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# Examining the relationship between ethnicity, school attainment and higher education participation in England

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## ABSTRACT

Analyses of administrative data have revealed that during the 1990s and early twenty-first century, young people in England from ethnic minority backgrounds appeared to have a greater propensity to participate in higher education than their white British counterparts. This paper presents the results of an analysis of linked administrative data for the entire cohort of English school pupils who took their GCSE examinations in 2015 ( $n = 565,169$ ) to further investigate recent trends in HE participation by ethnicity. In line with previous research, school pupils from almost all ethnic minority backgrounds were found to be more likely to progress to degree-level study by the age of 19 than those of white British ethnicity. Large gaps in the likelihood of HE participation by ethnicity could not be explained by other confounding variables such as prior attainment or socio-economic background. However, gaps in HE participation by ethnicity were relatively narrow for those with higher levels of school attainment but were very wide for those with below-average school attainment. Unlike their white British counterparts, lower attaining school pupils from ethnic minority backgrounds appear to have a strong inclination towards degree-level study, as opposed to possible alternative pathways.

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## Introduction

There now exists several decades' worth of data which illustrates that there is considerable variation by ethnicity in the likelihood of young people in England participating in HE (Bolton and Lewis 2023; Crawford and Greaves 2015; Gorard 2008; NCIHE 1997). Furthermore, published analyses of data so far reveal that disparities in HE access by ethnicity cannot typically be attributed to other confounding variables such as ethnic disparities in school attainment or average socioeconomic differences between members of different ethnic groups (Crawford and Greaves 2015; Richardson, Mittelmeier, and Rienties 2020).

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Disparities in access to HE matter because on average university graduates experience different financial and non-financial outcomes throughout adulthood when compared to their non-graduate counterparts. For example, the fact that graduates enjoy an average earnings premium when compared to those without a degree is well-established (Boero et al. 2019; Britton et al. 2016) and graduates on average tend to enjoy a range of favourable non-financial outcomes such as a longer life expectancy, greater civic engagement and a reduced likelihood of committing crime (Brennan, Durazzi, and Séné 2013). On the other hand, a minority of university graduates are forecast to end up financially worse off as a result of their HE participation (Britton et al. 2020).

This paper presents a new analysis of linked government administrative data. The data used is from both the Department for Education's National Pupil Database and the Higher Education Statistics Agency (HESA). The analysis will seek to answer the following two research questions:

- (1) To what extent does ethnicity predict the likelihood of a young person progressing to degree-level study in England, both before and after school attainment and other personal characteristics have been controlled for statistically?
- (2) To what extent does ethnicity predict the likelihood of a young person progressing to a more selective university in England, both before and after school attainment and other personal characteristics have been controlled for statistically?

The other personal characteristics referred to in these research questions are gender, free school meals eligibility and neighbourhood of residence.

This paper will begin by reviewing existing literature concerning disparities in access to HE by ethnicity. There will be a consideration of the nature of disparities in HE participation by ethnicity revealed in existing research so far, how these disparities might be explained, what the implications of these disparities might be and how they may drive other ethnic inequalities. Results of the present administrative data analysis will then be presented, before the article concludes with a discussion and suggestions for further research.

## Literature review

### *Trends in access to HE by ethnicity*

Efforts to try to gauge the representation of students from ethnic minority backgrounds in HE date back to at least the 1990s, when the 'Dearing Report' considered the issue of disparities in access to HE by ethnicity (NCIHE 1997). It was observed at this point that young people from ethnic minority backgrounds tended to be overrepresented in HE relative to their proportion within the wider population, however it was also noted that a greater proportion of ethnic minority students tended to be concentrated within some of the less selective former polytechnic universities formed in 1992 (NCIHE 1997). In the early 21<sup>st</sup> century, Gorard (2008) sought to better understand the representation of different ethnic groups within HE by using administrative data from the Higher Education Statistics Agency (HESA), though he found that this was not an especially

straightforward task given that ethnicity data was missing for a large proportion of students. Nonetheless, Gorard came to the general conclusion that ‘existing figures give us no reason to assume that ethnic minorities, in general, are under-represented in the HE systems of England or Wales’ (Gorard 2008, 428–9).

One development which improved our understanding of disparities in HE participation by ethnicity was the linking of the Government’s National Pupil Database (which contains details of the attainment and characteristics of all state school pupils in England) with HESA administrative records concerning all UK undergraduate students. Such linking enabled the tracking of individual pupils through the school system and into HE. This has meant that, for each ethnic group, it is possible to observe the proportion of school pupils within the group who end up in HE by the age of 19. These ethnicity access statistics for HE were first published in 2018 (Department for Education 2018) and HE progression rates by ethnicity have been provided for each cohort of young people in England starting with those who sat their GCSE examinations in 2006 (GCSEs are compulsory examinations taken by the vast majority of young people at the end of the academic year during which they turn 16 years old). The statistics have since been updated annually as new cohorts of data become available. Recent DfE figures for those school pupils who sat their GCSE examinations in 2018 reveal considerable disparities in access to HE by major ethnic group, with large variation in the proportions of Chinese (83.8%), Asian (67.8%), black (63.5%), mixed ethnicity (51.5%) and white (41.8%) school pupils progressing to HE (Department for Education 2023). A similar trend can also be observed with respect to the proportions progressing to more selective ‘high-tariff’ universities where considerable variation can be seen in progression rates for Chinese (46.0%), Asian (19.0%), black (13.3%), mixed ethnicity (15.7%) and white (12.3%) school pupils (Department for Education 2023). However, simply looking at progression rates for these ‘major’ ethnic group risks masking the low progression rates of members of certain ‘minor’ ethnic groups. For example, black Caribbean pupils progress to high-tariff HE at a considerably lower rate (6.7%) than those of white British ethnicity (12.1%) (Department for Education 2023).

### *What might explain disparities in HE access by ethnicity?*

One possible driver of HE progression disparities by ethnicity might be school-level attainment, given that there is known to be variation in the average level of school attainment by ethnicity (Department for Education 2021a). However, it is clear from even a cursory look at school attainment statistics that there is not a straightforward relationship between ethnicity, attainment and progression to HE. For example, black school pupils achieve slightly lower GCSE grades on average than their white counterparts (Department for Education 2021a), yet they are nonetheless more likely than white pupils to progress to HE by the age of 19 (Department for Education 2023). As Richardson, Mittelmeier, and Rienties (2020) put it, ‘differences in higher education participation across ethnic groups came about *despite* the differences in their attainment at Key Stage 4, rather than because of them’ (p. 352, authors’ emphasis).

Just as HE participation disparities by ethnicity are not necessarily explained by attainment disparities, it appears that they also cannot easily be attributed to other confounding variables such as average differences in socioeconomic background. In

their own study of large sets of government administrative data, Crawford and Greaves (2015) analysed linked NPD and HESA data for the cohorts of young people in England who sat their GCSE examinations in 2003 and 2008. The authors found that large ethnic disparities in HE participation persisted even after a range of background characteristics including attainment and socioeconomic status were controlled for statistically. It was observed that members of most ethnic minority groups were around 15 to 25% points more likely to progress to HE than otherwise similar white British pupils (Crawford and Greaves 2015).

Another possible driver of ethnic disparities in HE access might be the admissions process itself. Some evidence suggests that students from ethnic minority backgrounds could be disadvantaged in the HE admissions process, especially when they apply to more selective universities. For example, Boliver (2013) analysed data concerning HE applicants who applied to prestigious universities between 1996 and 2006 and observed that applicants from ethnic minority backgrounds applying to the selective 'Russell Group' of universities tended to be less likely to receive an offer of admission compared to their equivalently qualified white counterparts. Boliver raised a concern that access to more selective universities by ethnicity did not appear to be fair and concluded that 'for those from Black, Pakistani and Bangladeshi backgrounds, the unfairness seems to stem entirely from some form of differential treatment during the admissions process by Russell Group universities' (Boliver 2013, 358). On the other hand, some other evidence suggests that there are elements of the HE admissions process which may in fact favour ethnic minority applicants. A recent analysis of application and attainment data by Leckie and Maragkou (2023) concluded that, compared to students of white ethnicity, ethnic minority students tended to receive more generous predictions of examination grades from their teachers, something which may increase the likelihood of an offer of a university place following an application (universities in the UK initially make offers to applicants on the basis of predicted grades rather than achieved grades as these are not typically known at the point of application).

Unlike in the United States (until recently), universities in the UK have not explicitly factored ethnicity into the admissions decisions process through 'affirmative action' policies (Smith 2018), however UK universities often do use 'contextual admissions' policies which focus on other factors such as socioeconomic disadvantage, neighbourhood of residence and whether applicants have been looked after in local authority care (Boliver et al. 2017; Boliver, Gorard, and Siddiqui 2021). This creates the possibility of ethnicity being factored in indirectly in the UK admissions process, insofar as students from ethnic minority backgrounds may be more likely to be flagged as 'contextual' applicants given that they appear to be more likely to be from socioeconomically disadvantaged backgrounds (Crawford and Greaves 2015). Once flagged as 'contextual', applicants can benefit from certain adjustments such as lower A-level (or equivalent) entry requirements for places on undergraduate courses (Boliver et al. 2017).

Some data suggests that, compared to white British students, ethnic minority students appear to be more likely to take part in widening participation outreach programmes which are designed to increase participation in HE. For example, Barkat (2019) provides data on an outreach programme delivered at the University of Birmingham between 2010 and 2016 and reports that 55.3% of all participants were from an ethnic minority background. Similarly, Williams and Mellors-Bourne (2019) provide data on the

'Realising Opportunities' outreach programme delivered across a wide consortium of different universities, which reveals that over a nine-year period from 2009 to 2018, 47% of all programme participants were from an ethnic minority background. The high participation of ethnic minority students in outreach programmes may reflect the recent policy focus on driving up HE participation for ethnic minority students. For example, in 2015 the Government set a target to increase the number of ethnic minority students participating in higher education by 20% by 2020 (BIS 2015).

Members of certain ethnic groups appear to be much more likely than others to remain living in their family home whilst studying at university, thereby becoming 'commuter students' who travel between their family home and university from day to day (Maguire and Morris 2018). An analysis undertaken by Donnelly and Gamsu (2018) found that 67.1% of Pakistani students and 72.5% of Bangladeshi students were commuting during the 2014–15 academic year, in contrast with 35.3% of Indian students and 20.5% of white students. Given that staying in the family home restricts the choice of university to those within commuting distance, this could have the effect of restricting access to a more selective university. Compared to those of white British ethnicity, young people from ethnic minority backgrounds appear to be more likely to live in large cities, where many selective universities are based (Hamnett 2012). Nonetheless, a wider range of selective universities are still available to those who are geographically mobile. Related to this, some young people may be reluctant to access traditional student loan products due to religious reasons – an issue which predominantly affects Muslim students (Pollard et al. 2019). This may further increase the tendency of members of certain ethnic groups to commute to university, given that this may reduce the total cost of the overall university experience.

### *Higher education, ethnicity and social mobility*

University graduates tend to enjoy higher salaries on average throughout their working lives when compared to their non-graduate counterparts (Boero et al. 2019; Social Mobility Commission 2023; Walker and Zhu 2013). However, reference to *average* earnings alone can obscure the fact that some graduates do not benefit financially from their university studies. Using data concerning cohorts born in the mid-1980s, Britton et al. (2020) forecast that 20% of graduates in England in this age group are likely to be financially worse off as a result of their university participation since their graduate earnings premium (if they achieve one) is not likely to offset the opportunity cost of taking time out of the workforce in order to attend university. Given that the graduate earnings premium appears to be reduced for those who study at less selective universities (Belfield et al. 2018; Walker and Zhu 2017), graduates of these universities may be at greater risk of losing out financially as a result of their HE participation. Similarly, young people with lower school attainment seem to experience lower graduate earnings premia. For example, figures from the Department for Education show that university graduates who did not achieve at least 5 A\* to C grades at GCSE level tend to have earned less money in total by age 30 when compared to those with the same attainment who did not go to university (Department for Education 2021b).

When it comes to the connection between HE participation and labour market outcomes, there is a certain paradox with respect to ethnicity. Whilst it was noted

above that the overrepresentation of those from ethnic minority backgrounds in the HE system is likely to date back to at least the 1990s, many ethnic minority groups (such as the black, Pakistani or Bangladeshi ethnic groups) still experience lower average earnings today than the white British ethnic group (Office for National Statistics 2023). Those groups of workers with higher average earnings than the white British group (such as Chinese and Indian workers) tend to be those which are well represented in more selective high-tariff universities, rather than those that are well represented in HE *per se*.

A recent wide-ranging review of ethnic disparities across a number of different outcomes in the UK was carried out by the Commission on Race and Ethnic Disparities (2021). Considering the issue of HE access in particular, the commission's published report implied that the high participation rates in degree-level study seen in ethnic minority communities could potentially be counter-productive for these communities, suggesting that there was 'an exaggerated respect for the academic route as the only path to success and economic safety on the part of ethnic minorities' (Commission on Race and Ethnic Disparities 2021, 102). It was suggested that members of ethnic minority communities might benefit from considering alternatives to the HE pathway, with the commission asserting that 'it is vital that ethnic minority young people do not see their future only through a higher education lens' (Commission on Race and Ethnic Disparities 2021, 100). In their response to the commission's report, the Government pledged to take action to increase participation in apprenticeships among young people from ethnic minority backgrounds (HM Government 2022). However, when considering the choices made by those from ethnic minority backgrounds at age 18, the commission appeared not to consider the possible influence of racial discrimination in the workforce. Given that there is evidence that people from ethnic minority backgrounds face discrimination in the labour market (Heath and Di Stasio 2019), it is possible that many young people from ethnic minority backgrounds perceive becoming as well-qualified as possible to be a necessary strategy in order to counteract the effects of this discrimination and achieve upwards social mobility (Modood 2004). Conversely, young people of white British ethnicity may feel that they have greater latitude to choose not to go to university, since they are unencumbered by the threat of discrimination within the labour market in the future.

## Methods

### *Data gathering*

Data was accessed concerning the entire cohort of school pupils in England who sat their GCSE examinations in 2015 ( $n = 622,519$ ). This data was sourced from the Department for Education's National Pupil Database (NPD). In particular, the Key Stage 4 dataset within the NPD was accessed, which contains details of pupils' attainment in examinations at age 16. For state school pupils, details of pupils' ethnicity and other personal characteristics such as their age, gender, school type, home postcode and free school meals (FSM) eligibility were also available. School pupils in England are eligible for FSM if their family meets certain criteria such as being in receipt of means-tested benefits (HM Government *n.d.*). FSM eligibility is therefore seen as a proxy for socioeconomic



disadvantage and research suggests that it correlates well with other measures of socioeconomic status (Ilie, Sutherland, and Vignoles 2017).

Additionally, data from the HESA undergraduate student record was accessed. This contains details of all undergraduate students enrolled at UK universities. The NPD and HESA datasets were both accessed together using the Office for National Statistics Secure Research Service. Both datasets were supplied with pseudonymous pupil matching references which enabled them to be matched together. Two years of HESA data for the undergraduate student populations in the 2017/18 ( $n = 1,556,322$ ) and 2018/19 ( $n = 1,598,574$ ) academic years were used in this matching. The timeframe of HESA data used enabled the tracking of the NPD pupils over time such that it could be observed whether they had progressed to HE either by age 18 or by age 19 (and also which institution they had progressed to). By tracking through to age 19, students who had taken a year out of the education system before university (perhaps to take a 'gap year') could be included in the analysis. This was a necessary step to take to avoid bias given that some evidence suggests that those young people who choose to take a gap year may not be representative of the wider population of young people (Jones 2004).

The pupil postcode variable in the NPD dataset was used to merge in additional data concerning pupils' neighbourhood of residence. Two new variables were introduced into the dataset and these were a measure of the socioeconomic deprivation of pupils' neighbourhoods of residence and a measure of the rate of young HE participation in pupils' neighbourhoods of residence. The former was introduced using the Index of Multiple Deprivation (IMD) measure which is the official measure of relative deprivation in England and is drawn together using data concerning neighbourhood levels of income, employment, health deprivation and disability, education skills and training, crime, barriers to housing and living environment (Ministry of Housing Communities & Local Government 2019). The latter was introduced using the 'POLAR' classification, which stands for Participation of Local Areas. This measure is overseen by the Office for Students, who calculate the proportion of young people in each neighbourhood (officially Middle-Layer Super Output Area) who progress to HE by the age of 19. Each neighbourhood is then assigned a participation quintile depending on the level of HE participation in the area (Office for Students 2020a). Postcode 'lookup' files were downloaded from both the Office for National Statistics and Office for Students websites and these were used to introduce the new variables into the dataset (Office for National Statistics 2016; Office for Students 2020b). The IMD variable was on a ten point scale from 1 (most disadvantaged) to 10 (most advantaged), while the POLAR variable was on a five-point scale from 1 (low HE participation area) to 5 (high HE participation area).

When it came to pupil attainment, two different attainment measures were selected from the NPD in an attempt to capture details concerning not just level of attainment but also type of attainment. The first attainment measure used was a Key Stage 4 points score measure based on performance in pupils' 8 highest graded GCSE (or equivalent) qualifications. Additionally, the 'English Baccalaureate' attainment measure was also used which offered an indication of the type of qualifications that pupils had studied for as it shows whether or not pupils have achieved a good pass in a range of more traditional academic subjects. Pupils are considered to have met the criteria for the English Baccalaureate if they achieve at least a grade C in English language, English literature, mathematics, at least two science qualifications, a language and either history or



geography. Previous research has suggested that there is an association between studying for more traditional academic subjects and progression to HE, especially with respect to more selective universities (Dilnot 2016). A third attainment variable was derived by using the points score measure to assign all pupils to one of 5 equally-sized attainment quintiles when ranked in order of points score. Attainment at age 16 was used as this is the last point at which all members of a given cohort must undertake compulsory assessment. Previous research has also shown that Key Stage 4 attainment tends to be more predictive of HE participation than Key Stage 5 attainment (Crawford et al. 2016), perhaps because attainment at Key Stage 5 has typically not been determined at the point at which students apply to university.

Pupils in the linked dataset were considered to have progressed to HE if they were observed as being in the ‘standard registration population’ at a HE institution at age 18 or 19. Whilst the HESA datasets revealed which institutions students were attending, no distinction is drawn in these datasets between more selective and less selective universities. To plug this gap, publicly available data was accessed from the Department for Education’s website which classifies different universities into one of three categories (‘high-tariff’, ‘medium-tariff’ or ‘low-tariff’) according to their level of selectivity (Department for Education 2020). The DfE assigns providers into these different categories by calculating a mean entry tariff of examination grades achieved by those progressing to each university, ranking the universities and then allocating them evenly across the three categories such that ‘high-tariff’ represents the top third of universities by average entry tariff (Department for Education 2021c). This data was used to merge a new variable into the linked dataset which identified students who had progressed to a high-tariff institution.

Before the analysis of the linked dataset was undertaken, some cases were first removed. Cases were removed for one of three reasons – either because the pupil was not aged 15 at the beginning of the 2014–2015 academic year ( $n = 11,506$ ) and/or the pupil had attended an independent school ( $n = 48,656$ ) and/or the case was a duplicate ( $n = 519$ ). Pupils who were not 15 were removed as these were likely to be atypical cases (for example, the pupil was taking qualifications early or late). Independent school pupils could not be used in the analysis since no data about their ethnicity was available. Of the original 622,519 cases in the NPD data 57,350 were removed in total, leaving 565,169 remaining. This reduced dataset was used to generate the descriptive statistics in the analysis. For the purposes of undertaking multivariate analyses, incomplete cases with some missing data were also removed from the dataset. Only 15,247 (or 2.7% of the remaining cases) had one or more cells of missing data, meaning that 549,922 cases were used for multivariate analyses.

Table 1 below summarises the variables that were used in the data analysis and clarifies their source.

### *Data analysis*

The data analysis proceeded in two broad stages. Firstly, descriptive statistics were produced showing what proportion of school pupils within each ethnic group had progressed to HE by age 19. Additionally, descriptive statistics were produced showing a cross-tabulation of both ethnicity and attainment quintile, such that HE progression rates for each ethnic group could be observed at each given attainment quintile. Secondly,

**Table 1.** List of variables used in the data analysis.

Variable source	Variable	Official variable name	Description
National Pupil Database	Anonymous matching reference	KS4_PupilMatchingRefAnonymous	Used to link together the NPD and HESA datasets
National Pupil Database	Age	KS4_AGE_START	Shows the age of the pupil at the start of the school year
National Pupil Database	Ethnicity	KS4_ETHNIC	Shows the pupil's ethnicity. 98 ethnicity categories are used in the NPD, these were collapsed down to 18 categories for analysis
National Pupil Database	FSM eligibility	KS4_FSM	Shows if a pupil is known to be eligible for free school meals
National Pupil Database	Gender	KS4_FEMALE	Shows whether a pupil is female. The NPD currently uses a binary male/female categorisation for gender
National Pupil Database	Postcode	KS4_PPCODE	Shows the postcode of the pupil's home address
National Pupil Database	School type	KS4_NEW_TYPE	Shows the type of school the pupil attended
National Pupil Database	Key Stage 4 points score	KS4_PTSCNEWE_PTQ_EE	Shows a points score for attainment in the pupil's 8 highest-graded GCSE (or equivalent) qualifications
National Pupil Database	Achieved English Baccalaureate	KS4_EBACC_PTQ_EE	Shows whether the pupil has met the criteria for the 'English Baccalaureate'
HESA student record	Anonymous matching reference	HE_PUPILMATCHINGREFANONYMOUS	Used to link together the NPD and HESA datasets
HESA student record	HE registration status	HE_XPSR01	Shows membership of the registered student population
HESA student record	HE institution	HE_XINSTID01	Shows which institution the student was attending
Derived variable	Attainment quintile	N/A	Places the pupil in an attainment quintile from 1 (low) to 5 (high) based on the KS4_PTSCNEWE_PTQ_EE variable
Derived variable	POLAR quintile	N/A	Shows the POLAR quintile of a pupil's area of residence from 1 (low participation area) to 5 (high participation area), derived from the KS4_PPCODE variable
Derived variable	IMD decile	N/A	Shows the IMD decile of a pupil's area of residence from 1 (most deprived) to 10 (least deprived), derived from the KS4_PPCODE variable
Derived variable	High tariff institution marker	N/A	Shows whether a student attended a 'high-tariff' university, derived from HE_XINSTID01

a regression analysis was undertaken to gauge the extent to which membership of a given ethnic group had a bearing on the likelihood of progression to HE when other variables were controlled for statistically. The dependent variable in this regression analysis was whether each pupil did (1) or did not (0) progress to HE by age 19. Since this is a dichotomous measure, the method of binary logistic linear regression was used. It should be noted that the distribution of students across the two outcomes was not even, with 38.8%

of the cohort progressing to HE and the remaining 61.2% not progressing. This imbalance should be borne in mind in the interpretation of the results.

Independent variables were entered into the regression model in a series of three blocks. In the first block, pupil ethnicity was entered into the regression model in the form of a series of dummy variables referenced against the largest white British ethnic group. In block 2, two measures of pupil attainment at age 16 were entered along with ethnicity. In the third and final block, the variables of gender, FSM eligibility, IMD decile and POLAR quintile were also entered in addition to the other variables. The sequence of variable entry was informed by a combination of theoretical importance with respect to the research questions as well as by previous research which has sought to estimate the strength of different predictors. Ethnicity was considered first given its centrality to the research questions, and this was followed by school attainment given that previous research has found that this tends to be one of the strongest predictors of HE participation (Crawford and Greaves 2015; Croll and Attwood 2013). The covariates of gender, FSM eligibility and neighbourhood of residence have also been found to be associated with the likelihood of HE participation in previous research (Crawford et al. 2016; Gorard 2008; Montacute and Cullinane 2023).

Once the analysis had been completed, it was then repeated in exactly the same manner but with the outcome of interest being progression to high-tariff universities as opposed to progression to HE in general. In this second analysis, the dependent outcome variable was whether a pupil did progress to high-tariff HE (1) or did not progress to high-tariff HE (0), either because they progressed to a lower tariff university or did not progress to degree-level study at all. Both sets of results will be reported separately. Standard errors and p-values are not reported as part of the results, given that the data represents a census of the population of interest (with only a very small proportion of missing data) as opposed to a sample.

Ethical approval for this study was granted by the relevant faculty ethics committee.

## Results

### *Ethnicity and progression to HE*

For the cohort of state school pupils in England, who sat their GCSE examinations in 2015, [Table 2](#) below shows the number and percentage of members of each ethnic group progressing to HE by age 19. [Table 3](#) then summarises the results of both the descriptive statistics analysis and regression analysis by presenting percentage point differences in the likelihood of progression to HE by ethnicity (relative to white British progression rates) both before and after other variables are controlled for statistically. Note that these figures should be interpreted as arithmetical differences in the *probability*, not odds, of HE progression. A full table of regression coefficients can be found in the [Appendix](#).

These results show that, as with studies in the literature which use earlier data, ethnicity has a substantial bearing on the likelihood of a young person progressing to HE. On the whole, young people from ethnic minority backgrounds are more likely to progress to HE than their white British counterparts, though there are three minority ethnic groups (Gypsy or Roma, Travellers of Irish heritage and mixed white and black Caribbean) which have lower HE progression rates than the white British group.

**Table 2.** Progression to HE by age 19 by ethnicity.

Ethnicity	Frequency in cohort	Frequency progressing to HE	Percentage progressing to HE
Any other Asian background	8,074	5,427	67.2
Any other black background	3,280	1,603	48.9
Any other ethnic group	7,708	4,455	57.8
Any other mixed background	7,936	3,869	48.8
Any other white background	22,254	9,937	44.7
Bangladeshi	8,041	5,033	62.6
Black African	16,580	10,785	65.0
Black Caribbean	7,508	3,070	40.9
Chinese	1,954	1,540	78.8
Gypsy or Roma	1,152	43	3.7
Indian	13,284	9,211	69.3
Pakistani	19,988	10,680	53.4
Traveller of Irish heritage	178	11	6.2
White and Asian	4,870	2,540	52.2
White and black African	2,542	1,230	48.4
White and black Caribbean	7,515	2,412	32.1
White British	417,241	143,571	34.4
White Irish	1,894	942	49.7
Information not yet obtained	3,311	1,035	31.3
Refused	2,813	1,253	44.5
Missing	7,046	697	9.9
<b>Total</b>	<b>565,169</b>	<b>219,344</b>	<b>38.8</b>

**Table 3.** Percentage point differences in the likelihood of progression to HE by ethnicity, relative to white British.

Ethnicity	Raw difference in likelihood of progression to HE, compared to white British	Difference in likelihood of progression to HE, compared to white British (attainment controls applied)	Difference in likelihood of progression to HE, compared to white British (attainment, gender, FSM eligibility and neighbourhood characteristics controlled for)
Any	+32.8pp	+22.9pp	+22.7pp
other Asian background			
Any other black background	+14.5pp	+19.3pp	+19.4pp
Any other ethnic group	+23.4pp	+19.6pp	+19.6pp
Any other mixed background	+14.4pp	+9.2pp	+9.1pp
Any other white background	+10.3pp	+9.3pp	+9.2pp
Bangladeshi	+28.2pp	+21.8pp	+22.2pp
Black African	+30.6pp	+28.2pp	+28.3pp
Black Caribbean	+6.5pp	+13.6pp	+13.4pp
Chinese	+44.4pp	+21.3pp	+21.5pp
Gypsy or Roma	-30.7pp	-5.9pp	-5.2pp
Indian	+34.9pp	+20.1pp	+19.6pp
Pakistani	+19.0pp	+20.3pp	+20.6pp
Traveller of Irish heritage	-28.2pp	-7.7pp	-6.8pp
White and Asian	+17.8pp	+7.4pp	+7.3pp

*(Continued)*

**Table 3.** (Continued).

Ethnicity	Raw difference in likelihood of progression to HE, compared to white British	Difference in likelihood of progression to HE, compared to white British (attainment controls applied)	Difference in likelihood of progression to HE, compared to white British (attainment, gender, FSM eligibility and neighbourhood characteristics controlled for)
White and black African	+14.0pp	+11.0pp	+11.3pp
White and black Caribbean	-2.3pp	+3.6pp	+3.8pp
White British	0pp	0pp	0pp
White Irish	+15.3pp	+6.1pp	+5.5pp

Large disparities in access to HE still persist once attainment at age 16 is controlled for statistically. Whilst in many cases progression disparities are reduced (often considerably) once attainment is controlled for, in some cases they in fact increase. This is because there are some ethnic groups (such as the black Caribbean group) which have both lower average levels of school attainment and also a higher rate of HE progression than the white British group. In most cases, controlling for all other variables (i.e. gender, FSM eligibility and neighbourhood characteristics) only reduces the progression disparities by a relatively small amount. In some respects, this is unsurprising – for example, it would not be expected for there to be much variation in the proportion of males and females within different ethnic groups. However, some ethnic groups are (on average) more socioeconomically disadvantaged than others, yet this does not appear to explain to a large degree disparities in HE progression rates by ethnicity.

Table 4 below provides an illustration of the relationship between ethnicity, HE progression and broader attainment level at age 16. Any percentages calculated from frequencies lower than 10 have been suppressed. It should be stressed that this table does

**Table 4.** Ethnicity and progression rates to HE by attainment quintile at age 16.

Ethnicity	Percentage progression by attainment quintile				
	1	2	3	4	5
Any other Asian background	9.4%	44.5%	69.6%	81.5%	91.8%
Any other black background	8.9%	33.3%	63.3%	76.7%	87.6%
Any other ethnic group	10.1%	39.4%	64.4%	75.6%	88.0%
Any other mixed background	3.6%	23.5%	46.9%	64.9%	86.0%
Any other white background	5.3%	23.1%	44.9%	65.0%	84.3%
Bangladeshi	9.9%	42.0%	66.4%	79.5%	91.2%
Black African	14.8%	52.1%	75.2%	83.1%	91.4%
Black Caribbean	5.6%	27.4%	52.8%	69.7%	83.3%
Chinese	9.7%	39.5%	70.2%	82.7%	93.5%
Gypsy or Roma	SUPP	SUPP	15.2%	47.1%	SUPP
Indian	7.2%	40.5%	66.3%	80.3%	91.1%
Pakistani	6.4%	38.4%	66.3%	78.0%	87.7%
Traveller of Irish heritage	SUPP	SUPP	SUPP	SUPP	SUPP
White and Asian	3.1%	21.9%	42.4%	63.5%	85.8%
White and black African	5.9%	24.2%	51.2%	65.1%	85.1%
White and black Caribbean	1.7%	14.2%	36.0%	58.0%	79.1%
White British	1.5%	9.7%	28.9%	53.0%	81.2%
White Irish	SUPP	SUPP	37.0%	65.7%	85.4%
<b>All pupils</b>	3.1%	15.3%	35.9%	58.2%	83.1%

not report the way in which students who progress to HE in each ethnic group are distributed across the five attainment quintiles (hence each row of percentages does not sum to 100%). Rather it shows, for those pupils who are both members of a given ethnic group *and* members of a given attainment quintile, what proportion has progressed to HE. For example, of those pupils who were both of Indian ethnicity and also members of attainment quintile 3, 66.3% progressed to HE by age 19 (and it can be inferred that 33.7% of such pupils did not progress to HE). As noted in the methodology section, attainment quintiles were determined across the whole pupil population, not across each ethnic group.

Table 4 illustrates that the gap in HE progression between white British pupils and ethnic minority pupils tends to be much larger among those with lower levels of school attainment. This is not to say, however, that high attaining white British pupils are more likely to progress to HE than their high attaining ethnic minority counterparts. For example, whilst 81.2% those pupils who are both white British and in attainment quintile 5 progress to HE, this figure rises to 83.3% for high attainers of black Caribbean ethnicity and 87.7% for high attainers of Pakistani ethnicity. However, if the figures for lower attainers are inspected, it can be observed that disparities in HE progression rates between white British and ethnic minority students tend to be considerably larger. For example, whilst just 9.7% of pupils who are both white British and in attainment quintile 2 progressed to HE, this figure rises to 40.5% of all Indian students and 52.1% of all black African students in this same attainment quintile. In other words, at this lower level of attainment, Indian pupils are more than 4 times as likely to progress to HE than their white British counterparts and black African pupils are more than 5 times as likely to progress to HE. This data would suggest that many young people from ethnic minority backgrounds who achieve below-average results in their examinations at age 16 often still aspire to go to university, whereas lower attainers of white British ethnicity tend to follow other pathways instead.

### ***Ethnicity and progression to selective HE***

In this section, results are presented of the analysis concerning the relationship between ethnicity and progression to more selective or 'high-tariff' universities. Table 5 below shows the frequency and proportion of each ethnic group who progressed to a high-tariff university.

The high-tariff HE progression rate of the largest white British group (9.6%) is slightly lower than the progression rate for all pupils (10.2%). This means that ethnic minority pupils (as a whole) progress to high-tariff HE at a greater rate than the white British group. However, inspection of the figures reveals that there are a number of ethnic minority groups who appear to be underrepresented in high-tariff HE. It can be observed that 7 out of the 17 ethnic minority groups are less likely to progress to high-tariff HE than the white British group, whereas only 3 of the ethnic minority groups had been less likely to progress to HE overall than the white British group. Table 6 below presents percentage point differences in the likelihood of progression to high-tariff HE by ethnicity (relative to white British progression rates) both before and after other variables are controlled for statistically.

**Table 5.** Progression to high-tariff HE by age 19 by ethnicity.

Ethnicity	Frequency	Frequency progressing to high-tariff	Percentage progressing to high-tariff
		HE	HE
Any other Asian background	8,074	1,434	17.8
Any other black background	3,280	245	7.5
Any other ethnic group	7,708	1,029	13.3
Any other mixed background	7,936	1,159	14.6
Any other white background	22,254	2,741	12.3
Bangladeshi	8,041	813	10.1
Black African	16,580	1,830	11.0
Black Caribbean	7,508	354	4.7
Chinese	1,954	717	36.7
Gypsy or Roma	1,152	<10	SUPP
Indian	13,284	2,725	20.5
Pakistani	19,988	1,742	8.7
Traveller of Irish heritage	178	<10	SUPP
White and Asian	4,870	876	18.0
White and black African	2,542	289	11.4
White and black Caribbean	7,515	479	6.4
White British	417,241	39,980	9.6
White Irish	1,894	362	19.1
Information not yet obtained	3,311	321	9.7
Refused	2,813	374	13.3
Missing	7,046	210	3.0
<b>Total</b>	<b>565,169</b>	<b>57,687</b>	<b>10.2</b>

**Table 6.** Percentage point differences in the likelihood of progression to high-tariff HE by ethnicity, relative to white British.

Ethnicity	Raw difference in likelihood of progression to high-tariff HE, compared to white British	Difference in likelihood of progression to high-tariff HE, compared to white British (attainment controls applied)	Difference in likelihood of progression to high-tariff HE, compared to white British (attainment and other personal and area characteristics controlled for)
Any other Asian background	+8.2pp	+1.4pp	+1.5pp
Any other black background	-2.1pp	+1.5pp	+2.0pp
Any other ethnic group	+3.7pp	+1.2pp	+1.4pp
Any other mixed background	+5.0pp	+1.3pp	+1.3pp
Any other white background	+2.7pp	+1.0pp	+1.1pp
Bangladeshi	+0.5pp	-0.9pp	-0.4pp
Black African	+1.4pp	+2.2pp	+2.8pp
Black Caribbean	-4.9pp	-0.7pp	-0.3pp
Chinese	+27.1pp	+4.2pp	+4.4pp
Gypsy or Roma	SUPP	+0.8pp	+1.3pp
Indian	+10.9pp	+1.3pp	+1.2pp

*(Continued)*



**Table 6.** (Continued).

Ethnicity	Raw difference in likelihood of progression to high-tariff HE, compared to white British	Difference in likelihood of progression to high-tariff HE, compared to white British (attainment controls applied)	Difference in likelihood of progression to high-tariff HE, compared to white British (attainment and other personal and area characteristics controlled for)
Pakistani	-0.9pp	+0.5pp	+1.0pp
Traveller of Irish heritage	SUPP	-5.5pp	-5.1pp
White and Asian	+8.4pp	+1.3pp	+1.1pp
White and black African	+1.8pp	+0.7pp	+1.1pp
White and black Caribbean	-3.2pp	-0.3pp	+0.1pp
White British	0pp	0pp	0%
White Irish	+9.5pp	+2.8pp	+2.5pp

Unlike with progression to HE in general, disparities in progression to high-tariff universities can largely be accounted for once various confounding variables are taken into consideration and controlled for statistically. Furthermore, many ethnic disparities in access to high-tariff HE can be accounted for primarily by disparities in school attainment, while other factors such as FSM eligibility appear to have little explanatory power. For example, whilst Indian pupils are 10.9pp more likely to progress to high-tariff HE than their white British counterparts, they are only in fact 1.3pp more likely to progress once their higher average attainment is accounted for. Applying other controls such as FSM eligibility has little effect, reducing the disparity only marginally to 1.2pp.

A breakdown of progression to high-tariff HE by ethnicity across the attainment quintiles is not presented, given that the vast majority of all those progressing to high-tariff HE are found in the highest of the attainment quintiles.

## Discussion

As with previous analyses which reported that young people in England from ethnic minority backgrounds had a greater propensity to participate in higher education during the 1990s (NCIHE 1997) and early twenty first century (Gorard 2008), the results of the present analysis suggest that this trend has continued in more recent history. Similarly, as observed in the analysis published by Crawford and Greaves (2015), the present analysis finds that the large disparities in the likelihood of HE participation by ethnicity which exist cannot be explained by confounding variables such as prior attainment, neighbourhood deprivation or eligibility for free school meals. As such, ethnic disparities in HE participation must be explained by other factors which are not accounted for in the statistical modelling.

Broadly speaking, the high levels of HE participation observed among young people from ethnic minority backgrounds in England should of course be

celebrated. Strong representation of those from ethnic minority backgrounds in undergraduate study appears to be a success story for the HE sector. This stands in contrast with the lower rates of inclusion of some other traditionally disadvantaged groups – such as young people from low-income households – where progress over time in improving HE access has been much more limited (Martin 2024). Broad targets with a simple aim of increasing HE participation among those from ethnic minority backgrounds across the board – such as the target set by the Conservative government in 2015 to increase ethnic minority HE participation by 20% (BIS 2015) – would not necessarily be warranted today given recent trends. Instead, it would be better to make use of the rich administrative data which is available to investigate some of the barriers which still appear to exist for some particular ethnic minority communities, especially with respect to accessing more selective universities.

Whilst the analysis presented in this paper does not offer a definitive answer to the question of *why* young people from ethnic minority backgrounds are more likely to participate in HE than their white British counterparts, it nonetheless offers an indication of *where* the largest ethnic gaps in HE participation rates are to be found. Whilst young people from ethnic minority backgrounds with high attainment tend to be slightly more likely to undertake degree-level study than their high attaining white British counterparts, ethnic minority students with lower prior attainment are *considerably* more likely to progress to HE than their lower attaining white British counterparts.

It would therefore appear that gaps in HE participation by ethnicity are largely driven by the fact that low attaining school and college leavers from ethnic minority backgrounds tend to behave differently in their decision making, on average, compared to low attaining school and college leavers of white British ethnicity. The former appear to be inclined to follow an HE pathway, even though their lower school attainment may mean that they only meet the entry requirements of a minority of degree programmes and hence face a constrained choice of different universities and courses. The latter appear to prefer to follow alternative pathways to HE at age 18 and 19, such as employment or technical and vocational training.

As noted in the literature review above, it is possible that young people from ethnic minority backgrounds see HE participation as a necessary strategy in order to achieve an educational advantage which may to some extent counterbalance the racial discrimination that they may experience when they enter the workforce (Heath and Di Stasio 2019; Modood 2004). At the same time, lower attainers of white British ethnicity who are not constrained by fears of racial discrimination might find themselves with more confidence to pursue HE alternatives, perhaps motivated by a scepticism of the likely financial returns that they might expect from their investment in a university education. Such scepticism could be warranted, given that it has been forecast that around 20% of graduates born in the mid-1980s may be financially worse off as a result of their HE participation, with low attainers and those attending less selective institutions appearing to be less likely to enjoy a graduate earnings premium (Britton et al. 2020; Department for Education 2021b; Walker and Zhu 2017).

There could be a number of different possible ramifications of the greater tendency of lower attainers from ethnic minority backgrounds to pursue degree-level study. Insofar as there is likely to be a connection between attainment at school and

attainment at degree level, it is possible that this observed trend could be linked to some extent with the lower likelihood of certain ethnic minority groups to either graduate from university with a high degree classification or to progress from undergraduate to postgraduate study (Higher Education Statistics Agency 2022; Hill and Turner 2019). However, previous research has suggested that disparities in degree performance by ethnicity cannot be solely attributed to average differences in prior attainment, indicating that there are likely to be other additional drivers of this phenomenon (HEFCE 2015).

Perhaps, the most uncertain issue of all is the question as to how the greater tendency of lower attaining school pupils from ethnic minority backgrounds to participate in HE will (or will not) drive ethnic disparities in labour market outcomes in the longer term. If the longitudinal studies of the future reveal that lower attainers who participated in HE tended to benefit financially from this, then we might expect those from ethnic minority backgrounds to be particular beneficiaries. On the other hand, it is at least conceivable that lower attainers attending university today may, on average, not benefit financially from their HE participation if their graduate earning premia are too small to offset the opportunity cost of foregoing employment to attend university (along with the additional costs of student loan repayments). This seems feasible when considering the results of the most recent analyses of graduate earnings, alongside the greater tendencies of those with lower attainment to enter degree programmes which are less selective and less well-regarded by employers. Were this second situation to transpire, it is those from ethnic minority backgrounds who would be disproportionately penalised.

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## Disclosure statement

No potential conflict of interest was reported by the author(s).

## Notes on contributor

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## Data availability statement

The data that support the findings of this study are available from the Department for Education and the Higher Education Statistics Agency. Restrictions apply to the availability of these data, which were used under licence for this study. Data are available at <https://www.gov.uk/guidance/apply-for-department-for-education-dfe-personal-data>, with the permission of the Department for Education.

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## Appendix

**Table A1.** Regression coefficients for logistic regression with dependent variable as access to HE ( $n = 549,922$ ).

Variable	Block 1% correctly predicted 64.2%)		Block 2% correctly predicted 79.2%)		Block 3% correctly predicted 79.3%)	
	Regression coefficient (B)	Odds ratio (exp(B))	Regression coefficient (B)	Odds ratio (exp(B))	Regression coefficient (B)	Odds ratio (exp(B))
Any other Asian ethnicity	1.3656	3.918	1.5940	4.923	1.5921	4.9139
Any other black ethnicity	0.5985	1.819	1.3429	3.830	1.3578	3.8875
Any other ethnicity	0.9642	2.623	1.3664	3.921	1.3731	3.9474
Any other mixed ethnicity	0.5938	1.811	0.6393	1.895	0.6369	1.8907
Any other white ethnicity	0.4301	1.537	0.6441	1.904	0.6429	1.9020
Bangladeshi ethnicity	1.1618	3.196	1.5162	4.555	1.5573	4.7459
Black African ethnicity	1.2685	3.556	1.9594	7.095	1.9836	7.2691
Black Caribbean ethnicity	0.2770	1.319	0.9493	2.584	0.9352	2.5477
Chinese ethnicity	1.9592	7.094	1.4840	4.410	1.5034	4.4968
Gypsy or Roma ethnicity	-2.6006	0.074	-0.4073	0.665	-0.3633	0.6954
Indian ethnicity	1.4607	4.309	1.3961	4.039	1.3694	3.9329
Pakistani ethnicity	0.7811	2.184	1.4109	4.100	1.4434	4.2350
Traveller of Irish heritage ethnicity	-2.0641	0.127	-0.5334	0.587	-0.4753	0.6217
White and Asian ethnicity	0.7318	2.079	0.5178	1.678	0.5120	1.6687
White and black African ethnicity	0.5812	1.788	0.7620	2.143	0.7883	2.1998
White and black Caribbean ethnicity	-0.1029	0.902	0.2480	1.281	0.2657	1.3044
White Irish ethnicity	0.6365	1.890	0.4263	1.532	0.3865	1.4718
Key Stage 4 points score	x	x	0.0231	1.023	0.0224	1.0226
Achieved EBacc	x	x	0.3685	1.446	0.3407	1.4060
Is the pupil female	x	x	x	x	0.1954	1.2157
POLAR quintile	x	x	x	x	0.0914	1.0957
IMD decile	x	x	x	x	0.0119	1.0119
Is the pupil in receipt of free school meals	x	x	x	x	-0.1533	0.8578
Constant	-0.6439	0.525	-8.5391	0.000	-8.7249	0.0002



**Table A2.** Regression coefficients for logistic regression with dependent variable as access to high-tariff university ( $n = 549,922$ ).

Variable	Block 1% correctly predicted 89.7%)		Block 2% correctly predicted 92.4%)		Block 3% correctly predicted 92.5%)	
	Regression coefficient (B)	Odds ratio (exp(B))	Regression coefficient (B)	Odds ratio (exp(B))	Regression coefficient (B)	Odds ratio (exp(B))
Any other Asian ethnicity	0.7117	2.037	0.2379	1.269	0.2586594	1.2952
Any other black ethnicity	-0.2749	0.760	0.2562	1.292	0.3572612	1.4294
Any other ethnicity	0.3779	1.459	0.2128	1.237	0.2415583	1.2732
Any other mixed ethnicity	0.4755	1.609	0.2170	1.242	0.2256597	1.2531
Any other white ethnicity	0.2840	1.328	0.1791	1.196	0.1990455	1.2202
Bangladeshi ethnicity	0.0605	1.062	-0.1631	0.850	-0.0672508	0.9350
Black African ethnicity	0.1593	1.173	0.3779	1.459	0.4912061	1.6343
Black Caribbean ethnicity	-0.7682	0.464	-0.1217	0.885	-0.0518856	0.9494
Chinese ethnicity	1.6948	5.446	0.7222	2.059	0.7655929	2.1503
Gypsy or Roma ethnicity	-3.0037	0.050	0.1358	1.145	0.2336921	1.2633
Indian ethnicity	0.8890	2.433	0.2265	1.254	0.2155566	1.2406
Pakistani ethnicity	-0.1085	0.897	0.0795	1.083	0.1670654	1.1818
Traveller of Irish heritage ethnicity	-2.9214	0.054	-0.9508	0.386	-0.88333176	0.4134
White and Asian ethnicity	0.7282	2.071	0.2263	1.254	0.1965329	1.2172
White and black African ethnicity	0.1834	1.201	0.1231	1.131	0.1905207	1.2099
White and black Caribbean ethnicity	-0.4405	0.644	-0.0456	0.955	0.0145083	1.0146
White Irish ethnicity	0.7997	2.225	0.4805	1.617	0.4380227	1.5496
Key Stage 4 points score	x	x	0.0401	1.041	0.0394832	1.0403
Achieved EBacc	x	x	0.1521	1.164	0.1540825	1.1666
Is the pupil female	x	x	x	x	-0.2875988	0.7501
POLAR quintile	x	x	x	x	0.1203730	1.1279
IMD decile	x	x	x	x	0.0262484	1.0266
Is the pupil in receipt of free school meals	x	x	x	x	-0.0448582	0.9561
Constant	-2.2434	0.106	-17.4293	0.000	-17.6224664	0.0000