row %</i>	<i>Row %</i>	<i>Row %</i>	
North East	0.61	0.20	0.20	9,324
North West	0.59	0.23	0.18	24,000
Yorks. & Humberside	0.61	0.20	0.18	17,341
East Midlands	0.52	0.26	0.22	13,895
West Midlands	0.55	0.24	0.21	18,645
East of England	0.48	0.28	0.24	17,164
London	0.35	0.29	0.36	19,098
South East	0.44	0.31	0.25	24,934
South West	0.53	0.26	0.21	14,781
Wales	0.60	0.21	0.19	9,595
National	0.52	0.25	0.23	168,777

Notes: Data source is the ONS-LS restricted to study members aged 8 to 18 years at origin.

Table 4 presents absolute (columns 1 and 2), and relative (columns 4 and 5) mobility rates, separately for ‘movers’ and ‘stayers’. The ratios of these rates are reported in columns 3 and 6. In eight out of ten regions, movers had higher rates of upward mobility compared to stayers. Movers from the North East, Yorkshire and Humberside, and Wales had the highest absolute mobility rates compared to the stayers in their respective regions, with their rate of upward mobility approximately 1.5 times higher. The two exceptions are London and the South East, where absolute mobility is the same movers and stayers. One possible reason for this pattern is that the majority of moves out of London are to the South East, and vice versa.

Table 4 Social mobility rates by ‘mover/stayer’ status pooled over three cohorts

	Absolute upward mobility			Relative mobility			N	% mover
	Stayers	Mover	Ratio _{move/}	Stayers	Mover	Ratio _{move/}		
	(1)	(2)	^{stay} (3)	(4)	(5)	^{stay} (6)		
North East	0.19	0.28	1.47	2.39	2.68	1.12	9,324	19.7
North West	0.20	0.26	1.30	2.57	2.43	0.95	24,000	18.1
Yorks. & Humberside	0.18	0.26	1.44	2.63	2.22	0.84	17,341	18.3
East Midlands	0.19	0.24	1.26	2.35	2.46	1.05	13,895	22.1
West Midlands	0.21	0.27	1.29	2.33	2.25	0.97	18,645	20.9
East of England	0.19	0.21	1.11	2.35	2.46	1.05	17,164	24.4
London	0.23	0.23	1.00	2.59	2.24	0.86	19,098	35.9
South East	0.19	0.19	1.00	2.47	2.49	1.01	24,934	24.6
South West	0.18	0.24	1.33	2.43	2.18	0.90	14,781	21.4
Wales	0.19	0.29	1.53	2.59	1.83	0.71	9,595	19.0

Notes: This table reports absolute and relative mobility estimates by region of origin and “mover/stayers” status. The data source is the ONS-LS restricted to study members aged 8 to 18 years at origin.

The difference in relative mobility between movers and stayers across regions is more varied. For instance, for those with Welsh origin and destination states (the ‘stayers’), the odds of ending up in social classes 1 & 2 were 2.59 times higher for those who originated in classes 1 & 2 compared to those from classes 3 to 7. Among Welsh ‘movers’, the corresponding figure is 1.83, indicating there was less dependence on social origin among the movers than the stayers. Column 6 reports the mover relative mobility odds ratio divided by the stayer relative mobility odds ratio. Note that because larger odds ratios indicate lower relative mobility, a lower ratio of the mover odds ratio to the stayer odds ratio now indicates higher relative mobility among movers. For instance, of those who have Wales as their origin region, movers have a relative mobility odds ratio of 1.83, which is 0.71-times that of the ‘stayers’ figure of 2.59, indicating the movers are more socially, as well as more spatially mobile. We refer to these ‘ratios of odds ratios’ in Column 6 as ‘higher-level ratios’.

The majority of higher-level ratios are close to or below 1, indicating a relative mobility premium to moving, broadly in keeping with the findings for absolute mobility. However, the relative mobility odds ratios are more variable than the absolute mobility figures, and there is no North-South gradient evident in the difference between relative mobility rates between movers and stayers. For example, those who moved out of the North West, Yorkshire & Humberside, or Wales have higher-level ratios below 1, indicating higher relative mobility among movers than stayers. However, movers out of the North East have odds ratios that were 1.12 higher than those

who stayed, indicating lower relative mobility compared with stayers. Note, however, that the North East has a relatively small sample size for this quantity, so we do not place a strong interpretation on this estimate.

While Table 4 shows that movers and stayers differed in their social mobility outcomes, it provides no information about *where* people moved to because it pools across regional destinations. Nonetheless, estimating social mobility rates across all possible origin-destination transitions is unfeasible due to small cell sizes for most transitions. Therefore, in Table 5, we report absolute and relative mobility rates by an aggregation of geographical moves.

We consider study members who began their lives in the North of England or Wales and either stayed in the same region at destination, moved within that broad region, moved to London, or moved to any other region. While somewhat arbitrary in terms of the areas that this strategy combines, it is based nonetheless on the notion of a ‘North-South’ economic divide that has featured prominently in British political debate for much of the post-war period. Indeed, this regional economic disparity, and the linked idea that social mobility is worse in the North, was prominent in the 2019 General Election, when the notion of ‘levelling up’ between North and South featured heavily in the Conservative campaign. We report rates of absolute and relative mobility in three groups, differentiating those who grew up in the North of England or Wales (North East, North West, Yorkshire and Humberside, Wales) and: (1) remained in the same area in the North or Wales (‘stayers’); (2) moved to a different region in the North or Wales (‘moved within the North or Wales’); (3) moved out of the North or Wales, but not to London (‘moved elsewhere’); (4) moved to London.

Panel (a) of Table 5 reports rates of absolute mobility. Across all cohorts combined, 21% of those who have the North or Wales as their origin region moved from a low origin social class to a high origin social class. This figure is slightly lower for those who remained in the North or Wales (19%), and higher among the three mover groups. Across all cohorts, absolute mobility is highest among movers—whether the move was to another region in the North/Wales, to London, or elsewhere—compared with remaining in the North or Wales. In cohorts 1 and 2, absolute mobility was highest among those who moved to London, however for cohort 3, there was a tail-off in the rate of upward mobility for movers to London, with no difference in the upward mobility rate compared to stayers. The highest rate of upward mobility for cohort 3 was amongst those who moved to a different region within the North or Wales.

Panel (b) reports on relative social mobility, using odds ratios, within each geographical transition subgroup. For example, among those who stayed in the North or Wales, the odds of ending up in a class 1 & 2 destination were 2.58 times greater among those with a class 1 & 2 origin status, compared to individuals from a class 3-7 origin. Compared to the ‘stayers’, those who move have higher rates of relative mobility, irrespective of the destination, with the highest rate of fluidity for movers to London. Disaggregating by cohort, the London premium is not apparent across all cohorts, as it had disappeared entirely by cohort 3.

Table 5 Social mobility rates by type of transition

	All cohorts	Cohort 1	Cohort 2	Cohort 3
<i>(a) Absolute upward mobility rate</i>				
<i>All who begin in North or Wales</i>	0.21	0.18	0.21	0.23
Stayers	0.19	0.16	0.20	0.22
Moved to different region in the North or Wales	0.26	0.24	0.26	0.29
Moved to London	0.27	0.28	0.31	0.22
Moved elsewhere out of the North or Wales	0.27	0.27	0.27	0.27
<i>(b) Relative mobility - odds ratios</i>				
<i>All who begin in North or Wales</i>	2.86	3.17	2.50	2.69
Stayers	2.58	2.72	2.26	2.47
Moved to different region in the North or Wales	2.39	2.95	2.09	1.94
Moved to London	2.05	2.33	1.37	2.45
Moved elsewhere out of the North or Wales	2.20	2.48	1.91	2.03

Notes: Data source is the ONS-LS restricted to study members aged 8 to 18 years at origin, whose origin region is in North East, North West, Yorkshire and Humberside or Wales.

Discussion

In this paper we have documented rates of social class mobility at the sub-national level for three post-war cohorts in England and Wales. Our analysis offers two main novel contributions. First, we report estimates of social class mobility, rather than income mobility or other economic indicators as has been common in previous studies. Second, we explore the nexus between spatial and social mobility: does moving out lead to moving up? Our findings reveal a now familiar story of substantial dependence of social class position in adulthood on the social class of one’s parents, but now with a strong spatial patterning. At the national level, both absolute and relative mobility increased between our first and last cohorts, born between 1953–63 and 1973–83

respectively. This finding is consistent with existing studies which have documented static or upward trends in occupational-based measures of social mobility in Britain (Lambert, Prandy and Bottero, 2007; Erikson and Goldthorpe, 2010; Buscha and Sturgis, 2018). However, this overall increase in fluidity was not distributed evenly across regions or generations.

At a sub-national level, the regions in the North of England and Wales faced the most pronounced levels of immobility in the first cohort (born 1953–63), when labour markets in these areas were concentrated in traditional industrial and manufacturing sectors. For the second birth cohort, born 1963-73, these areas experienced a ‘catch-up’ in absolute and relative mobility rates, moving closer to the levels observed in the more affluent Southern regions, as their occupational structures shifted toward managerial and professional occupations. This second cohort also benefited from the rapid expansion of higher education during the late 1980s and early 1990s as they left secondary school (Blanden and Machin, 2004), and entered a labour market in the 1990-2000s that saw expansions in employment in finance and public administration sectors across the English regions (Champion and Townsend, 2011).

However, despite this regional convergence, the upward shift in absolute mobility between the first two cohorts effectively petered out for the most recent cohort (born 1973-83), with the majority of regions seeing either smaller, or in some cases no further increases in absolute mobility. More striking, however, are the findings for relative mobility. Compared to the second, 1963-73, birth cohort, relative mobility decreased slightly across the regions of Northern England, and in Wales, for the 1973-83 cohort, whereas London, the South West and South East had no further change in relative mobility. This finding of stalling relative mobility in the most recent cohort aligns with other studies documenting the fall in living standards and widening economic inequality facing young people growing up in the 21st century. This period has seen the boom in Britain’s ‘gig economy’, comprising labour contracts characterised by a lack of autonomy, employment rights, job security, against a backdrop of declining union power and increased globalisation. Many in this cohort also reached occupational maturity around the time of the 2008 economic crash, and experienced the concomitant fall in real wages and home ownership.

Comparing our sub-national findings to those of Bell et al., (2019), the trends are broadly consistent. At the national level, Bell et al., (2019) find an increase in absolute and relative occupational social mobility over the same time period. Their sub-national results cannot be directly compared with ours, as they are calculated using the NUTS geography which comprises 35 regions, rather than the 10 GORs in our study. However, their findings also show London to

have higher rates of absolute upward mobility compared with the rest of the country, with Inner West London being the highest in the country. Despite some degree of convergence over time, the North-South patterning in their absolute upward mobility results persists across the three cohorts considered, with London remaining the most mobile region in the most recent cohort, albeit with Inner London experiencing a decline over time in upward mobility chances. The corresponding estimates of relative mobility are substantially more variable, although they are positively correlated with absolute mobility.

This pronounced sub-national heterogeneity in social mobility has motivated a number of regional regeneration policies in Britain, the most recent incarnation being the ‘levelling up’ proposed by the current Conservative Government. This aims to refocus resources on historically Labour voting post-industrial regions in Wales, the Midlands, and the North of England. While these archetypal divides receive, to some degree, justified attention in policy-making and political debate, recent evidence has highlighted the importance of a more localised lens in shaping opportunity. In their highly influential 2014 study, mapping the geography of economic opportunity in the US, Raj Chetty and colleagues demonstrate not only the variation in opportunity by region (Chetty et al., 2014), but also that moving to a higher social mobility neighbourhood positively influences life chances, among those who move while young (Chetty, Hendren and Katz, 2016). Our analysis of mobility rates with Local Authority districts supports this more localised focus. We find substantial heterogeneity in social mobility *within* regions, as well as between regions. Indeed, all regions in England and Wales contain districts in the top & bottom 20th percentile of social mobility nationally suggesting a policy focus on broad regions is likely to overlook pockets of immobility within otherwise affluent regions.

The natural question is then whether those who move, potentially to regions with higher rates of social mobility, experience an increase in social mobility. We addressed this question by examining whether rates of social mobility differ by types of domestic migration. We find that movers, on the whole, had higher rates of social mobility than ‘stayers’ and that, especially in the first cohort, London tended to confer an ‘escalator’ effect on upward mobility. However, this effect dissipated over time, with no ‘London premium’ on upward mobility for the most recent cohort.

This changing pattern of social mobility by regional destination may be due to ‘ceiling’ effects on upward mobility in London: early movers to London had greater opportunities for upward mobility following the Big Bang in the late 1980s which created more white-collar jobs. However, the growth in the share of salariat occupations in London had slowed by the 2000s,

which, paired with social selection of emigrants from privileged social origins, seems to have placed a brake on increasing upward mobility for both ‘stayers’ in London and London’s domestic in-migrants. On the other hand, more recent efforts to regenerate Britain’s ‘second order cities’, through expansion of public administration and financial services in the 1990s and 2000s (Champion and Townsend, 2011) may have offset the mobility return to moving to London (Champion, Coombes and Gordon, 2013). Thus, while our findings tend to confirm contemporary accounts of London conferring a social mobility premium to its emigrants, this has not been true consistently across cohorts. Indeed, for the most recent cohort in our analysis, mobility chances were greatest amongst those who moved within regions of the North and Wales. These results align with those of Friedman and Macmillan (2017), who question the idea of London’s exceptionalism as an ‘engine of social mobility’, albeit from the perspective of destination rather than origin status.

While our study uses high-quality Census data, which avoid many data issues endemic to survey data, there are important caveats to our findings that should be noted. First, is that study members may have moved in the period between censuses, that is, during our 20-year origin and destination time-points. Consider the ‘escalator’ hypothesis, in which younger people move to a larger conurbation for early-career work and training, and then return to their ‘home’ region later in life. Study members following this pattern may move back to their home region before our destination time point (aged up to 38 years) and, as a result, be incorrectly classified as ‘stayers’. In this event, the net effect would be for our approach to under-estimate the difference between movers and stayers.

A second important caveat is the extent to which any of the associations we report reflect causal effects of spatial moves. The mobility estimates we present likely comprise a mix of selection and causal effects in unknown quantities and we have not attempted to identify their distinct components in this paper. The decision to migrate, especially over long distances, is a function of complex push- and pull-factors that are subject to substantial economic constraints. In particular, the freedom to move between regions is itself conditioned by the economic resources available to individuals and households. In this case, attaching an entirely causal interpretation to our estimates would over-state effects of internal migration on social mobility. Nevertheless, while it is beyond the scope of this study to draw causal inferences of this nature, we consider establishing as descriptive fact that internal migration between regions during this period is associated with different patterns and trends in intergenerational social mobility an important contribution in its own right.

Much of the debate around social mobility has focused on national trends and international comparisons: is Britain becoming fairer over time, or is social mobility grinding to a halt? How socially mobile is Britain compared with similar countries? While these broad-brush questions remain important, our findings show that spatial variation in social mobility rates is substantial, and many regions have faced a persistent disadvantage relative to others in this regard. Our research demonstrates that some of these efforts should be refocused on more localised disparities: indeed, variation in social mobility within regions is greater than variation between regions. While our study finds that ‘movers’ tended to have higher social mobility, the other side of that coin is the reduced prospects of the ‘stayers’. Facilitating spatial mobility of those able and willing to move does not solve the more fundamental problem of ‘left-behind’ towns and cities. These ideas resonate with the concept of an ‘upgrading the class structure’ (Bukodi and Goldthorpe, 2018): not only expanding the set of available jobs in the salariat classes, but also improving the working conditions—autonomy, employment rights and security—of occupations across the class structure, and indeed according to our findings, across the spatial dimension too. Our findings suggest that a stronger focus on regional and local disparities in social mobility is warranted.

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Appendix

Appendix Figure A1 References to “Social Mobility” in Hansard (1800-2020)

Text analysis of Hansard, the UK’s official report of all parliamentary debates, shows recorded 3,753 references to the term “social mobility” since the year 1800. The first known record appeared in 1962. However, 98% (3,676) of all recorded mentions of social mobility occurred after 1 Jan 2000 whilst 60% (2,263) were recorded since 1 Jan 2015. Moreover, 44 of the 60 parliamentary debates that included the term “social mobility” in their debate title have occurred since 1 Jan 2015. Similar statistics that show an increasing concentration of the topic social mobility in recent years can be compiled for academic studies or public discourse.



	Absolute mobility			Relative mobility
	<i>Total</i>	<i>Upward</i>	<i>Downward</i>	<i>Odds ratio</i>
<i>Cohort 1</i>				
All	0.32	0.18	0.14	2.95
Women	0.32	0.16	0.16	2.70
Men	0.32	0.20	0.12	3.26
<i>Cohort 2</i>				
All	0.37	0.21	0.16	2.54
Women	0.37	0.20	0.17	2.34
Men	0.37	0.22	0.15	2.76
<i>Cohort 3</i>				
All	0.38	0.23	0.15	2.59
Women	0.39	0.23	0.15	2.49
Men	0.38	0.22	0.15	2.70

Notes: Data source is the ONS-LS restricted to study members aged 8 to 18 years at origin.

Appendix Table A2

Absolute mobility rates based on binary NS-SEC by region and origin wave

		North East	North West	Y&H	East Midlands	West Midlands	East of England	London	South East	South West	Wales
Wave 1	Down	0.10	0.13	0.12	0.13	0.12	0.17	0.14	0.19	0.16	0.12
	Immobile	0.72	0.69	0.70	0.71	0.69	0.66	0.65	0.65	0.68	0.70
	Upward	0.18	0.18	0.18	0.16	0.19	0.17	0.20	0.17	0.16	0.18
Wave 2	Down	0.14	0.15	0.15	0.15	0.14	0.18	0.15	0.19	0.17	0.15
	Immobile	0.64	0.63	0.65	0.64	0.63	0.62	0.60	0.62	0.64	0.64
	Upward	0.22	0.22	0.20	0.20	0.23	0.20	0.25	0.19	0.19	0.21
Wave 3	Down	0.14	0.14	0.15	0.15	0.14	0.17	0.15	0.18	0.16	0.14
	Immobile	0.63	0.62	0.64	0.62	0.62	0.62	0.60	0.62	0.61	0.62
	Upward	0.23	0.24	0.22	0.23	0.25	0.21	0.26	0.20	0.23	0.24

Notes: Data source is the ONS-LS restricted to study members aged 8 to 18 years at origin.

Appendix Table A3 Absolute mobility rates by gender, region and wave of origin

		North East	North West	Y&H	East Midlands	West Midlands	East of England	London	South East	South West	Wales
<i>Women</i>											
Wave 1	Down	0.11	0.14	0.14	0.16	0.15	0.19	0.16	0.21	0.18	0.14
	Immobile	0.72	0.69	0.71	0.70	0.69	0.66	0.66	0.64	0.67	0.69
	Upward	0.17	0.16	0.15	0.14	0.16	0.15	0.17	0.14	0.15	0.17
Wave 2	Down	0.14	0.15	0.15	0.17	0.16	0.20	0.16	0.21	0.19	0.15
	Immobile	0.64	0.64	0.64	0.64	0.62	0.62	0.60	0.61	0.63	0.65
	Upward	0.21	0.21	0.20	0.19	0.22	0.19	0.24	0.18	0.18	0.21
Wave 3	Down	0.13	0.14	0.15	0.15	0.14	0.17	0.15	0.18	0.17	0.13
	Immobile	0.64	0.61	0.63	0.61	0.60	0.63	0.59	0.62	0.60	0.62
	Upward	0.22	0.25	0.23	0.24	0.26	0.20	0.26	0.20	0.24	0.26
<i>Men</i>											
Wave 1	Down	0.08	0.12	0.11	0.11	0.10	0.14	0.12	0.16	0.14	0.10
	Immobile	0.72	0.69	0.69	0.71	0.69	0.67	0.64	0.65	0.68	0.70
	Upward	0.19	0.19	0.20	0.18	0.21	0.19	0.23	0.19	0.18	0.19
Wave 2	Down	0.13	0.16	0.14	0.14	0.13	0.16	0.13	0.16	0.15	0.15
	Immobile	0.64	0.62	0.65	0.64	0.64	0.62	0.61	0.63	0.65	0.64
	Upward	0.23	0.23	0.20	0.22	0.24	0.22	0.26	0.21	0.20	0.21
Wave 3	Down	0.15	0.15	0.15	0.15	0.14	0.17	0.15	0.17	0.16	0.15
	Immobile	0.61	0.63	0.65	0.63	0.63	0.62	0.60	0.62	0.62	0.63
	Upward	0.24	0.22	0.21	0.22	0.23	0.22	0.25	0.21	0.22	0.22

Notes: Data source is the ONS-LS restricted to study members aged 8 to 18 years at origin.

Appendix Table A4

Relative upward mobility (odds ratios) and transition frequencies by origin wave and region among men

Men	North East			North West			Yorks & Humberside			East Midlands			West Midlands			
	0=low	1=high	OR	0	1	OR	0	1	OR	0	1	OR	0	1	OR	
	0	1149	357	0.31	2545	895	0.35	1816	632	0.35	1360	432	0.32	1970	743	0.38
	1	157	189	1.20	557	673	1.21	339	357	1.05	274	353	1.29	364	444	1.22
				3.87			3.44			3.03			4.06			3.23
	0	822	391	0.48	1797	947	0.53	1554	675	0.43	1178	570	0.48	1563	823	0.53
	1	212	250	1.18	657	807	1.23	464	600	1.29	362	473	1.31	436	640	1.47
				2.48			2.33			2.98			2.70			2.79
	0	520	298	0.57	1288	687	0.53	1017	474	0.47	840	468	0.56	1040	595	0.57
	1	180	236	1.31	470	701	1.49	338	482	1.43	305	475	1.56	352	564	1.60
				2.29			2.80			3.06			2.80			2.80
<i>Origin</i>	East of England			London			South East			South West			Wales			
	0	1		0	1		0	1		0	1		0	1		
	0	1449	552	0.38	1911	925	0.48	1817	785	0.43	1314	445	0.34	1064	347	0.33
	1	414	496	1.20	497	659	1.33	673	868	1.29	366	405	1.11	188	211	1.12
				3.14			2.74			2.99			3.27			3.44
	0	1119	682	0.61	1222	831	0.68	1603	963	0.60	1131	532	0.47	837	371	0.44
	1	489	800	1.64	417	730	1.75	729	1296	1.78	402	609	1.51	264	274	1.04
				2.68			2.57			2.96			3.22			2.34
	0	874	561	0.64	877	637	0.73	1202	783	0.65	804	494	0.61	575	296	0.51
	1	437	724	1.66	388	639	1.65	661	1169	1.77	357	567	1.59	195	272	1.39
				2.58			2.27			2.71			2.58			2.71

Notes: Data source is the ONS-LS restricted to study members aged 8 to 18 years at origin.

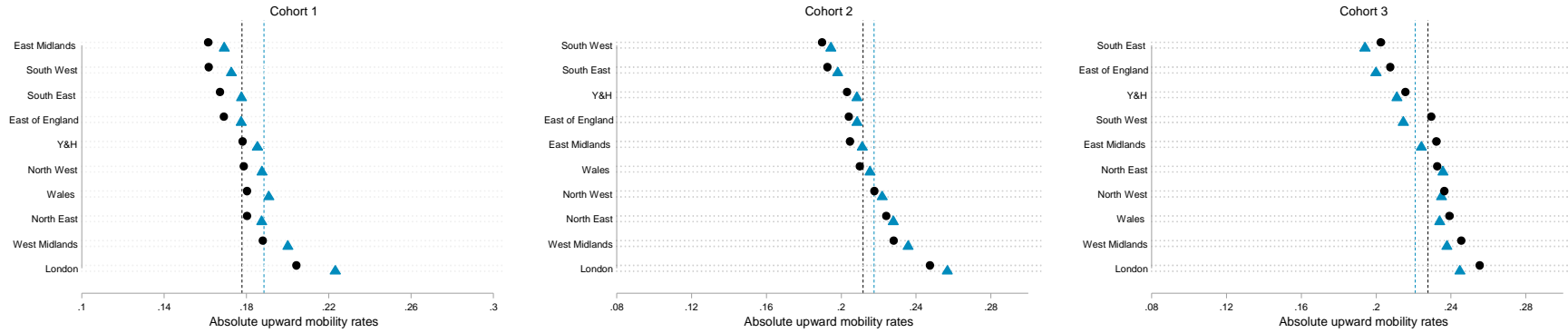
Appendix Table A5

Relative upward mobility (odds ratios) and transition frequencies by origin wave and region among women

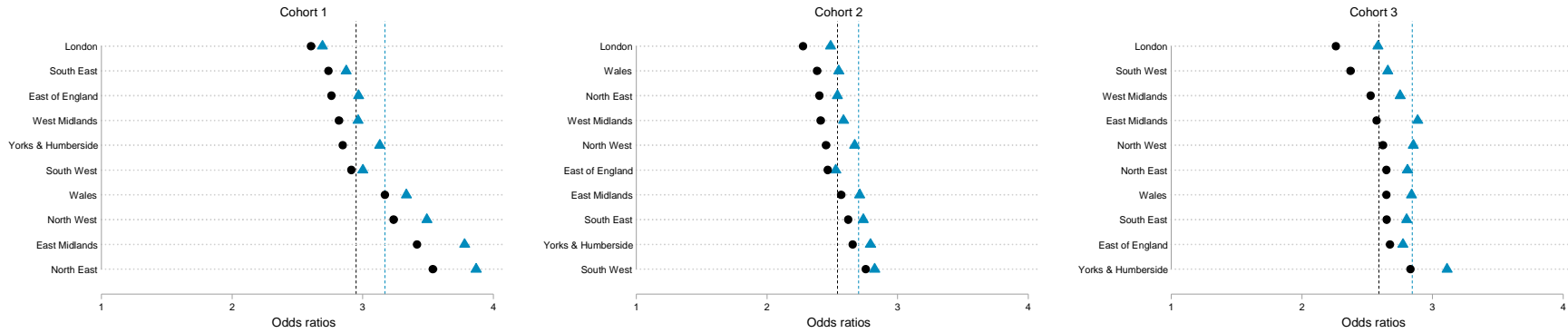
Women	North East			North West			Yorks & Humberside			East Midlands			West Midlands		
	0=low	1=high	OR	0	1	OR	0	1	OR	0	1	OR	0	1	OR
0	1020	274	0.27	2369	684	0.29	1753	439	0.25	1300	310	0.24	1799	491	0.27
1	188	166	0.88	593	523	0.88	402	276	0.69	338	230	0.68	449	306	0.68
			3.29			3.05			2.74			2.85			2.50
0	834	361	0.43	2115	974	0.46	1640	665	0.41	1249	486	0.39	1627	754	0.46
1	242	245	1.01	701	828	1.18	512	487	0.95	430	412	0.96	544	528	0.97
			2.34			2.56			2.35			2.46			2.09
0	528	276	0.52	1214	811	0.67	1006	546	0.54	817	493	0.60	1045	673	0.64
1	165	264	1.60	439	725	1.65	357	510	1.43	305	435	1.43	362	533	1.47
			3.06			2.47			2.63			2.36			2.29
Origin	East of England			London			South East			South West			Wales		
	0	1		0	1		0	1		0	1		0	1	
0	1399	385	0.28	1787	584	0.33	1843	543	0.29	1212	319	0.26	881	256	0.29
1	509	342	0.67	560	464	0.83	810	605	0.75	398	268	0.67	214	184	0.86
			2.44			2.54			2.54			2.56			2.96
0	1327	603	0.45	1371	805	0.59	1736	827	0.48	1280	519	0.41	886	367	0.41
1	629	648	1.03	562	675	1.20	1002	1137	1.13	541	524	0.97	258	259	1.00
			2.27			2.05			2.38			2.39			2.42
0	989	543	0.55	884	665	0.75	1218	776	0.64	839	542	0.65	561	358	0.64
1	474	719	1.52	374	634	1.70	713	1175	1.65	379	534	1.41	179	298	1.66
			2.76			2.25			2.59			2.18			2.61

Notes: Data source is the ONS-LS restricted to study members aged 8 to 18 years at origin.

(a) Absolute upward mobility



(b) Relative mobility



Notes: Data source is the ONS-LS restricted to study members aged 8 to 18 years at origin. The black data points show the main absolute and relative mobility presented in Appendix Table A2, and Table 2, respectively, and the blue data points are sensitivity analysis excluding the self-employed.