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The paradoxical role of social class background in the educational and labour market outcomes of the children of immigrants in the UK - document.

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- **Social origins and social mobility: the educational and labour market outcomes of the children of immigrants in the UK**

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Social origins and social mobility: the educational and labour market outcomes of the children of immigrants in the UK

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Abstract

Despite lower social class origins, children of immigrants in the UK are now attaining high levels of education. However, they experience poorer labour market outcomes, often attributed in part to disadvantaged origins. This paper engages with this paradox. We posit two potential mechanisms for second-generation educational success—social class misallocation and immigrant advantage—and discuss how far these sources of advantage might be replicated in labour market outcomes. We substantiate our discussion with empirical analyses. Drawing on a unique longitudinal study of England and Wales spanning 40 years and encompassing one percent of the population, we present new evidence on the educational and occupational social mobility of men and women from four immigrant-origin groups and the white British majority. We demonstrate that ethnic minorities' educational advantage is only partially reflected in the labour market. We reflect on the implications of our findings for research on 'ethnic penalties' and social mobility.

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1 Introduction

Differences among immigrant-origin groups in educational and labour market outcomes have been subject to extensive study across Europe (Alba & Foner, 2015; Heath & Cheung, 2007). While much analysis has traditionally focused on immigrants themselves, increasing attention is now being paid to the outcomes of the second generation, as they pass through education and reach adulthood in greater numbers (Crul & Schneider, 2010; Heath, Rothon & Kilpi, 2008). Studies on the second generation have typically attempted to explain ethnic minorities' relative disadvantage compared to majority populations in both education and the labour market. In understanding educational outcomes, recognising, and adjusting for, the fact that immigrants tend to cluster in lower socio-economic positions has helped to account for migrant-origin children's poorer educational outcomes (e.g. Levels & Dronkers, 2008), and enabled researchers to isolate specific 'ethnic effects' (Jackson, Jonsson & Rudolphi, 2012; Song, 2011). Research on 'ethnic penalties' in the labour market (Heath & McMahon, 1997) has also been enhanced by recognising the role of social background in employment outcomes, and the importance of adjusting for social origins (Gracia, Vázquez-Quesada & Van de Werfhorst, 2016; Li & Heath, 2016).

This body of research, by incorporating social origins has been empirically and conceptually fruitful in developing understanding of ethnic inequalities and the distinctive outcomes of those from different countries of origin (Gracia, Vázquez-Quesada & Van de Werfhorst, 2016; Platt, 2005; Zuccotti, 2015). However, while this approach makes sense when addressing groups with *poorer* educational as well as labour market outcomes than the native majority, in the UK, we increasingly observe ethnic minorities from the second generation *outperforming* the majority population in education (e.g. Crawford, Duckworth, Vignoles, & Wyness, 2010; Crawford & Greaves, 2015; Strand, 2014). We are then faced with the apparent paradox that the children of immigrants are educationally successful *despite* their disadvantaged origins, while labour market outcomes continue to be regarded as in part a *consequence* of such origins (Li & Heath, 2016). This paradox, that adjusting for social class background can lead to a picture of ethnic minority *advantage* in education, while it helps to account for second generation *disadvantage* in the labour market, has not been explicitly addressed in current research. In this paper we integrate analysis of the role of social origins in educational attainment with the role of social background in labour market outcomes. Recognising that they are not independent, we argue for the need to reconsider standard approaches to estimating ethnic penalties, and develop a new perspective which comprises a

consideration of both advantage *and* disadvantage (Modood, 2004; Shah, Dwyer & Modood, 2010).

Specifically, we present robust new evidence on both the educational attainment and the social mobility of the children of immigrants and the white British majority in England and Wales, using a unique longitudinal data set that enables us to track children from social origins to destinations across multiple ethnic groups. The ONS Longitudinal Study (ONS-LS) covers forty years (1971-2011) and has the largest analytical samples of children of immigrants in the UK. Importantly, it allows us to study social mobility prospectively (Song & Mare, 2015). Our analysis thus avoids the methodological issues associated with using repeat cross-sectional data (Platt, 2007). The data additionally allow us to identify the socioeconomic context in which individuals were raised, which varies across ethnic groups, and which recent research has demonstrated shapes patterns of social mobility more than area of contemporary residence (Bell, Blundell & Machin, 2019; Chetty, Hendren, Kline, & Saez, 2014). We elaborate a theoretical perspective on social origins that attempts to conceptualise why and how the children of immigrants are advantaged in education, despite their tendency to cluster in lower socio-economic groups. We introduce the concepts of *social class misallocation* and *immigrant advantage* to describe the processes whereby ethnic minorities' class background may translate differently into educational attainment than it does for the majority. We discuss what the implications of these mechanisms might be for their labour market outcomes. We focus on four minority groups with distinctive migration histories and educational and labour market outcomes: Indians, Pakistanis, Bangladeshis, and Caribbeans. We show that all these groups, even those which have previously been associated with poorer educational outcomes, experience higher educational mobility than their majority counterparts. However, labour market outcomes are more mixed. There is some evidence that unmeasured characteristics associated with educational success promote occupational attainment, but do not provide returns in access to employment.

Our contributions are threefold. First, we present new findings on the highest attained qualifications of minority group adults and on the social mobility of the UK's main ethnic minority groups, using the most suitable and comprehensive source for this analysis, and employing multiple measures of social origin. Second, our contemporary analysis sheds light on how patterns are changing across groups, even for those typically considered the most 'disadvantaged'. Third, we develop a framework for considering ethnic advantage in a way that complements the contemporary focus on ethnic disadvantage, to reflect increasing evidence of

minority 'success'. Our approach allows us to reformulate common assumptions about the role of social class background in minorities labour market outcomes, and can be extended to future research.

The paper proceeds as follows. First we introduce previous studies and the UK context (section 2); next, we develop our theoretical framework (section 3); then we present the data (section 4) and empirical results (section 5); finally, we conclude and discuss the implications of our analysis (section 6).

2 Previous literature and the UK case

Attention is increasingly focusing on the extent to which the children of immigrants, are or are not achieving (upward) social mobility (OECD, 2017; Papademetriou, Sumption & Somerville, 2009), and the role of both educational attainment and social class origins in explaining differential outcomes. Adjusting for educational attainment in measuring economic outcomes was fundamental in developing the concept of 'ethnic penalties' (Heath & McMahon, 1997). Since immigrants and their children have tended to be less well qualified than majority populations (Dustmann, Frattini & Lanzara, 2012; Kristen & Granato, 2007), such adjustment has typically reduced even if not eliminated labour market gaps, leading to evaluations of systematic ethnic penalties faced by the second generation in Europe (Heath and Cheung 2007). However, education is not the only predictor of labour market outcomes. Social origins impact outcomes directly—i.e. through orientations, networks and behaviours (Breen & Müller, 2020; Hout & DiPrete, 2006), as well as indirectly through education (i.e. "the OED model", see Blau & Duncan, 1967). Since immigrants tend to cluster in lower social class positions, it has thus been argued that part of the reason why second generation ethnic minorities continue to be disadvantaged in the labour market is heir lower social class origins (Platt, 2005). Studies on the second generation's outcomes have thus increasingly incorporated social class of origin (i.e. parental social class), and this adjustment has contributed to explaining ethnic penalties (Gracia, Vázquez-Quesada & Van de Werfhorst, 2016; Platt, 2005; Zuccotti, 2015). At the same time, since social class is expected to have a direct effect on educational attainment, incorporating social class background into analysis of educational outcomes has helped to account for educational disadvantage of migrations in a number of contexts (e.g. Marks 2005).

However, such analysis is complicated by the fact that in some cases educational outcomes of the children of immigrants outstrip those of their majority group counterparts, despite their

average low social class origins. This leads to the analytical problem that adjusting for educational outcomes, net of class origin, increases, rather than reduces, ethnic penalties, even as controls for social class background lessen them.

The UK offers a key setting within which to explore this paradox of educational success and labour market disadvantage. In many countries, a deficit model of educational attainment of the second generation persists (Levels & Dronkers, 2008; Song, 2011); but in the UK, recent school-cohorts consistently outperform the majority. For example, ethnic minorities tend to improve their test scores at a faster rate throughout compulsory schooling than the majority population (Strand, 2011; Wilson, Burgess & Briggs, 2011); and test scores at the end of compulsory schooling now suggest an advantage for most minority groups compared to the majority (Department for Education 2020), even if with substantial variation.[1] For example, Indians perform very highly whereas Black Caribbeans are less high-attaining. For given levels of attainment, ethnic minorities are also more likely to stay on in post-compulsory education than the white majority (Bradley & Taylor, 2004; Fernández-Reino, 2016) and to attend university (Crawford et al., 2010). Similarly, the well-documented higher educational aspirations of the children of immigrants (Jackson, 2012; Jonsson & Rudolphi, 2010; Kao & Tienda, 1998) are in many countries at odds with educational attainment (the aspirations-attainment paradox). In the UK, by contrast, aspirations tend to be linked to higher ultimate attainment (Fernández-Reino, 2016; Strand, 2014). Jackson, Jonsson and Rudolphi (2012) have argued that some systems, such as those in England, may favour the better realisation of migrant aspirations, and Crul and Vermeulen (2003) have stressed the importance of school systems in fostering or hindering the attainment of the second generation. At the same time, ethnic minorities in the UK continue to face higher risks of unemployment and lower labour market success, including poorer returns to education (Zwysen & Longhi, 2018). However, the implications of this combination of educational success and labour market inequalities has not been systematically investigated. Most studies of migrant educational outcomes focus on youth, while studies of ethnic penalties in the labour market focus on adults. The latter typically treat social class and education as having independent effects on labour market outcomes (e.g. Li & Heath, 2016; Platt 2007). In the next section we make a first attempt at a framework for evaluating the role of social origins in shaping *both* educational attainment *and* labour market outcomes, which recognises their interdependence.

[1] Most of the evidence we cite applies to England rather than the UK as a whole, given different education systems. However, the vast majority of the UK's non-white minorities (>90%) live in England.

3 A framework for the role of class background in educational and labour market outcomes of ethnic minorities

Treating education and social class origins as having independent effects on labour market outcomes is conceptually problematic when diverse groups, with differing educational and labour market outcomes, are compared. Following the OED model of Blau and Duncan (1967), if ethnic minorities are able to achieve in education (E) despite their lower social class origins (O), one might expect this advantage to also apply to their labour market outcomes (D). This is because the unmeasured factors driving educational attainment should also partly drive labour market attainment. If instead we find no ethnic minority disadvantage after controlling for both education and social origins, this cannot necessarily be viewed as the "disappearance of an ethnic penalty", precisely because there is a potential advantage that is not being translated into the labour market.

In order to better understand these patterns, we first need to outline processes of how educational advantage may be achieved *despite* social class origins. From this we can develop expectations about what labour market outcomes might stem from such models of educational attainment. We can then compare these expectations with the findings from our empirical analysis.

3.1 'Social class misallocation' and 'immigrant advantage'

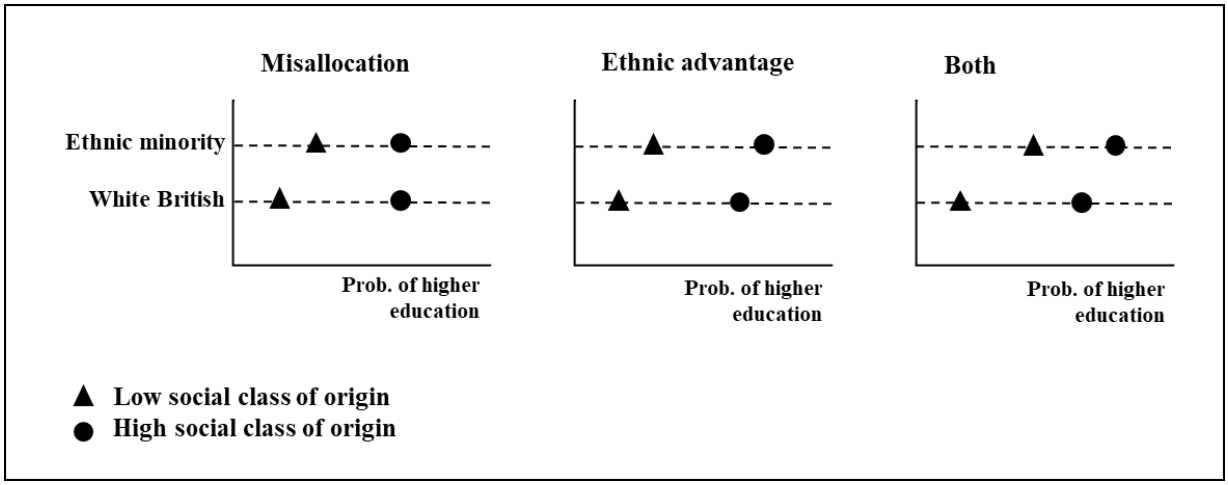
We identify two general mechanisms as to why ethnic minorities may experience an advantage in education despite low social class origins. We call these *social class misallocation* – which applies only to those second generation ethnic minorities with parents in lower social classes – and *immigrant advantage* – which applies across all social class origins.

The first mechanism, *social class misallocation*, implies that ethnic minorities' parental social class does not accurately reflect 'true' parental social class. The immigrant generation's labour market integration is often more challenging than that of later generations. In many cases, immigrants are concentrated in occupations for which they are overqualified, resulting in downward mobility on migration (Social Mobility Commission 2020). Occupational status in the destination country might therefore be a biased measure of their social status and of the extent to which they retain the cultural capital (Bourdieu, 1997), education, expectations, work experience and social networks/social capital (Coleman, 1988) associated with their 'true class' (see also Modood, 2004). According to recent arguments on educational selectively, migrants'

rank in the origin-country distribution may bring the habitus and orientations of advantaged status, even if that rank is not reflected in the destination country (Feliciano & Lanuza, 2017; Ichou, 2014).

If this is the case, the lower social class origins of migrants do not adequately represent the characteristics and orientations assumed to be associated with them, and the greater educational achievement among ethnic minorities who come from lower social classes is less surprising. Given the substantial overrepresentation of migrants of different ethnic groups in lower social classes (which we demonstrate empirically, below), this mechanism might potentially play a substantial role in the mismatch between disadvantaged origins and educational outcomes. At the same time, those who have achieved more advantaged class positions, which can be assumed to match their 'true' class position, should perform similarly to their comparably advantaged white British peers. In a scenario where this mechanism prevails, we would expect to see something like the first scenario in Figure 1: greater than expected educational attainment occurs principally among minorities from lower social class origins.

Figure 1: Theoretical framework: misallocation and immigrant advantage



Source: Authors' theoretical framework

The second process, *immigrant advantage,* does not require that first generation ethnic minorities are allocated to the 'wrong' occupational class, but that the incumbents of all stratified class positions retain specific orientations that are out of line with majority members of that class. This would imply that at each level of achieved social class, minorities have, for example, higher expectations and greater relative investment in their children's educational and occupational success. This derives from the fact that immigrants as a whole are assumed to be positively self-selected on characteristics that make them want to improve themselves and the

lives of their children (Feliciano, 2020; Zuccotti, Ganzeboom & Guveli, 2017). Immigrants are assumed to have greater motivation, determination and resilience fostering particular gains for their descendants (van Zanten, 1997). Under this scenario, we would observe something like the middle graph in Figure 1. Here, the overachievement of ethnic minorities in education is found across all classes of origin. Origins are still expected to have an additional effect, because they imply different levels of resources, networks and expectations, which are still likely to be important. For example, if the aspiration is that children achieve more highly than their parents, this will mean something different to those at different points in the class distribution.

Of course, it is perfectly possible that social class misallocation and immigrant advantage are both present as explanatory mechanisms for different groups or within the same group: illustrated in the last graph of Figure 1. Which pattern predominates is an empirical question. However, before turning to our analysis, we consider how far might we expect such mechanisms of educational advantage to translate into labour market outcomes; and whether the answer differs for employment compared to occupational success.

3.2 Translating gains in education into the labour market

If social class misallocation contributes to educational outcomes, we might argue that it should also affect labour market outcomes, both employment and occupational class. Following models of social stratification (Blau & Duncan, 1967), parental backgrounds are known to have a direct impact on individuals' labour market outcomes on top of the impact that they have via education. This 'black box' of the independent effect of social class on labour market outcomes might include knowledge of the job market and social networks, but also cultural capital, and corresponding expectations. Similarly, for the mechanisms connected to immigrant advantage, we could also argue that parental motivation, grit and resilience will not be restricted to educational careers. On the contrary, one might expect these mechanisms to play a role when the children of immigrants enter the labour market.

At the same time, however, there are reasons why such unobserved influences on education might not translate into better labour market outcomes. Parental unmeasured factors might affect individuals' educational and labour market outcomes differently. For example, parents' high cultural capital (Bourdieu, 1997), which both high and (misallocated) low class migrant-origin parents would be expected to hold, might be more relevant for their children's educational outcomes than for access to the labour market. Within the labour market, they might bring benefits in occupational attainment, when their positive characteristics can be observed

by employers, rather than when attempting to get a job. Similarly, the importance of social networks, or the quality of such networks, might also vary (Lin, 2001) between education and labour market contexts. While access to education is universal and not dependent on knowing members of the mainstream society, and bonding (intra-group) social capital can foster educational success (Borjas 1992), bridging social networks are arguably more relevant for finding a job (Granovetter, 1973) or for career progression (Franzen & Hangartner, 2006). Parents with high cultural capital but with networks arising, in part, from their low qualified jobs, might bring fewer benefits to their children's labour market outcomes, especially when searching for work. As for immigrant advantage, while parents' determination may enable them to foster their children's progression through school, for example through insistence on completing homework, it may be less salient when those children are attempting to succeed independently in the labour market. These ascribed traits of motivation and drive to the extent that they are intergenerationally transmitted, might be expected to be more relevant in terms of occupation and career progression (where they can be more easily demonstrated), while they might have a lower impact on performing effective job searches. Finally, and independently of the prevailing key mechanism, another factor contributing to ethnic minorities lower achievement in the labour market than in education is discrimination. While there is some evidence for teacher stereotyping of minority groups (Burgess & Greaves, 2013; Campbell et al., 2007), the evidence for labour market discrimination, particularly at point of access to employment, is of greater magnitude (Di Stasio & Heath, 2019; Heath & Cheung, 2006; Riach & Rich, 2002).[2]

This reflection leads us to two general expectations. First, independently of whether misallocation or immigrant advantage prevail, unmeasured traits that are beneficial in the labour market should be more visible in occupational attainment than in access to employment. Second, higher labour market attainment as a result of these processes should be most evident for those who have already demonstrated them through attainment of higher level qualifications, and therefore in returns to tertiary qualifications. We would therefore expect to

[2] Another factor might be the that ethnic minorities end up with a different 'market value' of qualifications (Richardson, 2008, 2015). Ethnic minorities select into less prestigious universities (Shiner & Noden, 2015) and have a higher rejection rate from these (Boliver, 2013). Degree level success may therefore be less salient for the job market for (some) minorities than for their majority peers, even if they are attaining tertiary qualifications at higher rates. However, much of the difference in university selection can be accounted for by social class background (Shiner & Noden, 2015). At the same time, analysis of early labour market outcomes among graduates, indicates that even if degree choice and institution differ across ethnic groups, they have relatively little explanatory power in relation to recent graduates' labour market experience (Zwysen & Longhi, 2018).

see a greater occupational class advantage and, perhaps to a lower extent, an advantage in access to employment, among those who have completed a university degree.

3.3 A comparative framework

To test these expectations, we distinguish four different migrant origin-groups in the UK, with different migration histories and social backgrounds. The Black Caribbean population of the UK is one of the longest standing of the UK's post-war migrant-origin groups. The iconic arrival of the SS Empire Windrush in 1948 marked a period of substantial migration of British subjects from former colonies in the West Indies through the 1950s and 1960s. Caribbean migrants were a skilled population that had been exposed to British institutions and values, including the English language and participation in the armed forces. However, with the exception of nurses recruited under the newly created National Health Service, most of the jobs that Caribbean immigrants performed were blue-collar, with many located in the public sector, such as London Transport (Cheung & Heath, 2007; Peach, 2005). The population faced substantial direct discrimination, with the 1965 Race Relations Act the first attempt to address it. Despite longstanding presence and citizenship, Black Caribbeans continue to suffer directly from the 'hostile environment' intended to target undocumented migrants (Gentleman, 2019).

Those identifying ethnically as Indians are a heterogeneous group. Those immigrants whose children have reached adulthood tend to come either from the former colony with substantial primary migration in the 1960s, alongside a continue flow of both labour and family re-unification, or from East African following the expulsion of Asian populations in the early 1970s. This group has high levels of ethnic capital and community resources, and tended more to enter high-qualified occupations upon arrival, including white-collar jobs in the government, entrepreneurship and business activities, doctors and engineers (Robinson & Valeny, 2005).

The peak migration of Pakistani immigrants was a little later than that of Indians from India. Pakistani immigrants settled in somewhat different areas, particularly in the midlands and the North of England to capitalise initially on niche employment in those areas (Ballard 1996). Pakistanis participated in the transport sector and were particularly present in textile and woollen industries located in the centre and north of England. Given these occupational and settlement patterns, they were more subject to the impacts of deindustrialisation in the occupational niches they concentrated in.

Finally, Bangladeshis are one of the most recent minority groups for whom we can reliably estimate the adult outcomes of the second generation. The peak migration period for

Bangladeshis was in the 1980s, though there has been ongoing primary migration and family reunification since. While Bangladeshis share many characteristics with Pakistanis, including low rates of female labour force participation in the first generation, they are differently distributed geographically and occupationally. In particular, they are concentrated in London where school outcomes are better and improving, and closer to a more dynamic labour market.

Our paper considers outcomes across these four groups for men and women separately. We expect to observe differences for men and women across groups in the ways education does or does not translate into labour market attainment. For example, South Asian women, even those with a degree, tend to be more likely to prioritise family responsibilities over employment (Dale, Fieldhouse, Shaheen, & Kalra, 2002; Dale, Lindley & Dex, 2006), partly informed by community norms (Zuccotti & Platt, 2017). This might lead us to observe poorer labour market outcomes for Asian women as compared to men, especially as regards economic activity.

In the next section we investigate patterns of social mobility – educational and labour market outcomes relative to social origins – for the four ethnic minority groups relative to the white British majority; and we relate them to the framework outlined above. After describing the data and providing descriptive statistics, we first examine educational mobility with respect to social origins. This provides a baseline for defining 'expected' labour market gains in relation to the potential processes we have theorised. We then investigate labour market outcomes in terms of access to employment, to activity (for women only) and to highly qualified occupations, examining in particular the returns to higher education.

4 Data and Methods

4.1 Data and variables

We use the ONS Longitudinal Study, a unique dataset that links census records for a one per cent sample of the population of England and Wales across five successive censuses (1971, 1981, 1991, 2001 and 2011). The original (1971) sample selected individuals based on their birthdate (with four possible dates); and each census, the sample is updated with intercensal births and immigrations of those with the same birthdays. Slightly more than 500,000 individuals can be found at any census point. About 400,000 people provide records at any two census points; while there are linked records across all five censuses for around 200,000 individuals.

In addition to its large sample, a special feature of this dataset is that both household and aggregated census data can be attached to each individual and for each census point. That is, we have information on the co-resident parents of the individuals when they were children, on the characteristics of their households in childhood and adulthood, and we can also match in characteristics of the neighbourhoods in which they reside at different periods. This, uniquely for the UK, enables us to measure social mobility prospectively, with the important advantages that brings (Song & Mare, 2015). Our study is also differentiated from existing analysis by our ability to account for local contextual conditions in childhood, the importance of which has been evidenced by Chetty, Hendren, Jones, and Porter (2019), and is likely to be particularly salient for minority ethnic groups, given their different patterns of geographical concentration with unequal access to educational and occupational opportunities (Burgess, 2014; Zuccotti & Platt, 2017).

We study individuals who lived with at least one parent between 0 and 15 years of age in any of the three so-called 'origin' years: 1971, 1981 and 1991. We measure the educational and labour market outcomes of these individuals in 2001 and 2011 ('destination years'), when they are between 20 and 45 years old. We exclude those between 46 and 55 years old, given they are present only for the 1971-2011 cohort. In line with research employing panel-like data, we constructed our sample in a way that allows for more than one measurement *per* individual. Given that individuals can be between 0 and 15 years old only in only two 'origin' census points, each individual can have up to 4 measurements (e.g. 1971-2001; 1971-2011; 1981-2001; 1981-2011). The total sample comprises more than 350,000 observations; around half of whom are 'unique' individuals. In order to account for repeat observations on individuals, we control for the 'origin' and 'destination' years and we cluster standard errors at the individual level. In robustness analysis we restrict our sample to single observation per individual with consistent results.

We study four outcomes: attainment of a university degree or equivalent, known as "Level 4+" qualifications (vs. other educational level);[3] activity (vs. inactivity (excluding full-time students), for women only), employment (vs. unemployment) and current or previous access to the social classes represented by professional and managerial occupations (vs. other social classes/occupations). Social (occupational) class is measured with the National Statistics Socio-

[3] Since most Level 4+ qualifications are university degrees, we use the terminology tertiary-educated, Level 4+ and with a university degree interchangeably throughout.

Economic Classification (NS-SEC) (Rose and Pevalin 2003). The NS-SEC has seven categories from higher managerial/professional occupations to routine occupations. We combine as higher occupational class outcomes those in classes 1 (higher managerial, administrative and professional occupations) and 2 (lower managerial, administrative and professional occupations).

We pool these four outcomes from 2001 or 2011. In additional analysis, we examined change over time, by comparing labour market outcomes across the two years (see Supplementary material), since time is an important factor in integration processes. However, there was little relative change in ethnic minority groups' position relative to the majority over time.

Our main independent variable is ethnic group. We focus on white British natives and second generation ethnic minorities of Indian, Pakistani, Bangladeshi and Caribbean origins. These are identified with the official ethnic group question (measured in 2011; or 2001 if missing in 2011). Our definition of second generation includes both individuals born in Britain with foreign-born parents and individuals born abroad who arrived before age 16 (around half of Bangladeshis and one fourth of Pakistanis are in this situation, while the shares for the other groups are below 20 per cent). Robustness checks restricting our analysis to those born in the UK only provided consistent results. White British individuals are restricted to those with both parents (or one, in the case of single-parent households) born in the UK.

Other key predictors are various indicators of individuals' social origins, which we measure in 1971/1981/1991. Chief among these is parental social class. We derive a five-category measure of No earners/ not-codeable, Manual, Routine non-manual, Bourgeoisie, and Service class, from a 7-category class schema whose members broadly share similar market and work situations (Goldthorpe & Hope, 1974). This is the only social class measure available and is harmonized for the three origin years (1971, 1981 and 1991). We use the highest social class of either mother or father (or the value of the father/mother in case of single-parent households). We also include three household-level variables: housing tenure (owner, private rented, in social housing), number of cars (0, 1, 2 or more) and number of persons per room (over 1.5 persons per room; 1.5; over 1 but less than 1.5; over 0.75 but less than 1; 0.75; over 0.5 but less than 0.75; and 0.5 or less); and a measure of neighbourhood deprivation. This is measured at the ward level (average population c.4000) using the Carstairs Index (Norman & Boyle, 2014; Norman, Boyle, & Rees, 2005), and summarizes four dimensions: % male

unemployment; % overcrowded households; % no car/van ownership; and % low social class. The variable is expressed in population-weighted quintiles.

We also control for age in years and, in the labour market outcomes, for detailed educational attainment categories (No qualifications, Level 1 (basic), Level 2 (lower secondary), level 3 (higher secondary/ post-compulsory), Level 4+ (university degree or equivalent) and Other). Additional controls include year of origin and of destination measurement, and number of times observed. We conduct separate analyses for men and women. Distributions of all independent variables are provided in Table S1 in the supplementary materials.

4.2 Analytical strategy

We estimate logistic regression models for each of the outcomes and, in line with best practice, report average marginal effects and predicted margins/probabilities (Mood, 2010). Since the interpretation of interactions in logistic regression is not straightforward (Norton, Wang & Ai, 2004), for the interaction terms included in our models (see below), we computed contrasts (in Stata 14: StataCorp, 2015). These provide us with the differential probabilities at the different values of the interacted variables. For ease of interpretation, we illustrate our key results graphically.

We start by identifying how much ethnic groups' probability of attaining a university degree differs compared to White British individuals, after controlling for parental social class and other key independent variables. Then, we add interactions between parental social class and ethnic group, to investigate whether the effect of social origins on education differs between ethnic minority groups and white British individuals, in order to investigate whether we can identify processes of class misallocation and immigrant advantage.

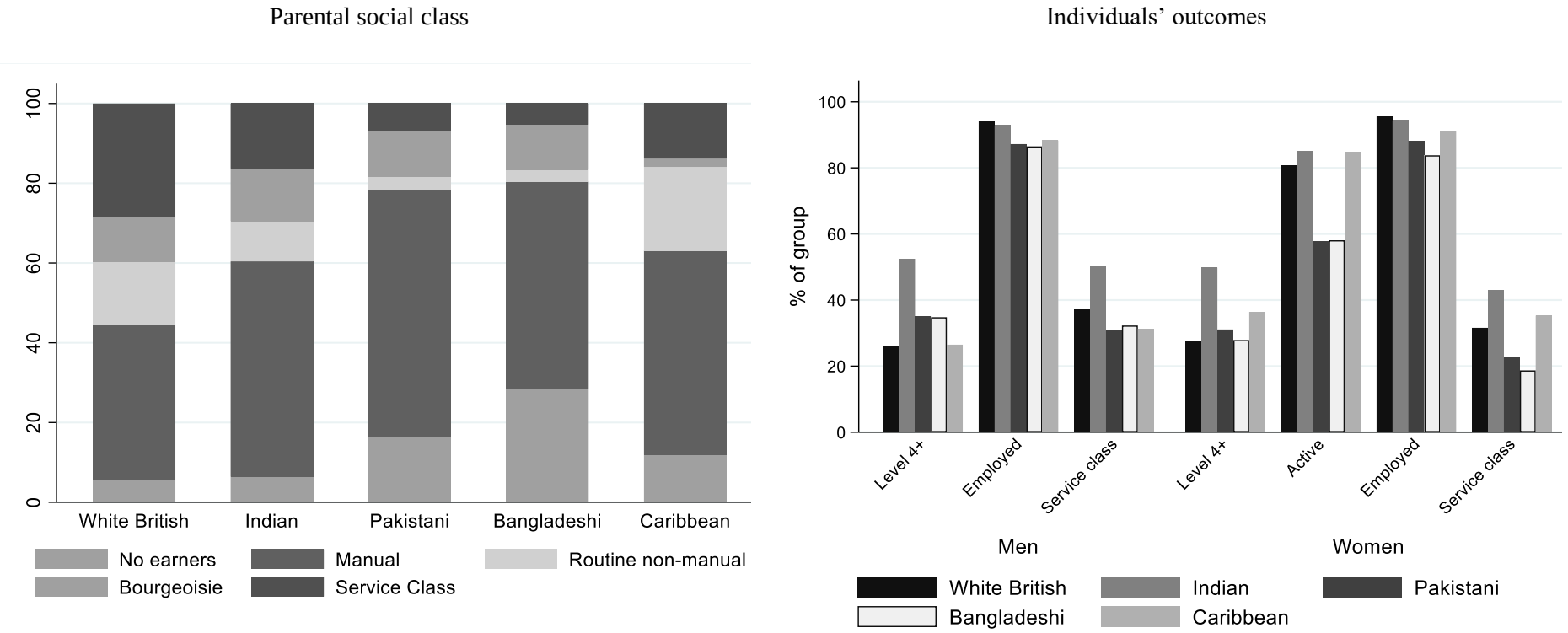
Next, we turn to study labour market outcomes. Similarly, we first investigate average effects of ethnic group, controlling for parental social class and, subsequently, for education (as well as other key variables). Then, in line with our expectations about the highly educated being able to materialize their advantages, we investigate returns to education interacting ethnic group with a dummy for degree qualifications (Level 4+).

5 Results

5.1 Descriptive statistics

Figure 2 presents descriptive statistics of the key variables, by ethnic group. The first thing to note is that there is substantial variation in terms of parental social class across ethnic groups: second generation Indian, Pakistanis, Bangladeshis and Caribbeans have higher shares of manual social origins compared to white British individuals; and all groups have lower shares of service class origins, but this is especially marked for Pakistanis and Bangladeshis. Table S1 in the supplementary materials shows that in addition to differences in social class background, all ethnic minority groups are more likely to have lived in overcrowded households and in deprived neighbourhoods when young, compared to white British individuals. These are also important potential factors in social mobility, which we therefore adjust for in our analysis.

Figure 2: Descriptive statistics



Totals: Parental social class=354498 (WB), 5986 (I), 3738 (P), 1142 (B), 2890 (C); Education & occupation (men)=17336 (WB), 3033 (I), 1787 (P), 526 (B), 1285 (C); Active (men)=162037 (WB), 2867 (I), 1572 (P), 483 (B), 1158 (C); Education, activity status & occupation (women)=181129 (WB), 2953 (I), 1951 (P), 616 (B), 1605 (C); Active (women)=146203 (WB), 2510 (I), 1128 (P), 358 (B), 1360 (C).
Population: Individuals between 20 and 45 years old
Source: Authors' own calculations based on ONS-LS

In terms of educational outcomes, most ethnic minority groups have high levels of tertiary qualifications, even if they are overrepresented among low social backgrounds. For example, more than 35 per cent of South Asian men attained this level, even though almost half of them had parents with manual jobs and only 16 per cent of them had parents with a service class position. Conversely, although the proportion of white British men with higher class parents stood at 29 per cent, only 26 had Level 4+ qualifications. Similar patterns (with variations) are observed among women (see Supplementary materials).

Labour market outcomes are more varied. Some of these seem to align more with groups' low social origins, such as higher unemployment rates for certain minority groups. This also suggests that the observed progress in education is not fully transformed into better employment opportunities. For example, Pakistani and Bangladeshi men have much higher unemployment rates and similar or lower probability of attaining professional managerial occupations compared to white British men, despite their high educational attainment. Most minority group women have higher unemployment levels than the white British, even though they are in general more educated, and importantly, gained this education 'against the odds'. Of all second generation ethnic minority groups, Indians seem to have best transferred educational advantage into the labour market, especially in their occupational attainment.

We go on to explore these relationships in detail, in multivariate models.

5.2 Educational outcomes

Table 1 shows the predicted probabilities of attaining a university degree by ethnic group and sex. Model 1 controls for age, origin and destination years and number of times observed in the data; Model 2 adds social origin variables, measured when the individual was between 0 and 15 years old: parental social class, tenancy, number of cars, number of persons per room and neighbourhood deprivation. Full models are provided in the supplementary materials, Table S2.

Table 1: Educational outcomes (attainment of university degree); AME and predicted values. Men and women.[1]

	Men		Women	
	Model 1	**Model 2**	**Model 1**	**Model 2**
Ethnic group (ref. white British)				
Indian	0.251***	0.331***	0.197***	0.280***
	(0.014)	(0.012)	(0.014)	(0.013)
Pakistani	0.090***	0.241***	0.010	0.158***
	(0.016)	(0.016)	(0.015)	(0.016)
Bangladeshi	0.097***	0.339***	-0.021	0.226***
	(0.027)	(0.028)	(0.021)	(0.025)
Caribbean	0.014	0.140***	0.090***	0.218***
	(0.018)	(0.020)	(0.018)	(0.018)
Predicted values				
White British		25.6		27.3
Indian		58.7		55.3
Pakistani		49.7		43.1
Bangladeshi		59.5		49.9
Caribbean		39.7		49.0

[1] Model 1 controls for age, origin and destination years and number of census points; Model 2 adds social origin controls, including include parental social class, tenancy, number of cars, number of persons per room and neighbourhood deprivation, measured when the individual was between 0 and 15 years old.
* p-value<.10 ** p-value<.05 *** p-value<.01. Robust (clustered) standard errors in parentheses
Population: Individuals between 20 and 45 years old
Source: Authors' own calculations based on ONS-LS

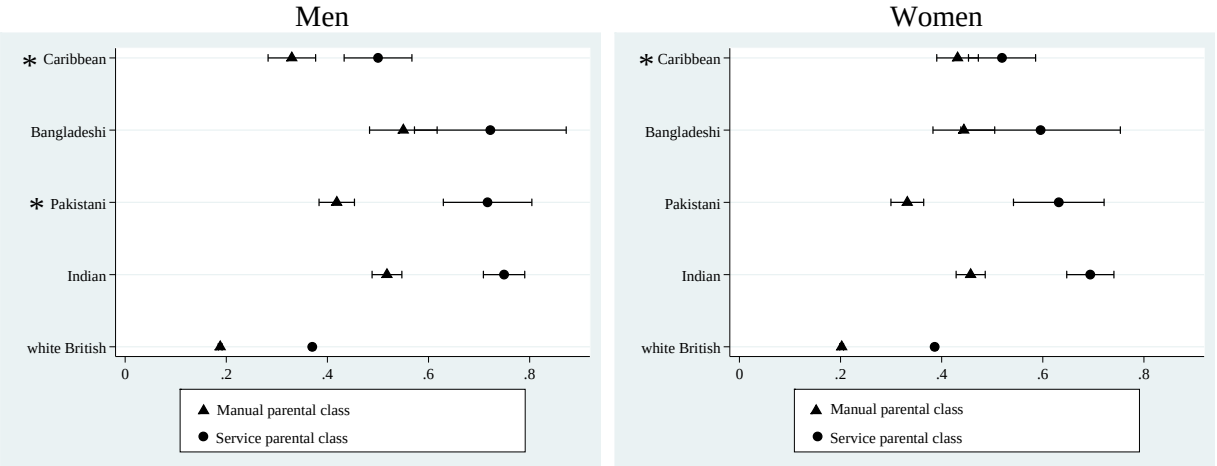
We see that all minority groups have an equal or higher probability of attaining tertiary qualifications compared to white British individuals (Model 1). There is thus no 'disadvantage' to be explained here, but rather a zero effect or an advantage for the ethnic minorities. Once we control for the fact that most groups are raised by parents with relatively lower social status and have, in general, poorer socio-economic conditions at origin (Model 2), we observe – as expected – a positive difference for all minority groups. These educational advantages are substantial: controlling for age and social origins, ethnic minority men and women have between 14 and 34 percentage points higher probabilities of attaining a university degree compared to their white British counterparts. It is important to stress that given the predominantly low social origins of ethnic minorities we would have expected to see an initial educational disadvantage for them, which, in typical analysis of ethnic educational attainment in Europe, low social origins would have then helped to explain (e.g. Kristen & Granato, 2007). Differences between men and women are substantial for some groups, as observed in the predicted values. In particular, Pakistani and Bangladeshi women are less likely to attain degree-level qualifications compared to men, while the opposite is observed among Caribbeans.

We next attempt to gain traction on whether these results imply misallocation or immigrant advantage for the different groups by interacting parental social class with ethnic group.

Following the theoretical model, we are particularly interested in comparing individuals who had service class parent(s) when they were young with those who had parents in manual occupations.

Figure 3 shows average predicted values for all groups, for manual and service social class origins, as well as statistically significant interactions (indicated with *) (Figure S2 in the Supplementary materials presents the marginal effects of the interactions). All ethnic minority groups from both low and high social classes perform better than their white British peers, pointing to a dominance of the immigrant advantage mechanism. For Indian and Bangladeshi men and women this advantage is quite pronounced (at around 30 percentage points) and appears to be the same for individuals with manual and service class origins. Among Caribbeans there is also some indication of class misallocation, given the greater relative advantage among those with low social backgrounds. Finally, for Pakistanis we observe the opposite pattern:[4] a higher social background provides them with a relatively higher chance of having tertiary qualifications. This is consistent with the evidence that Pakistanis working in niche manual occupations were well-matched to them. The question that emerges next is to what extent such educational gains translate into the labour market.

Figure 3: Educational outcomes (attainment of university degree) by parental social class; predicted values (with all controls) and CI (90%).



CI: 90%.
* The difference in the effect of education between the ethnic minority group and white British individuals is statistically significant at p-value<.10
Population: Individuals between 20 and 45 years old
Source: Authors' own calculations based on ONS-LS

[4] The effect for women is close to statistical significance, see Figure S2.

5.3 Labour market outcomes

5.3.1 Average effects

Tables 2 (men) and 3 (women) show the probability of being employed, of being in professional/managerial positions and, for women, of being economically active. As in the previous table, Model 1 shows results with basic controls, while Model 2 controls for social origins. Model 3 adds education and family composition. Full tables are provided in Tables S3 and S4 of the supplementary materials.

Going back to our theoretical discussion, if we were to assume that social origins, educational institutions and labour markets operate in the same way in terms of opportunities and constraints across groups; and if educational success is informative about unobserved aspects of social and immigrant background, then we would expect to see ethnic advantage in educational attainment translated into the labour market. However, it is clear from Tables 2 and 3 that this is not the case for all groups and both sexes, nor is it observed consistently across labour market outcomes. Model 2 in both tables shows the extent to which labour market outcomes vary across ethnic groups on equality of social origin characteristics, and the results do not reveal a consistent ethnic minority advantage as we saw for education.

For access to employment, only Bangladeshi men are more likely to be employed (rather than unemployed) compared to white British men of similar social backgrounds and demographics. Among women, we observe an ethnic minority advantage in the probability of being active for Indian and Caribbean women. In all other cases, we either observe equal probabilities or a penalty for ethnic minorities. Results differ when we look at occupational class outcomes: apart from Pakistani women, all groups are more likely to have professional/managerial positions than white British individuals, on equality of social origins. These results suggest that the positive unobserved characteristics present when studying educational outcomes may play a role in occupational outcomes, but are less salient in terms of access to jobs.

Table 2: Labour market outcomes. Men. AME. [1]

	Employment			Professional/managerial		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Ethnic group (ref. white British)						
Indian	-0.007	0.007	-0.004	0.141***	0.220***	0.072***
	(0.005)	(0.005)	(0.005)	(0.013)	(0.012)	(0.01)
Pakistani	-0.044***	-0.008	-0.021***	-0.036**	0.105***	-0.002
	(0.008)	(0.006)	(0.007)	(0.015)	(0.016)	(0.013)
Bangladeshi	-0.033***	0.016***	0.006	0.001	0.217***	0.066***
	(0.012)	(0.006)	(0.007)	(0.027)	(0.028)	(0.024)
Caribbean	-0.057***	-0.017**	-0.012	-0.056***	0.055***	0.003
	(0.012)	(0.008)	(0.007)	(0.018)	(0.019)	(0.016)

[1] Model 1 controls for age, origin and destination years and number of census points; Model 2 adds social origin controls include parental social class, tenancy, number of cars, number of persons per room and neighbourhood deprivation, measured when the individual was between 0 and 15 years old; Model 3 adds education and family composition.
* p-value<.10 ** p-value<.05 *** p-value<.01. Robust (clustered) standard errors in parentheses
Population: Individuals between 20 and 45 years old
Source: Authors' own calculations based on ONS-LS

Table 3: Labour market outcomes. Women. AME. [1]

	Activity			Employment			Professional/managerial		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Ethnic group (ref. white British)									
Indian	0.040***	0.063***	-0.002	-0.007	0.003	-0.013**	0.106***	0.176***	0.03***
	(0.009)	(0.008)	(0.011)	(0.005)	(0.004)	(0.006)	(0.012)	(0.012)	(0.01)
Pakistani	-0.232***	-0.146***	-0.191***	-0.052***	-0.021***	-0.035***	-0.093***	0.016	-0.051***
	(0.015)	(0.014)	(0.014)	(0.01)	(0.007)	(0.008)	(0.013)	(0.016)	(0.012)
Bangladeshi	-0.227***	-0.069***	-0.154***	-0.071***	-0.007	-0.038***	-0.123***	0.058**	-0.045**
	(0.024)	(0.02)	(0.02)	(0.016)	(0.008)	(0.012)	(0.020)	(0.029)	(0.019)
Caribbean	0.047***	0.084***	0.029**	-0.05***	-0.018**	-0.020***	0.036**	0.138***	0.024*
	(0.012)	(0.009)	(0.012)	(0.011)	(0.008)	(0.008)	(0.017)	(0.017)	(0.014)

[1] Model 1 controls for age, origin and destination years and number of census points; Model 2 adds social origin controls include parental social class, tenancy, number of cars, number of persons per room and neighbourhood deprivation, measured when the individual was between 0 and 15 years old; Model 3 adds education and family composition
* p-value<.10 ** p-value<.05 *** p-value<.01. Robust (clustered) standard errors in parentheses
Population: Individuals between 20 and 45 years old
Source: Authors' own calculations based on ONS-LS

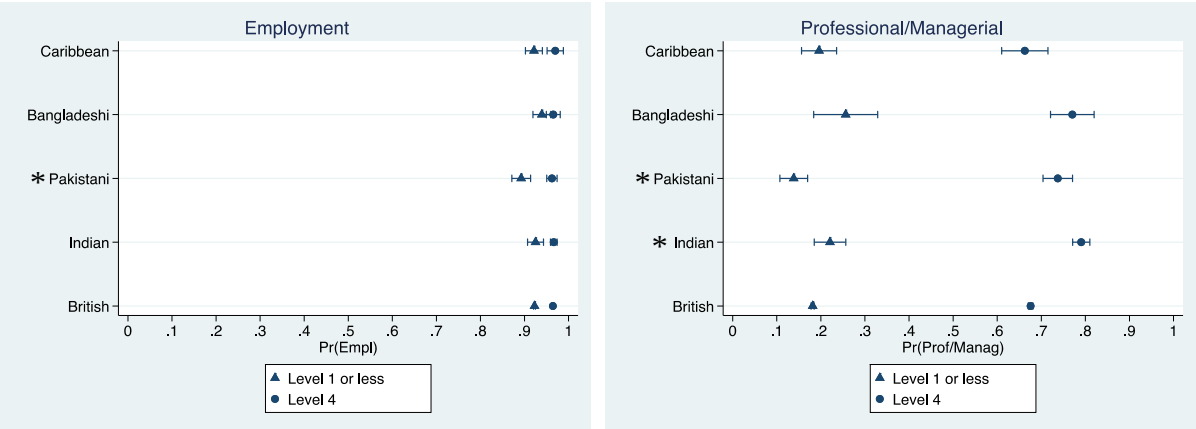
When we turn to Model 3, which controls for educational attainment, the findings become more complex. Any observed ethnic minority advantage reduces or become zero; and where there was no observed difference or a penalty, this remains the same or becomes a stronger ethnic penalty (the only exception is Caribbean men, for whom the employment penalty reduces). While this result is not surprising given that we have seen that ethnic minorities are more educated, it is not straight forward to interpret. Can we argue that the newly observed 'zero penalties' in Model 3 of Tables 2 and 3 mean the absence of ethnic disadvantage? Is education an unambiguous route to success? Do the advantages in occupational status reflect what ethnic minorities should truly be achieving, given educational attainment, and the

evidence that such attainment is shaped by unobserved characteristics? It is empirically difficult to respond to these questions, first, because we cannot measure the unobserved factors driving overachievement in education; and second, because we cannot assume that these unobservables should work equally in the labour market, for the reasons we discussed. Offering a solution to this problem is clearly a central task for future work; meanwhile, however, this simple but powerful demonstration shows that including both social origins and education in the same model can lead to a misleading picture of the extent of ethnic penalties in the labour market.

5.3.2 Exploring the role of education

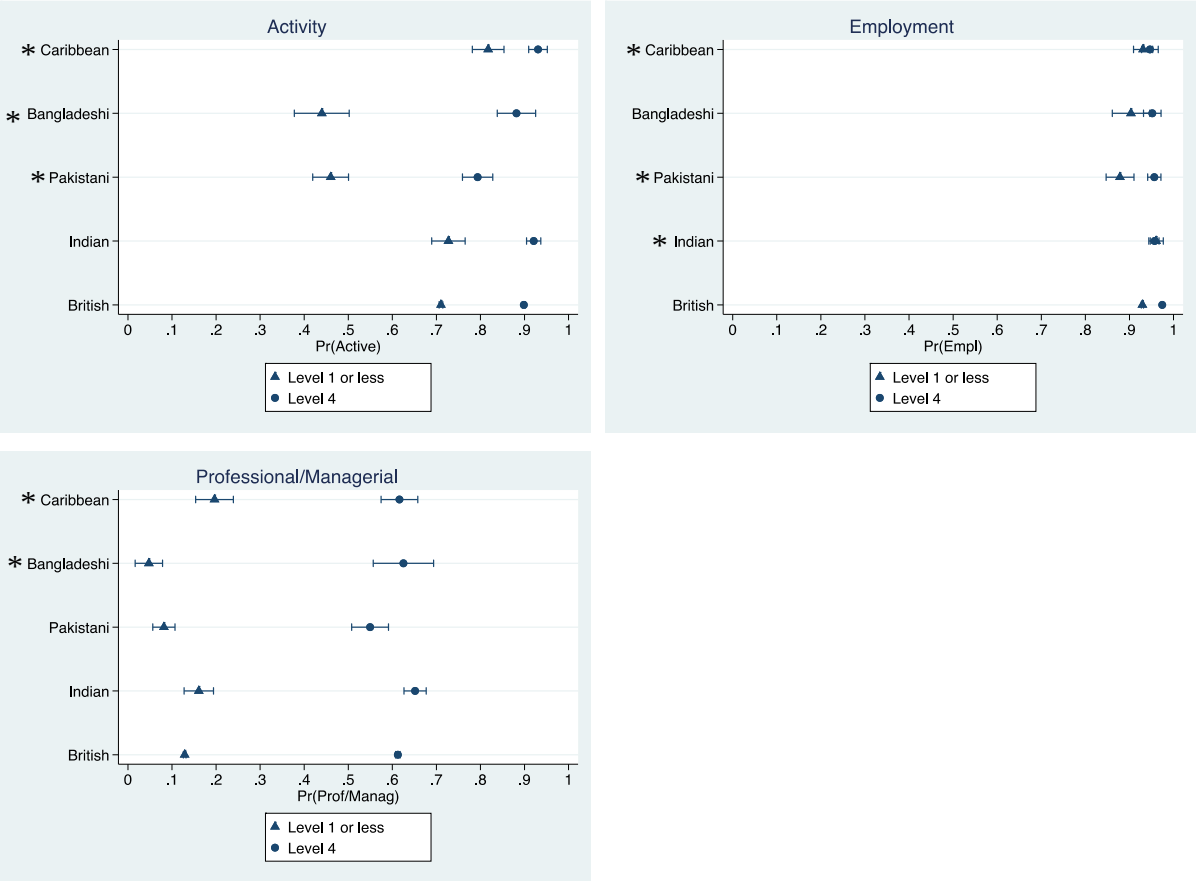
We now turn to explore more in detail the role of education. As we argued, it might be more relevant to consider the labour market outcomes among those who have actually achieved a tertiary (Level 4+) qualification, and who have thus been demonstrably been able to 'materialize' unobserved advantages. We therefore add interactions between education and ethnic group, to explore whether tertiary qualifications have a more positive effect on labour market outcomes for ethnic minorities than it does for white British individuals. As before, we calculated contrasts to identify statistically significant interactions (supplementary materials, Figure S2). Figures 4 (men) and 5 (women) show predicted values of labour market outcomes for those with Level 1 or no qualifications and those with Level 4 qualifications; statistically significant differences in the effect of education relative to white British individuals are indicated with *.

Figure 4: Labour market outcomes by education: predicted values (with all controls) and CI (90%). Men.



* The difference in the effect of education between the ethnic minority group and white British individuals is statistically significant at p-value<.10
Population: Individuals between 20 and 45 years old
Source: Authors' own calculations based on ONS-LS

Figure 5: Labour market outcomes by education: predicted values (with all controls) and CI (90%). Women.



* The difference in the effect of education between the ethnic minority group and white British individuals is statistically significant at p-value<.10
Population: Individuals between 20 and 45 years old
Source: Authors' own calculations based on ONS-LS

For several of the South Asian ethnic minority groups, education has a greater value in the labour market, i.e. offers greater returns to education than it does for white British men and women. For example, Indian men with a degree rather than low qualifications gain a greater advantage in terms of occupational outcomes compared to white British men: while among those who have level 1 or less education, there is only a 3% points advantage for Indian men (21% minus 18%), this increases to 11% points (79% minus 68%) among those educated to degree level. Similarly, degree-educated Pakistani men reduce their disadvantage in terms of employment, while obtaining an advantage in terms of occupational class. Among women, Pakistani and Bangladeshi women with tertiary qualifications have significantly higher activity rates, and to a greater extent than white British women. Degree-educated Pakistani women also show a greater improvement in employment rates compared to white British women, while Bangladeshi women experience a greater improvement in terms of occupational outcomes. In

line with our expectations, therefore, obtaining higher education has a stronger effect on the labour market opportunities of a number of groups. This suggests that the unobserved 'positive' factors that were presumed to play a role in the probability of obtaining a higher education in the first place, materialize in the labour market—even if not consistently.

From this analysis we can also observe that some groups obtain a similar advantage independently of their education, which suggests the role of unobserved factors, even if individuals have not achieved a high education. Such is the case, for example, of Indian men and women and of Bangladeshi men in access to professional/managerial class jobs. Finally, there are some cases in which returns to education are smaller than those observed for white British individuals. In particular, Caribbean women are the only minorities to experiences lower returns to education compared to white British women (see supplementary materials, Figure S2). This implies that a having tertiary qualifications positions this group in a worse relative position, compared to those with low education. At the same time, Caribbean women are better off than white British women in terms of activity and in gaining highly social class occupations among those with low education. This may suggest the existence of class misallocation processes that do not materialize in terms of educational outcomes but in routes into work. It is also consistent with differential patterns of labour market discrimination as well as the differential influence of ethnic networks and ethnic 'capital' across groups.

6 Conclusion

The concept of ethnic penalties has long dominated the literature on educational and labour market integration of migrants and their children in destination societies. While useful for describing the disadvantages experienced by ethnic minorities, and providing indicative evidence of labour market discrimination, it is limited for understanding more recent findings, which show a mix of both advantage and disadvantage in different domains of the second generations' lives. The experience of ethnic minority groups in the UK, with their high rates of educational success, but persistent unemployment disadvantage, offers a very clear case of this phenomenon, and calls for the development of a new framework for the analysis of the outcomes of children of immigrants. In this paper, we presented the first steps towards developing such a framework, while at the same time providing an updated empirical analysis of social mobility in relation to education and labour market attainment across ethnic groups, drawing on the most substantial and complete UK longitudinal dataset available.

We hypothesised two general mechanisms by which educational advantage might arise. The first was social class misallocation, which reflects the fact that, due to downward mobility on migration, lower social class origins might encompass all the middle class attributes of their 'true' or pre-migration class that are relevant for higher educational outcomes. The second was immigrant advantage, which refers to those unmeasured factors of positively selected immigrants that have a positive effect on education, independently of the social class of origin. We argued that, whichever mechanism holds, because social origins and education cannot be considered to impact outcomes independently, we need to reconsider how we interpret analyses of labour market outcomes that adjust for both social origins and education. In most studies, when the observed ethnic penalty disappears following the inclusion of social origins, it is interpreted as if there is no disadvantage. However, this disregards the fact that the same mechanisms that explain advantages in education (such as 'hidden' middle-class features or drive and motivation) might be expected to also play a role in the labour market. If this is the case, then a 'zero penalty' might mean that positive unobserved attributes are failing to reap rewards in the labour market.

Our empirical analysis using a unique data set was able to investigate both educational and occupational outcomes in a consistent way and enable direct comparison with white British majority comparators. We showed that, conditioning on social origins, second generation ethnic minorities were substantially more likely to obtain a university degree than their white British peers. Indians had the highest probabilities, of more than 55 percent, with Bangladeshis, Pakistanis and Caribbean following closely, with probabilities between 40 and 50 per cent, compared to 30 per cent among the white British majority. Our analysis suggested that, while immigrants were strongly clustered in lower social class occupations, higher educational attainment was found across all social class origins, suggesting the presence of immigrant advantage mechanisms. Indians and Bangladeshis were among the highest achievers, independently of origins; Pakistanis from high social origins achieved similar educational success, but less so those from low social origins. The case of Caribbeans, by contrast, combined immigrant advantage and misallocation mechanisms: in relative terms, they gained more from low social origins than from high social origins. While Indians have been associated with the migrant success story, Pakistanis and especially Bangladeshis, have been characterised as the most disadvantaged of the UK's ethnic groups (Modood, Berthoud & Lakey, 1997). It would be worthwhile for future research to pay attention to the factors driving the diverging trajectories of (lower class) Pakistanis and Bangladeshis, who have typically been combined in UK analysis.

The significant advantages of ethnic minorities in education were only partly translated into the labour market, with some variation by group, sex, and the particular labour market outcome under study. For example, no minorities had a higher probability of finding employment than white British individuals; and Pakistani men and women from all ethnic minority groups had lower probabilities of being employed relative to being unemployed, compared to equivalent white British men and women. Pakistani and Bangladeshi women were also less likely to be economically active; and only Caribbean women had a higher activity rate than white British women. For occupational success, the results suggest, in line with our expectations, that once a job has been secured, unobserved strengths pay off more. However, only Indian men and women and Bangladeshi men did *better* than white British men and women in access to professional/managerial occupations. Pakistani and Caribbean men, and Pakistani and Bangladeshi women showed either no differences (men) or a penalty (women) with respect to white British men and women. The absence of an ethnic penalty might have previously been interpreted as a 'positive outcome', or evidence of the declining role of labour market discrimination. However, given how well ethnic minorities performed educationally, we might have expected them to perform even better in the labour market than they are observed to do.

We can offer different explanations for the lack of correspondence between educational and labour market success. In particular, despite having unmeasured characteristics that benefited them in education, ethnic minorities may still lack class and status-based attributes that may be more relevant in the context of the labour market, such as the quality of their social networks. Additionally, those factors that produced returns in a relatively open education system, such as parental cultural capital, motivation and drive, might be harder to demonstrate in the labour market, particularly at the point of job application. Similarly, stereotypes or discrimination—which tend to predominate more in the labour market—could obstruct minorities from having the opportunity to display the attributes that had served them well in education.

Our theoretical framework suggested that it was those who successfully attained higher rates of education who would be most fully endowed with, or best able to 'materialize', the unmeasured characteristics associated with immigrant advantage. We therefore analysed specifically, whether labour market opportunities were enhanced for tertiary-educated ethnic minorities. We showed that, consistent with our model, there were higher returns to education for some ethnic minorities, when compared to white British individuals. This was the case, for example, for Pakistani and Bangladeshi women's economic activity: support or motivation to achieve higher education seemed to extend also to engagement with the labour market.

The paper is not without its limitations. Informed by the literature, to some extent we can 'read off' the mechanisms driving the outcomes, from the ways in which they are patterned across groups and differ for different outcomes; but, like most existing work on outcomes attributed to migrant selection, we are unable to measure them directly (Feliciano, 2020). The literature has emphasised both the importance of aspirations in educational attainment and of discrimination in labour market disadvantage. Both are consistent with the findings we present, but we are unable to directly substantiate our argument that minorities may lack the networks or signalling power that would benefit them in the labour market. We are also unable to directly measure the ethnic resources that may play a role in accounting for some of the differences between groups (Lee & Zhou, 2015). Future research would benefit from finding ways to link such relevant measures to mobility analyses to refine the explanatory frameworks outlined here.

In sum, this paper has provided new, contemporary findings on labour market outcomes of ethnic minorities and their social mobility in England and Wales, findings that, in some cases, revise the conclusions from past analysis (for example Heath & Cheung, 2007; Platt, 2007; Zuccotti, 2015). Furthermore, we offer a contribution to the ways in which the literature on immigrant and ethnic minority labour market inequalities may benefit from taking account not only of disadvantage but also of advantage, and the implications for the interpretation of empirical findings. Our paper is also an invitation to researchers working on education and labour market integration of ethnic minorities to develop strategies for analysis that are not framed purely in terms of a 'deficit' model. Finally, it further highlights the ways in which studies of the complex mobility dynamics of ethnic minorities can help to shed further light on stratification processes more generally.

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Supplementary material

Table S1: Control variables

	white British	Indian	Pakistani	Bangladeshi	Caribbean
Tenure					
Owner	61.6	85.2	85.4	40.9	49.7
Social rent	28.9	7.8	7.7	43.1	39.2
Private rent	9.4	7.0	6.8	16.0	11.1
Number of cars					
None	25.4	33.4	44.8	69.1	58.4
1 car	54.0	51.6	47.4	27.4	36.0
2+ cars	20.6	15.0	7.9	3.5	5.6
Number of persons per room (ppp)					
Over 1.5 ppp	1.9	15.7	24.5	36.8	14.8
1.5 ppp	1.0	5.5	7.3	8.4	6.4
>1 but < 1.5 ppp	9.6	23.3	31.0	27.3	25.7
1 ppp	19.0	21.3	18.4	13.9	22.0
>0.75 but < 1 ppp	25.4	16.3	9.9	7.7	12.8
0.75 ppp	4.2	2.5	1.6	1.2	3.9
> 0.5 but < 0.75 ppp	28.6	12.1	5.8	3.7	10.1
0.5 ppp	6.4	1.8	1.0	0.9*	2.7
Less than 0.5 ppp	4.0	1.5	0.5	0	1.5
Carstairs quintiles					
Carstairs Q1	20.8	5.1	1.7	1.4	3.1
Carstairs Q2	21.2	6.7	3.6	3.4	6.7
Carstairs Q3	20.6	10.6	5.7	6.4	12.7
Carstairs Q4	20.0	18.8	17.5	11.3	22.7
Carstairs Q5	17.3	58.8	71.5	77.5	54.8
Education (men)					
No education + other	18.3	9.3	18.0	16.2	17.1
Level 1	22.2	14.4	21.3	22.6	26.5
Level 2	21.0	13.5	17.2	16.5	22.1
Level 3	12.5	10.3	8.5	9.9	7.7
Level 4+	26.0	52.5	35.0	34.8	26.5
Education (women)					
No education + other	13.4	7.7	18.8	17.0	7.0
Level 1	21.9	14.2	18.6	21.6	23.0
Level 2	24.0	16.7	18.7	21.4	21.6

	white British	Indian	Pakistani	Bangladeshi	Caribbean
Level 3	13.2	11.7	12.9	12.0	12.0
Level 4+	27.6	49.8	31.1	27.9	36.4
Family composition					
Single, no child	30.3	42.2	34.9	39.8	43.4
Partner, no child	35.4	31.0	29.4	28.7	20.2
Single, with child	7.5	3.6	6.0	5.6	19.2
Partner, with child	26.8	23.3	29.7	25.9	17.3
Origin year					
1971	33.7	18.6	12.1	3.2	41.5
1981	42.2	48.1	47.7	34.6	45.5
1991	24.1	33.3	40.2	62.3	13.0
Destination year					
2001	51.1	40.4	36.7	30.0	52.6
2011	48.9	59.6	63.3	70.0	47.4
Number of waves					
2	1.2	2.6	7.1	13.1	3.5
3	17.3	25.1	36.1	51.8	18.6
4	39.8	49.5	43.3	32.5	40.4
5	41.8	22.8	13.5	2.5	37.5
Totals	**354,498**	**5,986**	**3,738**	**1,142**	**2,890**
Total men	173,369	3,033	1,787	526	1,285
Total women	181,129	2,953	1,951	616	1,605

Population: Individuals between 20 and 45 years old
Source: Authors' own calculations based on ONS-LS

* 0.5 ppp or less

Table S2: Attainment of a university degree; AME. Men and women. Full model.

	Men		Women	
	Model 1	**Model 2**	**Model 1**	**Model 2**
Ethnic group (ref. white British)				
Indian	0.251***	0.331***	0.197***	0.280***
	(0.014)	(0.012)	(0.014)	(0.013)
Pakistani	0.090***	0.241***	0.010	0.158***
	(0.016)	(0.016)	(0.015)	(0.016)
Bangladeshi	0.097***	0.339***	-0.021	0.226***
	(0.027)	(0.028)	(0.021)	(0.025)
Caribbean	0.014	0.140***	0.090***	0.218***
	(0.018)	(0.020)	(0.018)	(0.018)
Parental social class (ref. manual)				
Not codable/No earners in hh		0.004		0.004
		(0.006)		(0.006)
Routine non-manual		0.053***		0.063***
		(0.004)		(0.004)
Bourgeoisie		0.001		0.021***
		(0.004)		(0.004)
Service class		0.185***		0.187***
		(0.004)		(0.004)
Tenure (ref. owner)				
Social rent		-0.118***		-0.126***
		(0.003)		(0.003)
Private rent		-0.063***		-0.064***
		(0.005)		(0.005)
Number of cars (ref. none)				
1 car		0.041***		0.045***
		(0.004)		(0.003)
2+ cars		0.061***		0.066***
		(0.005)		(0.005)
Number of persons per room (ref. 1)				
Over 1.5 ppp		-0.059***		-0.051***
		(0.008)		(0.008)
1.5 ppp		-0.042***		-0.030***
		(0.011)		(0.011)
Over 1 but less than 1.5 ppp		-0.022***		-0.035***

	Men		Women	
	Model 1	**Model 2**	**Model 1**	**Model 2**
		(0.005)		(0.005)
Over 0.75 but less than 1 ppp		0.034***		0.027***
		(0.004)		(0.004)
0.75 ppp		0.045***		0.044***
		(0.007)		(0.007)
Over 0.5 but less than 0.75 ppp		0.077***		0.071***
		(0.004)		(0.004)
0.5 ppp		0.105***		0.106***
		(0.006)		(0.006)
Less than 0.5 ppp		0.138***		0.141***
		(0.007)		(0.007)
Carstairs quintiles (ref. Q1: less deprivation)				
Carstairs Q2		-0.016***		-0.022***
		(0.004)		(0.004)
Carstairs Q3		-0.030***		-0.032***
		(0.004)		(0.004)
Carstairs Q4		-0.048***		-0.042***
		(0.004)		(0.004)
Carstairs Q5		-0.055***		-0.064***
		(0.004)		(0.004)
Age in destination				
Age	0.001***	0.001***	0.002***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)
Origin year (ref. 1971)				
1981	0.029***	-0.022***	0.021***	-0.029***
	(0.002)	(0.002)	(0.002)	(0.002)
1991	0.037***	-0.065***	0.042***	-0.064***
	(0.003)	(0.003)	(0.003)	(0.003)
Destination year (ref. 2001)				
2011.outyear	0.104***	0.099***	0.112***	0.116***
	(0.003)	(0.003)	(0.003)	(0.003)
Number of census points (ref. 2)				
3	0.074***	0.044***	0.106***	0.058***
	(0.007)	(0.008)	(0.008)	(0.009)
4	0.138***	0.081***	0.136***	0.072***

	Men		Women	
	Model 1	**Model 2**	**Model 1**	**Model 2**
	(0.007)	(0.008)	(0.008)	(0.009)
5	0.127***	0.062***	0.076***	0.013
	(0.008)	(0.009)	(0.009)	(0.010)
N	**180000**	**180000**	**188254**	**188254**

* p-value<.10 ** p-value<.05 *** p-value<.01. Robust (clustered) standard errors in parentheses
Population: Individuals between 20 and 45 years old
Source: Authors' own calculations based on ONS-LS

Table S3: Labour market outcomes. Men. AME. Full models.

	Employment			Occupation		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Ethnic group (ref. white British)						
Indian	-0.00660	0.00708	-0.00426	0.141***	0.220***	0.0724***
	(0.00548)	(0.00453)	(0.00522)	(0.0128)	(0.0117)	(0.00988)
Pakistani	-0.0436***	-0.00750	-0.0207***	-0.0359**	0.105***	-0.00245
	(0.00835)	(0.00593)	(0.00679)	(0.0153)	(0.0159)	(0.0126)
Bangladeshi	-0.0334***	0.0163***	0.00593	0.00128	0.217***	0.0663***
	(0.0119)	(0.00610)	(0.00735)	(0.0274)	(0.0277)	(0.0236)
Caribbean	-0.0574***	-0.0171**	-0.0117	-0.0556***	0.0551***	0.00302
	(0.0115)	(0.00791)	(0.00733)	(0.0179)	(0.0192)	(0.0161)
Education (ref. level 1)						
No education			-0.0492***			-0.134***
			(0.00318)			(0.00382)
Other			0.00954***			-0.0633***
			(0.00319)			(0.00531)
Level 2			0.00858***			0.0956***
			(0.00218)			(0.00402)
Level 3			0.0247***			0.172***

	Employment			Occupation		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
			(0.00230)			(0.00512)
Level 4+			0.0306***			0.462***
			(0.00205)			(0.00420)
Family composition (ref. single, no child)						
Partner, no child			0.0615***			0.0935***
			(0.00186)			(0.00306)
Single, with child			-0.0114			0.00315
			(0.00890)			(0.0125)
Partner, with child			0.0568***			0.0860***
			(0.00206)			(0.00354)
Parental social class (ref. manual)						
Not codeable/No earners		-0.0171***	-0.0153***		0.00533	0.0115**
		(0.00287)	(0.00265)		(0.00626)	(0.00561)
Routine non-manual		0.0109***	0.00711***		0.0767***	0.0445***
		(0.00179)	(0.00175)		(0.00402)	(0.00348)
Bourgeoisie		0.00484**	0.00449**		-0.00404	-0.00296
		(0.00237)	(0.00221)		(0.00470)	(0.00423)
Service class		0.0168***	0.00739***		0.185***	0.0825***

	Employment			Occupation		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
		(0.00179)	(0.00187)		(0.00406)	(0.00354)
Tenure (ref. owner)						
Social rent		-0.0229***	-0.0154***		-0.108***	-0.0406***
		(0.00182)	(0.00172)		(0.00376)	(0.00335)
Private rent		-0.00836***	-0.00550**		-0.0528***	-0.0189***
		(0.00221)	(0.00217)		(0.00498)	(0.00429)
Number of cars (ref. none)						
1 car		0.0232***	0.0187***		0.0407***	0.0153***
		(0.00178)	(0.00168)		(0.00364)	(0.00317)
2+ cars		0.0301***	0.0244***		0.0663***	0.0297***
		(0.00228)	(0.00221)		(0.00487)	(0.00424)
Number of persons per room (ref. 1)						
> 1.5 ppp		-0.0187***	-0.0104**		-0.0864***	-0.0435***
		(0.00466)	(0.00408)		(0.00813)	(0.00778)
1.5 ppp		-0.00998*	-0.00617		-0.0456***	-0.0209*
		(0.00572)	(0.00525)		(0.0120)	(0.0109)
> 1 but < 1.5 ppp		-0.00833***	-0.00568**		-0.0322***	-0.0150***
		(0.00244)	(0.00229)		(0.00502)	(0.00451)
> 0.75 but < 1 ppp		0.00837***	0.00638***		0.0301***	0.0114***

	Employment			Occupation		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
		(0.00181)	(0.00175)		(0.00393)	(0.00341)
0.75 ppp		0.00637**	0.00493*		0.0397***	0.0169***
		(0.00298)	(0.00290)		(0.00717)	(0.00617)
> 0.5 but < 0.75 ppp		0.00988***	0.00656***		0.0659***	0.0256***
		(0.00189)	(0.00185)		(0.00404)	(0.00350)
0.5 ppp		0.0117***	0.00805***		0.0881***	0.0338***
		(0.00278)	(0.00279)		(0.00607)	(0.00526)
< 0.5 ppp		0.00737**	0.00302		0.105***	0.0365***
		(0.00345)	(0.00351)		(0.00748)	(0.00634)
Carstairs quintiles (ref. Q1)						
Carstairs Q2		-0.00158	-0.000987		-0.0263***	-0.0179***
		(0.00192)	(0.00191)		(0.00396)	(0.00343)
Carstairs Q3		-0.00526***	-0.00410**		-0.0390***	-0.0236***
		(0.00199)	(0.00197)		(0.00418)	(0.00364)
Carstairs Q4		-0.0146***	-0.0126***		-0.0634***	-0.0380***
		(0.00206)	(0.00203)		(0.00434)	(0.00377)
Carstairs Q5		-0.0247***	-0.0212***		-0.0739***	-0.0418***
		(0.00226)	(0.00220)		(0.00472)	(0.00410)
Age at destination						
Age	0.00192***	0.00184***	0.000633***	0.00395***	0.00385***	0.00341***

	Employment			Occupation		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
	(0.000150)	(0.000147)	(0.000144)	(0.000293)	(0.000284)	(0.000269)
Origin year (ref. 1971)						
1981	0.0150***	0.00396***	0.00211	0.0284***	-0.0211***	-0.0109***
	(0.00153)	(0.00136)	(0.00129)	(0.00200)	(0.00221)	(0.00188)
1991	0.0182***	-0.00417**	-0.00267	0.0246***	-0.0776***	-0.0405***
	(0.00185)	(0.00190)	(0.00180)	(0.00333)	(0.00359)	(0.00311)
Destination year (ref. 2001)						
2011.outyear	-0.00522***	-0.00556***	-0.0112***	0.0173***	0.0138***	-0.0500***
	(0.00177)	(0.00177)	(0.00176)	(0.00331)	(0.00321)	(0.00298)
N census points (ref. 2)						
3	0.0455***	0.0218***	0.0200***	0.0596***	0.0201**	-0.00458
	(0.00714)	(0.00566)	(0.00519)	(0.00918)	(0.00999)	(0.00964)
4	0.0781***	0.0446***	0.0371***	0.132***	0.0654***	0.00982
	(0.00744)	(0.00594)	(0.00547)	(0.00933)	(0.0101)	(0.00972)
5	0.0990***	0.0640***	0.0542***	0.152***	0.0756***	0.0212**
	(0.00769)	(0.00623)	(0.00575)	(0.0101)	(0.0108)	(0.0103)
N	168117	168117	168117	180000	180000	180000

* p-value<.10 ** p-value<.05 *** p-value<.01. Robust (clustered) standard errors in parentheses
Population: Individuals between 20 and 45 years old
Source: Authors' own calculations based on ONS-LS

Table S4: Labour market outcomes. Women. AME.

	Activity			Employment			Occupation		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Ethnic group (ref. white British)									
Indian	0.0402***	0.0626***	-0.00249	-0.00678	0.00279	-0.0132**	0.106***	0.176***	0.0298***
	(0.00926)	(0.00830)	(0.0105)	(0.00519)	(0.00448)	(0.00583)	(0.0123)	(0.0122)	(0.00966)
Pakistani	-0.232***	-0.146***	-0.191***	-0.0517***	-0.0212***	-0.0354***	-0.0925***	0.0155	-0.0514***
	(0.0154)	(0.0141)	(0.0136)	(0.00981)	(0.00723)	(0.00846)	(0.0131)	(0.0159)	(0.0123)
Bangladeshi	-0.227***	-0.0692***	-0.154***	-0.0705***	-0.00726	-0.0380***	-0.123***	0.0576**	-0.0446**
	(0.0244)	(0.0198)	(0.0198)	(0.0158)	(0.00806)	(0.0121)	(0.0203)	(0.0291)	(0.0194)
Caribbean	0.0471***	0.0837***	0.0293**	-0.0498***	-0.0177**	-0.0201***	0.0356**	0.138***	0.0243*
	(0.0116)	(0.00934)	(0.0122)	(0.0108)	(0.00757)	(0.00777)	(0.0167)	(0.0174)	(0.0141)
Education (ref. level 1)									
No education			-0.217***			-0.0489***			-0.106***
			(0.00547)			(0.00412)			(0.00316)
Other			-0.000707			0.00770			-0.0239***
			(0.00824)			(0.00502)			(0.00711)
Level 2			0.0584***			0.0172***			0.0639***
			(0.00344)			(0.00215)			(0.00345)
Level 3			0.116***			0.0324***			0.149***
			(0.00386)			(0.00220)			(0.00463)
Level 4+			0.135***			0.0343***			0.461***
			(0.00340)			(0.00206)			(0.00409)
Family composition (single, no child)									
Partner, no child			-0.0408***			0.0219***			0.00674**
			(0.00275)			(0.00169)			(0.00340)
Single, with child			-0.166***			-0.0439***			-0.102***
			(0.00403)			(0.00320)			(0.00455)

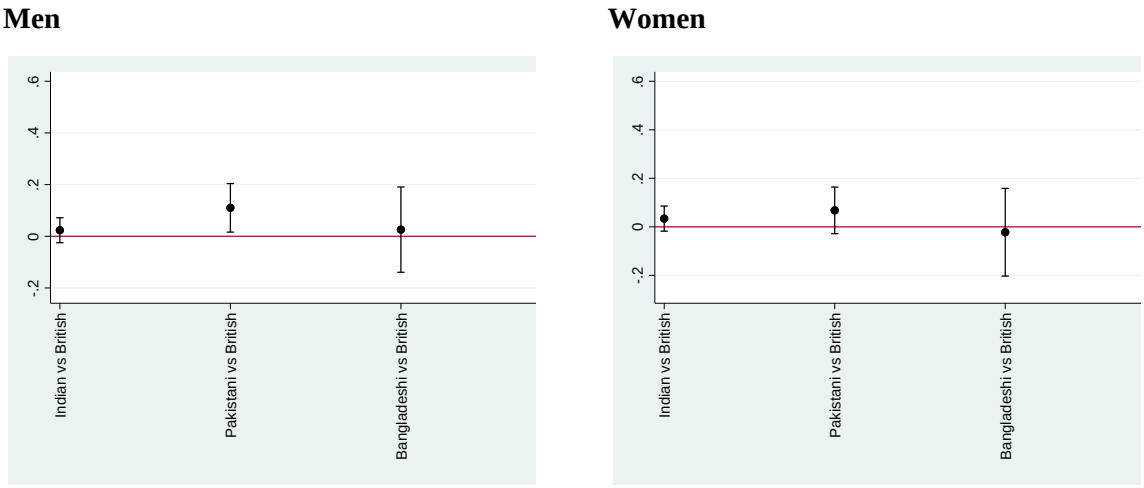
	Activity			Employment			Occupation		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Partner, with child			-0.134***			0.0136***			-0.0705***
			(0.00342)			(0.00204)			(0.00373)
Parental social class (ref. manual)									
Not codeable/No earners in hh		-0.0610***	-0.0365***		-0.0148***	-0.00971***		-0.0155***	-0.00503
		(0.00481)	(0.00408)		(0.00261)	(0.00231)		(0.00553)	(0.00525)
Routine non-manual		0.0366***	0.0131***		0.00526***	0.000968		0.0586***	0.0223***
		(0.00305)	(0.00286)		(0.00168)	(0.00165)		(0.00375)	(0.00325)
Bourgeoisie		0.00633	-0.00258		0.00363*	0.00176		0.0160***	0.00367
		(0.00400)	(0.00359)		(0.00218)	(0.00207)		(0.00441)	(0.00393)
Service class		0.0440***	-0.00415		0.0110***	0.00191		0.138***	0.0379***
		(0.00309)	(0.00305)		(0.00167)	(0.00176)		(0.00381)	(0.00324)
Tenure (ref. owner)									
Social rent		-0.0645***	-0.0188***		-0.0211***	-0.0115***		-0.105***	-0.0319***
		(0.00302)	(0.00272)		(0.00171)	(0.00161)		(0.00346)	(0.00314)
Private rent		-0.0270***	-0.00386		-0.00910***	-0.00397*		-0.0527***	-0.0139***
		(0.00385)	(0.00358)		(0.00211)	(0.00204)		(0.00464)	(0.00404)
Number of cars (ref. none)									
1 car		0.0305***	0.0124***		0.0145***	0.00957***		0.0471***	0.0205***
		(0.00279)	(0.00255)		(0.00164)	(0.00156)		(0.00338)	(0.00299)
2+ cars		0.0395***	0.0150***		0.0191***	0.0135***		0.0741***	0.0359***
		(0.00392)	(0.00366)		(0.00216)	(0.00210)		(0.00457)	(0.00400)
Number of persons per room (ref. 1)									
Over 1.5 ppp		-0.0535***	-0.0145**		-0.0168***	-0.00843**		-0.0556***	-0.0151*
		(0.00695)	(0.00585)		(0.00448)	(0.00375)		(0.00788)	(0.00787)
1.5 ppp		-0.0195**	0.00518		-0.00897*	-0.00329		-0.0344***	-0.00831
		(0.00918)	(0.00771)		(0.00535)	(0.00473)		(0.0110)	(0.0106)

	Activity			Employment			Occupation		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Over 1 but less than 1.5 ppp		-0.0254***	-0.00933***		-0.00939***	-0.00517**		-0.0333***	-0.0117***
		(0.00391)	(0.00343)		(0.00233)	(0.00211)		(0.00463)	(0.00423)
Over 0.75 but less than 1 ppp		0.0173***	0.00455		0.00808***	0.00565***		0.0221***	0.00456
		(0.00305)	(0.00278)		(0.00169)	(0.00162)		(0.00368)	(0.00321)
0.75 ppp		0.0176***	0.00204		0.00328	0.000116		0.0304***	0.00470
		(0.00541)	(0.00509)		(0.00292)	(0.00289)		(0.00659)	(0.00571)
Over 0.5 but less than 0.75 ppp		0.0264***	0.00284		0.0104***	0.00614***		0.0572***	0.0161***
		(0.00318)	(0.00295)		(0.00175)	(0.00171)		(0.00380)	(0.00331)
0.5 ppp		0.0288***	-0.00378		0.0121***	0.00627**		0.0826***	0.0218***
		(0.00480)	(0.00467)		(0.00250)	(0.00260)		(0.00578)	(0.00485)
Less than 0.5 ppp		0.0241***	-0.0150**		0.00768**	0.000111		0.0975***	0.0201***
		(0.00602)	(0.00606)		(0.00320)	(0.00345)		(0.00721)	(0.00592)
Carstairs quintiles (ref. Q1: less deprivation)									
Carstairs Q2		-0.00150	0.00460		-0.000512	0.000752		-0.00916**	0.00239
		(0.00325)	(0.00313)		(0.00180)	(0.00185)		(0.00372)	(0.00317)
Carstairs Q3		-0.00536	0.00605*		-0.00426**	-0.00195		-0.0218***	-0.00349
		(0.00336)	(0.00321)		(0.00186)	(0.00190)		(0.00390)	(0.00332)
Carstairs Q4		-0.0123***	0.00559*		-0.00696***	-0.00310		-0.0287***	-0.00314
		(0.00344)	(0.00326)		(0.00192)	(0.00193)		(0.00407)	(0.00348)
Carstairs Q5		-0.0322***	-0.00354		-0.0121***	-0.00539***		-0.0482***	-0.00898**
		(0.00372)	(0.00347)		(0.00207)	(0.00203)		(0.00439)	(0.00382)
Age in destination									
Age	-0.00144***	-0.00155***	0.00271***	0.00106***	0.00102***	0.00141***	0.00228***	0.00154***	0.00429***
	(0.000241)	(0.000237)	(0.000239)	(0.000150)	(0.000147)	(0.000153)	(0.000294)	(0.000288)	(0.000269)
Origin year (ref. 1971)									
1981	-0.00130	-0.0197***	-0.00678***	0.00336***	-0.00396***	-0.00293***	0.0199***	-0.0231***	-0.00485***

	Activity			Employment			Occupation		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
	(0.00164)	(0.00172)	(0.00161)	(0.00114)	(0.00108)	(0.00106)	(0.00184)	(0.00203)	(0.00174)
1991	0.0210***	-0.0195***	0.00412	0.00810***	-0.00746***	-0.00406**	0.0271***	-0.0625***	-0.0259***
	(0.00260)	(0.00302)	(0.00274)	(0.00149)	(0.00166)	(0.00160)	(0.00305)	(0.00325)	(0.00284)
Destination year (ref. 2001)									
2011.outyear	0.0695***	0.0682***	0.0256***	-0.00882***	-0.00824***	-0.0144***	0.0403***	0.0430***	-0.0293***
	(0.00271)	(0.00270)	(0.00273)	(0.00177)	(0.00176)	(0.00180)	(0.00332)	(0.00325)	(0.00299)
Number of census points (ref. 2)									
3	0.124***	0.0790***	0.0433***	0.0390***	0.0214***	0.0133***	0.0938***	0.0516***	0.0151
	(0.0109)	(0.00963)	(0.00831)	(0.00703)	(0.00568)	(0.00494)	(0.00878)	(0.00978)	(0.00961)
4	0.150***	0.0933***	0.0469***	0.0561***	0.0340***	0.0219***	0.135***	0.0788***	0.0286***
	(0.0113)	(0.00997)	(0.00861)	(0.00744)	(0.00604)	(0.00528)	(0.00893)	(0.00997)	(0.00976)
5	0.165***	0.105***	0.0634***	0.0617***	0.0396***	0.0281***	0.101***	0.0433***	0.0191*
	(0.0118)	(0.0106)	(0.00923)	(0.00786)	(0.00647)	(0.00570)	(0.00971)	(0.0107)	(0.0104)
N	188.254	188.254	188.254	151.559	151.559	151.559	188.254	188.254	188.254

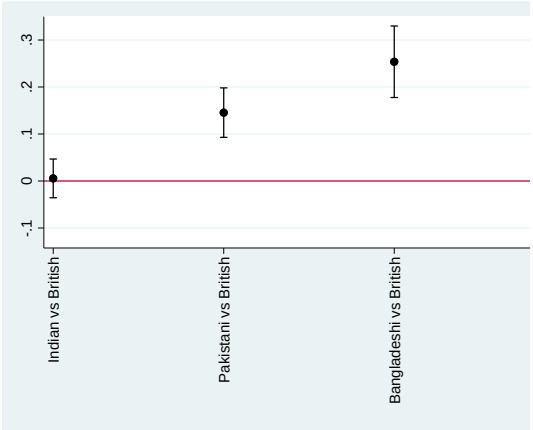
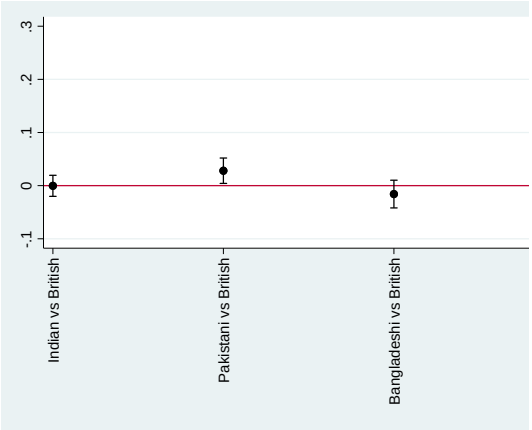
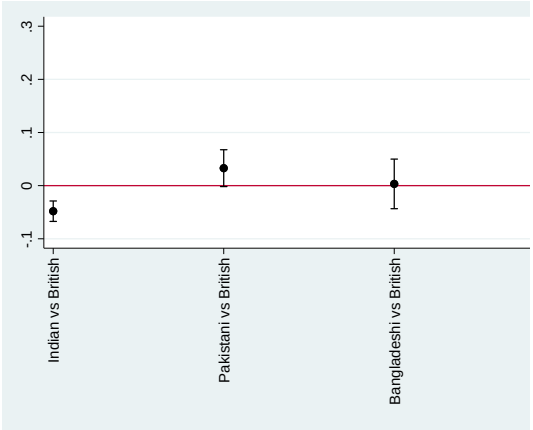
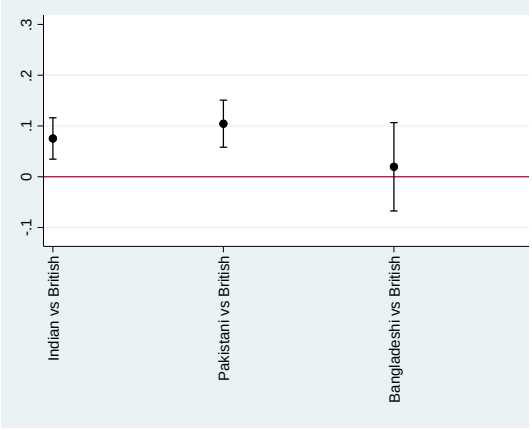
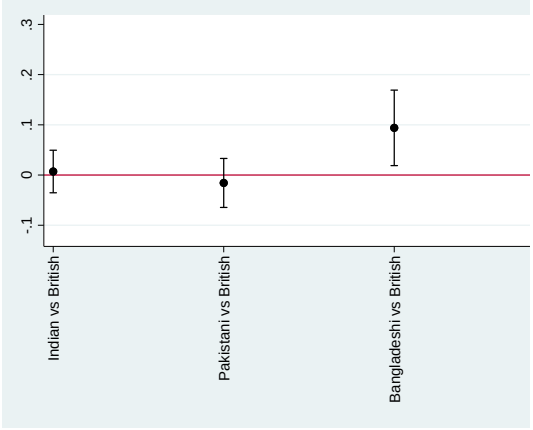
* p-value<.10 ** p-value<.05 *** p-value<.01. Robust (clustered) standard errors in parentheses
Population: Individuals between 20 and 45 years old
Source: Authors' own calculations based on ONS-LS

Figure S1: Contrasts: effect of having parents from the service class (vs. manual) on the probability of attaining of a university degree.



Controls include age, origin and destination years, number of census points, parental social class, tenancy, number of cars, number of persons per room and neighbourhood deprivation. CI: 90%.
Population: Individuals between 20 and 45 years old
Source: Authors' own calculations based on ONS-LS

Figure S2: Contrasts: effect of a university degree (vs. level 1 or less) on the probability of being active (women only), of being employed and of having a professional/managerial occupation.

Men	Women
Activity	
	
Employment	
	
Occupation	
	

Controls include age, origin and destination years, number of census points, parental social class, tenancy, number of cars, number of persons per room and neighbourhood deprivation. CI: 90%.
Population: Individuals between 20 and 45 years old

Source: Authors' own calculations based on ONS-LS

Exploring changes over time

We argued in the main text that studying labour market outcomes among those with a university degree is a better way to test how unobserved advantages might translate into the labour market; a similar argument can be made about more recent cohorts. Integration policies have improved in the past decades (Cheung & Heath, 2007; Heath & Yu, 2005), and one would also expect some replacement in cohorts, with younger cohorts doing better than older cohorts. This section compares the labour market outcomes of 20 to 45 year old individuals in 2001 and in 2011, with the expectation of finding a better relative position of ethnic minorities in the most recent year.[5] For this purpose, we added interactions between year and ethnic group in our models (tables available upon request), and created predicted values shown in Tables S5 (men) and S6 (women). We indicate statistically significant interactions with a star (*), meaning that the effect of year is different between a certain ethnic minority group and white British individuals. Contrasts are shown in Figure S3.

In 2011 employment probabilities became more similar across white British, Pakistani and Caribbean men. The situation of Bangladeshis and Indians compared to white British individuals did not converge further. The relative position of most groups in terms of their probability of achieving a professional/managerial occupation has not changed significantly between both years. An exception is Caribbean men, who in 2011 seemed to be doing better relative to white British. Among women, the results show no relative change in most cases. Pakistanis and Bangladeshis are the only exception: they are more likely to be employed in 2011 and Pakistanis were also more likely to attain high status occupations. Being the most disadvantaged groups in 2001, these results point to a reduction in ethnic penalties between both years. This would suggest that they seem to be better able to materialize unobserved characteristics (which we presume have allowed them to achieve high educational levels) in the labour market, as time goes by. Nevertheless, most ethnic minority groups, and women in particular, lag behind the white British. Also, Indian women were the only group that is in a worse-off position with respect to white British women as regards access to employment.

[5] Although this is a comparison of two cross-sections, they should be informative of average changes in the decade.

Table S5: Labour market outcomes by year: predicted values. Men.

	Employed			Prof/Manag		
	2001	2011	Diff.	2001	2011	Diff.
Predicted values						
British	94.8	93.6	-1.2	39.6	34.5	-5.0
Indian	93.8	93.6	-0.2	46.1	42.4	-3.7
Pakistani	90.1	93.1	3.0*	37.9	35.5	-2.4
Bangladeshi	94.0	94.9	0.9	49.1	40.2	-8.9
Caribbean	92.0	94.3	2.3*	37.3	37.8	0.4*

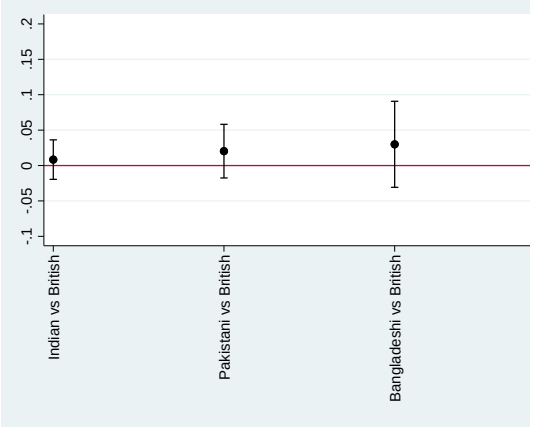
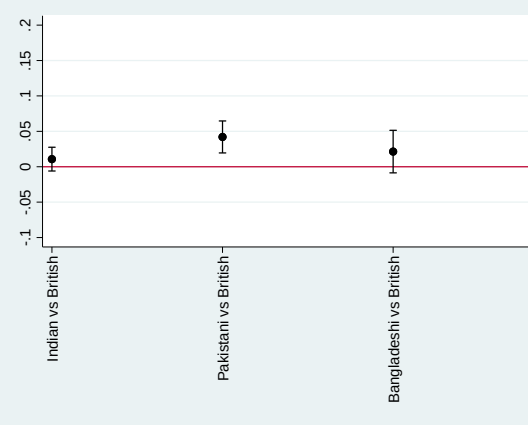
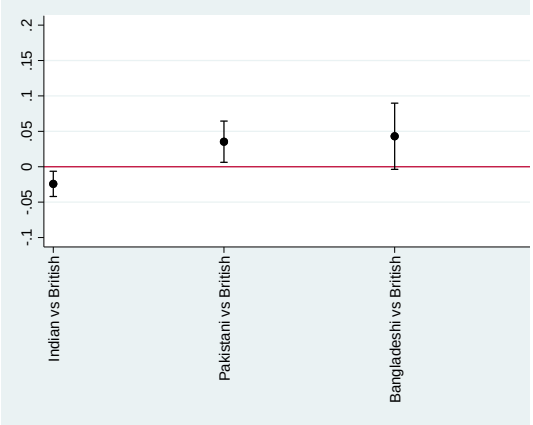
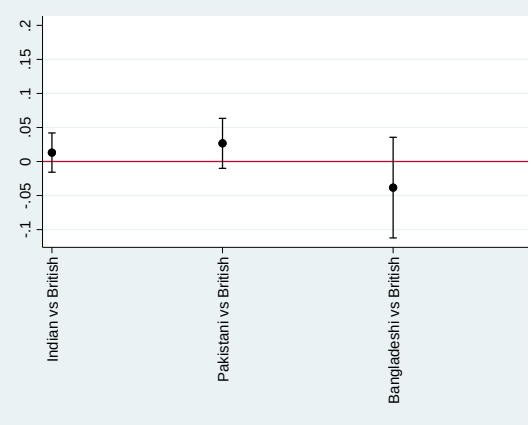
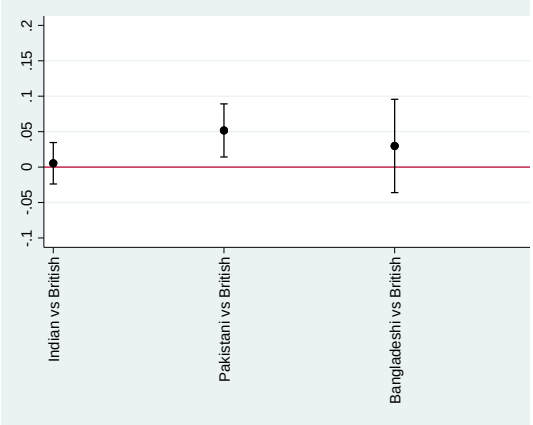
* The difference in the effect of education between the ethnic minority group and white British individuals is statistically significant at p-value<.10
Population: Individuals between 20 and 45 years old in 2010 and 2011
Source: Authors' own calculations based on ONS-LS

Table S6: Labour market outcomes by year: predicted values. Women.

	Active			Employed			Prof/Manag		
	2001	2011	Diff.	2001	2011	Diff.	2001	2011	Diff.
Predicted values									
British	79.6	82.1	2.5	96.3	94.8	-1.4	33.2	30.2	-3.0
Indian	78.9	82.3	3.4	96.3	92.5	-3.9*	35.9	33.5	-2.4
Pakistani	59.6	64.1	4.6	90.3	92.4	2.1*	24.9	27.1	2.2*
Bangladeshi	62.2	67.7	5.5	89.1	92.0	2.9*	26.7	26.7	0.0
Caribbean	82.1	85.7	3.6	94.4	92.7	-1.7	37.2	31.3	-5.9

* The difference in the effect of education between the ethnic minority group and white British individuals is statistically significant at p-value<.10
Population: Individuals between 20 and 45 years old in 2010 and 2011
Source: Authors' own calculations based on ONS-LS

Figure S3: Contrasts: effect of destination year (2011 vs. 2001) on the probability of being active (women), of being employed and of having a professional/managerial occupation.

Men	Women
Activity	
	
Employment	
	
Occupation	
	

Controls include age, origin and destination years, number of census points, parental social class, tenancy, number of cars, number of persons per room and neighbourhood deprivation. CI: 90%.
Population: Individuals between 20 and 45 years old
Source: Authors' own calculations based on ONS-LS