



## CEPEO Working Paper No. 25-01

# Inequalities in Access to Professional Occupations

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Previous research has shown that disadvantaged young people are less likely to work in professional occupations than their advantaged peers, even when they have achieved the same level of education. Yet until now little has been known about the reasons for this - are they applying for professional entry-level roles and not being hired, or are they not applying in the first place? Using unique recruitment data from 17 large employers' entry programmes, we answer this question for the first time. We find that applicants from lower socio-economic and ethnic minority groups are well represented among the applicant pool, but disproportionately do not receive job offers, even when considering similar applicants. While much of the gap can be explained by prior attainment, there are still large socio-economic gaps in offer rates within university groups. Women are typically underrepresented in the applicant pool across entry routes but are more likely to achieve a job offer than otherwise similar men, among those who do apply.

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## Highlights

- Most of the socio-economic background and ethnic inequalities observed in entry to professional occupations are driven by employer-side decisions made during the recruitment process.
- Graduate applicant pools are broadly representative of the general talent pool available, in terms of those from lower socio-economic backgrounds, although intermediate socio-economic background groups and women are underrepresented. Ethnic minority groups are overrepresented in the applicant pool, along with applicants from professional backgrounds and male applicants.
- Similarly, there are only small gaps in withdrawal rates among applicants from different socio-economic backgrounds, by ethnicity, and by gender, suggesting underrepresented groups are not choosing to withdraw at higher rates.
- Instead, for graduate and school leaver and apprenticeship routes, employers are disproportionately filtering out candidates from less advantaged backgrounds and ethnic minority groups throughout the application process.
- Around half of the gap in graduate offer rates for those from working class backgrounds occurs when they reach face-to-face assessments with employers, whereas the majority of the gap for black ethnic minorities occurs at the online stage of the process.

## Why does this matter?

Understanding the role of applications and recruitment processes in creating inequalities in access to professional occupations is vital for equalising labour market opportunities and driving productivity and economic growth.



# **Inequalities in Access to Professional Occupations**

**March 2025**

Catherine Dilnot, Lindsey Macmillan & Claire Tyler

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# 1. Executive Summary

## Motivation

- Professional occupations typically offer better long-term earnings prospects and greater economic security and stability than other occupations (Garcia-Penalosa et al., 2023, Goldthorpe, 2016). They are also crucial to the UK economy, representing almost a third of all jobs (UKCES, 2016), including senior positions of influence in society. Understanding and reducing barriers to professional occupations promotes equality of opportunity for all.
- Understanding diversity in access to *entry-level* roles in professional careers is of vital importance as they represent the first rung on the career ladder. If there are unequal opportunities in labour market entry, this will limit career progression and persist throughout adulthood.
- Beyond motivations based on equity, there are also efficiency reasons for focusing on inequalities in the labour market: evidence shows that countries that are more inclusive have higher levels of productivity, making better use of their available talent (Hsieh et al., 2019). The ‘business case’ for diversity is therefore growing ever stronger with reported benefits for innovation, decision making, profitability and growth.
- Recognising this, there has been rapid growth in diversity and inclusion legislation from policy makers, including the introduction of gender pay gap reporting; disability and ethnicity pay gap reporting on the horizon along with recognition of intersectional claims for ‘dual discrimination’; and the potential enactment of the socio-economic duty in the Equality Act 2010.
- Employers also want to ‘do the right thing’ while reaping the reported economic benefits of increasing entry-level diversity. However, as recently demonstrated by high profile employers reviewing the future of their EDI strategies, they lack a rigorous independent evidence base to support investment in diversity related recruitment initiatives and assess their impact and whether they represent value for money (Inclusion at Work Panel, 2024)).

- While much of the research focus has been on progression and pay gaps among the existing workforce, diversity in entry-level access to careers is an important stage of the pipeline for broadening representation. However up until now, there has been little evidence on the types of careers that people from underrepresented groups apply to or on the size of the barriers faced by these groups during recruitment processes. To date, we have only been able to observe young people working in given occupations.
- Disentangling whether under-represented groups are a) not applying for roles, or b) applying but not being hired for roles, can give key insights into the action required. This creates a robust evidence base allowing employers and policy makers to refocus diversity initiatives and policies more efficiently where required to allow ‘untapped talent’ from all backgrounds to pursue professional careers.
- Utilising unique individual-level applications data from 17 large employers to entry-level routes (the largest research data resource of its kind to date), this report provides the first evidence on the role of applications and recruitment processes in creating inequalities in access to professional occupations.

### Questions

- 1) How do applications to entry-level routes into professional occupations vary by key diversity characteristics, and at which stage of the recruitment process do the biggest differences in success appear by socio-economic background (SEB), gender and ethnicity, and their intersections?
- 2) Why does access to professional occupations vary by key characteristics? What role do subject and qualification choices at school and university, networks, and work experience (internships) play in this process?

### Approach

- We approached 59 employers who featured in both the Times Top 100 Graduate Employers list, and either the Social Mobility Index, The Times Top 50 Employers for Women, or the Race at Work Charter Signatories, leading to initial conversations with 27 large employers, and signed data sharing agreements with 21 employers.

- For this report we have received individual-level anonymised recruitment data for almost 2 million (N=1,934,271) young people from 17 employers across graduate, internship, and school leaver and apprenticeship entry route programmes.
- These include three large employers from the accountancy and professional services sector, three from the legal sector, and 10 from the public sector. In our first spotlight analysis, we present in-depth evidence on question 2 for the accountancy sector where we have more detailed information on applicants.
- The focus of this baseline report is all applicants from the UK, applying in the latest recruitment year available (typically entry for academic year 2023/2024) for an entry-level UK role, with a valid recruitment outcome (N=253,653).
- We observe key diversity characteristics across applicants, including parental occupation (used to construct the social class measure), school type attended, parental university attendance, and free school meals (FSM) eligibility, for socio-economic background. We also observe indicators of gender and ethnicity of applicants. We present evidence from the most representative indicators and their intersections in our analysis.
- Alongside key diversity characteristics, we also observe background information on the candidate including their region of origin, visa status, university attended, and undergraduate subject studied (for graduate and internship entry routes), GCSE maths grades, and A level and equivalent subject and grades (for a subset of school leavers and apprenticeships).
- There is also information available on networks and prior work experience (in the form of internships), alongside details of the specific application, including programme applied to, line of service, office location, and intake year.
- Crucially we observe success at each stage of the application process, alongside any decision by the applicant to withdraw from the process.
- To answer question 1, we show the proportion of applicants: applying to each role; making it through the online stages of recruitment; and achieving an offer, by diver-

sity characteristics. We compare these proportions to the relevant national benchmarks using linked administrative data.

- To answer question 2, we show changes in the percentage differences in the chances of applicants from different groups achieving a job offer (or withdrawing from the process), once comparing individuals with similar demographic, education, and application experiences. For example, we show the percentage difference in someone from a working class background receiving an offer (compared to being rejected) relative to someone from a professional background, with otherwise similar observable attributes.
- We are also able to show the relative contributions of various characteristics, such as university attended, subject studied, networks, application readiness, and type of role applied to in accounting for any differences in offer rates between those from different backgrounds.
- We explore the role of previous work experience in this process by analysing the applicant pool and success rates for internship programmes, which typically take place after the second year of undergraduate studies. Evidence shows that over half of internship positions were converted into graduate jobs in the past year (Institute of Student Employers, 2024).

## Main findings

### *Graduate entry routes*

- Low socio-economic background (SEB) graduates are well represented among the applicant pool to professional occupations, relative to the national pool of graduates, but are disproportionately less successful at getting offers. They are 32% less likely to get a job offer than applicants from professional backgrounds.
- Applicants from intermediate backgrounds, by contrast, are underrepresented among the applicant pool and in terms of offer rates.

- In the accountancy sector, over 50% of the gap in offer rates between working class and professional background applicants can be accounted for by differences in UCAS tariff points and by the type of university institution attended. There is also an important role for application date in explaining SEB gaps since low SEB applicants apply later and later applicants have less chance of getting an offer. By contrast, networks and subject studied at university play a relatively minor role in accounting for these gaps.
- While applicants are disproportionately from the South and London and Russell Group universities, when we compare applicants with similar attributes, low SEB graduates are 18% less likely to get a job offer than *otherwise similar* professional background applicants.
- Education, measured in terms of the university attended and undergraduate subject studied, does not equalise opportunities for applicants from underrepresented backgrounds. Even if a working class applicant attends the same type of university and studies the same subject as an applicant from a professional background, they are still less likely to get a job offer for a graduate programme.
- Half of the gap emerges due to working class candidates not passing the online application sift and online testing stages, while the other half emerges during the face-to-face stages of the recruitment process.
- Privately educated applicants are 9% more likely to get a job offer than *otherwise similar* state educated applicants.
- Women are underrepresented in the applicant pool but among those who do apply, women have a higher offer rate than otherwise similar men.
- Asian and Black applicants are overrepresented in the applicant pool but are significantly less likely to get offers than white applicants, *even comparing like with like*. Comparing applicants from Black and Asian backgrounds to white applicants, they are 45% and 30% less likely to get a job offer respectively. Black applicants *with similar characteristics* to their white counterparts are 33% less likely to get a job offer, while Asian applicants are 25% less likely to get an offer.

- Inequalities by ethnicity are more pronounced at the online application sift and online testing stages for Black applicants who are 37% less likely to pass the online application sift and online testing stages than their comparable peers of white ethnicity, and only 5% less likely to pass the face-to-face stage. Asian applicants face similar barriers at each stage.
- When considering the intersection between socio-economic background and ethnicity, we observe a double disadvantage for working class ethnic minority groups, who are 45% less likely to get an offer than white applicants from professional backgrounds.
- Applicants from different backgrounds typically withdraw from the recruitment process at similar rates by SEB, gender, and ethnicity, suggesting that inequalities are driven by employer decisions rather than applicant decisions.

#### *Internship entry routes*

- Young people applying to internship programmes (typically after the 2<sup>nd</sup> year of undergraduate programmes) are more likely to be from advantaged backgrounds, London or the South, and attend a Russell Group university.
- Recent evidence suggests that over half of those working in internship roles were offered graduate roles following completion of their degrees (Institute for Student Employers, 2024).
- Independent school pupils are twice as prominent in the application pool for internships as in the population of graduates, but have similar offer and withdrawal rates as state school pupils, meaning their prominence feeds through into the internship offer pool.
- Women are again underrepresented in the applicant pool but have a greater chance of getting an offer relative to men if they apply.
- Asian and Black applicants are overrepresented in applicant pool, and Black applicants are more likely to get an offer for these programmes than similar white applicants.

### *School leaver and Apprenticeship entry routes*

- Applicants from working class backgrounds are less likely to get offers to school leaver or apprenticeship programmes than otherwise similar applicants from professional backgrounds. Comparing like with like, working class applicants are 15% less likely to get an offer to a school leaver or apprenticeship role, compared to their peers from professional backgrounds.
- Women are again underrepresented in the applicant pool for these routes but have a greater chance of getting an offer, relative to men, if they apply.
- Asian and Black applicants are overrepresented in applicant pool but far less likely to get offers. Black applicants are 43% less likely to receive an offer to a school leaver or apprenticeship role and Asian applicants are 35% less likely. Even comparing similar candidates, Black applicants are 33% less likely to get an offer and Asian applicants 23% less likely to get an offer relative to their comparable white peers.
- While white working class applicants are less likely to get offers than white professional applicants, ethnic minority applicants from any socio-economic background face the largest penalties in terms of offer rates, at over 35% less likely to get an offer than white professional applicants.

### *Summary*

- Most of the socio-economic background and ethnic inequalities observed in entry to professional occupations are driven by employer-side decisions made during the recruitment process.
- The graduate applicant pools are broadly representative of the general talent pool available, in terms of those from lower socio-economic backgrounds, although intermediate socio-economic background groups and women are underrepresented. Ethnic minority groups are overrepresented in the applicant pool, along with applicants from professional backgrounds and male applicants.
- Similarly, there are only small gaps in withdrawal rates among applicants from different socio-economic backgrounds, by ethnicity, and by gender, suggesting underrepresented groups are not choosing to withdraw at higher rates.

- Instead, for graduate and school leaver and apprenticeship routes, employers are disproportionately filtering out candidates from less advantaged backgrounds and ethnic minority groups throughout the application process.
- Around half of the gap in graduate offer rates for those from working class backgrounds occurs when they reach face-to-face assessments with employers, whereas the majority of the gap for ethnic minorities occurs at the online stage of the process.
- For graduate applicants, education (university attended and university entry tariff, where available) does not equalise opportunities but does account for some of the gap between offers to working class and professional background applicants. University attended accounts for part of the gap even when we take account of attainment prior to university.
- While internship programmes are more equal in terms of offer rates by SEB, gender, and ethnicity, and they have high conversion rates to graduate roles, they still only provide a small fraction of graduate hires.

## Recommendations

Our findings suggest an important role for employers and universities in tackling inequalities in access to professional careers. Below we outline nine key recommendations for employers and universities. More detail is outlined in Section 5.

### Key recommendations for employers:

- Track socio-economic background, gender, and ethnicity data for all applicants to identify and address barriers to entry. Measuring these factors and achieving high response rates enables a deeper understanding of inequalities and supports more inclusive hiring practices.
- Review recruitment processes to ensure candidates are assessed on their potential, rather than on past qualifications or experiences which may be influenced by their social background.
- Consider proactively monitoring and maintaining the diversity of the applicant pool throughout the online testing stages to help ensure a representative talent pool reaches the final assessment stage.
- Design face-to-face assessments with socio-economic and cultural differences in mind to avoid disadvantaging underrepresented candidates. Focusing on essential skills for recruitment while allowing room for development post-onboarding can help create a more inclusive hiring process.
- Employers seeking a diverse workforce should assess whether recruiting predominantly from Russell Group universities is sustainable. While targeted outreach can improve representation, expanding recruitment to high-potential candidates from non-Russell Group universities can widen the talent pool, reduce competition for LSEB candidates and reduce renege rates.
- Employers should work with universities to give more assistance in understanding how to prepare students from underrepresented backgrounds, including the importance of applying early to graduate schemes, and providing guidance on preparing for psychometric tests.

- Expand outreach efforts to attract state-educated applicants to internships, given their high conversion to graduate roles. Broadening spring week eligibility and opening internships to finalists can help level the playing field for underrepresented students balancing university adjustment and work commitments.

Key recommendations for universities:

- Universities should inform disadvantaged students that applying early to graduate schemes improves success rates. Providing guidance on preparation for psychometric tests and assessments can boost confidence and help students without support networks navigate the recruitment process more effectively.
- Universities and employers should foster stronger connections and collaborate on data sharing to enhance career guidance and recruitment strategies, particularly to support underrepresented students.

## 2. Introduction

Children from disadvantaged backgrounds face more limited life chances throughout their lives, from early years where upon school entry they are already behind their more advantaged peers in terms of development, and throughout their schooling experiences, where gaps widen, particularly at secondary school (Crawford et al., 2016). But research has also shown that even if young people from disadvantaged backgrounds overcome these barriers within the education system to achieve similar levels of education as young people from more affluent backgrounds, they still face penalties in the labour market, in terms of earnings and the types of occupations that they can access (Macmillan et al., 2015, Friedman and Laurison, 2019, Crawford and Vignoles, 2014). Yet until now we have been unable to disentangle how and why these inequalities persist into the labour market. Are disadvantaged young people less likely to apply to the types of jobs that lead to professional and managerial positions, and steeper career and earnings trajectories? Or do they apply to these roles but face rejection by employers at higher rates than their advantaged counterparts? And what role do subject and qualification choices at school and university, as well as networks play in explaining any differences observed across groups? These are the questions that this research attempts to answer, using a unique new dataset of individual-level recruitment data from 17 large employers.

We have established relationships with several large employers, spanning a range of industries, including both the private and public sector, to securely share individual-level anonymised data on an annual basis for applicants to their entry-level roles. These roles include graduate programmes, internship programmes, and school leaver and apprenticeship entry routes. Entry into these programmes, and in particular the graduate and internship programmes, is the first stage on a career trajectory into professional and managerial occupations, akin to the top two social classes<sup>1</sup>. Alongside providing information on the types of roles applied for, and the stage of the process that the applicant makes it through to, these employers also collect information on a range of diversity characteristics, including the socio-economic background (SEB) of the applicant (across a range of metrics),

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<sup>1</sup> For more information on the National Statistics Socio-economic Classification (NS-SEC): <https://www.ons.gov.uk/methodology/classificationsandstandards/otherclassifications/thenationalstatistics socioeconomic classification nssec based on soc 2010>

gender, and ethnicity. Many also collect information on the prior attainment of the applicants, and other demographic information including their region of origin. This unique and rich dataset allows us to directly investigate who applies to these entry-level roles, what stage do people from different backgrounds reach, and why we see inequalities in offer rates among those from underrepresented groups, in this baseline report. A follow up report will consider how these patterns have changed over time.

We find that applicants from lower SEB groups and ethnic minority groups are well represented among the applicant pool to professional occupations across entry routes, but disproportionately do not receive job offers. Applicants from working class backgrounds are over 30% less likely to receive a job offer than an applicant from a professional background. These gaps persist even when considering applicants with similar prior attainment and other demographic characteristics applying to similar roles. Withdrawal rates by contrast are broadly similar across applicants from different groups and are therefore not an important driver of offer rate differences.

Why should it be that equally qualified graduates from different backgrounds have different success rates? For the graduate programmes' intake, this appears to be driven in part by disparities in who makes it through to the face-to-face phase of the recruitment process: around half of the gap between working class and professional background applicants appears during the application sift and online test phase of the process. The other half of the gap in offers, however, emerges once they reach the face-to-face stages. For ethnic minority groups, most of the gap in offer rates emerges at the application sift and online test phase, rather than at the face-to-face stage.

Women are typically underrepresented in the applicant pool across entry routes but are more likely to achieve a job offer than otherwise similar men, among those who do apply. The inverse is true for ethnic minority groups, with Asian and Black applicants overrepresented in the applicant pool across entry routes, but disproportionately less likely to receive an offer (for graduate and school leaver and apprenticeship entry routes). While there are little differences by gender in intersectional analysis, there are double disadvantages in graduate programme entry for low SEB applicants from ethnic minority backgrounds.

These findings highlight that the recruitment processes of large employers are leading to an underrepresentation of some minority groups. While young people from low SEB and ethnic minority groups are well represented in the applicant pool to these roles, they are far less likely to receive an offer than their otherwise observably similar high SEB or white counterparts.

This work contributes to an existing body of literature on intergenerational mobility, which shows that parental background is an important determinant of labour market outcomes including labour market earnings (Gregg et al., 2017, Carneiro et al., 2020), occupation and social class (Macmillan et al., 2024, Stansbury and Rodriguez, 2024), and joblessness (Macmillan, 2014). While much of the literature has focused on the importance of education in driving inequalities across generations, building on theoretical models showing the centrality of education and skills in this process (Kilpi-Jakonen et al., 2024, Becker and Tomes, 1986), there has been a growing interest in the importance of family background beyond accumulated skills and education in the labour market (Friedman and Laurison, 2019, Macmillan et al., 2015). There is also a related literature on gender differences in earnings in the labour market (Bachan and Bryson, 2022) and differences in labour market outcomes by ethnic background (Mirza and Warwick, 2022).

While much of the existing literature has considered mechanisms through which SEB, gender, and ethnicity pay gaps or occupation gaps appear, to our knowledge there is no existing work that can disentangle the role of applications and recruitment processes in this process. This represents a big step forward for the literature in helping us to understand whether people from underrepresented backgrounds are simply not applying for these competitive programmes that set young people on a career trajectory to professional and managerial roles, or if they are applying but not being offered these roles. Further, given the richness of our data, we are able to compare individuals with similar prior attainment, from similar regions, and applying to similar roles. Finally, while it is typical in the literature to focus on one diversity characteristic in isolation, in a similar vein to Friedman and Laurison (2019), we investigate penalties across SEB, gender, and ethnicity, and the intersections of these characteristics, to illustrate double- disadvantages in accessing professional occupations for underrepresented groups.

In the next section of this report we describe the data collection and analytical approach, before describing our main findings across entry routes in section 4. Section 5 concludes with some recommendations based on the findings from our analysis.

### 3. Approach

#### Sampling

We drew a sample of employers from those listed in the Times Top 100 Graduate Employers rankings, and featured in either the Social Mobility Index 2020, the Times Top 50 Employers for Women 2020, or the Race at Work Charter Signatories (from December 2020). This gave us a sample of 63 employers across 13 sectors, including accounting and professional services, banking and finance, law, IT and telecoms, and the public sector. Our initial plan was to recruit 12 employers in total. We approached 59 employers, with support through introductions from the Social Mobility Commission and the Careers and Enterprise Company, leading to some form of initial contact (email discussion or initial call) with 27 employers. Employers were offered anonymity and employer-specific reports in return for sharing individual-level anonymised data on all applicants to all entry routes. This outreach led to signed Data Sharing Agreements (DSAs) covering 21 employers. 4 employers were previously not capturing socio-economic background data and so their data will not be available until late Summer 2024.

#### Data

For this analysis we have anonymised individual level data from 17 employers for almost 2 million applicants to entry-level graduate, internship (and other forms of work experience), school leaver and apprenticeship programmes across a range of sectors, including accountancy and professional services, law, and the public sector. For these sectors, we have at least three employers in each sector and so can also present sector level analysis where relevant (and in particular for employer-specific report benchmarking).<sup>2</sup> The focus of this research is analysing the extent of inequalities in a given year so we analyse the most recent data available from each employer, typically from the 2023 hiring round. Future analysis will utilise variation over time to consider the effects of changes in employers' practices.

We asked all employers for a common set of measures from their recruitment systems (see Technical Appendix Section 1 for full details). While the nature of the collaboration with employers means that there are some differences in the final data fields received, our

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<sup>2</sup> See section 5 of our Technical Appendix for further details.

sample is defined based on applications to entry level roles for UK based jobs for applicants from a UK region of origin with a valid recruitment outcome for the latest round of recruitment. This gives us a final sample of 117,043 applicants to graduate programmes, 28,046 applicants to internships, and 108,564 applicants to school leaver and apprenticeship programmes.<sup>3</sup>

We received a range of information on applicants to entry-level roles from participating employers including key diversity characteristics such as parental occupation which was used to create measures of the National Statistics Socio-Economic Classification (NS-SEC), school type, eligibility for Free School Meals (FSM), whether at least one parent has a degree education, gender, and ethnicity. These characteristics are asked by participating employers as part of the equal opportunities section of application forms for monitoring and research purposes but are not used in recruitment decisions.<sup>4</sup>

Section 8 of the Technical Appendix illustrates the extent of completeness of the data for the full sample and across sectors where we are able to provide this breakdown. Table A11 illustrates that 16 employers report parental occupation, while all employers report school type, gender, and ethnicity. FSM eligibility and parental education are less frequently reported by employers, with 8 employers providing information on FSM eligibility and 7 on parental education. This varies across sectors, with full reporting of background characteristics across the majority of accountancy and law employers, but fewer public sector employers providing information on FSM eligibility and parental education. For this reason, our main focus will be on parental occupation and school type metrics (private school attendance vs state school attendance) for our analysis of inequalities by SEB for the graduate route.

A sub-set of our employers offer internship routes for undergraduates, with 7 employers providing information on school type, FSM eligibility, parental education, gender, and ethnicity, and 5 providing information on parental occupations. Our sector breakdown illustrates this is more common across accountancy and law sectors. 14 employers offer school leavers and apprenticeship programmes, with all providing information on school

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<sup>3</sup> See section 3 of the Technical Appendix for further details

<sup>4</sup> See section 2 of the Technical Appendix for full details on how each variable was operationalised.

type, gender, and ethnicity, and only a subset providing information on FSM eligibility and parental education. There is variation across sectors again with the public sector and accountancy firms more likely to offer school leavers and apprenticeships routes, while this is less common in the legal sector. For this reason, we provide limited sector breakdowns for these routes, and focus on parental occupation and school type for our analysis of inequalities by SEB for the internship and school leavers and apprenticeship routes.

Gender, ethnicity, school type, and parental education typically have response rates of around 90% or above. Parental occupation and FSM eligibility is reported for around 80% of applicants with broadly similar response rates across entry routes (see Table 12 of the Technical Appendix which reports rates of non-response to key diversity questions by entry route, for employers that provide this information).

Our outcomes of interest include whether the applicant was made an offer to their programme of choice, whether they withdrew from the process, and which stage of the application process they reached.<sup>5</sup> We can observe measures of prior attainment including university attended<sup>6</sup> and subject studied (for graduate and internship programmes), A level grades and GCSE maths grades (for a subset of school leaver and apprenticeship programmes), and indicators of the region of origin of the applicant. We also have indicators of the application process including how the applicant found out about the role (networks), the region of the office they applied to, and the job role applied to.<sup>7</sup>

To compare applicant pools to the relevant populations of available hires, we utilise linked administrative data of all graduates with a UK degree in 2021, having attended a school in England at age 16 (N=251,380) from the National Pupil Database (NPD) and Higher Education Statistics Authority (HESA), for our graduate and internship entry routes. For our school leaver and apprenticeship routes we use the National Pupil Database for all school and college leavers from Key Stage 5 in 2019, having attended a school in England at age 16 (N=311,350). These years are the latest available that are not affected by Covid-related

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<sup>5</sup> Table 11 in the Technical Appendix indicates that one employer did not provide information on the stage of the process the applicant made it to (rather just offer or reject) for the graduate route.

<sup>6</sup> Technical Appendix Section TA7 illustrates the categories of universities used in our analysis – Boliver clusters

<sup>7</sup> See Technical Appendix Table 7 for full details of which variables are available for our analysis.

examination issues such as Centre Assessed Grades in 2020, and Teacher Assessed Grades in 2021.<sup>8</sup>

### Analytical approach

To consider our first research question of how applications and routes of entry into professional occupations vary by key diversity characteristics we begin by illustrating the proportion of applicants overall, passing the online stage of recruitment, and getting an offer, by key diversity characteristics, and relative to the relevant benchmarked population from the administrative data. These graphs illustrate the extent to which applicants from different groups (state vs independent school for example) 1) are prevalent in the overall population as a baseline benchmark (of graduates for example), 2) are represented in the overall pool of applicants, 3) make it past the online stages (including sifting and any online testing), and 4) make it through any face-to-face recruitment stages to receive an offer. By tracking the proportion of each group across these stages, we can start to understand whether young people from underrepresented groups are simply not applying to these routes, or if they are applying at a representative rate but are dropping out of the recruitment process at different stages. Note that this simple analysis does not distinguish between people withdrawing from the process (individual action) or being rejected by the employer (employer action), but simply presents a descriptive picture of the relevant populations at each stage.

To move on to further distinguish between employers' rejecting applicants, or individuals' withdrawing from the recruitment process, and to further understand why inequalities in access to professional occupations might arise, we model the likelihood of receiving an offer from employers, and the likelihood of withdrawing from the recruitment process, by key diversity characteristics.<sup>9</sup> We present the percentage difference in offer (withdrawal) rates across key diversity characteristics, calculated as the percentage point difference in offer (withdrawal) between groups from the estimated models, relative to the baseline percentage offer (withdrawal) rate. We also present some conditional non-linear models for passing the online part of the recruitment process, and passing the face-to-face part of the

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<sup>8</sup> See Section TA4 of our Technical Appendix for full details of our benchmark analysis.

<sup>9</sup> See section TA6 of the Technical Appendix for further details.

recruitment process, to build on our findings from the descriptive analysis for research question 1, on which phase of the recruitment process inequalities are particularly exacerbated. We build our conditional models in stages, depending on the data available for each entry route (as outlined in Technical Appendix Table 7).<sup>10</sup>

As an example, for our graduate entry route findings, we begin by presenting the raw differences in the percentage chance of getting an offer (or withdrawing) comparing individuals from different backgrounds who apply to the same employers. We then add the comparison that the applicants are from different backgrounds but applying to the same employer and come from the same region of origin with the same visa status. This second model takes into account differential access to different entry routes across the country. In our third model we further restrict the comparison to applicants from different backgrounds who apply to the same firm, from the same region of origin, with the same visa status, who attended the same type of university and study the same subject grouping. This third model accounts for prior attainment differences between applicants that could explain why underrepresented groups are less likely to get an offer. Our final specification compares individuals that are otherwise similar as in model 3, but also apply to the same type of job in the organisation, to employers in the same region, and with the same access to networks to find out about jobs.

Note that in the final specification we are comparing, for example, an applicant from a working class background who has come from the same region, has achieved the same education, and is applying to the same role, with the same networks, as an applicant from a professional background. These working class applicants have therefore already overcome multiple hurdles to reach this stage of the process. But our raw models are also informative given that we observe applicants (and withdrawals), since the act of applying (or withdrawing) indicates that these applicants are likely to share a more similar set of unobservable characteristics such as motivation, preferences for jobs, and self-selection of applicants due to search costs or fit (at both the extensive margin of applying and the intensive margin of withdrawing) than if comparing those who apply to those who do not

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<sup>10</sup> It is important to note that the characteristics that we can account for in our models vary across sectors depending on the information provided by employers. It is therefore valid to compare raw gaps across sectors but 'like for like' comparisons from fully conditional models across sectors are not comparable.

apply. Once taking into account this similar set of unobservable characteristics, and additional observable differences through our models, remaining gaps in offer rates between applicants from different backgrounds are likely telling us that otherwise very similar candidates are receiving differential treatment by employers in the recruitment process.

## 4. Main Findings

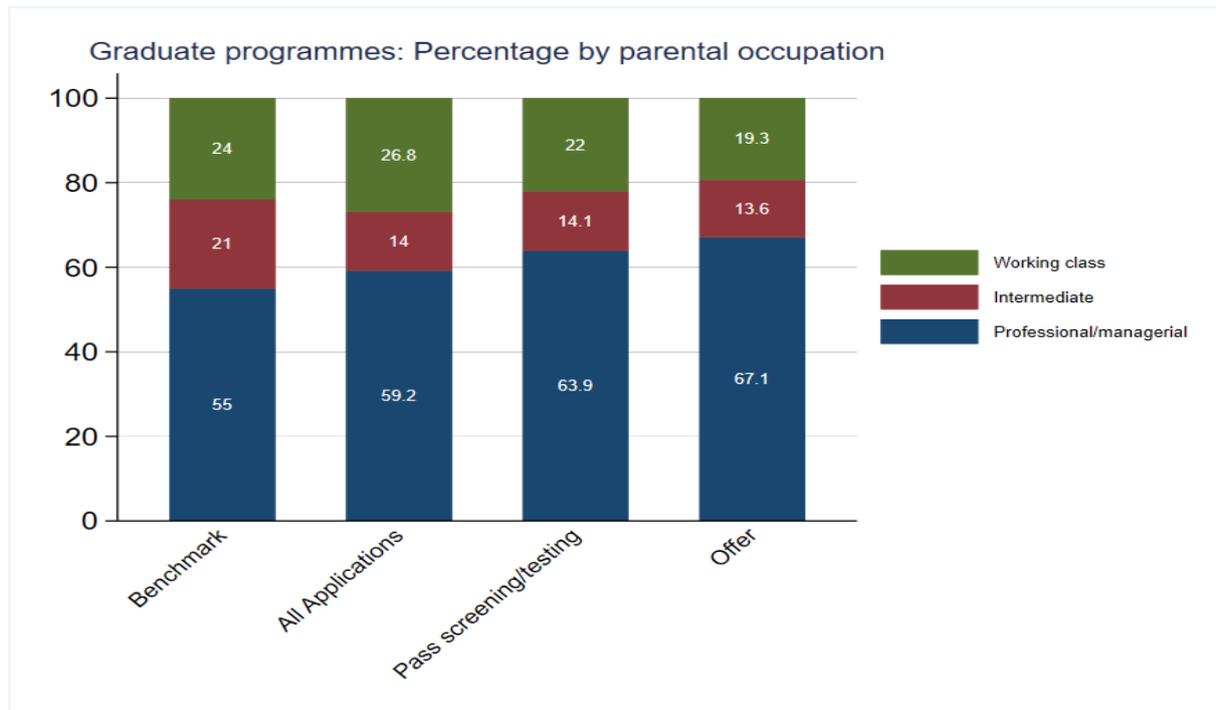
### Graduate entry routes

We begin by comparing the proportion of applicants from each group to the national benchmarks of graduates, using linked administrative data records, to illustrate the available talent pool. Figure 1 shows the proportion of applicants applying to graduate programmes; passing the online screening and testing; and achieving an offer (columns 2-4) relative to the national benchmarks (column 1) by parental occupation (NS-SEC). It essentially allows us to understand for the first time, the journey from application to offer of graduates from different backgrounds.

Figure 1 shows that relative to the national benchmark of graduates, working class applicants are broadly well-represented in our sample of all applicants, while those from intermediate backgrounds are underrepresented and those from professional backgrounds are overrepresented. But the proportion of working class applicants declines at each stage of the recruitment process, in favour of applicants from professional backgrounds, from almost 27% of all applicants, to just 19% being made an offer, while the proportion of intermediate applicants remains broadly stable.

These patterns indicate that while working class graduates are applying to these graduate entry roles at a representative rate, they are either withdrawing from the process or being screened out of the recruitment process and are not made offers at the same rate as applicants from professional backgrounds. It is important to distinguish between applicants withdrawing from the process and applicants being rejected by employers as the recommendations for each explanation are different. We therefore consider the likelihood of being made an offer, relative to being rejected by employers, removing withdrawals from our analysis. We also model the likelihood of withdrawing by key diversity characteristics to understand the relative contributions of applications, offers, and withdrawals in explaining why some groups are underrepresented in terms of who is hired.

Figure 1: Proportion of graduates at various stages of the recruitment process, by parental NS-SEC



As discussed in section 3, the fact that these applicants from different backgrounds are applying to similar roles suggests they are likely to have a similar set of unobservable characteristics, such as motivation to apply and preferences for these roles. Yet they could have different observable experiences, such as living in different regions or attending different types of universities before applying to these positions. Figure 2 illustrates that applicants to these programmes are predominantly from the South and London, and these regions are overrepresented at each stage of the application process, relative to all graduates from our benchmarking. Table 8 in the Technical Appendix shows that while working class applicants are more likely to come from London, applicants from professional backgrounds and independent schools are more likely to come from the South.

Figure 2: Proportion of graduates at various stages of the recruitment process, by region

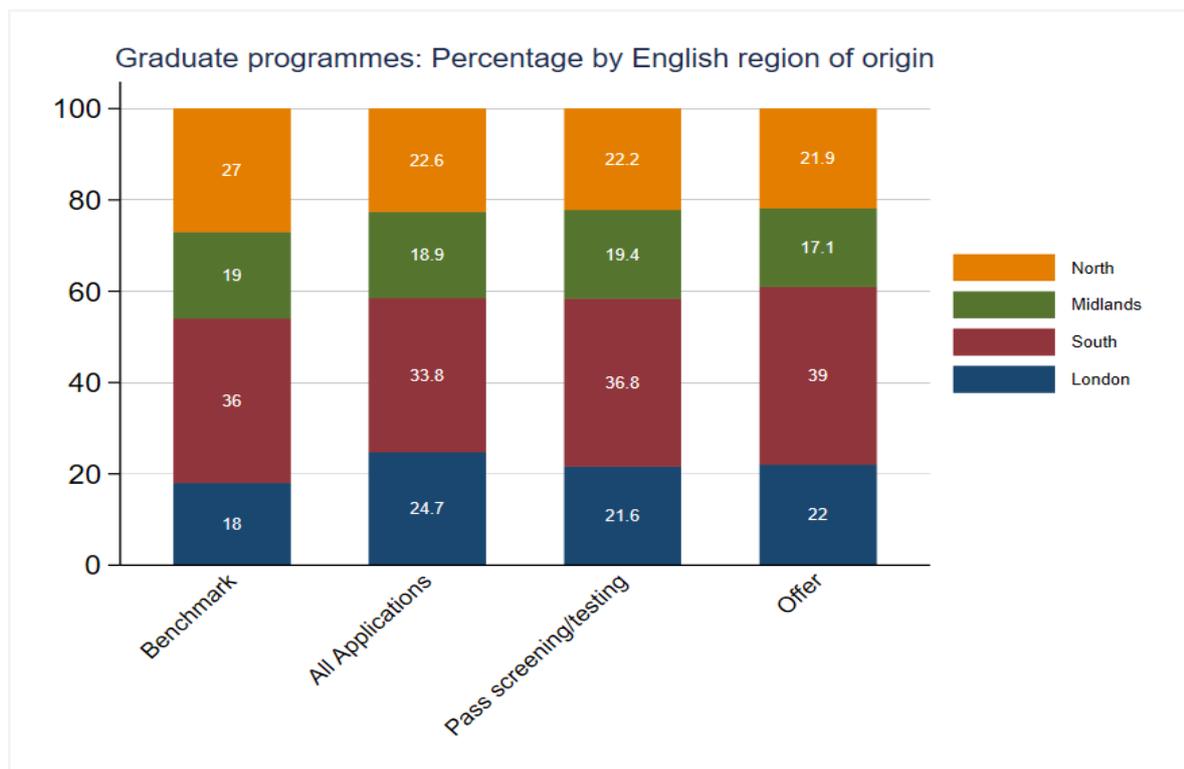
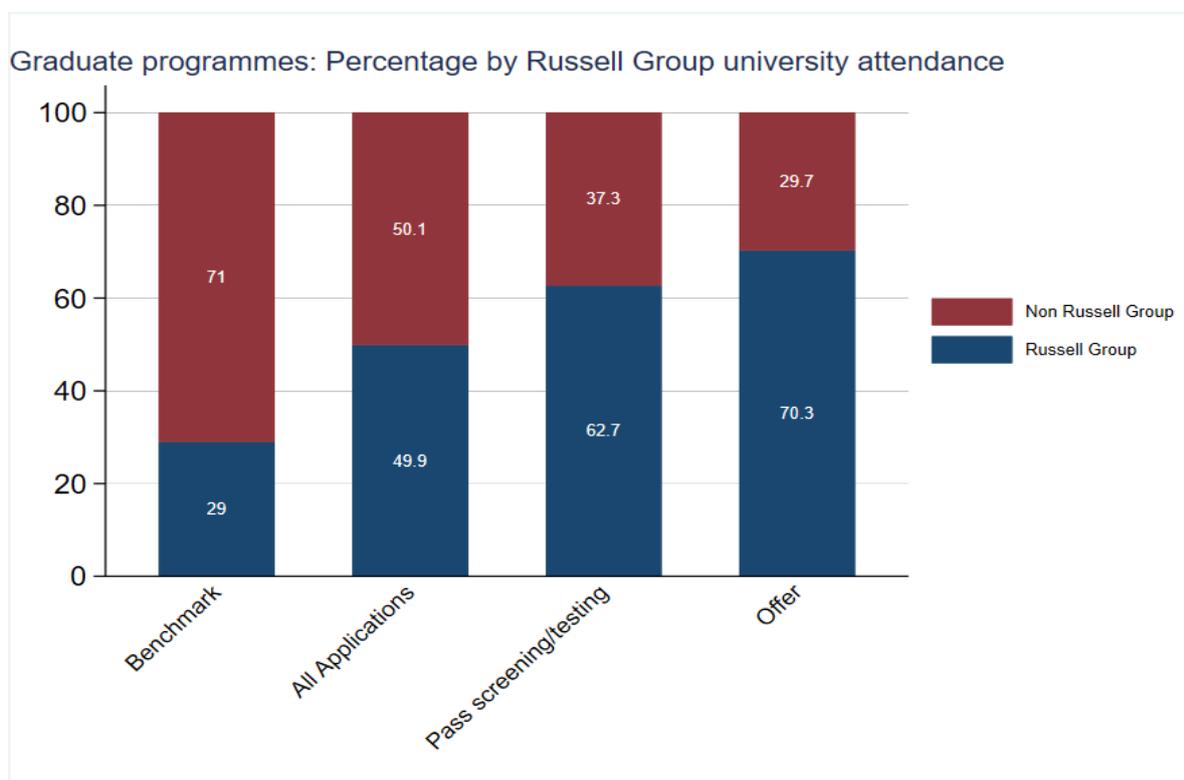


Figure 3: Proportion of graduates at various stages of the recruitment process, by university



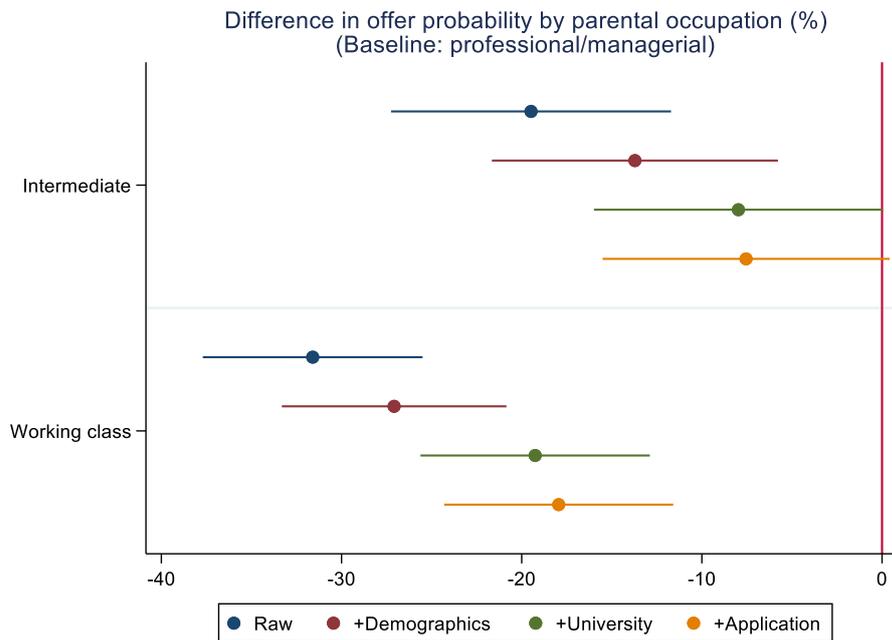
Similarly, Figure 3 shows that applicants to these programmes are more likely to have attended a Russell Group university relative to the national pool of graduates (50% of applicants relative to 30% of graduates) and are far more likely to receive an offer (70% of offer holders). The university attended is observed by employers and may form part of the recruitment decision. The extent to which working class applicants are less likely to attend a Russell Group university compared to a professional applicant (40% compared to 56% - see Technical Appendix Table 8), could therefore be driving these differences in achieving an offer.

In Figure 4, we present the likelihood of receiving an offer for those from intermediate and working class backgrounds, relative to professional backgrounds, focusing on those who do not withdraw from the recruitment process, and taking into account differences in observable characteristics of applicants; first only accounting for the employer they apply to, before then accounting for demographics, education, and information about their applications.

Figure 4 shows that working class applicants are over 30% less likely to get an offer to a graduate programme than their counterparts from professional backgrounds who are applying to the same employer. When we adjust for region of origin, gender, ethnicity, and visa status, this gap reduces slightly to just below 30%, and adjusting for university attended and course studied leaves a gap of just under 20%, reflecting the different locations and education experiences of working class applicants relative to those from professional backgrounds. Yet still, when comparing a working class applicant who has all the same advantages as those from a professional background in terms of location, type of university attended and subject studied, similar networks and applying to the same type of role, they are still 18% less likely to get an offer than an otherwise similar applicant from a professional background.

Despite being underrepresented among the applicant population, applicants from an intermediate background have a slightly smaller disadvantage than working class applicants relative to professional applicants. They are 20% less likely to get an offer to a graduate programme than those from professional backgrounds. Comparing applicants with similar demographics, university experiences and applying to similar roles, this gap is reduced to just below 10%.

Figure 4: Offer rates to graduate programmes, conditional on observable differences across applicants, by parental NS-SEC



Note: Raw models contain employer fixed effects only; + Demographics adds controls for region of origin, and visa status; + University adds controls for university category and subject studies; + Application adds controls for networks, region of office, and job role applied to. Points represent % estimates while lines represent 95% confidence intervals.

### Spotlight on working class disadvantage for the accounting sector

We have shown that working class applicants to graduate schemes are over 30% less likely to receive job offers than applicants from professional backgrounds, on average, across all sectors represented in our sample (Figure 4). This is also the case for highly competitive graduate programmes in the accounting and professional services sector where 7.0% of applicants from professional/managerial backgrounds receive job offers compared to 4.8% of applicants from working class backgrounds (31% less likely). But which specific characteristics explain this SEB gap? We have more information available for applicants in the accounting sector than we do for other sectors, meaning that we can take a more in-depth look at the potential mechanisms driving the difference in offer rates between applicants from working class and professional backgrounds.

Figure S1 decomposes<sup>11</sup> the SEB gap into three elements – unfavourable, favourable and unexplained. Unfavourable characteristics (in orange) reduce the chances of working class applicants obtaining a job offer, whereas favourable ones (in green) increase these chances. Together these two elements explain almost two-thirds (62%) of the SEB gap in entry-level access to the accountancy profession, however over one third (38%) of the SEB gap remains unexplained by the available data.

#### *Unfavourable characteristics*

This analysis highlights the extent to which inequalities in prior educational attainment are perpetuated into the labour market. Working class applicants, on average, have lower educational attainment and are more likely to attend lower ranked universities than their peers from professional backgrounds. These factors account for 34% and 27% respectively of the SEB gap in graduate access to accountancy careers. Degree class also makes a small contribution (2.8%) due to small differences in university attainment which are magnified by the importance of educational attainment for these entering careers.

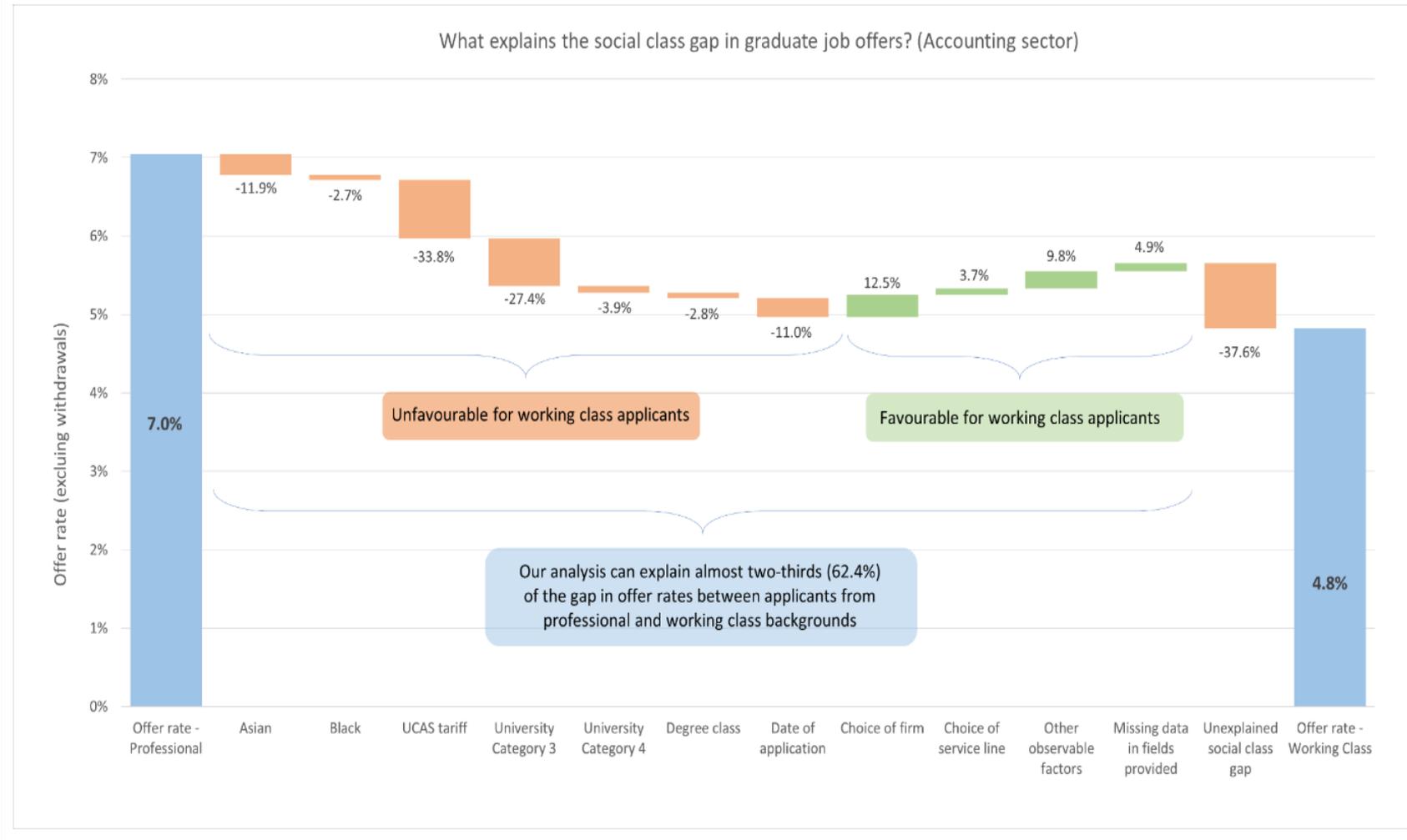
‘Application readiness’ is an important driving factor of the SEB gap as working class applicants apply later, on average, to graduate schemes than their peers from professional backgrounds. This accounts for 11% of the social class gap. By the start of an undergraduate’s final year of study (early October), the accountancy firms in our sample have already received 30% of applications and made 50% of job offers for graduate schemes starting the following September.

Working class applicants are also more likely to be of Asian or Black ethnicity than their peers from professional backgrounds. Barriers for these ethnic minorities, which are not explained by the other characteristics in our data, account for 12% and 3% of the SEB gap respectively. This highlights the importance of intersectional analysis to identify further barriers in the recruitment process for ethnic minorities from working class backgrounds.

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<sup>11</sup> These are results from an Oaxaca-Blinder decomposition using a probit specification for binary outcomes (job offer or rejected). See the technical appendix (section TA6) for more detail on this methodology and more explanation of these key drivers of the social class gap in the accounting sector (TA6, Table 9).

Figure S1 Decomposition of the working class disadvantage in graduate offers in the accounting sector



### *Favourable characteristics*

In our sample, applicants from working class backgrounds made favourable application decisions relating to their choice of employer and line of service. These applicants were more likely to apply to the 'least competitive' accountancy firm and service line (although all are very competitive) which improved their chances of obtaining a job offer. Along with some 'other observable factors' and 'missing data' effects (all individually small and statistically non-significant), these favourable factors slightly offset the unfavourable effects of educational attainment, application readiness and ethnicity.

### *Unexplained SEB gap*

Over one third (38%) of the SEB gap in entry level access to the accountancy profession remains unexplained by the available data. Our analysis includes a range of factors which are not significant drivers of the SEB gap in our sample and therefore do not account for this unexplained gap. These are university subject choice, networks, postgraduate qualifications, UK region of origin and UK region of office applied to. Other potential unexplained barriers may include performance on online tests (only those uncorrelated with educational attainment as those correlated will already be captured in the above analysis), quality and duration of work experience, commercial awareness, cultural capital and private schooling<sup>12</sup>.

The firms in our sample have proactive social mobility strategies, are strong performers in the Social Mobility Employer Index, and are open and generous with their data for research purposes, yet still barriers for working class applicants remain. We suggest these barriers may be even larger for employers who are at the beginning of their social mobility journey.

### *Recommendations*

Employers from all industries should review the extent to which they are rewarding potential in their recruitment processes and whether prior educational attainment criteria (or tests correlated with these) may be a barrier for high potential working class applicants entering their organisation.

Policy makers should improve the chances of high potential young people from all backgrounds

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<sup>12</sup> Private schooling increases the total proportion of the social gap explained to 65.6%, and itself accounts for 7.2% of the social class gap. We have kept this separate here to focus on single measures of social background.

being able to achieve the highest levels of academic success which are required for entry to competitive professional careers.

Greater information, advice and guidance should be provided to working class applicants relating to timelines and requirements of graduate scheme applications to improve their 'application readiness'. This should include improving readiness for internship applications due to their high conversion rates to graduate roles. Guidance about which sectors, employers and roles are most or least competitive may also be useful for working class students to partly offset their educational disadvantage.

Considering these patterns by school type, we can see from Figure 5 that independent (private) school applicants are over-represented in the applicant pool, making up 19% of applications relative to 13% of graduates. This over-representation increases throughout the recruitment process, to 21% passing the online screening and testing phases, and 23% receiving offers.

Figure 5: Proportion of graduates at various stages of the recruitment process, by school type

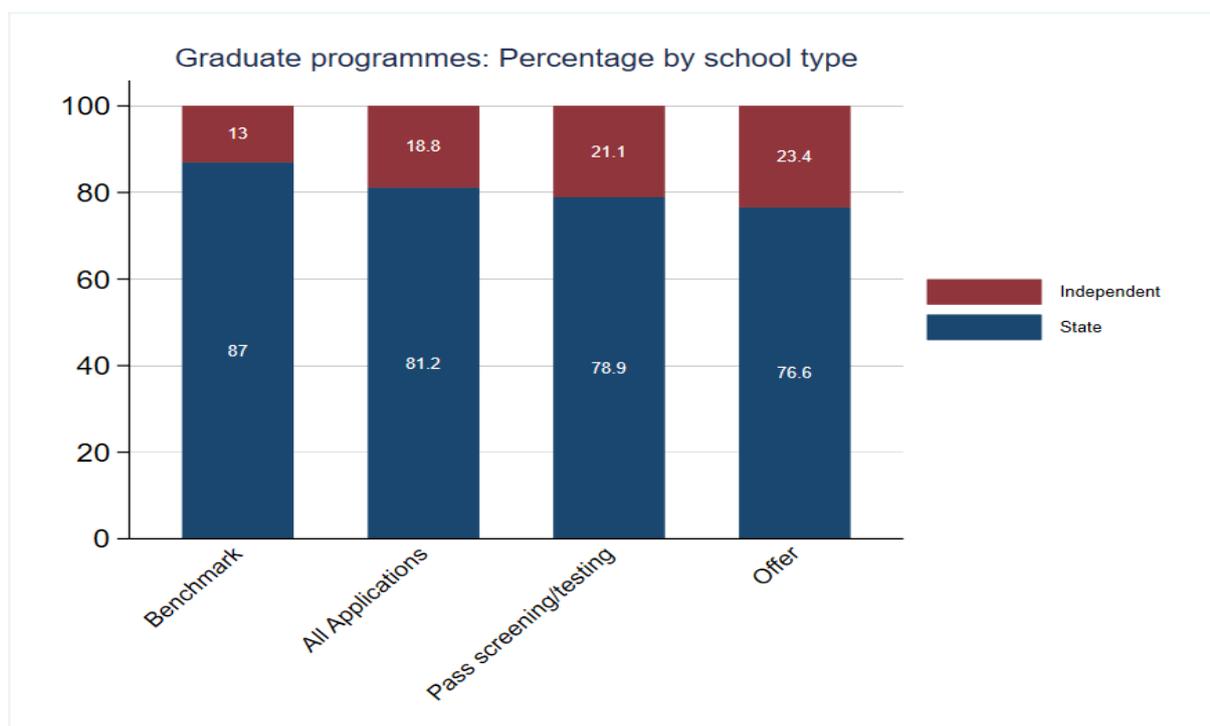
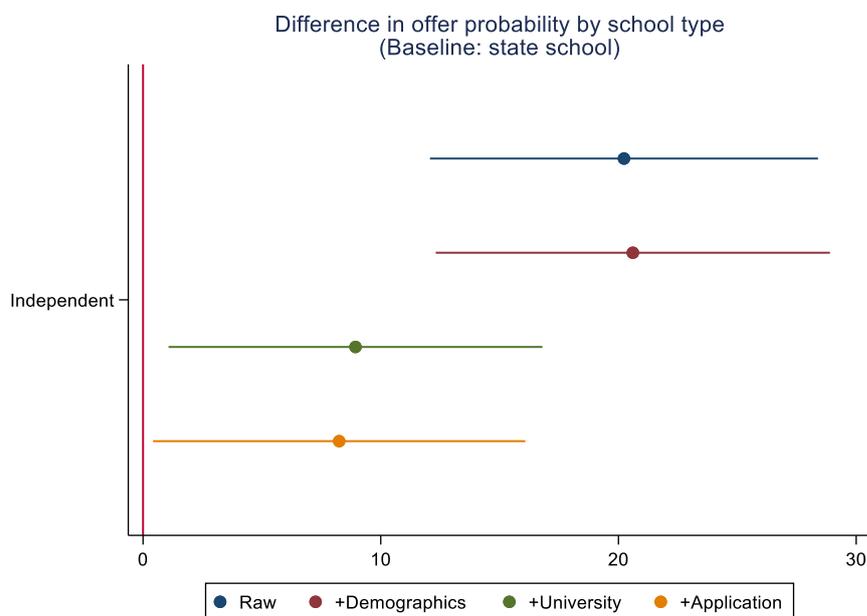


Figure 6 shows that independent school applicants are around 20% more likely to get an offer to a graduate programme than a state school applicant applying to the same employer, and this gap remains stable when accounting for demographic differences such as region of origin, gender and ethnicity. Around half of this independent school advantage is accounted for by independent school pupils being more likely to attend more prestigious universities which have far higher offer rates (see Figure 3). Yet an 8% gap remains when comparing an independent school applicant to a state school applicant with the same observable characteristics, prior attainment, and applying to similar roles for the same employer.

*Figure 6: Offer rates to graduate programmes, conditional on observable differences across applicants, by school type*

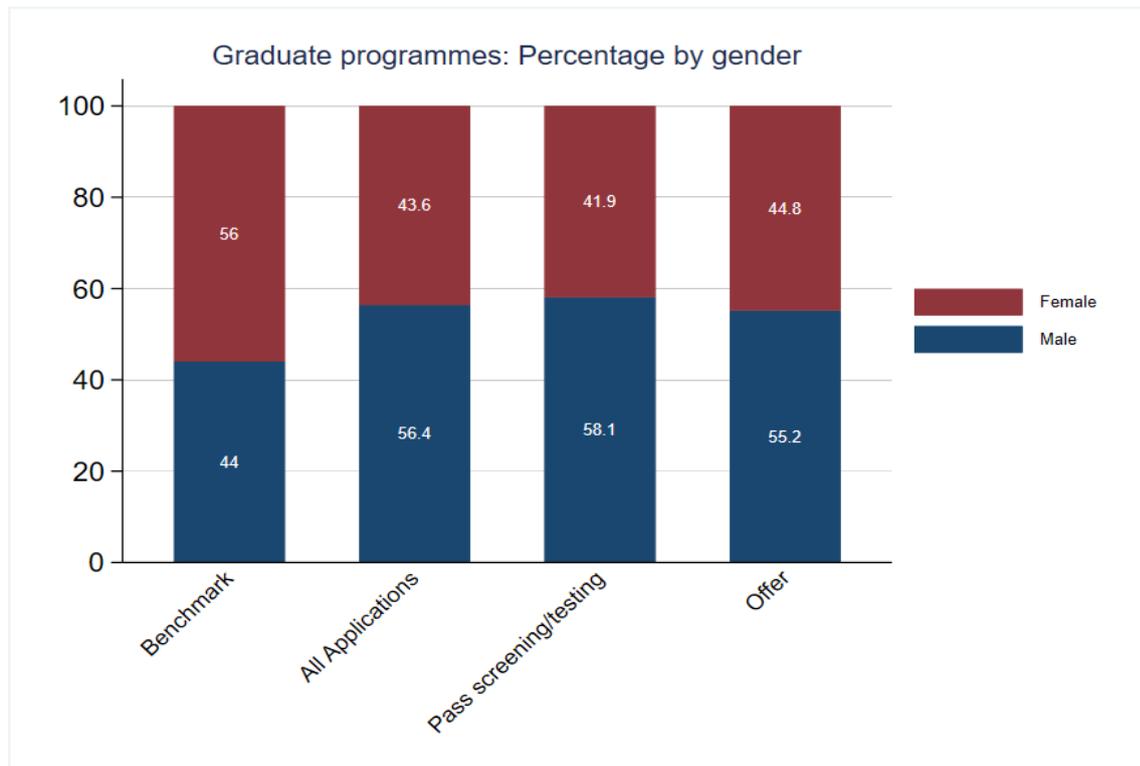


Note: Raw models contain employer fixed effects only; + Demographics adds controls for region of origin, and visa status; + University adds controls for university category and subject studies; + Application adds controls for networks, region of office, and job role applied to. Points represent % estimates while lines represent 95% confidence intervals.

While we control for gender in our models for SEB, we can also consider differences in applications and offer rates for women compared to men. Figure 7 shows that while women are overrepresented among the pool of graduates from our national benchmarks, they are underrepresented in the pool of applicants to these graduate programmes, comprising 56%

of the overall pool of graduates and only 46% of the pool of applicants. There is some drop off in the proportion of women passing the online screening and testing phase, but then women are more represented among the proportion who receive a final offer. This suggests some positive selection of women at the face-to-face stage of recruitment.

Figure 7: Proportion of graduates at various stages of the recruitment process, by gender

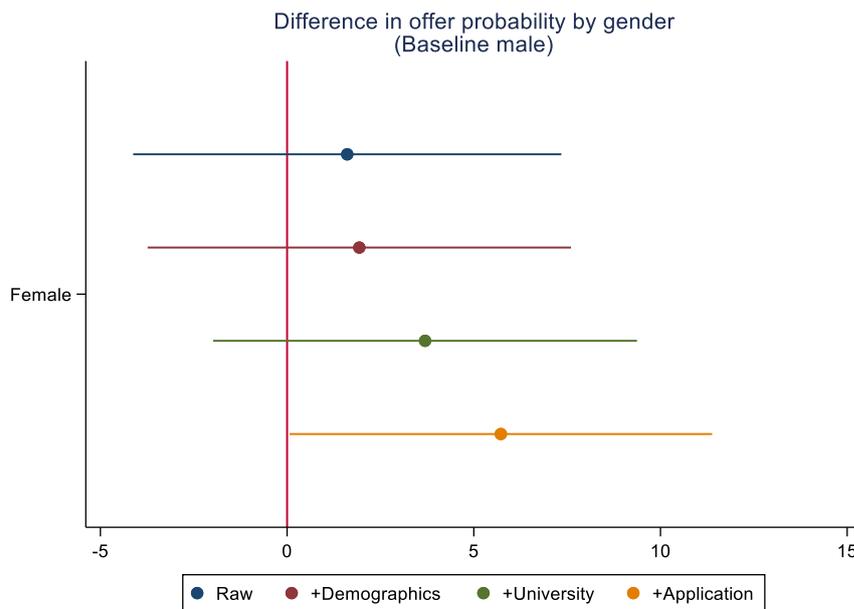


Our models in Figure 8 confirm that while there is no significant gender gap in the chances of being made an offer, when we consider the range of characteristics that we can observe about applicants, we can see that women are just over 5% more likely to receive an offer than men with otherwise similar demographics, prior attainment, applying to similar roles.

Our demographic controls for our SEB and gender models also take into account the ethnicity of applicants. Figure 9 shows that Black and Asian minority ethnic groups are overrepresented in the applicant pool, relative to the national graduate benchmark population, with 33% of applicants coming from an Asian background relative to 15% of all graduates, and 9% of applicants coming from a Black background relative to 6% of all graduates. While Asian applicants remain overrepresented in terms of final offers, their proportion decreases across the recruitment process. Similarly, the proportion of Black

candidates decreases across the process so that they make up a slightly lower proportion than those seen in the graduate talent pool in terms of offer rates.

Figure 8: Offer rates to graduate programmes, conditional on observable differences across applicants, by gender



Note: Raw models contain employer fixed effects only; + Demographics adds controls for region of origin, and visa status; + University adds controls for university category and subject studies; + Application adds controls for networks, region of office, and job role applied to. Points represent % estimates while lines represent 95% confidence intervals.

Figure 9: Proportion of graduates at various stages of the recruitment process, by ethnicity

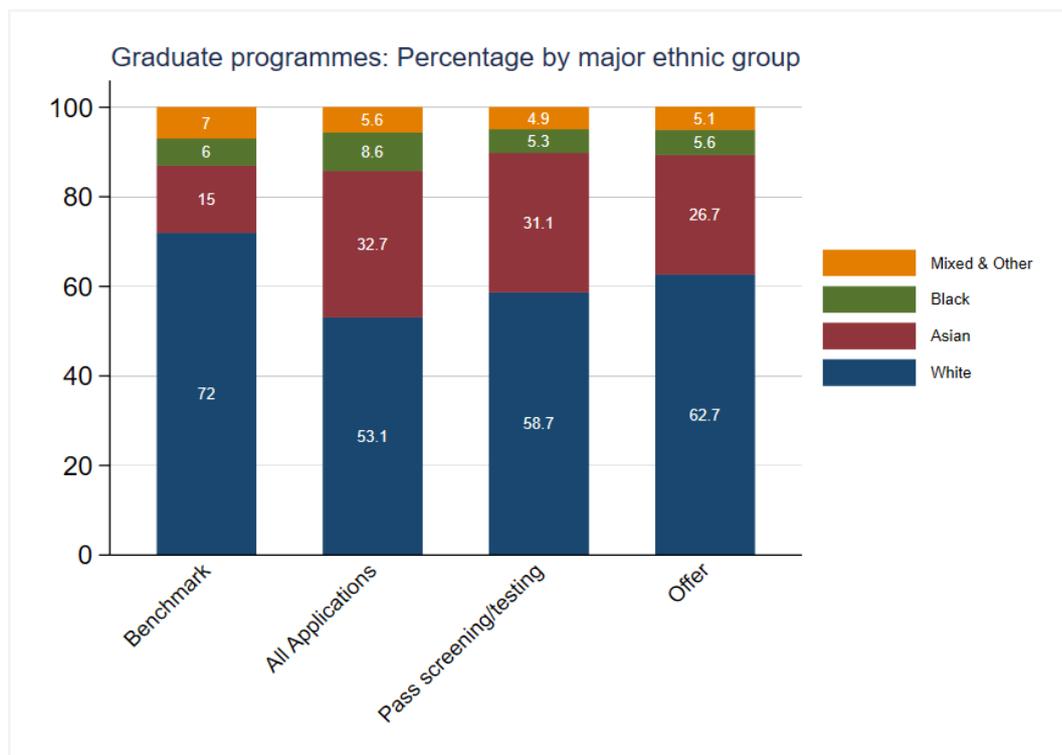
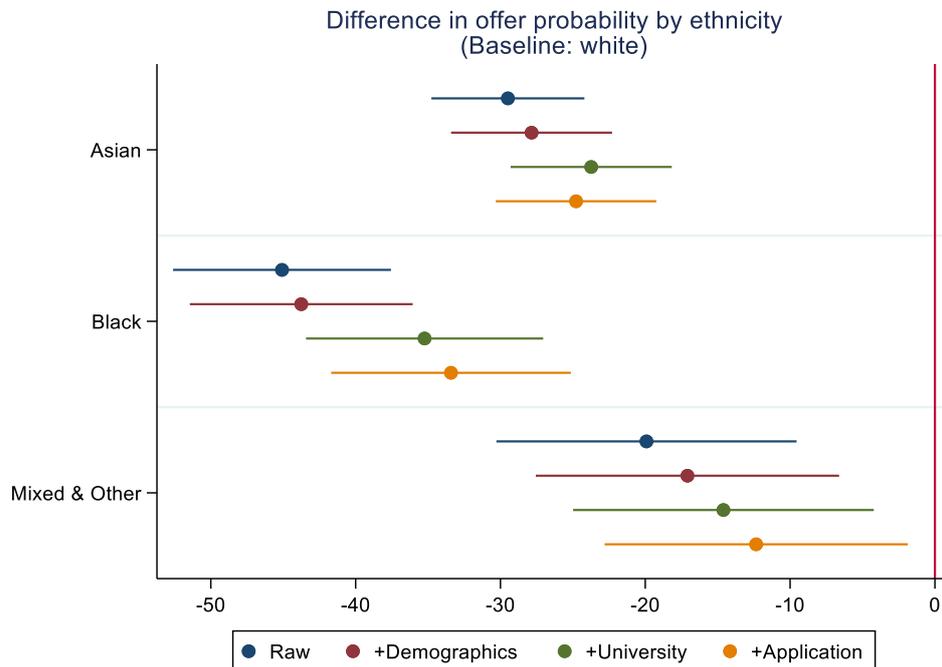


Figure 10 shows that while these minority ethnic groups are overrepresented in terms of the overall applicant pool, they are far less likely to get an offer from an employer relative to white applicants, even comparing like with like. The raw gaps between offer rates for Black (Asian) applicants relative to white applicants applying to the same employer are 45% (30%). While prior attainment accounts for some of this gap, particularly for Black applicants, the ethnic gaps in offer rates when comparing Black (Asian) applicants with the same demographics, prior attainment, and applying to similar roles are still 33% (25%). These findings mirror those from university applications and offers, where ethnic inequalities in offer rates are large, and particularly so for courses where they form a larger proportion of applicants (Boliver, 2015).

Figure 10: Offer rates to graduate programmes, conditional on observable differences across applicants, by ethnicity



Note: Raw models contain employer fixed effects only; + Demographics adds controls for region of origin, and visa status; + University adds controls for university category and subject studies; + Application adds controls for networks, region of office, and job role applied to. Points represent % estimates while lines represent 95% confidence intervals.

Given that the biggest gaps in offer rates are by SEB and ethnicity, we can look to see if there are any additional penalties to being from both a working class background and an ethnic minority group combined<sup>13</sup>. Considering first applicant breakdowns by these characteristics, Figure 11 shows that the majority of the overrepresentation among ethnic minority group applicants comes from those from professional backgrounds (22% in applicant pool compared to 13% in graduate pool). While working class ethnic minorities are also overrepresented in the applicant pool, this is to a lesser extent than those from professional backgrounds.

<sup>13</sup> Note intersections by gender, ethnicity, and SEB are available on request, but the findings are very similar across genders

Figure 11: Proportion of graduates at various stages of the recruitment process, by ethnicity and parental NS-SEC

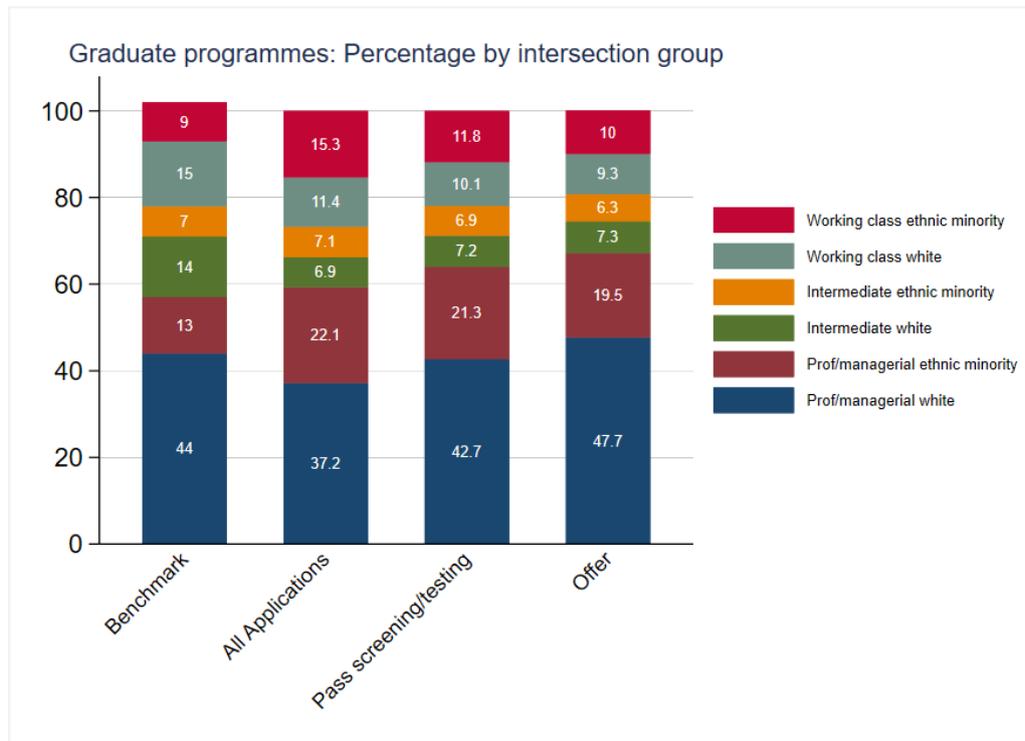
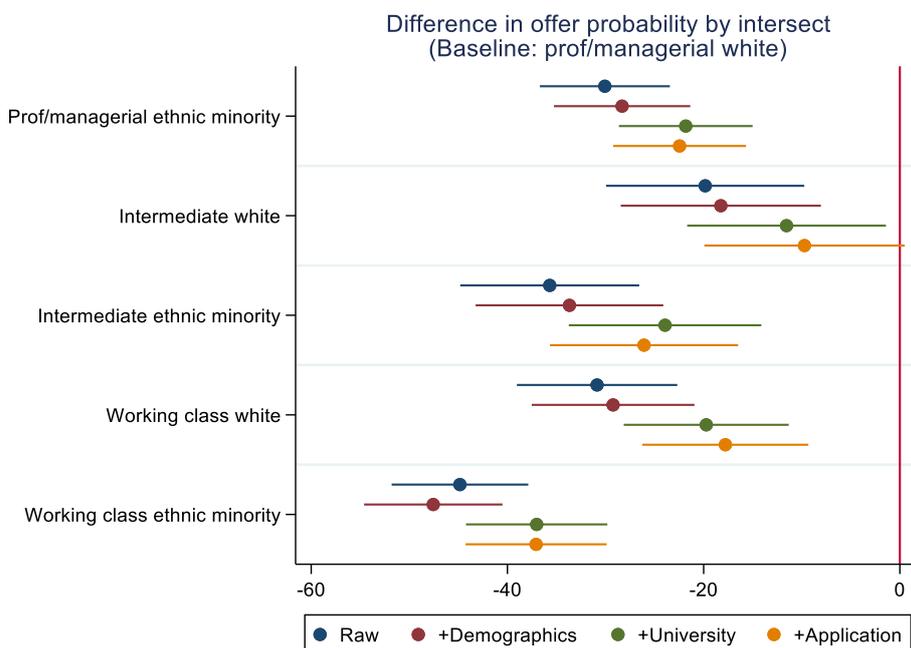


Figure 12 plots differences in offer rates of combinations of parental background and ethnicity relative to being a professional white applicant. All groups have a lower probability of being hired than a professional white applicant, even comparing those with similar characteristics. While professional ethnic minority applicants and working class white applicants are both around 20% less likely to get an offer than professional white applicants, working class ethnic minority applicants face a double disadvantage, at almost 40% less likely to get an offer than professional white applicants.

Figure 12: Offer rates to graduate programmes, conditional on observable differences across applicants, by ethnicity and parental NS-SEC



Note: Raw models contain employer fixed effects only; + Demographics adds controls for region of origin, and visa status; + University adds controls for university category and subject studies; + Application adds controls for networks, region of office, and job role applied to. Points represent % estimates while lines represent 95% confidence intervals.

Table 1: Inequalities in applying, receiving an offer, and withdrawing from the graduate recruitment process, by diversity characteristics

	Applying	Receiving an offer (raw)	Receiving an offer (like for like)	Withdrawing (raw)	Withdrawing (like for like)
Working class Independent	4%	-32%	-18%	3%	3%
Female	-39%	2%	6%	-3%	-4%
Asian	195%	-29%	-25%	0%	-4%
Black	95%	-45%	-33%	6%	2%
Mixed/other	9%	-20%	-12%	5%	2%
Prof/managerial ethnic minority	100%	-30%	-22%	3%	3%
Intermediate white	-41%	-20%	-10%	4%	3%
Intermediate ethnic minority	19%	-36%	-26%	0%	-1%
Working class white	-10%	-31%	-18%	6%	5%
Working class ethnic minority	126%	-45%	-37%	3%	1%

Notes: The baseline categories are professional for SEB, male for gender, and white for ethnicity. For the intersectional analysis the baseline is white professionals. There are very small differences by gender for the intersectional analysis so males and females are considered together to simplify the discussion.

Table 1 pulls together the findings across graduate entry routes by key diversity characteristics discussed in this section to show the extent to which applications and withdrawing from the process (both decisions of the applicants) are driving hiring rate differences compared to offer rates (which are decisions made by the employer).

While working class applicants are well represented among the applicant pool for example, the largest gaps for working class applicants relative to professional applicants comes from employer-led decisions in offers, where we see raw gaps of 32% and gaps of 18% even when comparing applicants from different backgrounds with similar characteristics. Withdrawals by contrast are much more equal across working class and professional applicants. Why are graduates from working class backgrounds less likely to receive a job offer than those from better-off backgrounds? Around half of this drop off occurs at the online screening and testing phase, where applicants who are not qualified for the roles are rejected, while the other half occurs during the face-to-face stage of the recruitment process (see 'Spotlight on recruitment stages for graduate programmes' box below).

For women the story is reversed – while offer rates are relatively equal compared to men, they are underrepresented in the applicant pool, which will lead to fewer women being employed overall. Again, withdrawal rates are similar across men and women.

Ethnic minority groups are overrepresented in the applicant pool but face the largest penalties to being made an offer relative to white applicants, in terms of both the raw differences in applicants, and when comparing applicants from different ethnicities with the same characteristics. The vast majority of this gap between white and ethnic minority applicants is being driven by ethnic minorities being screened out of the online stages of the recruitment process (see 'Spotlight on recruitment stages for graduate programmes' box below).

When we look at the intersection between background and ethnicity, we see a double disadvantage for working class ethnic minority groups who are again over-represented in the applicant pool but far more likely to be rejected than white professional applicants, even with the same characteristics. Yet again, withdrawal rates are very similar across groups here, pointing to the importance of employer decisions in driving these inequalities.

## Spotlight on recruitment stages for graduate programmes

We have shown that once a young person has applied for a graduate scheme, the largest barriers they will face are due to their ethnicity and social background (rather than gender).

The charts below show that while overall working class inequalities occur relatively evenly across screening/test and face to face stages (Figure S2 and Figure S3), the ethnicity inequalities are much more pronounced at the screening/test stage, especially for black and mixed/other ethnicity applicants (Figure S4 and Figure S5).

Figure S2 – Relative likelihood of passing screening and online tests for the graduate programmes, conditional on observable differences across applicants, by parental NS-SEC

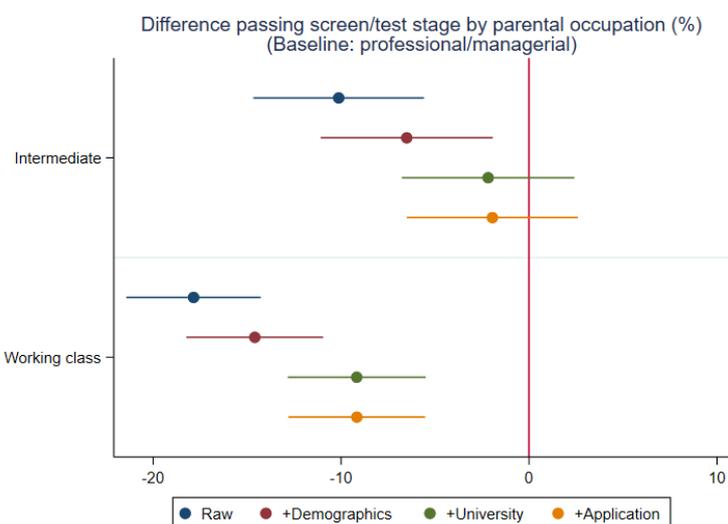
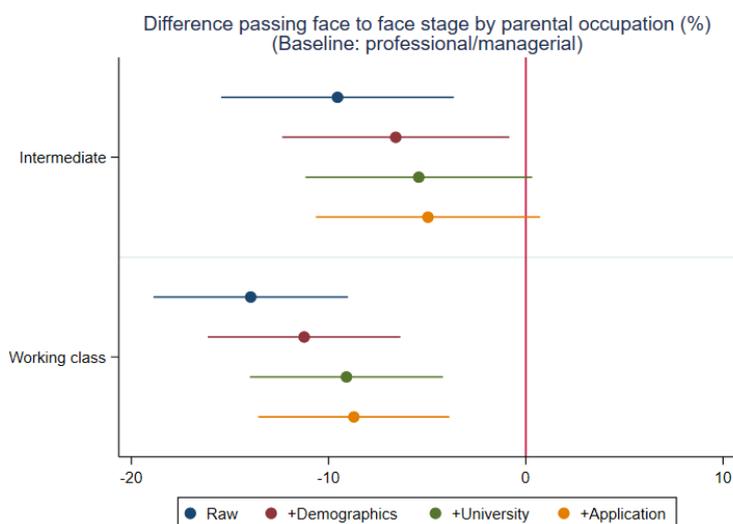


Figure S3 – Relative likelihood of passing face to face stages for the graduate programmes, conditional on observable differences across applicants, by parental NS-SEC



For example, working class applicants are 9% less likely to pass the screening/test stage than their comparable peers from a professional background, and 9% less likely to pass the face-to-face stage. For ethnicity, Black applicants are 37% less likely to pass the screening/test stage than their comparable peers of white ethnicity, and 5% less likely to pass the face-to-face stage.

Figures S4 – Relative likelihood of passing screening and online tests for the graduate programmes, conditional on observable differences across applicants, by ethnicity

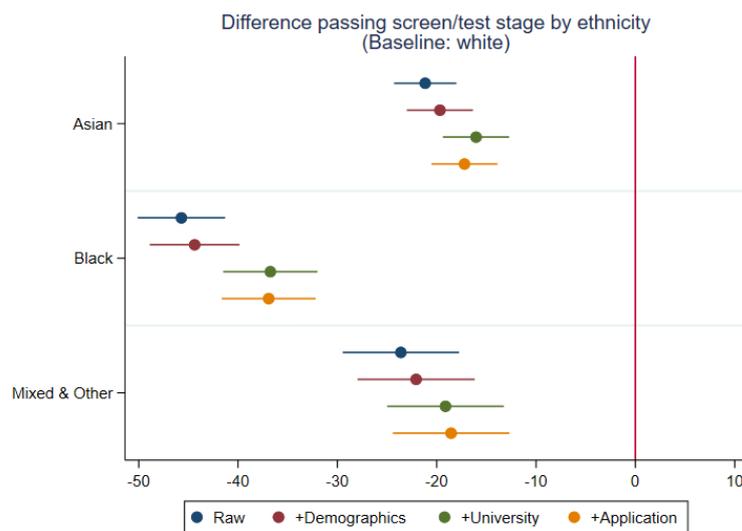
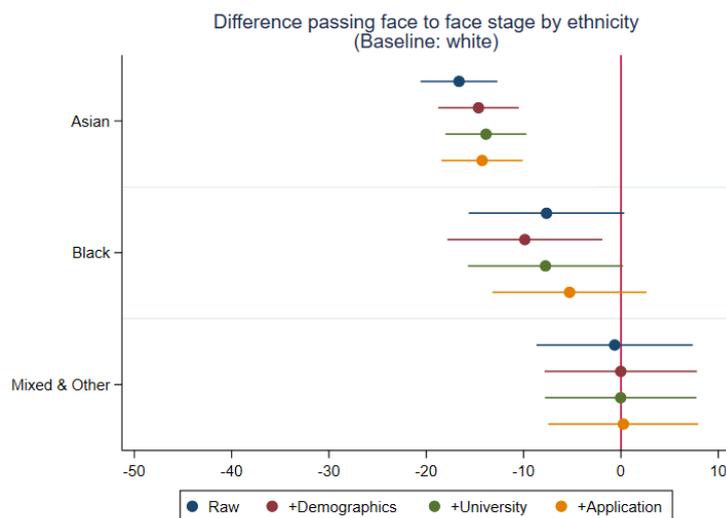


Figure S5 – Relative likelihood of passing face to face stages for the graduate programmes, conditional on observable differences across applicants, by ethnicity



This extent to which ethnic minorities, and to a lesser extent working class applicant's penalties are driven by online screening and testing indicates that inequalities in entry-level access to 'elite' careers may be less related to notions of 'cultural fit' during face to face

interactions and more related to formalised recruitment systems mirroring patterns of prior education inequality and perpetuating these inequalities into the labour market.

Even when applicants of Black, Mixed and Other ethnicities report the same educational attainment as White applicants, large inequalities remain at the early screening and testing stage. These inequalities may relate to inequalities in other cognitive skills assessed via online tests such as numerical and verbal reasoning, situational judgement and critical thinking. They may also relate to lack of preparation for such tests if these applicants are less likely to have parents or networks with experience of these tests.

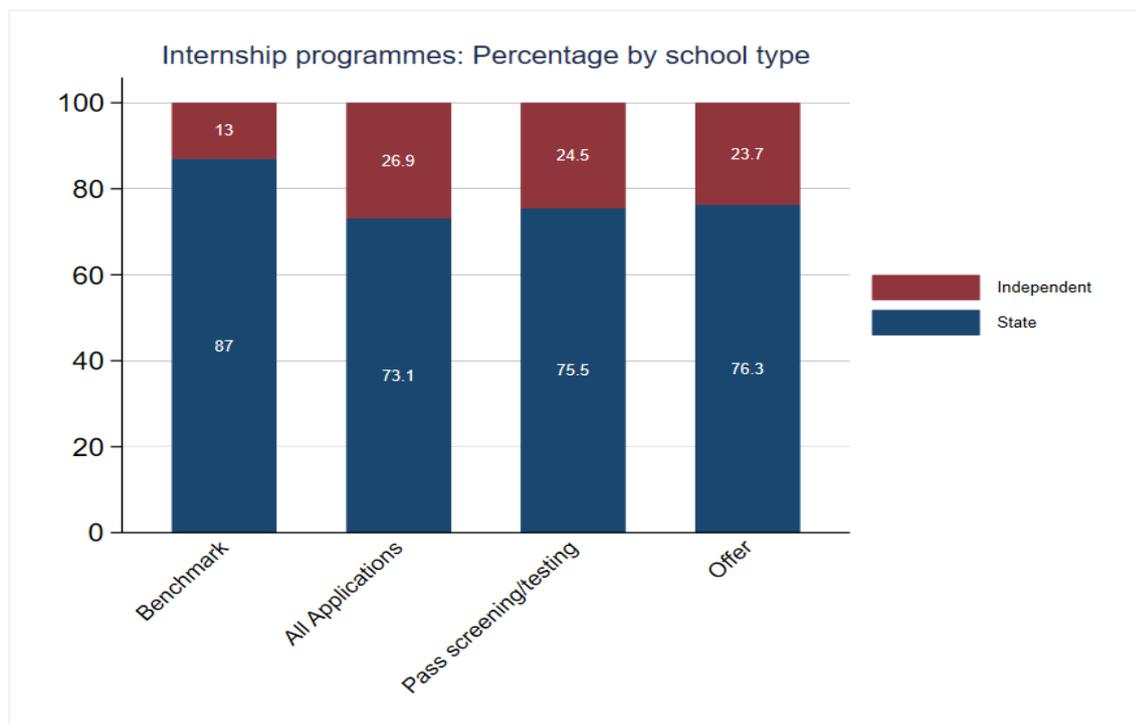
Employers should prioritise exploring inequalities for each of their screening criteria and online tests (for example, academic entry criteria and scores for psychometric, situational judgement, numerical reasoning and verbal reasoning tests) to identify which element could be driving these inequalities. Employers are starting to move towards rewarding potential rather than prior attainment, however this data shows there is much still to be done.

#### Internship entry routes

One way in which young people access graduate training programmes after graduation is through gaining work experience by applying for an internship programme in the summer before their final year at university. There is a high transfer rate between internship programmes and graduate training programmes – for example for one employer in our data where we could link across internship and graduate programmes, 80% of their interns were offered a place on their graduate training programme once they had graduated. A recent survey by the Institute for Student Employers found that over half of those working on internship programmes were eventually recruited onto graduate programmes (Institute for Student Employers, 2024). We can therefore explore access to internship entry routes as one source from which inequalities in access to professional occupations might originate.

Given that there are more limited internship routes in our data (7 employers offer these, 2 of which do not collect parental occupation information), we focus on school type as our measure of SEB here.

Figure 13: Proportion of interns at various stages of the recruitment process, by school type



Applicants to internship routes from independent schools are hugely overrepresented relative to the proportion of graduates from our national benchmarks attending these types of schools, with double the proportion applying to internship routes (27% compared to 13% nationally – see Figure 13). While this proportion declines across the stages of recruitment, with the majority who do drop out being screened out at the online screening and testing phase, they are still overrepresented in the proportions receiving an offer (24% compared to 13% nationally). This is comparable to the proportion receiving an offer from the graduate entry route (see Figure 5).

As with graduate entry routes, it could be the case that internships are predominately based in London and so maybe be more accessible to young people who live in those locations. Figure 14 shows that applicants to internship programmes from London and the South are overrepresented relative to the national benchmark of graduates (69% vs 54% nationally) and this overrepresentation remains prominent throughout the recruitment process. Technical Appendix Table 8 confirms that independent school applicants are predominately from the South or London compared to any other region. This could be contributing to part of the picture for their overrepresentation among applicants.

Figure 14: Proportion of interns at various stages of the recruitment process, by region

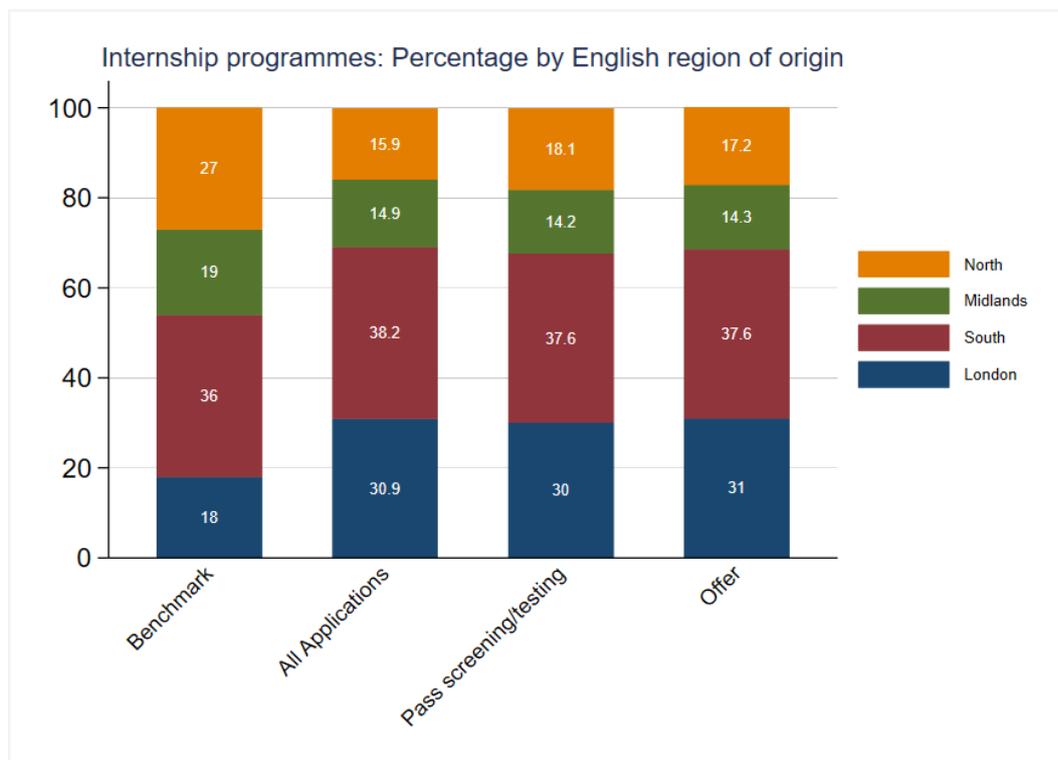
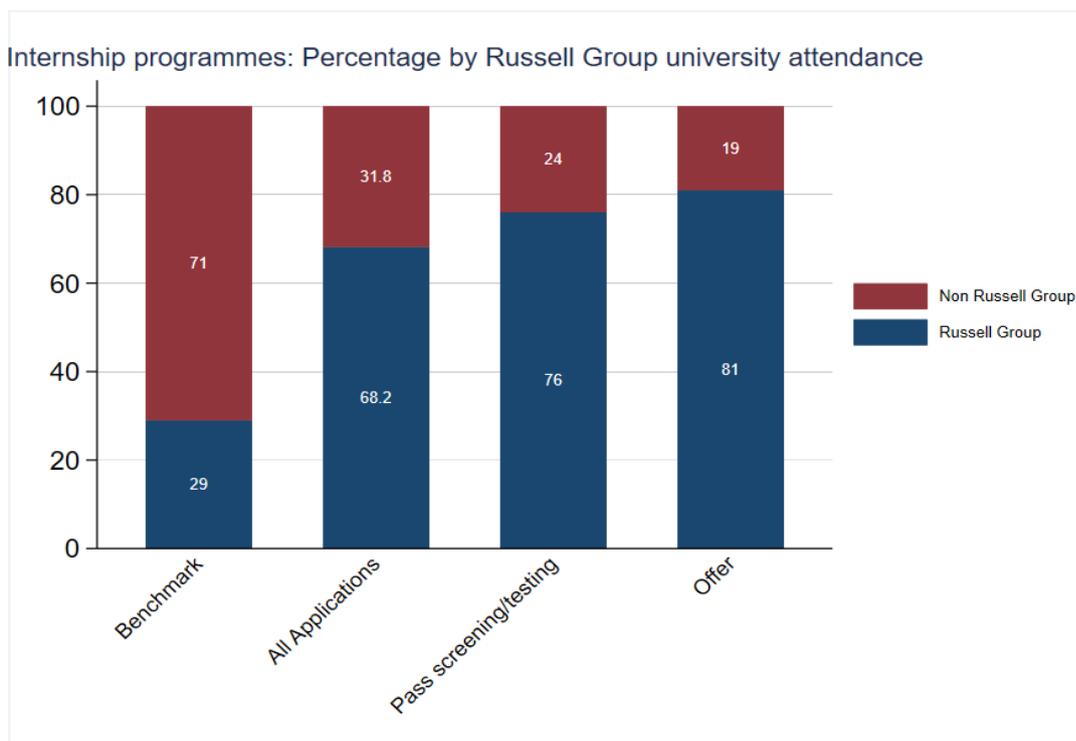


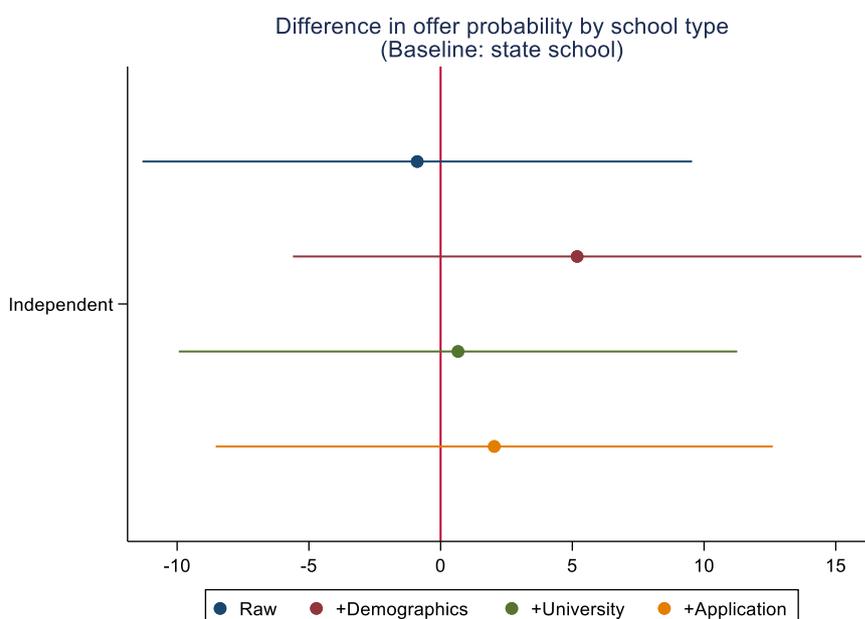
Figure 15: Proportion of interns at various stages of the recruitment process, by university



Internship applicants are also far more likely to be from Russell Group institutions (see Figure 15) with 68% of applicants to these routes coming from a Russell Group university compared to 29% among all graduates in the population from our benchmarking. The proportion of Russell Group applicants making it through the recruitment process increases at each stage, so that 4 out of 5 internship offers go to Russell Group educated applicants, compared to just short of 1 in 3 in the population. Technical Appendix Table 8 shows that a far larger proportion of independent school internship applicants study at Russell Group universities than state school students (80% compared to 64%) illustrating that this selection by university type could further drive inequalities in access to these internship positions.

Yet when we look at offer rates for internships by school type in Figure 16, we see that in both the raw and conditional models (comparing like for like), independent school applicants have the same chance of getting made an offer as state school applicants, conditional on applying. As with the graduate programme, there is again very little difference between withdrawal rates between independent and state school applicants, suggesting that the main reason for the overrepresentation of independent school pupils in internship roles is that they are far more likely to be in the applicant pool, relative to the national population of graduates.

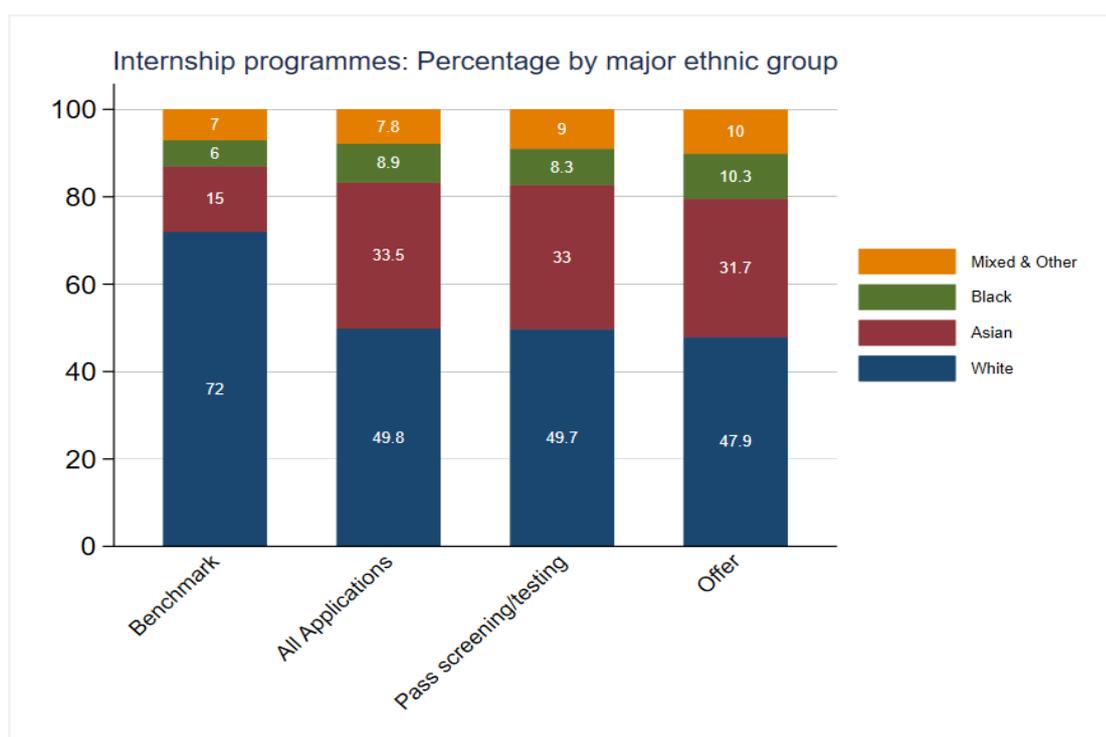
*Figure 16: Offer rates to internship programmes, conditional on observable differences across applicants, by school type*



Note: Raw models contain employer fixed effects only; + Demographics adds controls for region of origin, and visa status; + University adds controls for university category and subject studies; + Application adds controls for networks, region of office, and job role applied to. Points represent % estimates while lines represent 95% confidence intervals.

The picture for entry to internship routes by gender looks very similar to the graduate entry routes – women are underrepresented in the applicant pool relative to men, but conditional on applying, are more likely to be hired to an internship programme. This could be driven by unobservable differences in characteristics between men and women. But the picture by ethnicity looks slightly more positive for applicants from ethnic minority groups compared to the graduate programmes (See Figure 16). Again, applicants from ethnic minority backgrounds are overrepresented in the sample of applicants, but instead of their representation falling through the recruitment process, Black applicants remain overrepresented in terms of offers, while the proportion of Asian applicants getting an offer is only slightly below the applicant pool proportion. This could be related to regional availability to these positions – Figure 14 shows the overrepresentation of London in terms of location of applicants and Technical Appendix Table 8 shows that Asian and Black applicants predominately come from London.

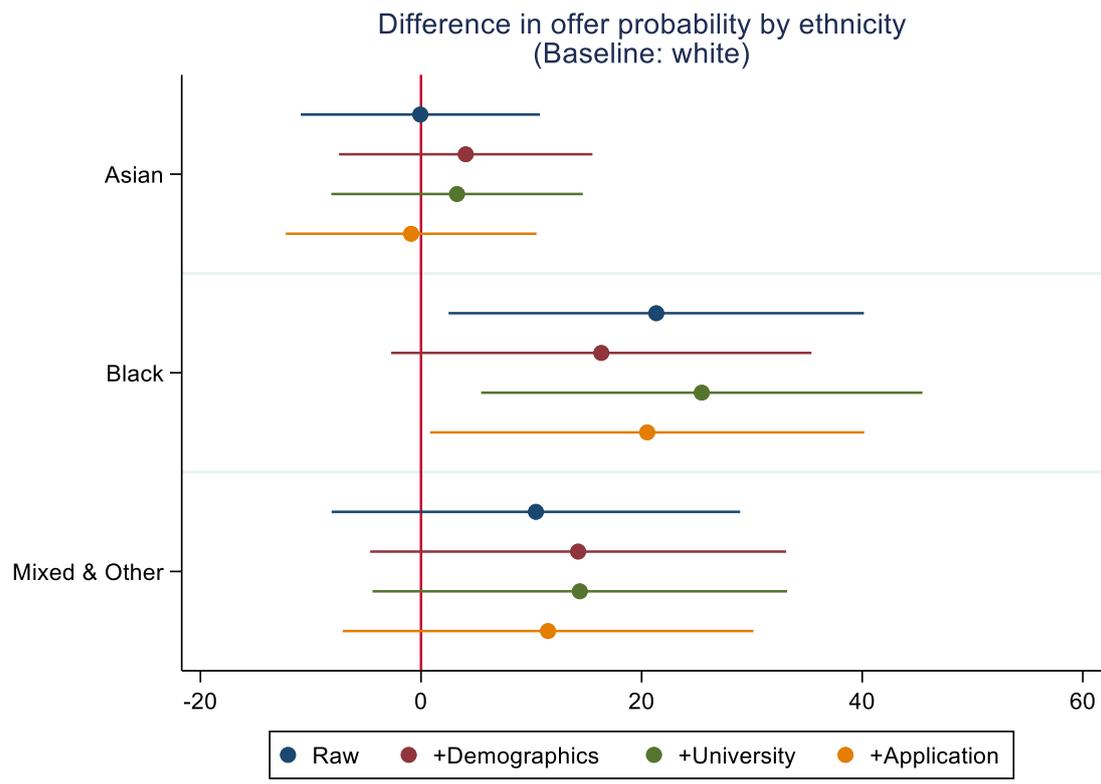
Figure 17: Proportion of interns at various stages of the recruitment process, by ethnicity



When we compare offer rates, in terms of raw differences between ethnic minority applicants and white applicants, and then comparing like with like, taking into account differences in demographics, prior attainment, and types of applications made, we see that Asian applicants are as likely to get an offer to an internship programme as white applicants, while Black applicants are 20% more likely to get an offer to an internship programme compared to similar white applicants. This may be due to

the specific targeting of internship schemes to particular groups. Figure 18 shows that this gap remains stable whether comparing raw or like for like gaps between Black and white applicants.

Figure 18: Offer rates to internship programmes, conditional on observable differences across applicants, by ethnicity



Note: Raw models contain employer fixed effects only; + Demographics adds controls for region of origin, and visa status; + University adds controls for university category and subject studies; + Application adds controls for networks, region of office, and job role applied to. Points represent % estimates while lines represent 95% confidence intervals.

### School leavers and Apprenticeship entry routes

A number of employers also offer entry routes to professional occupations to non-graduates – i.e. school leavers and apprenticeships. These are typically for young people who have completed some form of level 3 education (post-16 qualifications), but not gone on to study to level 6 for a degree. These entry routes are offered across accountancy, law and the public sector in our data (see Technical Appendix Table 11 for number of employers by sector), yet we should be mindful that the vast majority of roles in this route are through

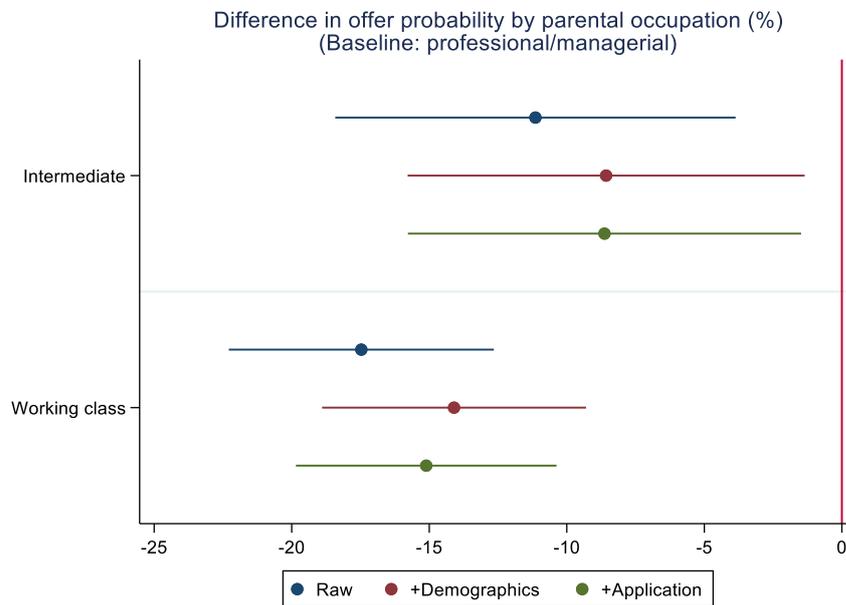
the public sector (83% of roles) and so this sample is less representative than our graduate analysis in terms of balance across employers and sectors. We are also constrained in terms of providing specific national benchmarks for certain characteristics for this entry route, as a) we can only include level 3 qualifications that are included on DfE's list of those counting in school performance tables (see Technical Appendix section A.4 for full details) and b) our parental occupation benchmarks come from linked university data.

The top panel of Figure 19 illustrates that working class applicants are 17% less likely to get offers to school leaver and apprenticeship programmes than professional applicants. When we compare applicants with the same demographic characteristics (gender, ethnicity, visa status), applying to the same region, and same type of role, these gaps remain wide at 15%. As with graduate and internship programmes, withdrawal rates are very similar across applicants from different socio-economic backgrounds. A further drawback of this part of the analysis is that typically we do not have measures of prior attainment for applicants to these routes, making like for like comparisons more difficult. But we can observe level 3 attainment for the accountancy sector, and so we can compare the picture in terms of SEB gaps in offer rates to these programmes overall to those in the accountancy sector, where we can make this more detailed comparison across applicants.

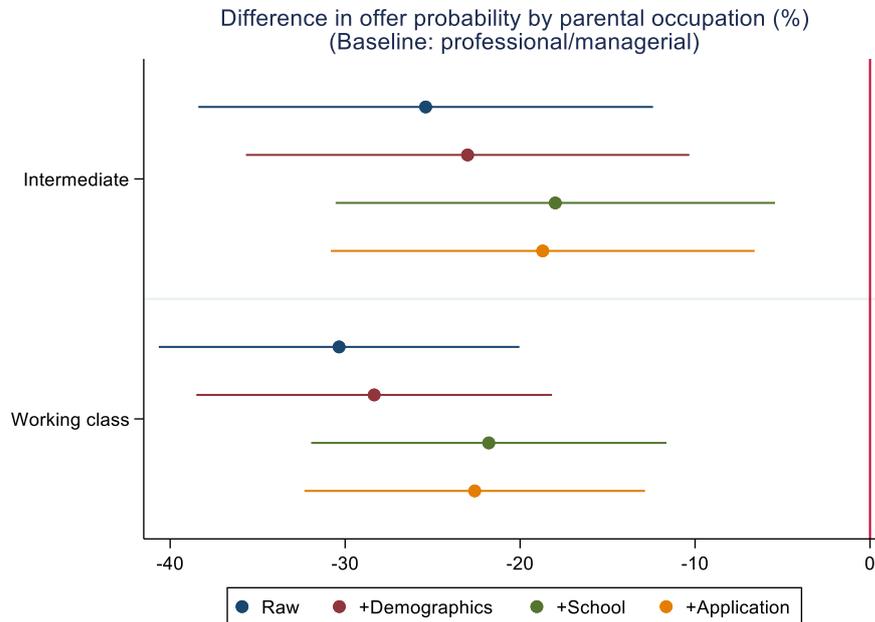
The lower panel of Figure 19 therefore shows greater inequality in offer rates for the accountancy sector. This sector is more unequal than the broader sample population (dominated by the public sector) with working class applicants to accountancy school leaver and apprenticeship programmes 30% less likely to get an offer than applicants from professional backgrounds. When we take into account the prior attainment of applicants (grade at maths GCSE and A-level grades – see Technical Appendix Table 7), working class applicants are still 23% less likely to get an offer to these programmes than applicants from professional backgrounds. This is indicating that the gaps that we see between applicants from working class and professional backgrounds are unlikely to all be driven by differences in prior attainment among these applicants.

Figure 19: Offer rates to school leaver programmes, conditional on observable differences across applicants, by parental NS-SEC for all and accountancy only

School Leavers (All)



School leavers (Accountancy only)

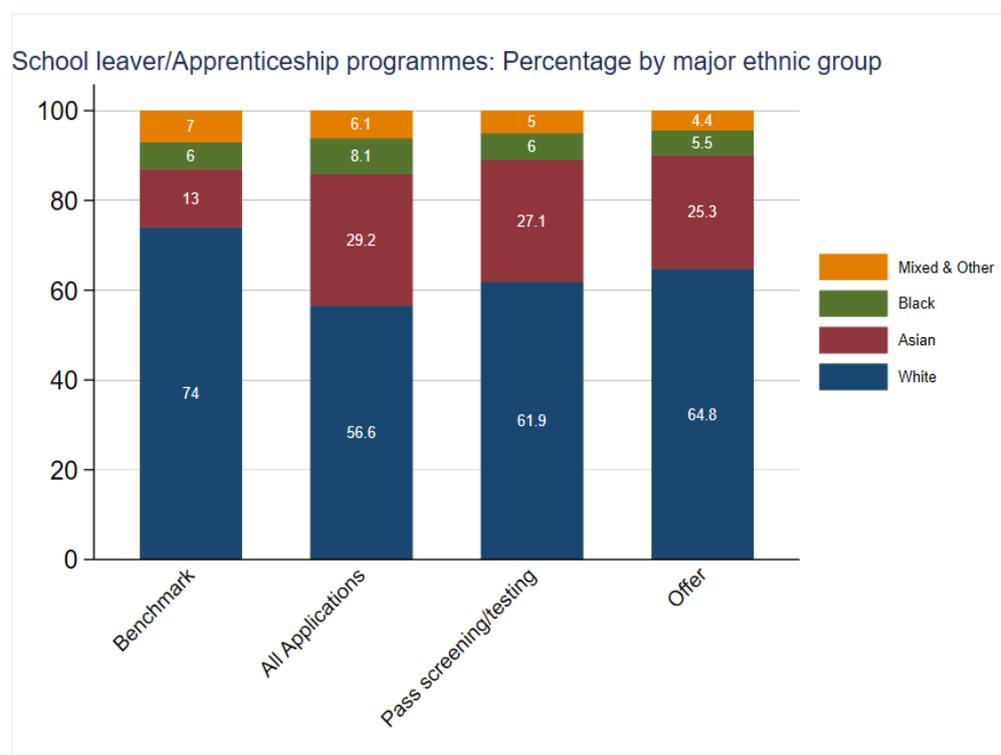


Note: Raw models contain employer fixed effects only; + Demographics adds controls for visa status; + School adds controls for GCSE maths grade and A-level grades; + Application adds controls for region of office, and job role applied to. Points represent % estimates while lines represent 95% confidence intervals.

The picture for gender differences in access to school leaver and apprenticeship routes mirrors those of graduate and internship routes, with women once more being underrepresented among the applicant pool relative to all school leavers (49% of applicants vs 55% of school leavers), but conditional on applying, being more likely to get an offer than men (21% more likely in simple comparisons and 19% more likely comparing to men with otherwise similar observable characteristics).

Ethnicity differences also closely mirror those of graduate programmes. Figure 20 shows that applicants are more likely to be from Asian and Black backgrounds relative to the national benchmark of school leavers (29% compared to 13% of school leavers for Asian applicants and 8% relative to 6% of school leavers for Black applicants). The proportion of both Asian applicants and Black applicants falls across each stage of recruitment, with Asian applicants remaining overrepresented among offers and Black applicants underrepresented relative to national benchmarks.

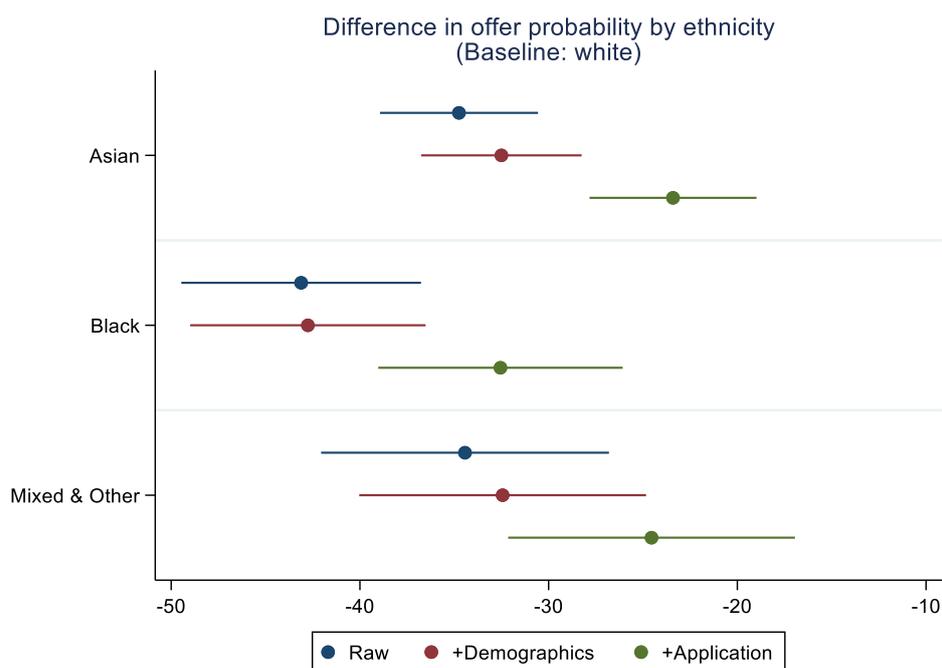
Figure 20: Proportion of school leavers at various stages of the recruitment process, by ethnicity



When we compare offer rates among applicants from Asian and Black backgrounds, relative to white applicants, Asian applicants are 35% less likely to be offered positions, and Black

applicants 43% less likely to be offered position, relative to white applicants (see Figure 21). Taking into account demographics and details of the application (including region of office applying to), these raw gaps reduce to 23% for Asian applicants and 33% for Black applicants.

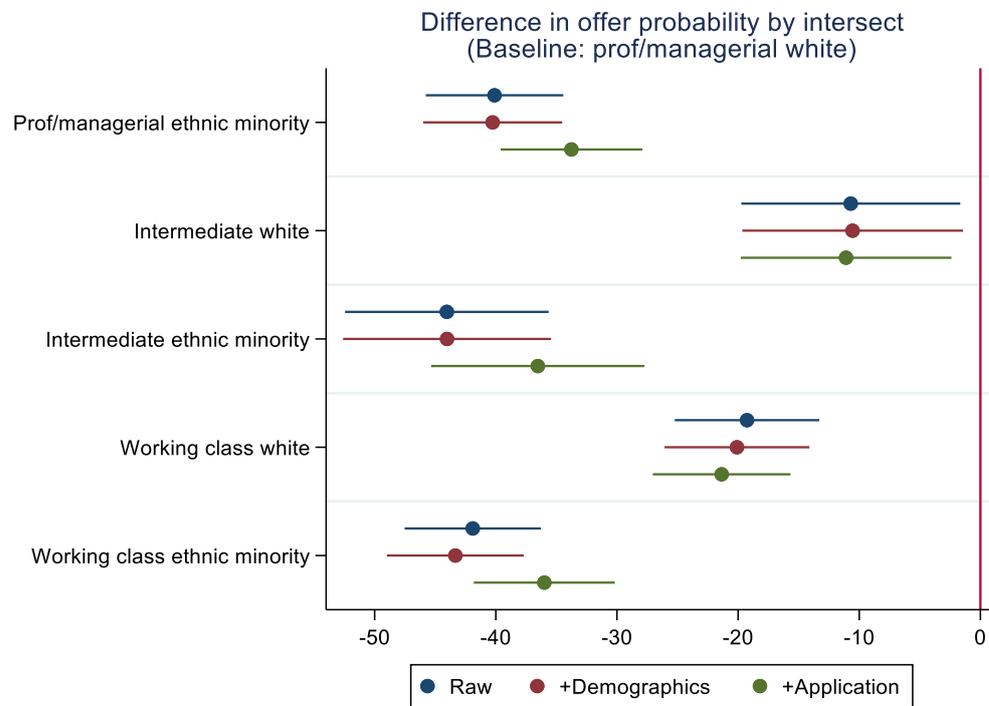
Figure 21: Offer rates to school leaver programmes, conditional on observable differences across applicants, by ethnicity



Note: Raw models contain employer fixed effects only; + Demographics adds controls for visa status; + Application adds controls for region of office, and job role applied to. Points represent % estimates while lines represent 95% confidence intervals.

Given these large differences by socio-economic background and ethnicity that we see in offer rates to school leaver and apprenticeship programmes, we also consider the intersection of these characteristics, to see if there is a double disadvantage to being both working class and an ethnic minority when applying to this route. Figure 22 illustrates that while white applicants from working class backgrounds are 20% less likely to receive an offer relative to white applicants from professional backgrounds, ethnic minority applicants *from any socio-economic background*, are around 35% less likely to get an offer to a school leaver or apprenticeship programme than a white applicant from a professional background, with similar characteristics.

Figure 22: Offer rates to school leaver programmes, conditional on observable differences across applicants, by ethnicity and parental NS-SEC



Note: Raw models contain employer fixed effects only; + Demographics adds controls for visa status; + Application adds controls for region of office, and job role applied to. Points represent % estimates while lines represent 95% confidence intervals.

## 5. Recommendations

Recommendations for employers

### **Recommendation 1:**

**Employers should track socio-economic background, gender, and ethnicity data for all applicants to identify and address barriers to entry. Measuring these factors and achieving high response rates enables a deeper understanding of inequalities and supports more inclusive hiring practices.**

Employers should ensure they are measuring SEB, gender, and ethnicity of all applicants (both successful and unsuccessful ones), to enable them to analyse inequalities in their applicant pools and final intakes to better understand barriers to entry to professional occupations. Our participating employers have taken steps to measure socio-economic background, along with gender, and ethnicity of applicants and already feature on the Social Mobility Foundations' Employers Index to be approached to participate in this analysis. These findings are therefore the tip of the iceberg with regards to inequalities in access to professional occupations.

### **Recommendation 2:**

**Review recruitment processes to ensure candidates are assessed on their potential, rather than on past qualifications or experiences which may be influenced by their social background.**

One of the participating employers, Severn Trent (who have allowed us to cite their participation in this project), uses strengths-based recruiting to maintain a diverse pipeline of talent throughout the recruitment process. This approach has shown particular success at the online testing stage, with diverse talent represented throughout each stage of the recruitment process, particularly into final assessment centres. Other employers could consider adopting this approach to enable candidates to be assessed on their potential, rather than their past qualifications or experience. Severn Trent aim to create a level playing field for all candidates, particularly those that are from marginalised groups. Candidates are reported to feel more relaxed and energised with a strength based approach, allowing the

employer to see their true strengths and suitability for the role and the working environment

### **Recommendation 3:**

**Employers should consider proactively monitoring and maintaining the diversity of the applicant pool throughout the online testing stages to help ensure a representative talent pool reaches the final assessment stage.**

This follows the example of one participating employer, which does not experience the drop off in diversity at these stages observed on average in our study. This employer describes having a 'laser focus' on the diversity of candidates progressing through each recruitment stage, monitoring for adverse impact. They undertake constant review of the demographic makeup of the applicants as they make their way through the testing stages and adjust the pass marks for the whole cohort where necessary and appropriate to help ensure a representative proportion of candidates reach the Assessment Centre stage. This agile approach allows differential setting of pass marks for elements of the testing that are particularly important for different lines of service being applied for, never going below pre-agreed quality thresholds, and remaining fair as any adjustments to pass marks affect all applications.<sup>14</sup>

### **Recommendation 4:**

**Employers should design face-to-face assessments with socio-economic and cultural differences in mind to avoid disadvantaging underrepresented candidates. Focusing on essential skills for recruitment while allowing room for development post-onboarding can help create a more inclusive hiring process.**

Students from lower socio-economic backgrounds are likely to be less comfortable in face-to-face recruitment settings through having a more limited range of experiences and a less well-developed ability to communicate them. Conversational cultures may also vary. Employers who proactively consider these differences in the design of their face-to-face assessments can avoid penalising applicants from underrepresented groups for lacking professional or communication skills which they will be able to learn once recruited. By reviewing the balance of essential skills to be manifest during recruitment and skills that can

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<sup>14</sup> In other words, pass marks are only adjusted to reduce adverse impact to a more acceptable level, and often a small tweak is all that is required, but this is not always possible depending on volumes.

be developed post onboarding, employers can make progress in removing barriers to underrepresented groups in their assessment process.

**Recommendation 5:**

**Employers seeking a diverse workforce should assess whether recruiting predominantly from Russell Group universities is sustainable. While targeted outreach can improve representation, expanding recruitment to high-potential candidates from non-Russell Group universities can widen the talent pool, reduce competition for LSEB candidates and reduce renege rates.**

Employers who wish to recruit a diverse workforce should consider whether recruiting predominantly from Russell Group universities is a sustainable recruitment strategy. Several employers in our sample demonstrated very representative applicant and offer pools compared to national benchmarks due to specifically targeting students from underrepresented groups attending Russell Group universities. However many other employers with applicant pools largely originating from Russell Group universities were much less representative due to the persistent relationship between social background (and ethnicity) and attending a more highly ranked university. It is therefore entirely possible to recruit a diverse pool of candidates from Russell Group universities with the correct targeting strategy. Although, as only 29% of graduates who grew up in the UK attended these universities and employers are increasingly prioritising social mobility and hiring of LSEB candidates, this pool of LSEB candidates at Russell Group universities is becoming increasingly sought after by employers. This will result in more LSEB candidates holding multiple offers from different employers and increased costly renege rates for recruitment teams (the ISE estimate the mean cost per hire is currently £4672). Employers should therefore consider strategies for targeting high potential candidates from non-Russell Group universities to widen their pool of available talent.

**Recommendation 6:**

**Employers should work with universities to give more assistance in understanding how to prepare students from underrepresented backgrounds, including the importance of applying early to graduate schemes, and providing guidance on preparing for psychometric tests.**

While employers do a lot of outreach work, particularly to higher ranked universities, this may not be detailed or targeted enough to help universities to understand how to support how to support those students who need it most. Employers could provide more specific information on the recruitment process to university careers teams to allow them to better inform their students. For example, informing careers teams that earlier applications have higher chances of success could enable them to intervene earlier with underrepresented groups. In addition, employers could provide careers teams with materials to support preparation for psychometric testing, which could be passed on to students to aid their efforts.

**Recommendation 7:**

**Employers should expand outreach efforts to attract state-educated applicants to internships, given their high conversion to graduate roles. Broadening spring week eligibility and opening internships to finalists can help level the playing field for underrepresented students balancing university adjustment and work commitments.**

Greater outreach work to attract state educated applicants to internship programmes could be beneficial given the high conversion rate from internships to permanent graduate roles. The pipeline in some sectors of work experience from first year spring week schemes to second year internships to graduate jobs favours students who are ‘application ready’ in their first term at university. During this time, students from underrepresented groups are acclimatising to the culture shock of university, may be juggling substantial part time work and are less likely to be familiar with opportunities to look out for. Opening spring week schemes to undergraduate students from all years and internships to finalists (as well as penultimate year students) would enable talented students from underrepresented groups a better chance of participating in these schemes.

Recommendations for universities

**Recommendation 8:**

**Universities should inform disadvantaged students that applying early to graduate schemes improves success rates. Providing guidance on preparation for psychometric tests and assessments can boost confidence and help students without support networks navigate the recruitment process more effectively.**

Universities should make clear to disadvantaged students that applying early to graduate schemes is likely to improve their chances of success. This communication should be made early in the students' time at university – in the first or second year. It should signpost support to practice of psychometric and other tests and assessments likely to be required in graduate recruitment processes to encourage undergraduates to become more 'application ready'. This has the double benefit of giving students who might not have a support network familiar with recruitment processes the chance to overcome a lack of confidence with testing through repeated practice and increasing the chance of their making early applications to graduate schemes.

**Recommendation 9:**

**Universities and employers should foster stronger connections and collaborate on data sharing to enhance career guidance and recruitment strategies, particularly to support underrepresented students.**

Employers and university careers teams have highlighted an appetite for greater collaboration and data sharing to both improve careers guidance provided to students and inform the recruitment strategies of employers. Stronger connections between employers and universities could improve information flows and transparency, better supporting students to make education to work transitions, especially students from underrepresented groups who may not have access to this information or support from other sources.

For example, employers could share data from recruitment systems highlighting groups of candidates who may require better support in preparation for specific stages of the recruitment process.

Universities (and in particular those who struggle to attract leading employers) could convene careers fairs across multiple institutions, lowering the costs to employers of attending each institution. They could also share data on the demographic characteristics of their student body, or signpost employers to the data dashboard provided by OfS (<https://www.officeforstudents.org.uk/data-and-analysis/access-and-participation-data-dashboard/>) so that employers can target their attraction strategies more effectively to ensure a diverse pool of job applicants.

Employers should also track and record the impact of outreach work. In late 2025, an ‘evidence repository’ will be launched, where both universities and employers can log results of evaluations of outreach work to share effective and ineffective practice – it would be a positive step to see employers engaging with this infrastructure to support students that need it the most.

As suggested in several recent sources (AGCAS, 2024; Demos, 2024; Inclusion at Work Report, 2024), there may be a role for a funded ‘data partner’ in creating a centralised data hub or toolkit supporting employers and universities to agree formats and standardise data across organisations, which in the longer term can also be used to evaluate the success of interventions.

## 6. Summary and Conclusions

This report offers the largest study to date on inequalities in application and hiring decisions across sectors for entry-level professional occupations by SEB, gender, ethnic group and their intersections. We find that the majority of the inequalities that we observe by socio-economic background and by ethnicity in entry to professional occupations are driven by employer-side decisions made during the recruitment process.

The graduate applicant pools are broadly representative of the general talent pool available, in terms of applicants from working class socio-economic backgrounds. Ethnic minority groups are overrepresented in the applicant pool, along with those from professional backgrounds and males. Applicants from intermediate backgrounds and female applicants are underrepresented in the applicant pool.

Withdrawal rates by SEB, ethnicity, and by gender are similarly small across groups. Instead, for graduate and school leaver and apprenticeship routes, employers are losing talent from working class backgrounds and ethnic minority groups due to rejection decisions made throughout the recruitment process.

While around half the disadvantage gap in graduate offer rates occurs in screening and online testing stages for working class applicants relative to those from professional backgrounds, the other half occurs at the face-to-face stage. For ethnic minority applicants, the majority of the disadvantage occurs at the screening and online testing stages of the recruitment process, relative to white applicants.

Internship programmes appear to be more equal in terms of their intakes, possibly in part due to programmes specifically targeting certain groups. While this is positive news given that over half of those working in internship roles are hired on graduate programmes, these still only make up only a small proportion of the intake into graduate programmes, and differences across regions suggest big differences in availability.

Our findings challenge the notion that employers do not have access to enough diverse talent in the entry-level pipeline. They also challenge the idea that candidates are appointed primarily based on prior attainment and university attended, given that working class and ethnic minority applicants face lower offer rates despite being well represented in the

applicant pool, and compared to applicants from professional backgrounds and white applicants that attended similar universities and studied similar subjects.

Given our findings that around half of the SEB gap, and most of the ethnic minority disadvantage gap occurs at the screening and online testing stage of recruitment, employers should prioritise exploring the role of screening criteria and online tests in measuring potential. These findings could be driven by a lack of preparation for online tests, perhaps due to parents and wider networks having more limited experiences of these processes. This could point to a role for greater collaboration between employers and the education sector, through both employer outreach and careers guidance in the education sector specifically focusing on preparation for these types of processes for applicants from non-traditional backgrounds. Employers that maintained a diverse pipeline of talent throughout their recruitment process pointed to the use of strengths-based recruiting, based on potential rather than experience, and a laser focus on maintaining diversity throughout each stage of the process, by making adjustments where necessary. By reviewing the balance of essential skills to be manifest during recruitment and skills that can be developed post onboarding, employers can make progress in removing barriers to underrepresented groups in their assessment process.

There is also a potential role for outreach work to attract more women and applicants from intermediate backgrounds to apply for these roles, given their underrepresentation in the applicant pool. This could help to reduce gender and SEB inequalities between the top and the middle of the SEB distribution. Information campaigns could highlight that female applicants have higher offer rates when they apply, compared to similarly attaining male applicants. Outreach work could also highlight the important role of work experience, and internships in this process. While these are not equally distributed across regions, there is a high conversion rate of internship programmes to graduate programmes, and offer rates are similar by SEB to these programmes, despite an overrepresentation of private school applicants in the applicant pool. Some internship schemes start very early, favouring those who are 'application ready' in their first term at university. Offering multiple chances to enter these schemes could attract more diverse talent. Ethnic minority candidates have higher offer rates than white applicants, which could be partly driven by schemes specifically targeting certain underrepresented groups.

Finally, an immediate impact of this project has been encouraging participating employers to collect information on the socio-economic background of their applicants for the first time on a consistent basis. All employers should prioritise measuring SEB, gender, and ethnicity, and analysing their applicant pools and final intakes to better understand barriers to entry to professional occupations. While our participating employers have taken steps to measure socio-economic background, along with gender, and ethnicity of applicants and already feature on the Social Mobility Foundations' Employers Index to be approached to participate in this analysis, our findings will only show the tip of the iceberg with regards to inequalities in access to professional occupations.

## 7. References

- ACGAS (2024) 'How Can Data Ignite Relationships Between Universities and Employers?', Institute of Student Employers Blog, 16<sup>th</sup> September 2024. Available at: <https://insights.ise.org.uk/attraction-and-marketing/blog-how-can-data-ignite-relationships-between-universities-and-employers/>
- Bachan, R., & Bryson, A. (2022). The gender wage gap among university vice chancellors in the UK. *Labour Economics*, 78, 102230.
- Becker, G. S., & Tomes, N. (1986). Human capital and the rise and fall of families. *Journal of labor economics*, 4(3, Part 2), S1-S39.
- Blanden, J., Gregg, P., & Macmillan, L. (2007). Accounting for intergenerational income persistence: noncognitive skills, ability and education. *The Economic Journal*, 117(519), C43-C60.
- Boliver, V. (2016). Exploring Ethnic Inequalities in Admission to Russell Group Universities. *Sociology*, 50(2), 247-266. <https://doi.org/10.1177/0038038515575859>
- Carneiro, P., Cattan, S., Dearden, L., van der Erve, L., Krutikova, S., & Macmillan, L. (2020). The long shadow of deprivation: Differences in opportunities across England. Social Mobility Commission
- Corak, M. (2013). Income inequality, equality of opportunity, and intergenerational mobility. *Journal of Economic Perspectives*, 27(3), 79-102.
- Crawford, C., Gregg, P., Macmillan, L., Vignoles, A., & Wyness, G. (2016). Higher education, career opportunities, and intergenerational inequality. *Oxford Review of Economic Policy*, 32(4), 553-575.
- Crawford, C., & Vignoles, A. (2014). *Heterogeneity in graduate earnings by socio-economic background* (No. W14/30). IFS Working Papers.
- Demos (2024). The Opportunity Effect. How Social Mobility Can Help Drive Business And The Economy Forward'. October 2024. Available at: [https://demos.co.uk/wp-content/uploads/2024/10/Co-op\\_Report\\_2024\\_Oct.pdf](https://demos.co.uk/wp-content/uploads/2024/10/Co-op_Report_2024_Oct.pdf)
- Friedman, S. and Laurison, D. (2019) *The Class Ceiling. Why it pays to be Privileged*. Bristol: Policy Press
- García-Peñalosa, C., Petit, F., & Van Ypersele, T. (2023). Can workers still climb the social ladder as middling jobs become scarce? Evidence from two British cohorts. *Labour Economics*, 84, 102390.
- Goldthorpe, J. H. (2016). Social class mobility in modern Britain: changing structure, constant process. *Journal of the British Academy*, 4(89-111).
- Gregg, P., Macmillan, L., & Vittori, C. (2017). Moving towards estimating sons' lifetime intergenerational economic mobility in the UK. *Oxford bulletin of economics and statistics*, 79(1), 79-100.
- Hsieh, C. T., Hurst, E., Jones, C. I., & Klenow, P. J. (2019). The allocation of talent and us economic growth. *Econometrica*, 87(5), 1439-1474.
- Inclusion at Work Panel (2024). *Report on the Inclusion at Work Panel's recommendations for improving diversity and inclusion (D&I) practice in the workplace*.

Institute of Student Employers. (2024). Student recruitment survey 2024. Institute of Student Employers.

Jerrim, J., & Macmillan, L. (2015). Income inequality, intergenerational mobility, and the Great Gatsby Curve: Is education the key?. *Social Forces*, 94(2), 505-533.

Kilpi-Jakonen, E., Blanden, J., Erola, J., & Macmillan, L. (Eds.). (2024). *Research Handbook on Intergenerational Inequality*. Edward Elgar Publishing.

Macmillan, L. (2014). Intergenerational worklessness in the UK and the role of local labour markets. *Oxford Economic Papers*, 66(3), 871-889.

Macmillan, L., Murphy, R., & Wyness, G. (2024). *Occupational hazard: Inequalities in labour market mismatch* (No. 24-06). UCL Centre for Education Policy and Equalising Opportunities.

Macmillan, L., Tyler, C., & Vignoles, A. (2015). Who gets the top jobs? The role of family background and networks in recent graduates' access to high-status professions. *Journal of Social Policy*, 44(3), 487-515.

Mirza, H. S., & Warwick, R. (2022). *Race and ethnicity* (No. R230). IFS Report. Deaton Review

Stansbury, A., & Rodriguez, K. (2024). *The class gap in career progression: Evidence from us academia*. Technical report. Working Paper.

UKCES (UK Commission for Employment and Skills). (2016). *Labour Market Projections for the UK: 2014-2024 – Working Futures 2014-2024 data: England, 6 industries (Table 6.0.4)*.



# **Inequalities in Access to Professional Occupations**

## **Technical Appendix**

**March 2025**

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## TA.1 Data received

This report provides the technical details to accompany the main report on inequalities in access to professional occupations. Since piloting this project in 2015 we have received recruitment data for almost 2 million applicants (N=1,934,271) to entry-level roles including graduate, school leaver, apprenticeship and internship programmes across 17 employers participating in this research project. This is the largest dataset of its kind containing detailed anonymised individual-level data for all applicants on a range of diversity characteristics, demographics, educational attainment, networks and work experience, application and outcome details as outlined in Table 1. We also received entry criteria and recruitment process maps for each entry level programme. We encouraged employers to provide data even where response rates were low so improvements in these rates could be observed over time (in our next report). Missing data proportions for key variables in the baseline year are included in TA.8.

*Table 1: Recruitment data requested by UCL*

<b>Key diversity characteristics</b>	Undergraduate degree institution
Parental occupation	Undergraduate degree - subjects
School type	Undergraduate degree - grades
Parent degree	Postgraduate qualifications - subjects
FSM eligibility	Postgraduate qualifications - grades
Gender	<b>Networks and work experience</b>
Ethnicity (minor group)	Prior work experience at your organisation
Ethnicity (major group)	Networks or information source
Contextual recruitment flag (if any)	<b>Application details</b>
<b>Demographics</b>	Programme
Region of origin (based on school location at age 16 or 18)	Business area
Age / year of birth (or age band)	Office location
Nationality	Intake year
Visa status	Date of application
<b>School attainment</b>	Applicant ID (anonymised)
GCSEs - Maths and English grades	<b>Outcomes</b>
A-level and equivalents - subjects	Application stage reached or offer
A-level and equivalents – grades	Performance at each stage of the recruitment process (e.g. test scores)
<b>University</b>	

## TA.2 Data preparation

Our aim is to produce publicly available research reports based on data collated from all participating employers, while also providing bespoke reports and benchmarks to each participating employer. We have therefore prioritised the standardisation and consistency with which all data is requested, coded, analysed and reported, while also being flexible and sensitive to employers’ challenges around data collection and extraction, response rates, data privacy and time commitments. We therefore received data from all participating employers which maximises anonymity and protects applicant confidentiality, while also being rich in detail for us to conduct our analysis.

We have cleaned the data and created the variables as outlined below in Table 2. In all cases responses such as ‘I don’t know’, ‘I prefer not to say’ and ‘undisclosed’ are classed as an additional missing category for each variable.

*Table 2: Variables created*

<b>Variables created</b>	<b>Details</b>
<b>Key diversity characteristics</b>	
Parental occupation (NS-SEC: National Statistics Socio-Economic Classification)	<p>Applicants are grouped into three broad social background categories in line with Social Mobility Commission guidance<sup>1</sup> based on a single question capturing the occupation of the main parental household earner.</p> <p>These groups are:</p> <p>Professional and managerial – modern and traditional professional occupations; senior or junior managers or administrators</p> <p>Intermediate backgrounds – clerical and intermediate occupations; small business owners</p> <p>Working class backgrounds – technical and craft occupations; routine, semi routine and service occupations; long term unemployed.</p> <p>For earlier years before the single question was adopted by employers, we derived NS-SEC from variables on parental occupation, parental supervisory status, and parental employment status, using ONS guidance on self-coded NS-SEC<sup>2</sup>.</p>
School type	Schools are classified as state, independent or international. Selective schools are not identified separately due to lack of consistency in collecting this data across employers.

<sup>1</sup> <https://socialmobility.independent-commission.uk/resources/socio-economic-diversity-and-inclusion-employers-toolkit/>

<sup>2</sup> <https://www.ons.gov.uk/methodology/classificationsandstandards/standardoccupationalclassificationsoc/soc2020/soc2020volume3thenationalstatisticsocioeconomicclassificationnssecrebasedonthesoc2020#deriving-the-ns-sec-self-coded-method>

	International school responses are also used to identify international applicants for exclusion from the sample where they do not provide any other UK region of origin data.
Parent degree	This captures whether the applicant has at least one parent with an undergraduate degree, or not.
Eligibility for Free School Meals	Applicants are classified as either eligible or non-eligible for FSM 'ever'. For the purposes of benchmarking we have assumed all employers who collect this data use the wording recommended by the Social Mobility Commission which captures whether applicants were eligible for FSM 'at any point during your school years' (rather than at a single point in time).  Overseas responses are used to identify international applicants for exclusion from the sample where they do not provide any other UK region of origin data.
Gender	Applicants are grouped as male, female or other.
Ethnicity (major)	Applicants are grouped as White, Asian, Black, Mixed and Other as per ONS Census 2021 categories <sup>3</sup> .
Ethnicity (minor)	Applicants are grouped into 18 minor ethnic grouping as per ONS Census 2021 categories <sup>4</sup> . For benchmarking, the categories White-Irish, White-Gypsy or Traveller, White-Roma and White-'Other' are either zero or suppressed due to small cell sizes.
Intersectional	An intersectional variable is created from parental occupation (3 groups as above), gender (male or female), and ethnicity (white or ethnic minority). Applicants are therefore assigned to one of 12 intersectional groups, such as 'ethnic minority female from a working-class background'.
<b>Demographics</b>	
UK region of origin (or nation of origin)	Applicants are assigned to one of nine English regions, Northern Ireland, Scotland or Wales. This is derived from school location at age 16 or 18 via a thorough matching process using data such as school names, postcodes, towns and/or counties.  If English region data is entirely unavailable from an employer, we group applicants into UK nations where possible: England, Scotland, Wales, Northern Ireland.

<sup>3</sup> <https://www.ethnicity-facts-figures.service.gov.uk/style-guide/ethnic-groups/>

<sup>4</sup> <https://www.ethnicity-facts-figures.service.gov.uk/style-guide/ethnic-groups/>

	<p>Applicants who are missing a UK region are identified as either 'UK-missing region' or 'non-UK' using data on the type of school attended, eligibility for free school meals (both of which capture being at school overseas) and visa status. Applicants identified as having a non-UK region of origin are excluded from the sample.</p>
Nationality/Visa status	<p>Nationality is captured as British (British or UK citizen, settled status, right to remain etc) and non-British.</p> <p>Visa status is classed as eligibility to work in the UK or not.</p> <p>We use data on nationality and visa status for two purposes:</p> <ul style="list-style-type: none"> <li>- to check whether any apparent disadvantage for ethnic minority groups may be due to visa restrictions rather than ethnicity per se.</li> <li>- to identify applicants who are missing region of origin as either UK or international applicants where possible.</li> </ul> <p>In some cases, employers transferred data only for applicants eligible to work in the UK, so no further nationality or visa status data was required.</p>
Age band	<p>Applicants are grouped into age bands chosen by employers to avoid individual applicant identification where groups are small.</p>
<b>School attainment</b>	
GCSE grades – Maths and English	<p>Grades on both old and new scales are used. They are grouped as 7/8/9 (A*/A); 4/5/6 (B/C); lower than 4 (C); or another grade.</p>
UCAS tariff	<p>UCAS tariff is calculated from the best 3 A-Levels of applicants with at least 3 A-levels using the conversion below<sup>5</sup>. It is not calculated for applicants with 2 or fewer A-levels.</p> <p>A* 56</p> <p>A 48</p> <p>B 40</p> <p>C 32</p> <p>D 24</p> <p>E 16</p> <p>Other or fail 0</p>

<sup>5</sup> <https://www.ucas.com/undergraduate/applying-university/entry-requirements/calculate-your-ucas-tariff-points>

QCA points	<p>QCA points are calculated from the best 3 A-Levels of applicants with at least 3 A-levels using the conversion below<sup>6</sup>. It is not calculated for applicants with 2 or fewer A-levels.</p> <p>A* 60  A 50  B 40  C 30  D 20  E 10  Other or fail 0</p>
Level 3 qualification type	Where provided, Level 3 qualification types are grouped as A-levels; BTECs; Highers; IB; A-level and other qualification mixtures; or any other Level 3 qualifications (with no A-levels).
<b>University</b>	
Undergraduate University Group (Boliver Cluster <sup>7</sup> )	<p>Undergraduate universities are allocated into university groups (Boliver Clusters as described in TA.7). This is a more nuanced grouping than Russell or non-Russell Group.</p> <p>If more than one undergraduate institution is provided by applicants, the highest ranked university is used.</p> <p>Where only the most recent university institution is captured by employers, applicants with postgraduate degrees are missing undergraduate institution data. In this case, an applicant's university group reflects their most recent institution.</p> <p>If employers do not wish to disclose individual university names to UCL, we provide a look up table of university names and university groupings for the employer to do this allocation themselves. This allocates each university to a Boliver Group, Russell Group or not, and Scottish university or not. The latter is used to correctly allocate four-year Scottish 'MAs' as undergraduate degrees rather than postgraduate degrees.</p>
Russell Group	<p>The captures whether the applicant attended a Russell Group university for their undergraduate degree (or for their most recent qualification is this is the only data provided).</p> <p>If more than one undergraduate institution is provided by an applicant, they are flagged as a Russell Group student if any of their institutions are in the Russell Group.</p>

<sup>6</sup> [https://assets.publishing.service.gov.uk/media/660e9c8ca43d91001c3af140/Performance\\_points-a\\_practical\\_guide\\_to\\_key\\_stage\\_4\\_and\\_16\\_to\\_18\\_performance\\_points.pdf](https://assets.publishing.service.gov.uk/media/660e9c8ca43d91001c3af140/Performance_points-a_practical_guide_to_key_stage_4_and_16_to_18_performance_points.pdf)

<sup>7</sup> See Boliver, V. (2015). Are there distinctive clusters of higher and lower status universities in the UK?. *Oxford review of education*, 41(5), 608-627.

Undergraduate or Postgraduate Degree	<p>This identifies whether applicants report undergraduate or postgraduate degrees. It is largely coded from free text capturing all qualification title variants including not only BA, BSc, MA, MS. and PhD, but also titles such as LLB, BMus, MChem, MEng, LLM etc.</p> <p>As four-year undergraduate degrees from most Scottish universities are called MAs, these have been coded as undergraduate degrees, whereas non-Scottish MAs are coded as postgraduate degrees.</p>
Degree subject	<p>Undergraduate degree subjects are grouped as: economics; accounting and finance; business and management; law, maths; other.</p> <p>This is coded largely from free text.</p> <p>For single honours, major or minor degrees, any instance of the five key subjects is coded into the relevant subject group to capture any prior knowledge of these subjects, e.g. BA History and Economics is coded as Economics.</p> <p>For joint honours where two key subjects are reported, the first listed subject is used, e.g. BSc Economics and Maths is coded as Economics.</p> <p>Where two undergraduate degrees are reported, the first one entered by the applicant is used, e.g. if BSc Maths is entered before BSc Law, then BSc Maths is used.</p>
<b>Application details</b>	
Programme	Entry-level programmes are grouped for consistency across employers as graduate, school leaver & apprenticeships, internships, and other work experience programmes.
Line of service	Captures line of service, department or business area within an organisation and therefore varies by employer. Where possible we have grouped similar lines of service for each industry group.
Region of office (or nation)	We use choice of office location to assign applicants to one of nine English regions, Scotland, Wales or Northern Ireland. A small number of applicants to international offices have been removed from the sample. If no office location is provided, we assume all applicants are applying for UK roles and are classed as 'UK-missing region of office'.

Intake year	<p>Applicants are grouped by the intake they apply to join, e.g. applicants applying to start in September 2023 are defined as the 2023 intake in our reports. Where intake year is unavailable, application year is used.</p> <p>If employers have multiple intakes a year, these are grouped in consultation with the employers to ensure our findings are aligned their own internal reporting periods as far as is possible.</p> <p>If employers recruit continuously throughout the year, suitable cut-off dates for data extraction have been agreed in advance, such as 1 September to 31<sup>st</sup> August to align with a traditional graduate recruitment cycle. Some employers with continuous recruitment record application date but intake date for successful applicants only. The application date has therefore been used as the grouping date variable for these employers.</p>
Month of application	<p>Date of application was provided variously as date, week or month of application by participating employers. For consistency, we have assigned all applicants a month of application from this data.</p>
Networks	<p>This captures how applicants heard about the employer or role or what influenced them to apply. Applicants are grouped into:</p> <p>Online – such as using social media, employer websites, recruitment websites.</p> <p>Personal or professional network – such as friends, family or work contacts.</p> <p>Work experience at the employer – if influenced to apply after completing a work placement or due to being a current/former employee in another role.</p> <p>Other information source – such as school/university (e.g. careers services, careers fair, staff), employer events, diversity initiatives, adverts and professional bodies.</p>

Outcomes	
Outcome of application	<p>We record the outcome of the application process as either:</p> <p>Offer made (even if the offer is later rejected by the candidate)</p> <p>Rejected by employer (e.g. for failing a stage, roles being already filled or not completing assessments on time)</p> <p>Withdrawal (the applicant leaves the process voluntarily)</p> <p>'On-hold' by the employer (at any point in the process, while employers manage the recruitment pipeline)</p>
Stage of recruitment process reached (summarised into key stages)	<p>We identified where applicants passed, were rejected, withdrew or were put on hold during the recruitment process. This includes stages such as initial screening, online assessments, interviews and assessment centres. The rejection category captures reasons such as failure, the vacancy being filled, or assessments which are attempted but not completed in the required time (timed-out).</p> <p>Stages were coded for participating employers with reference to several sources of information: data capturing the stage at which the applicant left the process; any recruitment process maps provided to us and conversations with recruitment teams for smaller points of clarification where required.</p> <p>The stages vary both by employer, and over time for the same employer. For consistent reporting, we have grouped these into two key stages:</p> <p>1) Screening and testing, which includes all application sifting, screening based on educational credentials and online testing. Online tests assess skills such as numerical reasoning, verbal reasoning, situational judgement, behaviours, preferences and strengths.</p> <p>2) Face to Face which includes interviews (video and in person), and assessment centres (case studies, group exercises).</p>

## TA.3 Defining the sample

In this baseline report we focus our analysis on a single ‘baseline’ year of data for each of the 17 participating employers (the most recent year). We include in our sample applicants who meet all six criteria outlined below. We focus on a sample of a quarter of a million (253, 653) applicants to graduate, school leaver & apprentice and internship programmes for this baseline report.

*Table 3: Numbers of applicants by programme and year received by UCL*

Programme	Applicants – data received (all years)	Applicants – sample (baseline year)
Graduate	1,078,671	117,043
School leaver & Apprentice	516,666	108,564
Interns	206,691	28,046
Other*	132,082	-
Missing	161	-
Total	1,934,271	253,653

*\*Other’ programmes include other work experience schemes ranging from insight days to year in industry placements.*

Across all participating employers, applicants meeting all six following criteria are included in the sample:

### 1. UK region of origin

In order to obtain accurate benchmarking data against the UK population, we restricted the sample to include only applicants who attended school in the UK. These applicants were identified via a thorough matching process using school location data captured during the recruitment process (relating to school qualifications taken at age 16 or 18) which variously included school names, postcodes, towns and/or counties. The aim was to allocate each applicant to one of nine English regions, Scotland, Wales or Northern Ireland and include these applicants in the sample. Applicants providing non-UK school locations are excluded from the sample.

Applicants who were still missing region of origin data at the end of this matching process were subsequently identified as either ‘UK-missing region’ or ‘non-UK’ using data on the type of school attended, eligibility for free school meals (both of which capture being at school overseas) and visa status. All other applicants are assigned ‘region of origin missing’ and are included in the sample as this group is likely to include UK applicants (as well some international applicants). For participating employers with relatively complete school location data, this latter ‘region of origin missing’ category is very small.

### 2. Applying for a job in the UK

Applicants applying for UK roles are identified by their choice of office location. In a small number of cases, we received applicant data for international offices and these have been removed from the sample. If no office location is provided, we have assumed all applicants are applying for UK roles.

### 3. Applying for an entry level role

Entry level roles are identified by the programme or scheme applied for, such as graduate, school leaver, apprenticeship, internship or other entry level role. Applicants missing this data, or who applied for ‘non entry level’ roles are excluded from the sample and these non-entry level roles have been discussed in advance with recruitment teams where applicable. Where employers do not require a degree for entry to a particular level we follow recruitment team advice about which levels should be classified as graduate and school leaver, restrict our sample to those under 25 and include external candidates only.

#### 4. Valid outcome measure

Applicants with a valid outcome measure are included in the sample. This is defined as either receiving an offer, being rejected, voluntarily withdrawing or being put on hold during the process by the employer. The vast majority of applicants have a valid outcome. A small number of applicants who are missing this data are excluded from the sample.

#### 5. Full sample of applicants provided in intake year

We require data on all successful and unsuccessful applicants in an intake to be able to conduct our analysis. Where unsuccessful applicants for some previous intakes have been deleted by employers due to data retention policies, we have excluded all applicants from this specific intake from the sample.

#### 6. Latest recruitment year of data provided

For the baseline report we use only the most recent year of complete recruitment data provided by each employer. For accounting firms this is the 2023 intake for all programmes (but for one accounting firm we use the 2021 intake due to delays receiving 2022 and 2023 data). For law firms we use the 2025 graduate intake and 2023 for all other programmes. For public sector employers we use the latest year's applicant data (2022 to 2023) if they use rolling recruitment, and 2023 intake if they have an annual recruitment round. For employers in other industries we also use 2023 intake data.

## TA.4 National ‘talent pool’ benchmarks

### Data sources and measures used

We have constructed national benchmarks revealing the characteristics of the potential talent pool for entry level roles in the UK. These benchmarks summarise the characteristics of two recent cohorts of young people who were at school in England at age 16 – a cohort of graduating students and a cohort of school leavers (who may subsequently have gone to university).

We use the graduate cohort to benchmark to graduate schemes and internship programmes; and we use the school leaver cohort to benchmark to school leaver and apprenticeship programmes as follows:

*Table 4: Benchmark cohorts*

Entry level programme	Benchmark cohort
Graduates and Interns	The cohort of graduating students (N=251, 830) is all those identified in HESA data as graduating from an undergraduate degree at a UK university in 2021, who have been identified as being at school in England at age 16.
School leavers and apprentices	The cohort of school leavers (N=311,350) is all those recorded in the National Pupil Database (NPD) data at age 18 (known as Key Stage 5 or KS5), who were at school in England at age 16, and who left school or college in 2019 with a qualification at least the size of an A-level.

Demographic data for school leavers is taken from their KS4 records, where it is most complete. Although both state and private school and further education (FE) college pupils are included in both the KS4 and KS5 data, private schools do not complete the ‘School Census’ which is submitted to the Department for Education (DfE) by state schools. The data available on private school pupils comes from the various qualification awarding bodies and does not include demographic data such as ethnicity, eligibility for free school meals and links to geographical area. Demographic data for FE college students comes from their linked KS4 school record.

We chose 2019 as the school leaver cohort to analyse, as it is the year immediately before the Covid pandemic necessitated the use of ‘Teacher Assessed Grades’, which resulted in the awarding of significantly higher grades than previous years, on average. The qualification regulator Ofqual committed to reducing grade profiles to their pre Covid levels by 2023, but these data are not yet available to use in this analysis.<sup>8</sup> Using school leavers in 2019 has the added benefit of allowing us to see which individuals are subsequently found at a UK university in 2019/20 or 2020/21.

### Demographic measures

#### *Gender*

For graduates the gender is as given in the HESA dataset, and ‘other’ is an option. For school leavers gender comes from the pupils’ KS4 record and is either female or male.

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<sup>8</sup> <https://educationhub.blog.gov.uk/2023/04/28/exams-in-2023-everything-you-need-to-know/>

### *Ethnic Group*

Both major and minor ethnic group are available in the HESA data for graduates. For school leavers, ethnicity is missing for private school students who were not at state school at KS4, so the analysis by ethnicity for school leavers is just for state school pupils.

### *Social background measures*

There are two measures of social background given in HESA data for graduates. They are whether either parent has a degree qualification, and a socio-economic classification, coded from self-reported data given by applicants about their parents' occupations (if under 21 on entry) when filling in their university application form. This is the collapsed three class form<sup>9</sup>, with additional disclosure of long term unemployed. The three classes are: higher managerial, administrative and professional occupations; intermediate occupations; and routine and manual occupations.

### University measures

#### *University groupings*

We provide benchmarks according to two different university groupings – whether the graduate attended one of the Russell Group of research-intensive universities or not, and a more nuanced grouping based on work by Boliver (2015), which splits universities into four groups<sup>10</sup>. These groups are Oxbridge, Other Russell Group and higher ranked, Most new and lower ranked old, bottom ranked, UK not classified. These benchmarks therefore highlight the diverse talent available to employers outside the most commonly targeted universities<sup>11</sup>.

#### *Degree subject*

Benchmarks are provided for the graduate data using HESA's Higher Education Classification of Subjects<sup>12</sup> to categorise their undergraduate degree subject. Students were allocated to the first (largest proportion) subject listed if doing joint honours. Benchmarks are reported at the top level of the Common Aggregation Hierarchy (CAH).

Five subjects, thought to be important to recruiters, are used if that subject has been taken at all by the student, even if as a minor rather than major part of their degree. These are Law, Mathematics, Business, Accounting and Economics. These benchmarks are thus comparable to any mention of the subject of interest in the degree stated by applicants to employers.

### Geographical measures

#### *Region*

For graduates we have constructed benchmarks of both the region they have graduated from (i.e. the region of their university) and of the region where they lived aged 16, through using their Output Area of residence age 16, provided in the KS4 data. For region of university the ONS's nine regions have been used, together with an aggregation of those students who were at school in England aged 16 and went on to Welsh, Scottish and Northern Irish universities.

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<sup>9</sup> <https://webarchive.nationalarchives.gov.uk/ukgwa/20160106042025/http://www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/soc2010/soc2010-volume-3-ns-sec--rebased-on-soc2010--user-manual/index.html#7>

<sup>10</sup> These more theoretically rigorous categories are based on a cluster analysis of five key dimensions of universities: research activity, teaching quality, economic resources, academic selectivity and socio-economic mix of the student body. This gives rise to four distinct clusters. Boliver, V. (2015). Are there distinctive clusters of higher and lower status universities in the UK?. *Oxford Review of Education*, 41(5), 608-627.

<sup>11</sup> [https://www.highfliers.co.uk/download/2021/graduate\\_market/GM21-Report.pdf](https://www.highfliers.co.uk/download/2021/graduate_market/GM21-Report.pdf) (Table 4.8)

<sup>12</sup> <https://www.hesa.ac.uk/support/documentation/hecos>

#### Note on disclosure controls and ONS disclaimer

All percentages are given to the nearest integer, and counts are rounded to 10, as is required by the conditions of access to this administrative data. Percentages based on counts of fewer than 23 pupils/students are suppressed (labelled SUPP – 0 means below half a percent, but based on a count of 23 or more, so not suppressed). In all cases percentages are of non-missing data.

We are grateful to the Department for Education for making available linked school (National Pupil Database (NPD)) and university (HESA) data under reference DR220908. These benchmarks were produced using this statistical data, made available through the ONS. The use of the ONS statistical data in this work does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data.

This work uses research datasets which may not exactly reproduce National Statistics aggregates.

## TA.5. Employer benchmarks

We have also constructed two employer benchmarks - one based on data from all employers participating in this research collaboration, and one based on data from participating employers operating in the same sector. This enables employers to compare the diversity of their own applicant and offer pools with those of all (anonymous) participating employers. These are provided as part of the personalised insight reports we have provided confidentially to each participating employer. Each employer's own data is therefore included in the employer benchmarks provided. We use the most recent year of employer data to create the benchmarks. The benchmarks are constructed as follows:

*Table 5: Employer benchmarks*

All participating employers	For the Summer 2024 employer reports, we have included data from 17 organisations. We expect there to be 20 employers included for the Summer 2025 reports.
Sector specific	Sector specific benchmarks are constructed where we have at least three participating employers operating the same sector, namely: 1) accounting & professional services 2) legal sector 3) public sector.

## TA.6: Modelling approach

Overall offer rates are driven by two effects – rejections by the employer and voluntary withdrawals by the applicant<sup>13</sup>. We treat these two effects separately to observe which applicants are more likely to be rejected by employers, and which applicants are more likely to voluntarily withdraw.

### Obtaining a job offer

We use multivariate analysis methods to investigate how the characteristics of applicants relate to their chances of being made a job offer (even if they later reject it). Multivariate regression enables us to compare the chances of success of two hypothetical individuals who differ in just one characteristic (e.g. parental occupation) holding all their other characteristics (such as university type or university subject), equal. One important issue we can investigate using these techniques is whether there are gaps between people from different parental backgrounds in receiving offers, once their other observed characteristics, such as prior attainment or university type are taken into account. If prior attainment and university attended are the main reasons for applicants achieving job offers, there should be no remaining difference by parental occupation, school type, parental degree status, FSM eligibility, gender or ethnicity once these other factors have been taken into account.

The outcome we are interested in, getting a job, is a dichotomous (one/zero) outcome. Applicants who receive a job offer are coded as '1' and applicants who are rejected by the employer are coded a '0'. Candidates who voluntarily withdraw or who are put on hold by the employer are excluded from these models as we are focussing only on the recruitment decision of the employer whether to offer or reject a candidate. We therefore use a regression technique designed for analysing binary outcomes – a probit regression. In our reports we report on the marginal effects from these models i.e. the difference in probability of the group of interest receiving an offer (e.g. applicants from professional or managerial backgrounds), relative to the comparison group (e.g. applicants from working class backgrounds). We convert these percentage point difference in probabilities into percentages in the charts presented.

The graphs of these marginal effects therefore show the *percentage* difference in the probability of receiving a job offer between applicants from different SES, gender and ethnic backgrounds. The graphs start by showing the 'raw' (i.e. uncontrolled) difference in the probabilities (expressed as a percentage) of being made an offer for the category of interest, compared with the appropriate base category (e.g. FSM compared to non-FSM). For example, if the overall probability for the base category (e.g. non-FSM) receiving a job offer from an employer is 4%, a one percentage point difference here (such as 3% offer rate for FSM applicants) would be equivalent to a 25% lower chance of receiving a job offer. Each successive bar to the right on these charts means that additional observable characteristics (known as 'controls') have been added to the model, which may explain some of the raw difference. We firstly take into account that employer choice can affect an applicant's chances of receiving an offer as offer rates vary substantially by employer. We call this column 'Raw – FE' representing employer 'fixed effects' – meaning that the offer rate gap shown represents the average gap faced by candidates applying to same employer. We then add different groups of controls to the model successively where relevant and available, starting with demographic characteristics of the applicant, then school, university, and application-related characteristics.

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<sup>13</sup> We code outcomes as offer, reject, withdraw or on hold. We do not provide any analysis for candidates on hold as the numbers are either small or zero.

Significant differences in marginal effects by characteristic that remain after all controls have been added into the models do not necessarily mean that there is bias in the process according to that particular characteristic. It may be that there are variables that we cannot observe which are related with both that characteristic and the chance of getting a job offer. An example might be the visa status of applicants (if this data has not been provided by employers); where students applying without the right to work in the UK might be more likely to come from non-White British ethnicities and less likely to get a job offer. The gap in ethnicity shown by the model in this sort of case may not represent a direct ethnic bias. To be clear, our analyses are unable to distinguish between bias (whether conscious or unconscious), or other explanations related to the unobserved characteristics of applicants and their circumstances.

### Withdrawals

We also investigate how the characteristics of applicants relate to their chances of voluntarily withdrawing from the recruitment process. The outcome we are interested in, voluntarily withdrawing, is a dichotomous (one/zero) outcome. For these models we are comparing the characteristics of applicants who withdraw (withdraw=1) to those of applicants who do not withdraw (withdraw=0) i.e. applicants who received an offer, were rejected or put on hold. The interpretation is the same as for the ‘obtaining a job offer’ models explained above. We report marginal effects from probit models i.e. the difference in probability of the group of interest withdrawing (e.g. applicants from professional or managerial backgrounds), relative to the comparison group (e.g. applicants from working class backgrounds). We express these differences in percentage terms relative to the comparison group.

### Recruitment stages

We also present models which show the difference between groups of applicants in their chances of passing each of the two main stages of the recruitment process:

- 1) Screening and testing: this includes all application sifting, screening based on educational credentials and online testing. Online tests assess skills such as numerical reasoning, verbal reasoning, situational judgement, behaviours, preferences and strengths.
- 2) Face to Face: this includes interviews (video and in person), and assessment centres (case studies, group exercises).

The recruitment process of all employers follows this broad two-stage structure, with some variation within each stage in terms of the specific screening criteria, psychometric tests or assessment tasks used.

For example only around a quarter of candidates in the sample apply to a recruitment process which includes screening based on prior educational qualifications (GCSE, A-levels and/or 2:1 degree). Whereas most participating employers use online tests, interviews and assessment centres as selection methods (80-100% of candidates apply to employers who use these methods).

*Table 6: Proportion of applicants applying to recruitment processes containing various selection methods*

Screening and testing	GCSE screening	22%
	UCAS screening	23%
	Require a 2:1 degree	24%
	Online testing	98%
Face to face	Interview	100%
	Assessment Centre	80%

## Model specifications

We investigate whether there are differences in offer rates and withdrawal rates by the following characteristics of interest:

- Parental occupation
- School type
- Parent degree
- FSM
- Gender
- Ethnicity (major)
- Intersectional variable (parental occupation x gender x ethnicity)

We run separate models for each of these characteristics for the overall baseline sample of applicants to graduate and internship programmes. We then replicate these models for the accounting, legal and public sector for graduates, and the accounting and legal sectors for internships. We do not present separate internship models for the public sector due to fewer than three employers in this sector offering these programmes in our sample.

We also run models for the overall baseline sample of applicants to school leaver & apprenticeship programmes and provide accounting and public sector industry models separately for these programmes. Separate models for the legal sector are excluded for these programmes due to fewer than three employers in this sector offering these programmes in our sample.

The number of applicants and employers in each model is shown in Table 7. This table also shows which of the key characteristics of interest are available for each model. The data for variables marked with a 'x' have too high a proportion of missing data to be able to include in the models.

As described above, we firstly present raw effects from our models, followed by effects controlling in stages for the variables shown in Table 7. The stages are 'fixed effects' meaning we compare applicants to the same employer to account for differing offer rates across employers, followed by demographics, school attainment, university experience and application details.

Table 7 – Model specifications

	Graduate				Internship			School leaver & Apprentice		
	All	Accounting	Legal	Public	All	Accounting	Legal	All	Accounting	Public
<b>Sample N (offer models)</b>	86,960	46493	3280	36081	23,100	15746	3280	70,878	10,746	58,061
<b>Sample N (withdraw models)</b>	117,043	64016	3503	46647	28,046	18526	3493	108,564	12,763	91,361
<b>Number of employers</b>	17	3	3	10	7	3	3	14	3	9
<b>Characteristic of interest</b>										
Parental occupation	✓	✓	x	✓	✓	✓	x	✓	✓	✓
School type	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Parent degree	✓	✓	✓	x	✓	✓	✓	x	✓	x
FSM	✓	✓	✓	x	✓	✓	✓	x	✓	x
Gender	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ethnicity (major)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Intersection	✓	✓	x	✓	✓	✓	x	✓	✓	✓
<b>Controls</b>										
<b>1. Fixed effects</b>										
Employer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>2. Demographics</b>										
Gender (for Ethnicity & SES models)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ethnicity major (for Gender & SES models)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Parent Occupation (for Gender & Ethnicity models)	✓	✓	x	✓	✓	✓	x	✓	✓	✓
Region of origin (UK)	✓	✓	✓	✓	✓	✓	✓	x	✓	x
Visa status	✓	✓	x	x	✓	✓	x	✓	✓	✓
Nationality	x	✓	x	x	x	x	x	x	✓	x
<b>3. School</b>										
GCSE maths grade	x	x	x	x	x	x	x	x	✓	x
A-level grades	x	✓	x	x	x	✓	x	x	✓	x
<b>4. University</b>										
University category (Boliver)	✓	✓	✓	✓	✓	✓	✓	x	x	x
UG or PG	x	✓	x	x	x	✓	x	x	x	x
UG degree class	x	✓	x	x	x	✓	x	x	x	x
UG degree class - obtained or predicted	x	✓	x	x	x	✓	x	x	x	x
UG subject group	✓	✓	x	✓	✓	✓	x	x	x	x
<b>5. Application</b>										
Networks	✓	✓	x	✓	✓	✓	x	x	✓	x
Month of application	x	✓	x	x	x	✓	x	x	✓	x
Region of office	✓	✓	x	✓	✓	✓	x	✓	✓	✓
Line of Service	✓	✓	x	✓	✓	✓	x	✓	✓	✓

In interpreting our results it is helpful to note how key characteristics of interest vary with control variables, as well as with outcomes. Table 8 gives some examples of these for the graduate sample for Russell Group attendance, source of information or influence on application being a personal or professional contact, and summary English region or origin.

*Table 8– Characteristics of interest by examples of control variables*

	Parental occupation			School type		Gender		Ethnicity			
	Prof/ Manag'l	Interm'te	Working class	Indep'nt	State	Male	Female	White	Asian	Black	Mixed/ Other
<b>Graduates</b>											
Russell Group attendance %	56.3	45.1	39.7	68.3	46.3	47.8	52.3	55.1	44.3	33.8	50.3
Primary network personal/ professional contact %	11.1	9.2	8.2	11.0	10.0	10.0	9.6	11.4	7.8	7.7	10.1
Region of origin London %	19.2	24.8	32.8	23.1	25.3	23.7	26.0	13.1	35.8	49.9	42.2
Region of origin South %	41.1	29.4	22.9	46.2	31.2	33.6	33.7	42.2	23.5	21.7	26.8
Region of origin Midlands %	17.2	20.9	20.3	14.4	18.9	19.7	18.1	17.0	22.5	16.5	14.1
Region of origin North %	22.5	24.9	24.0	16.3	24.6	23.1	22.2	27.7	18.3	11.9	16.9
<b>Interns</b>											
Russell Group attendance %	73.0	62.9	57.7	80.5	64.4	68.8	67.2	71.7	66.5	53.0	68.7
Primary network personal/ professional contact %	6.8	5.7	5.2	6.2	6.6	6.2	6.2	6.9	5.1	6.8	7.1
Region of origin London %	26.2	31.5	39.4	27.3	32.3	29.2	33.0	16.9	41.0	55.4	46.3
Region of origin South %	44.6	34.0	26.1	48.7	34.4	39.2	36.9	49.5	27.3	23.0	31.5
Region of origin Midlands %	13.6	16.1	17.1	12.9	15.6	15.1	14.8	14.1	18.3	11.4	10.5
Region of origin North %	15.6	18.4	17.4	11.1	17.7	16.6	15.3	19.6	13.4	10.2	11.6

The table shows, for example, that only 39.7% of the working class applicants in the sample went to a Russell Group university compared with 56.3% of those from a professional/managerial background. The proportions are calculated based on those attending a UK university, those with data on network, and those with an English region of origin.

### Decomposition of the working class disadvantage in the accounting sector

We decompose the SEB gap in the accounting sector (which has very similar gaps in offer rates to the full sample population) using an Oaxaca-Blinder decomposition which is a popular method in economics for explaining the difference in outcomes between two groups, in this case offer rates for applicants from professional and working class backgrounds.

For a characteristic to be identified as a barrier to accessing the accounting profession in this analysis two effects must be present:

- 1) The characteristic must vary by social background, for example working class applicants have lower UCAS scores than applicants from professional backgrounds.
- 2) The characteristic must be predictive of obtaining a job offer, for example, applicants with higher UCAS scores are more likely to obtain job offers.

Table 9 provides more explanation of each of the unfavourable and favourable barriers identified in the main report. The two columns 'characteristics of applicants by social background' show the data for effect (1), for example, the mean UCAS tariff for applicants from professional backgrounds is 132 points, compared to 124 points for working class applicants. Similarly, 26% of applicants from a professional background attend a 'category 3' university (new or lower ranked) compared to 41% of applicants from working class backgrounds.

The column 'do these characteristics predict job offers' show the findings for effect (2). This explains the benefit, in terms of higher offer rates, which is associated with each of these characteristics. It is important to note that these effects are for applicants who are comparable on all other observable characteristics in our data, meaning we are attempting to isolate the specific effect of this single characteristic. For example, an applicant from a 'category 3' university has a 57% lower chance of receiving a job offer than an applicant from a category 2 university (non-Oxbridge Russell Group and other higher ranked), with the same A-level attainment, degree class, undergraduate subject studied, networks, who are of the same gender and ethnicity and from the same region of the UK, and who applied to the same firm, line of service and UK region of office on the same date.

The columns 'working class applicants are...' ties together effects (1) and (2) and explains the resulting impact on the chances of working class applicants obtaining job offers.

As the outcome is binary (offer made or rejected), we use a probit specification for this modelling which is designed for this purpose. Withdrawals have been excluded from this analysis in order to focus on recruitment decisions made by employers and identify which characteristics are being rewarded by employers.

Table 9: Explanation of key drivers of the social class gap in graduate offers in the accounting sector

	Notes	Characteristics of applicants by social background		Do these characteristics predict job offers?	Working class applicants are:
		Professional/Managerial	Working class		
Ethnicity (vs White)	a				
Asian		30%	44%	Asian applicants are 18% less likely to receive a job offer compared to otherwise similar White applicants. The penalty for Black applicants is 16%.	More likely to be Asian or Black ethnicity which decreases the chances of receiving a job offer for reasons unexplained by the data included in our analysis. The effect for Black applicants explains a smaller proportion of the social class gap in offers because they make up a smaller proportion of our sample than Asian applicants.
Black		8%	12%		
UCAS points ( mean)		132	124	Each additional A-level grade (8 UCAS points) increases the chances of obtaining a job offer by 0.6ppt. For context, the mean offer rate is 6.3% for accountancy graduate schemes in our sample.	Likely to have lower educational attainment at school which <b>decreases</b> their chance of success. There is a one A-level grade difference between applicants from professional and working class backgrounds.
University (vs Category 2)*	b				
Category 3		26%	41%	University category is highly predictive of success over and above all other characteristics. Applicants from Category 3 universities are 57% less likely to obtain a job offer than comparable applicants from Category 2 universities. The penalty for Category 4 is 90%.	More likely to attend a lower ranked university which <b>decreases</b> their chances of obtaining a job offer (even for applicants with the same UCAS tariff).
Category 4		1%	2%		
Degree class (vs 2:1)					
1st		36%	35%	Degree class is very predictive of success over and above all other characteristics. Applicants with a 1st are 25% more likely to receive a job offer than similar candidates with a 2:1 degree. Penalties for 2:2 and 3rd class degrees are large - these applicants are 45% and 88% respectively less likely to receive job offers than similar applicants with a 2:1.	Slightly less likely to obtain a 1st and more likely to obtain 2:2/3rd which <b>decreases</b> their chance of success (small effect)
2:2		7%	8%		
3rd		0%	1%		
Date of application		Applicants from professional backgrounds apply 14 days earlier (on average) than applicants from working class backgrounds		Applying earlier is associated with higher offer rates. Each month earlier increases job offer rates by 0.4ppt, even for applicants with the same demographic and educational background and application choices.	More likely to apply later which <b>decreases</b> their chance of success.
Choice of firm (vs Firm A)	c				
Firm B		supp.	supp.	supp.	More likely to apply to the firm with the highest offer rate which <b>increases</b> their chances of success.
Firm C		supp.	supp.	supp.	
Choice of service line (vs Audit)					
Deals & Consulting		28%	24%	These service lines are more competitive (4-5% offer rates) than audit (9.4% offer rate). Applying to audit can therefore double an applicant's chances of obtaining a job offer.	Less likely to apply to Deals & Consulting (which is more competitive) and more likely to apply to Audit (which is less competitive) which <b>increases</b> their chance of success. Smaller differences occur for other service lines.
Tax, Legal, Pensions & Risk		17%	18%		
Other		20%	21%		

a. All figures are percentages of non-missing data

b. University groups are explained in more detail in the Technical Appendix. Universities are grouped into Category 1 (Oxbridge), Category 2 (Russell Group and other higher ranked), Category 3 (New Universities and old lower ranked) and Category 4 (Bottom ranked).

c: 'Supp' shows where these figures have been suppressed as we have committed not to disclose any data relating to individual employers

## TA.7: University categories used in analysis (Boliver clusters<sup>14</sup>)

Table 10: University Boliver clusters ( <sup>a</sup> denotes Russell group)

<b>Cluster 1 (Oxbridge)</b>	University of Leeds <sup>a</sup>	<b>Cluster 3 (New universities and old lower ranked)</b>
University of Cambridge <sup>a</sup>	University of Leicester	Abertay Dundee University
University of Oxford <sup>a</sup>	University of Liverpool <sup>a</sup>	Aberystwyth University
	University College London <sup>a</sup>	Arts University Bournemouth
<b>Cluster 2 (Russell Group and other higher ranked)</b>	LSE <sup>a</sup>	University of the Arts London
University of Aberdeen	Loughborough University	Aston University
University of Bath	The University of Manchester <sup>a</sup>	Bangor University
University of Birmingham <sup>a</sup>	Newcastle University <sup>a</sup>	Bath Spa University
University of Bristol <sup>a</sup>	The University of Nottingham <sup>a</sup>	University of Bedfordshire
Cardiff University <sup>a</sup>	Queen Mary University of London <sup>a</sup>	Birmingham City University
University of Dundee	Queen's University Belfast <sup>a</sup>	Bournemouth University
Durham University <sup>a</sup>	University of Reading	University of Bradford
University of East Anglia	Royal Holloway, University of London	University of Brighton
The University of Edinburgh <sup>a</sup>	University of St Andrews	Brunel University London
University of Exeter <sup>a</sup>	SOAS, University of London	Canterbury Christ Church University
University of Glasgow <sup>a</sup>	The University of Sheffield <sup>a</sup>	Cardiff Metropolitan University
Goldsmiths, University of London	University of Southampton <sup>a</sup>	University of Central Lancashire
Heriot-Watt University	University of Strathclyde	University of Chester
Imperial College London <sup>a</sup>	University of Surrey	University of Chichester
University of Kent	University of Sussex	City University
King's College London <sup>a</sup>	The University of Warwick <sup>a</sup>	Coventry University
Lancaster University	The University of York <sup>a</sup>	University for the Creative Arts

<sup>14</sup> See Boliver, V. (2015). Are there distinctive clusters of higher and lower status universities in the UK?. *Oxford Review of Education*, 41(5), 608-627.

De Montfort University	Plymouth University	<b>Cluster 4 (Bottom ranked)</b>
University of Derby	University of Portsmouth	Anglia Ruskin University
Edinburgh Napier University	Queen Margaret University	Bishop Grosseteste University
University of Essex	Robert Gordon University	University College Birmingham
Falmouth University	University of Roehampton	University of Bolton
University of Glamorgan	University of Salford	Buckinghamshire New University
Glasgow Caledonian University	Sheffield Hallam University	University of Cumbria
University of Gloucestershire	Staffordshire University	University of East London
University of Greenwich	University of Stirling	Edge Hill University
Harper Adams University	University of Sunderland	Glyndwr University
University of Hertfordshire	Swansea University	Leeds Trinity University
University of the Highlands and Islands	Teesside University	Liverpool Hope University
University of Huddersfield	Ulster University	London Metropolitan University
The University of Hull	University of the West of England	University of Wales, Newport
Keele University	University of West London	University of St Mark and St John
Kingston University	University of the West of Scotland	Southampton Solent University
Leeds Beckett University	University of Westminster	University Campus Suffolk
University of Lincoln	The University of Winchester	University of Wales Trinity St David
Liverpool John Moores University		University of Wolverhampton
London South Bank University		York St John University
Manchester Met University		
Middlesex University		
Newman University, Birmingham		
The University of Northampton		
Nottingham Trent University		
Northumbria University		
Oxford Brookes University		

## TA.8 Missing data

Table 11 sets out the number of employers providing diversity metrics by sector and programme. It includes the numbers of employers providing stages variables allowing us to construct valid stages outcomes. These stages outcomes are passing or withdrawing before the last screening or testing stage, and being made an offer or withdrawing, conditional on having passed the last screening or testing stage.

*Table 11: Numbers of employers providing key metrics by programme, sector and stage*

	N employers providing metric	N employers providing metric by sector			Stages models	
		Accounting	Law	Public	N employers with valid outcomes	N employers providing metric
<b>Graduate programmes</b>						
Parental occupation	16	3	2	10	16	15
School type	17	3	3	10	16	16
FSM eligibility	8	3	3	1	16	7
Parental education	7	3	3	1	16	6
Gender	17	3	3	10	16	16
Major ethnic group	17	3	3	10	16	16
<b>Internships</b>						
Parental occupation	5	3	1	1	5	4
School type	7	3	3	1	5	5
FSM eligibility	7	3	3	1	5	5
Parental education	7	3	3	1	5	5
Gender	7	3	3	1	5	5
Major ethnic group	7	3	3	1	5	5
<b>School leaver/ apprenticeships</b>						
Parental occupation	13	3	0	9	14	13
School type	14	3	1	9	14	14
FSM eligibility	5	3	1	0	14	5
Parental education	4	3	1	0	14	4
Gender	14	3	1	9	14	14
Major ethnic group	14	3	1	9	14	14

Table 12 shows the percentages of data missing for the overall sample by programme type, where applicants have not responded to a question, replied 'don't know' or 'prefer not to say'. These percentages exclude where employers were unable to provide metrics.

*Table 12: Non-response percentages for key metrics*

	Graduates %	Interns %	School leavers and apprentices %
Parental occupation	20.2	19.4	18.8
School type	10.5	9.6	9.5
Parental education	10.3	10.2	13.7
FSM eligibility	19.0	17.6	23.9
Gender	2.4	2.0	1.8
Major ethnic group	4.8	3.1	3.7

The numbers of employers providing control variable data is set out in Table 13 and analysed by sector.

Table 13: Numbers of employers providing control metrics by programme and sector

	Overall			Accounting and prof services			Law		Public sector	
	Graduates	Interns	School leavers & apprentices	Graduates	Interns	School leavers & apprentices	Graduates	Interns	Graduates	School leavers & apprentices
<b>Demographics</b>										
Region of origin (UK)	8	7	5	3	3	3	3	3	1	0
Nation of origin (UK)	8	7	5	3	3	3	3	3	1	0
Visa status	14	4	12	2	2	2	1	1	10	9
Nationality	5	4	4	3	3	3	0	0	1	0
<b>School</b>										
GCSE maths grade	2	2	3	2	2	3	0	0	0	0
GCSE English grade	2	2	3	2	2	3	0	0	0	0
A-level grades	3	3	3	3	3	3	0	0	0	0
<b>University</b>										
University category (Boliver)	7	6	N/A	3	3	N/A	2	2	1	N/A
Russell Group	7	6	N/A	3	3	N/A	2	2	1	N/A
UG or PG	14	4	N/A	3	3	N/A	1	1	9	N/A
UG degree class	5	5	N/A	3	3	N/A	1	1	1	N/A
UG degree class - obtained or predicted	3	3	N/A	3	3	N/A	0	0	0	N/A
UG subject group	6	5	N/A	3	3	N/A	1	1	1	N/A
<b>Application</b>										
Networks	5	5	3	3	3	3	1	1	1	0
Region of office	17	7	14	3	3	3	3	3	10	9
Month of application	15	6	13	3	3	3	2	2	10	9
Line of service	15	5	14	3	3	3	1	1	10	9

Table 14 shows the non-response rates for control variables. As for Table 11, the percentages exclude those combinations of employer and programme where employers were unable to provide the variables.

*Table 14: Non-response percentages for control variables*

	Graduates	Interns	School leavers & apprentices
<b>Demographics</b>			
Region of origin (UK)	3.1	2.2	5.2
Nation of origin (UK)	3.1	2.2	5.2
Visa status	9.4	10.2	2.9
Nationality	32.1	29.2	18.2
<b>School</b>			
GCSE maths grade	0.0	0.0	14.6
GCSE English grade	0.0	0.0	14.6
A-level grades	28.4	24.4	61.8
<b>University</b>			
University category (Boliver)	20.9	18.9	N/A
Russell Group	20.9	18.9	N/A
UG or PG	29.6	12.6	N/A
UG degree class	36.3	33.8	N/A
UG degree class - obtained or predicted	19.7	19.7	N/A
UG subject group	14.7	10.2	N/A
<b>Application</b>			
Networks	1.9	1.2	6.8
Region of office	5.0	0.0	14
Month of application	0.0	0.0	0.0
Line of service	2.5	9.6	5.7

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