Report on the Differential Attainment of Applicants through the Pupillage Gateway

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Executive Summary

Background

1. This report summarises an analysis of the success or otherwise of applicants to the Pupillage Gateway – an online application system for aspiring barristers.

2. This work was commissioned by the Bar Council in response to analysis undertaken by the Bar Standards Board which establishes that minority ethnic graduates of the Bar Professional Training Course were less likely to obtain pupillage than their white British counterparts.

3. This study complements and augments the Bar Standards Board report by considering a group of individuals who have chosen to *apply* for pupillage, whereas the BSB analysis could not distinguish *applicants* and might therefore include individuals who had no intention of obtaining a pupillage.

4. Using the details provided by applicants on the pupillage gateway the analysis presented here also considers in greater detail the differences between specific ethnic groups and possible differences between genders within an ethnic group.

5. **A limitation of this study is that it does not encompass any pupillages advertised outside of the pupillage gateway.**

Data

6. The analysis reported here relates to more than 90,000 applications made by more than 6,000 applicants, over five years (2013-2017).

7. For each applicant there are details of their ethnicity (reported across 19 different categories), their gender, their educational attainment (both in the training course and in their degree studies) and proxies for their socio-economic circumstances.

8. There are approximately 3,000 applicants whose educational background is either not known or not complete, largely on account of not having received a score on the BPTC at the time of applying. Like the Bar Standards Board study, these applicants are excluded from subsequent analysis.

Methods

9. The key issue to account for is that applicants of different ethnic backgrounds also have other characteristics that might account for their different chances of success.

10. Regression analysis is used to simultaneously account for as many potential factors as possible and therefore produce findings for the effect of ethnicity and gender with *other things equal*.

11. The measures of success that are constructed are binary variables (either success or failure) and are thus amenable to a logistic regression framework.

12. Four regression specifications are examined and these can be ranked in terms of complexity and detail. The first considers only an aggregate of all non-white-

British ethnicities and separates the influence of ethnicity and gender. The second allows for an interaction of gender with the aggregate of ethnicity. The third considers a fully detailed breakdown of ethnic groups and the fourth combines this with an interaction with gender.

13. The regression models are used both to calculate *odd-ratios* and the *implied probabilities of success* of different ethnic groups. The latter are preferred in this summary as they are easier to interpret.

Results

14. The simplest regression model confirms that ethnic minority applicants have a lower success rate (10%) than their white British counterparts (16%) even after controlling for their different educational attainment. This is a 6% difference or *ethnicity attainment gap*.

15. The simplest specification also confirms that there is no statistically significant *gender attainment gap.*

16. However, allowing for differences between genders is important because according to the more general regression specification the ethnicity attainment gap for women is much smaller than that for men.

17. For men the ethnicity attainment gap is 8%, whilst for women it is 4% and this latter figure is not statistically significant implying that we cannot rule out that the attainment gap is in fact zero for women.

18. For men the attainment gap remains both large and statistically significant.

19. Breaking down the results into specific ethnic groups reveals further important differences. The ethnicity attainment gap differs substantially from group to group.

20. Some groups who are in a minority do nearly as well or even better than white British counterparts. This is the case for Irish, Black Caribbean, Asian Indian and mixed White & Black African, White & Asian, and White & Black Caribbean ethnicities

21. For these groups there is either an approximately zero or a positive ethnicity attainment gap.

22. For some other groups the ethnicity attainment gap is very large – for example, this is the case for Black African, Asian Bangladeshi and Chinese applicants, for all of whom the ethnicity attainment gap is greater than 10%.

23. The picture becomes more complex when allowance is made for gender to interact with ethnicity.

24. There are some ethnic groups where men succeed much more than women (Asian Pakistani, Black African and Irish), and vice versa (Asian Indian and Black Caribbean).

25. There are thus some ethnic groups where one gender does not have an ethnicity attainment gap at all, but the other gender has a substantial gap.

26. **The headline figures need to be treated with caution since many of the effects lack statistical significance but they are very strongly suggestive of a large variation in the ethnicity attainment gap *both* across ethnic groups and *within* ethnic groups according to gender.**

Conclusions

27. The analysis presented in this report indicates that there is differential attainment in applications to pupillage.

28. Ethnic minority applicants overall are less likely to succeed in their applications than their white British counterparts.

29. The results also confirm the absence of a gender attainment gap – overall women are as likely to succeed as men.

30. These simple findings break down as soon as we consider the details of ethnic groupings and allow for the interaction of gender and ethnicity.

31. The new insights that the analysis reveals are;

    a. **There is large variation in attainment across different ethnicities with some minority groups performing as well or better than the white British group, but some performing much worse.**

    b. **There are important gender effects at the level of individual ethnic groups. So that whereas there is no overall gender attainment gap for some ethnicities there is a substantial gap in favour of men, and in some a substantial gap in favour of women.**

32. Taken together these findings suggest that a simple "one size fits all" approach to differential ethnic attainment is inappropriate.

33. They also suggest that gender and ethnicity need to be considered together.

34. The largest attainment problems in respect of obtaining pupillage would appear to be focused on specific genders within specific ethnic groups.

35. There is a need to conduct further research to understand these substantial differences.

Background

This report summarises an analysis of the progression of aspiring barrister applicants who applied for pupillage through the Pupillage Gateway[1] (PG). A study undertaken by the Bar Standards Board[2] (BSB) establishes that graduates of the Bar Professional Training Course (BPTC) who are Black Asian and Minority Ethnic (BAME) status have lower chances of obtaining pupillage *other things equal.* The study takes account of the educational attainment and socio-economic backgrounds of graduates and therefore implies that a well-qualified BAME student has a lower chance of obtaining pupillage than a similarly qualified white British (WB) counterpart.

One limitation of the BSB study is that it cannot distinguish between individuals who actively apply for pupillage and those who do not. Hence the present study was undertaken to determine whether the differential attainment of pupillage of BAME individuals also applies to those who specifically applied for pupillage.

Due to differences in the underlying data captured by BSB and available through the PG the two studies are not directly comparable. Nevertheless, the analysis reported here was designed to both closely replicate the BSB study and where possible extend it.

Since applicants to the PG report extensive *Equality and Diversity* monitoring information, it is possible to consider permutations of particular ethnicities and gender. Doing this reveals that there is a complex pattern of differential attainment varying by ethnic group, with some minority ethnicities attaining on a par with WB counterparts, and varying within ethnic groups according to gender.

Data

The PG providers supplied data relating to both applicants and the pupillages they had applied for. The underlying nature of the application gateway is that individuals enter their personal details and make applications by filling in on-line forms. Hence one individual is associated with a number of applications. Part of the personal information requested covers an individual's personal characteristics that are used to monitor equality and diversity in the application process. Through these data the Chambers posting vacancies can access reports on the composition of their applicants. As a natural part of the application process individuals also report their academic attainment.

Applicants and outcomes

The starting point for analysis is a consideration of the complete set of applicants recorded on the PG. This constitutes 6,456 individuals. These individuals made a total of 93,052 applications. For each application the stage reached is recorded in a way

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[1] The Gateway can be viewed here https://www.pupillagegateway.com/

[2] There are two aspects studied in the report published and available at http://www.barstandardsboard.org.uk/media/1910429/differential_attainment_at_bptc_and_pupillage_analysis.pdf . The analysis considered here deals with the analysis reported under the heading "Obtaining Pupillage Analysis

that suggests a natural ordering of attainment. The stages reached are set out in Table 1.

Last Stage Reached	Number of Applications	Percentage
Applied	76,405	82.11
Assessment	499	0.54
Confirmed	99	0.11
First Interview	8,616	9.26
Mini-Pupillage Assessment	431	0.46
Offer	424	0.46
Offer Withdrawn	158	0.17
Recruited	587	0.63
Reserved	569	0.61
Second Interview	2,524	2.71
Shortlisted	2,713	2.92
Third Interview	27	0.03
Total	**93,052**	**100**

Table 1. The stages an application can reach

For most applications the stage reached is *Applied* meaning that the applicant did not progress beyond completing the on-line form.

Attainment can be interpreted in a number of different ways. For example, the proportion of applications that an applicant is shortlisted for could be one measure of attainment and the highest stage reached across all applications might be another. In the remainder of this report we consider an *Offer, Recruitment* and being *Reserved* as favourable outcomes of an application. Depending on the exact criteria for success[3] between 12% and 18% of applicants have at least one successful application in the PG.

Characteristics of applicants

Ethnicity and gender

A key focus of the analysis is the relationship between protected characteristics (as defined under the Equality Act 2010, e.g. gender and ethnicity) and success. For 47 individuals there was not information on these characteristics, for the remaining 6,409 their self-reported ethnicity and gender is summarised in Table 2.

| Ethnicity | Gender | | | |
	Female	Male	Prefer not to say	Total
Any other Asian background	83	37	1	121
Any other Black background	12	5	0	17
Any other Mixed/multi	107	45	0	152
Any other ethnic group	60	32	0	92

[3] These are described in detail in the methods section.

		Very		
	Competent	Competent	Outstanding	Total
Any other white background	299	186	1	486
Arab	15	17	0	32
Asian Bangladeshi	48	40	0	88
Asian Indian	157	111	0	268
Asian Pakistani	118	110	0	228
Black African	170	103	1	274
Black Caribbean	82	42	0	124
Chinese	70	63	0	133
English/Welsh/Scottish (WB)	1,776	1,774	4	3,554
Irish	59	72	0	131
Prefer Not to Say	101	100	309	510
White & Asian	60	51	0	111
White & Black African	19	9	0	28
White & Black Caribbean	37	23	0	60
Total	**3,273**	**2,820**	**316**	**6,409**

Table 2: Ethnicity and Gender of Applicants with valid data

As can be seen, some ethnic groups have very low representation. It is also clear that grouping together all other than WB into a single category of BAME will result in a very diverse ethnic group. Finally, it can be noted that gender balance is very uneven across ethnic groups. So, for example, whereas in WB women make up almost exactly 50% of the total in most other ethnic groups they constitute substantially more than 50%, whilst amongst Irish applicants they are less than 50%.

Education attainment and background

Data from the PG will also in the future permit an analysis based upon university attended. However, for this report these were omitted due to limitations of time and the need for extensive data cleaning. Since applicants enter information regarding their education in free-form text there are numerous instances of a single university being recorded in many different ways and of entries for institution being incorrectly spelt.

The most directly relevant information on educational background is the grade obtained and the place of study of BPTC and the class of degree obtained. These are captured in the PG data. The number of applicants corresponding to each BPTC provider and their distribution across grades is summarised in Table 3, whilst the distribution of degree classes is summarised in Table 4.

		Very		
BPTC Provider	Competent	Competent	Outstanding	Total
BPP Law School - Birmingham	0	1	0	1
BPP Law School - Leeds	41	101	5	147
BPP Law School - London	169	381	45	595
BPP Law School - Manchester	4	30	2	36
Cardiff Law School	13	64	18	95
City Law School	156	447	40	643
Kaplan Law School	15	72	8	95

Manchester Metropolitan	67	148	5	220
Northumbria University	28	117	10	155
Nottingham Law School	38	155	2	195
The College of Law - Birmingham	42	99	6	147
The College of Law - London	89	330	34	453
The University of Law - Birmingham	4	14	2	20
The University of Law London	2	25	5	32
University of the West of England	38	103	30	171
Total	**708**	**2,089**	**215**	**3,012**

Table 3: Number of applicants from each provider with given grades

Many applicants do not have a valid grade[4] on the BPTC, either because they have failed components and are pending resit, or they had not completed the course at the time of application. Where subsequently we restrict analysis to applicants with a valid grade, there are 3,012 applicants.

Degree Class	
First	976
Upper Second	2,367
Lower Second	443
Third	6
Prefer Not to Say	2,609
Total	**6,409**

Table 4: Distribution of degree classes

Socioeconomic factors

Many studies of attainment focus on the role of socioeconomic factors with a view to establishing whether an individual's background has an impact on their prospects. There are many potential proxies for socioeconomic circumstances and the equality and diversity monitoring data collected in PG includes a number of these. They are all self-reported by applicants and in many instances the applicants prefer not to say. Nevertheless, we utilize whether a parent (or parents) had a degree, the type of school attended (state or private) and whether the applicant's family have been in receipt of income support as potential indicators of socioeconomic background. The distributions of these across applicants are summarised in Tables 5-7. In total number of applicants for which there are valid responses to these questions (including preferring not to say) is 6,390.

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[4] This is similar to the data reported by BSB.

Parent has Degree?	
No	2,536
Yes	3,148
Prefer Not To Say	706
Total	**6,390**

Table 5: Parental Degrees

School Type	
State	3,873
Prefer Not To Say	632
Private	1,885
Total	**6,390**

Table 6: Type of school attended

Received Income Support	
Yes	928
No	4,496
Prefer Not To Say	966
Total	**6,390**

Table 7: Whether income support was received

Methods

Overview

The question of interest is whether an applicant's chances of succeeding in the application process are related to their gender and ethnicity, holding their educational attainment and other characteristics fixed. There is a *prima facie* reason to suppose this might be the case because if we simply calculate the proportion of successful applicants according to ethnicity there are substantial differences. For example, taking the broadest measure of success – achieving an offer (or being appointed) in any application – where 18% of all applicants are successful, the proportions for WB and BAME are 22% and 7% respectively.

However, such a comparison ignores the fact that WB and BAME applicants may have different educational attainment and different socio-economic backgrounds. Regression analysis, in which all potential factors are simultaneously considered, is a method to control, or *correct* for these other potential influences.

For reasons of comparability with the BSB analysis we construct measures of success that are 1 or 0 and use logistic regression. This approach models the log of the "odds" of success as a linear combination of explanatory variables.

Whilst a logistic regression most naturally estimates the effect of each explanatory variable on the odds of success relative to the odds of success in its absence -- *odds-ratios* – these are not natural quantities to interpret. Therefore, for the regressions, we also present estimates of the implied probabilities of success for individuals with different characteristics.

It is usual practice in regression analysis to focus only on effects that achieve some level of statistical significance and thus not consider effects that might simply be observed quite frequently by pure chance. We follow a rather relaxed approach to this narrowing of focus. There is in no ultimately correct level of statistical significance.

Variables used in the logistic regressions

The dependent variables for regression analysis are measures of success in application. Several measures were constructed and investigated. Qualitatively the results are the same across them. Results are reported for two measures, summarised in Table 8 below

Measures of Success	
Broad Measure	Equal to 1 if the applicant obtains an offer, is recruited or is reserved in any of their applications. Includes applicants where an offer is withdrawn (on the assumption that the applicant has succeeded elsewhere.
Narrow Measure	Equal to 1 if the applicant obtains an offer, or is recruited.

Table 8: Definition of measures of success

The explanatory factors used in all regressions are described in the data section. The following table lists them as the variable name used in the regression together with their properties.

Variable name	Type of variable	Description
Institution	Factor 16 levels	The BPTC provider of an applicant. Used in regression to control for any differences in the nature of BPTC provision that might influence chances of success
Grade	Factor 3 levels	The BPTC grade – a measure of the applicant's attainment.
Gender code	Factor 3 levels	Applicants declared gender
Ethnicity code	Factor 19 levels	The applicant's declared ethnicity – detailed version allowing for subdivisions and mixed ethnicity.

Ethnic group code	Factor 5 levels	The applicant's declared ethnicity – summarised version grouping non-WB ethnicities into BAME
Degree class code	Factor 5 levels	Applicant's university degree grade
Parental degree code	Factor 3 levels	Whether applicant's parent(s) have a university degree
School type code	Factor 3 levels	The type of school (state or private) that the applicant attended.
Income support code	Factor 3 levels	Whether the applicant's family received income support.
Total applications *App squared*	Integer	The total number of applications that the applicant has made through PG and the square of this to capture possible non-linear effect on the chances of success
First year	Integer	Year of first application
Last year	Integer	Year of most recent application

Table 9: Explanatory variables used in regressions

Regression specifications

We consider four regression specifications. In the simplest, *ethnic group code* and *gender code* are entered separately. This considers only a simple aggregate definition of ethnicity and does not allow for a separate influence of the combination of ethnicity and gender. This specification is the closest to that used by BSB in their study but does include all of the other explanatory variables including the BPTC providers.

The second specification generalises on the first by allowing for the *interaction* of ethnicity and gender. This allows for the possibility that where ethnicity affects the prospects of an applicant, the effect is different for men and women.

The third specification is the same as the first, except that *ethnicity code* is used in place of *ethnic group code*. This specification therefore allows a consideration of whether the specific ethnic group of an applicant is associated (other things equal) with their prospects of a successful application.

The fourth specification is the most general and allows for the interaction of all ethnic groups and gender. It therefore reveals whether particular gender groups within particular ethnic groups are associated with different prospects of success.

For all specifications the *reference group* is a Male, White British, state-school educated, holding a 2.2 degree, having achieved Competent in the BPTC and having attended BPP Law School London.

As we move through these four specifications the data requirements get more demanding. So, for example, whilst specification one requires estimation of 6 gender and ethnicity effects, specification three requires the estimation of 20 such effects and

specification four requires 40. It is therefore almost inevitable that the estimated effects become less precise (lose statistical significance) in the more elaborate specifications. Whilst statistical significance is one measure of the performance of a specification it is not either the only, or necessarily the most important one. We therefore comment on statistical significance but do not rely on it for specification selection.

As noted above, the logistic regression model estimates log odds ratios. The regression package *Stata®* used[5] for this report allows for the conversion of these odds ratios into the underlying probabilities of an applicant achieving success, distinguishing between different categories of applicant according to their ethnicity and gender. Except for the simpler specifications we focus reporting of results on these probabilities.

Results

Specification 1

The regression estimates for this specification using the narrow and broad measures of success are set out in Tables 10 and 11 respectively.

Narrow success measure	Odds Ratio	Std. Err.	z
Gender code			
Female	0.8778649	0.121924	-0.94
Prefer Not to Say	0.7289462	0.4773862	-0.48
Ethnic group code			
Any other white	0.8305035	0.2068348	-0.75
BAME	0.6237399	0.1298599	-2.27
Mixed	1.21844	0.3482547	0.69
Prefer Not to Say	0.6808231	0.3263964	-0.8
Year submitted	0.9015079	0.0625721	-1.49
Degree class code			
First	7.138995	3.822431	3.67
No minimum	22.12026	39.83685	1.72
Prefer Not to Say	3.717134	2.027588	2.41
Third	1	(empty)	
Upper Second	3.712439	1.933842	2.52

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[5] All data preparation and regression estimation was undertaken using the Stata® statistics package. Probabilities were calculated using the Delta-method under the *margins* post-estimation option. The Stata® do-file for conducting the analysis is available on request.

Parental degree code			
Prefer Not To Say	1.86178	0.65801	1.76
Yes	1.589402	0.2412996	3.05
School type code			
Prefer Not To Say	0.8561159	0.3938856	-0.34
Private	0.829028	0.1324865	-1.17
Income support code			
Prefer Not To Say	0.7610117	0.2402754	-0.86
Yes	0.9195681	0.1910659	-0.4
Total applications	1.083025	0.0216626	3.99
App squared	0.9990562	0.0003557	-2.65
Institution			
	1	(empty)	
BPP Law School - Birmingham	1	(empty)	
BPP Law School - Leeds	0.8772279	0.3153678	-0.36
BPP Law School - Manchester	1.411791	0.7452996	0.65
Cardiff Law School	0.7746677	0.3126795	-0.63
City Law School	0.8606467	0.1786572	-0.72
Kaplan Law School	2.390506	0.6966968	2.99
Manchester Metropolitan University	0.6892389	0.2288279	-1.12
Northumbria University	0.3329774	0.1629574	-2.25
Nottingham Law School	0.9935842	0.2907633	-0.02
The College of Law - Birmingham	0.4581044	0.1954281	-1.83
The College of Law - London	0.9964419	0.2203152	-0.02
The University of Law - Birmingham	1.276668	1.025389	0.3
The University of Law - London	1.579289	0.8527425	0.85
University of the West of England, Bristol	0.4311816	0.1743782	-2.08
Grade			
Outstanding	9.633781	3.41913	6.38
Very Competent	4.555481	1.40953	4.9
_cons	1.35E+88	1.89E+90	1.45

Table 10: Logistic regression estimates for specification 1 and the narrow measure of success

Broad success measure	Odds Ratio	Std. Err.	z
Gender code			
Female	0.9216512	0.1094463	-0.69

Prefer Not to Say	0.413495	0.2107926	-1.73
Ethnic group code			
Any other white	0.7926827	0.1686963	-1.09
BAME	0.5552357	0.0980861	-3.33
Mixed	1.112551	0.2804719	0.42
Prefer Not to Say	1.150855	0.4050063	0.4
Year submitted	0.9686172	0.0564086	-0.55
Degree class code			
First	6.76686	3.020927	4.28
No minimum	16.11184	31.74494	1.41
Prefer Not to Say	4.270246	1.91486	3.24
Third	1	(empty)	
Upper Second	3.71026	1.598793	3.04
Parental degree code			
Prefer Not To Say	1.346955	0.4125838	0.97
Yes	1.325214	0.1709086	2.18
School type code			
Prefer Not To Say	0.7784052	0.2975852	-0.66
Private	0.9468675	0.1287499	-0.4
Income support code			
Prefer Not To Say	1.192085	0.2880029	0.73
Yes	0.9315325	0.1635131	-0.4
Total applications	1.104694	0.0188514	5.83
App squared	0.9987862	0.0002987	-4.06
Institution			
	1	(empty)	
BPP Law School - Birmingham	1	(empty)	
BPP Law School - Leeds	0.4903546	0.1650057	-2.12
BPP Law School - Manchester	1.362064	0.5934952	0.71
Cardiff Law School	0.5207463	0.1920344	-1.77
City Law School	0.7169183	0.1238202	-1.93
Kaplan Law School	1.595229	0.4312965	1.73
Manchester Metropolitan University	0.4612873	0.1343959	-2.66
Northumbria University	0.3429043	0.1249994	-2.94
Nottingham Law School	0.7294755	0.1867467	-1.23
The College of Law - Birmingham	0.3042364	0.115165	-3.14
The College of Law - London	0.8567398	0.1594175	-0.83
The University of Law - Birmingham	0.9037176	0.6248044	-0.15

The University of Law - London	1.443969	0.6525315	0.81
University of the West of England, Bristol	0.4794035	0.1450017	-2.43
grade			
Outstanding	10.50163	2.938377	8.4
Very Competent	3.942158	0.9252156	5.84
_cons	3.37E+25	3.96E+27	0.5

Table 11: Logistic regression estimates for specification 1 and the broad measure of success

We focus henceforth on results for the broad measure of success, as the results are qualitatively similar to those for the narrow measure. A key point of similarity with the BSB findings is in respect of the effect of BAME status. Relative to a WB application a BAME applicant has a lower chance of success – the-odds ratio is 0.55. This suggests approximately [6] a 45% lower chance of success. This is statistically significantly different from 1.0 and so we can effectively rule out it being a chance finding. The confidence interval – a reasonable reflection of the imprecision of the estimate -- is approximately 0.4 to 0.8. The regression analysis accounts for many other potential determinants of success, so this result is strongly suggestive of differential attainment. BAME applicants perform poorly in regard to their applications.

The remaining results are certainly interesting and worthy of detailed comments but for reasons of space we limit that here. Points to note are; there is no substantial or statistically significant effect of an applicant's gender on their chances of success; applicants with better degrees and higher attainment in the BPTC are more successful (as expected); a parent being degree educated does have a positive effect on success (all other things equal) and there is some substantial variation of success according to the BPTC providing institution[7].

Henceforth, the entire focus will be on gender and ethnicity, and regression results for the other variables included in the regressions will not be reported.

To see how these results imply different chances of success, Table 12 reports the implied probabilities of success for the different ethnicities and genders.

Probabilities of success	
Any other white	0.13
BAME	0.10
WB	0.16
Mixed	0.17
Prefer Not to Say	0.17
Female	0.14

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[6] Odds (a probability in ration to 1 minus that probability) ratios approximate probability ratios when probabilities are small – as they are in this case.
[7] The variation across providers is often statistically significant and would seem to be worthy of future investigation.

Male		0.15	
Prefer Not to Say		0.07	

Table 12: Probabilities of success implied by the results in Table 11.

So, whilst WB applicants have on average a 16% success rate – holding all other characteristics constant – BAME applicants have a 10% success rate.

Specification 2

This specification allows for a different potential effect of ethnicity for *each* gender. Here we report only the estimates for the broad measure of success and relating to gender and ethnicity.

	Odds Ratio	Std. Error	z
Female	0.9006536	0.1285701	-0.73
Prefer Not to Say	0.3088958	0.1796872	-2.02
Ethnic group code			
Any other white	0.9876961	0.3030771	-0.04
BAME	**0.4046928**	**0.1209314**	**-3.03**
Mixed	0.8463507	0.4010289	-0.35
Prefer Not to Say	1.516693	0.6555985	0.96
Gender code # ethnic group code			
Female # Any other white	0.670847	0.2812295	-0.95
Female # BAME	**1.631111**	**0.5967455**	**1.34**
Female # Mixed	1.471254	0.8219933	0.69
Female # Prefer Not to Say	0.4441133	0.3156201	-1.14

Table 13: Selected regression estimates for specification two.

The key point to note from the table (highlighted in bold) is that whilst, as in Table 11, there is an odds ratio that is significantly less than one (in fact even lower here at 0.40) this relates to BAME males. The odds ratio for BAME females is 1.63 implying that this group of applicants has a *higher* relative probability of success. Translating these results into probabilities gives rise to.

Probabilities of Success	
WB Male	0.16
BAME Male	0.08
WB Female	0.15
BAME Female	0.11

Table 14: Probabilities of success associated with estimates in Table 13

So, whereas a WB male has 8% increased chance of succeeding (0.16 to 0.08) relative to their BAME male counterpart, a WB female has only a 4% increased chance. It is further the case that the difference between BAME and WB females is *not statistically*

significant. So, both in absolute terms, and in regard to statistical relevance, there is a substantial difference between genders when comparing the impact of BAME status. The conclusion is that where ethnicity influences attainment it does so differentially across genders and for women this effect is small and not statistically significant.

Specification 3

The motivation for this specification is to understand differences in the effect of ethnicity for different specific ethnicities rather than for the aggregation into BAME. Here the regression estimates reported are only those relating to ethnicity.

	Odds ratio	Std. Error	z
Any other Asian background	0.4350107	0.2368301	-1.53
Any other Black background	1.363131	1.640655	0.26
Any other Mixed/multiple ethnic background	1.004025	0.4129464	0.01
Any other ethnic group	1.338203	0.6118915	0.64
Any other white background	0.6720764	0.1667149	-1.6
Asian Bangladeshi	0.2260333	0.1684423	-2
Asian Indian	0.8062116	0.241646	-0.72
Asian Pakistani	0.5078719	0.2249902	-1.53
Black African	0.3356681	0.1603875	-2.28
Black Caribbean	0.95327	0.4429153	-0.1
Chinese	0.2448243	0.1855037	-1.86
Irish	1.237239	0.469311	0.56
Prefer Not to Say	0.7232376	0.4576361	-0.51
Prefer not to say	1.305648	0.5035891	0.69
White & Asian	0.9178946	0.3874055	-0.2
White & Black African	3.413392	2.174957	1.93
White & Black Caribbean	0.9250753	0.5488978	-0.13

Table 15: Selected regression estimates for specification three.

For the reasons given above, this much more demanding specification results in many estimates that are not statistically significant. Nevertheless, it is useful to consider the odds ratios across different ethnic groups. These reveal that some groups perform *better* (*Any other Black background, Any other ethnic group, Irish,* and *White & Black African*), some groups have very similar success performance (*Black Caribbean, White & Asian* and *Asian Indian*) and some groups have very poor performance indicating less than 1/3 the chance of success compared with their WB counterparts (*Asian Bangladeshi, Chinese*). These estimates translated to probabilities are given in Table

Probabilities of Success	
Any other Asian background	0.08
Any other Black background	0.20
Any other ethnic background	0.16
Any other ethnic group	0.19
Any other white background	0.12
Asian Bangladeshi	0.05
Asian Indian	0.13
Asian Pakistani	0.09

Black African	0.06
Black Caribbean	0.15
Chinese	0.05
WB	0.16
Irish	0.18
White & Asian	0.15
White & Black African	0.34
White & Black Caribbean	0.15

Table 16: Probabilities of success associated with estimates in Table 15.

The benchmark for comparison is WB where applicants have a 16% chance of succeeding in at least one of their applications. Against this, Irish applicants have an 18% chance of success, mixed White & Black African have a 34% chance of success and Black Caribbean applicants a 15% chance. In contrast, poor attaining groups such as Asian Bangladeshi, Black African and Chinese applicants have an approximately 5% chance of success.

These estimates strongly indicate that non-WB ethnicity is not a uniform factor in predicting success. Some groups who are in a minority do as well or better than WB counterparts whilst some groups do much worse than the average of BAME.

Specification 4

The final specification combines a detailed breakdown of ethnicity with an allowance for the ethnicity effect to vary with gender. It places considerable demands on the data and does not generate many statistically significant estimates. Many ethnicities have relatively few applicants in them, and drilling down further by gender often results in missing categories. However, understanding how the two types of variability (across gender within ethnicity and across ethnicity) play out is a useful guide as to where differential attainment may be most severe.

Rather than report regression estimates we focus directly on the implied probabilities of success and select a few of these to offer commentary on some notable features and differences.

Probabilities of success	
Asian Indian Female	0.18
Asian Indian Male	0.08
Asian Pakistani Female	0.08
Asian Pakistani Male	0.12
Black African Female	0.04
Black African Male	0.11
Black Caribbean Female	0.19
Black Caribbean Male	0.08
WB Female	0.16
WB Male	0.17
Irish Female	0.15

Irish Male	0.22
White & Asian Female	0.15
White & Asian Male	0.15

The reference point is again WB, and in this group men have a 17% success rate and women a 16% success rate. This is a small absolute difference and is not statistically significant. So, within WB, women perform equivalently to men. However, in some ethnic groups there are very large gender differences and these can go in opposite directions for different groups.

Black Caribbean women and Asian Indian women outperform their male counterparts and even outperform WB women (although this effect is small and not statistically significant). In contrast Asian Pakistani women and Black African women perform substantially worse than their male counterparts, and have very low absolute success rates.

Extensions

The results reported thus far are a snapshot of what is possible within the regression framework that has been implemented for this report. Whilst certainly not exhaustive the following are some extensions that could easily be pursued;

- The probabilities of success that are compared above are averages across the explanatory variables. It is straightforward to calculate and report these probabilities for specific "types" of applicant – for example those with *Outstanding* on the BPTC or with a first-class degree.

- The measures of success employed here were designed to be comparable with the BSB study. However, since the PG contains details on each individual application made it would be possible to present results on different and perhaps more relevant measures of success. For example, the probability of making it to interview, the average stage reached in an application, the number of offer or interviews obtained either in total or an average per applications and so on.

- The results presented here suggest further avenues of investigation. The measures of success represent the outcome of a process in which applicants choose to apply and Chambers select. It will be important to try and disentangle these two aspects of application to establish the most likely source of the differential attainment – is it the application strategy of certain individuals or is it the way those individuals are assessed and viewed.

All of the above (and more) are capable of being examined and implemented within the broad framework used and developed in this report.

Conclusions

The analysis reported here has confirmed that differential attainment in applications to pupillage exists. As in the BSB report we find that aggregating ethnic minorities into

BAME there are lower probabilities of success amongst BAME applicants than their WB counterparts, having controlled for educational attainment, socio-economic background and the number of applications made. One way of expressing this is in terms of the difference in the probability of success. For WB applicants this is 16% whilst for equivalent BAME applicants it is 10%. We can term this difference in probabilities as *differential ethnic attainment*.

The analysis also confirms that there is no evidence of *differential gender attainment*. The regression results all suggest that being a woman does not, other things equal, significantly affect the probability of success in applications.

However, this "top-level" summary masks a wealth of important detail. One key aspect of the analysis was to allow for the interaction of ethnicity and gender. When this is done and interesting finding emerges. Whereas there is a statistically significant and large differential attainment gap for BAME men, the same is *not* true for women. Not only is the gap between the success rates of BAME and WB women smaller than that for men, it is not statistically significant. We conclude that differential attainment is a mixture of gender and ethnicity.

Another key aspect of the analysis undertaken has been to separate out individual ethnic groups. Once this is done the grouping of ethnicities into BAME is revealed to be a serious misrepresentation of an underlying reality in which some ethnic groups perform as well or better than their WB counterparts whereas others suffer an even more substantial differential attainment than the average of BAME. We conclude that in studying differential ethnic attainment the details of ethnicity are fundamentally important.

When we combine both detailed ethnicity with the possibility of differences between genders within an ethnic group the picture that emerges is more complex still. There are ethnic groups where men substantially outperform women in regard to applications, and vice versa. We conclude that it is a complex interdependence of detailed ethnicity and gender that defines differential attainment in applications.

As the profession seeks to move forward and to understand and address differential attainment these findings are both relevant and in need of further investigation.