THE GENDER AND ETHNICITY EARNINGS GAP AT LSE

The LSE Equity, Diversity and Inclusion Taskforce
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Contents

Background

This report has been commissioned by the EDI task force in January 2016 to provide quantitative evidence on the earnings gap for academic and professional staff at the LSE. The report uses HR payroll data for all employees in 2015 and internal predicted REF scores from the REF 2014 for academics.

The analysis and the report are by Oriana Bandiera (Professor of Economics and Director of STICERD) with assistance from Shan Aman Rana and Guo Xu (PhD students in Economics). The research team have all signed a confidentiality agreement which, amongst other things, guarantees that all efforts are undertaken to prevent individuals from being personally identified. Following conclusion of the analysis and follow-up work, final versions of data documents will be forwarded to the Pro-Director Faculty Development (Prof Eric Neumayer) and Human Resources, for secure storage, before deletion of all locally held copies.

The authors wish to thank Human Resources and the Chief Operating Officer, Andrew Young, for providing the data and help with the analysis.

Executive Summary

- In 2015, the School had 3,865 people on the payroll. The largest group is professional services staff, which account for 46% of the total, followed by academics, which account for 17% of the total. The remainder are research staff, LSE fellows, and hourly paid staff.

- Chapter 1 analyses earnings and promotions gender gap for academics.

The main findings are:

  - Women earn 11% less than men of similar age, length of service and research productivity; the gap has been widening since 1998.
  - Women are promoted more slowly: after 15 years at the LSE more than twice as many men (24% of men vs. 11% of women) are estimated to become full professors.

- Chapter 2 analyses gender and ethnicity gap for professional service staff.

The main findings are:

  - Women earn 5.9% less than men of similar age, length of service and division
  - Non-whites earn 11.4% less than whites of similar age, length of service and division

Chapter 1: The gender earnings gap among academics

Summary of main findings

1. The average female academic earns 12% less than her male counterpart of similar age and experience at the LSE.
2. The gap is not due to differences in research productivity. Controlling for internal predicted REF scores from REF 2014, the average gap is 11%.
3. The earnings gap is particularly large for the top earners: women at the 90th percentile earn 30% less than their male counterparts.
4. The gap is partly due to the fact that women are more likely to work in departments that pay lower salaries: adding department controls reduces the gap to 6%.
5. Differences in seniority of rank explain one quarter of the wage gap. The gap increases with seniority: it is 2% for Assistant Professors, 7% for Associates and 11% for full Professors.
6. The earnings gap has been increasing over time from around 3% in the late '90s to 9% in 2014.
7. Women's earnings grow more slowly over time: comparing women and men who started at the LSE as Lecturers between 1998 and 2002 reveals that the gap in median earnings materialises after 4 years and widens after that.
8. The widening gap is due to gaps in promotion: promotion to Associate and Full Professor happens much more slowly for women. After 15 years at the LSE more than twice as many men (24% of men vs. 11% of women) are estimated to become full Professors.

Part I: The earnings gap in 2015

This part analyses gender gap in earnings for the universe of LSE academics in 2015. We use HR payroll data and internal predicted REF 2014 scores for all academics as a proxy for research productivity. In addition to gender, we use data on the age of academic staff, the number of years of service at LSE (called 'tenure' for the purposes of this analysis) and, in further analysis, data on the rank of academic staff (Assistant Professor, Associate Professor or (Full) Professor) and the Department they are in.

In 2015, the School had 3,865 people on payroll. Academics account for 17% of total employees and 33% of academics are women.

1. Gender earnings gap and research productivity

Gender differences among academics are not due to differences in age, tenure at the LSE, or research productivity (REF scores). Controlling for these factors, the average gap is 11%.

Figure 1 estimates the gender earnings gap for all academics in the School. Each bar shows the gap estimated using a different specification as well as the 95% confidence interval. The height of the bar represents the percentage difference in earnings between women and men. This is obtained by regressing the natural log of total annual pay on a gender dummy which equals one if the individual is a woman and a set of control variables.
The confidence interval indicates the range of values within which the gap lies with a confidence level of 95%. If the interval does not contain 0, then we can reject the hypothesis that the gap equals 0. The regression output is reported in Table 1, appendix A.

The first bar shows the raw mean difference in pay, that is, without controlling for differences in other factors. This shows that an average female academic earns 16.5% less than her male counterpart. The second bar controls for research productivity based on internal REF scores. While this is not a perfect measure of research productivity, the corresponding Table 1 in appendix A, shows that REF scores are positively and strongly correlated with pay, thus supporting their use as a proxy.

Having access to a proxy for research productivity allows us to distinguish between two alternative explanations of the gap, namely:

(i) That external factors make women less productive and this is reflected in lower pay;
OR

(ii) That women receive lower pay for the same level of research productivity.

The second bar shows that controlling for REF scores has almost no effect on the estimated gap: the average female academic earns 15% less than her male counterpart.[1] This finding rules out explanation (i), namely that the gender wage differential is due to a research productivity difference between male and female academics. Rather, *it suggests that women receive lower pay for the same level of research productivity.*

The third bar in Figure 1 controls for differences in age and time spent at the School. We use age as a proxy for academic age (years since the first academic employment whether at LSE or elsewhere). This reduces the difference to 12.2% since women are on average younger than men.

The fourth bar in Figure 1 estimates the gender wage gap controlling for age, tenure and research productivity together. It shows that *the average female academic earns 10.5% less than her male counterpart*. Note that in all cases, the confidence interval does not contain zero and we can thus reject the hypothesis that the estimated gender difference is equal to zero.

We note that we have no measure of teaching productivity, contributions to service and citizenship. However, these factors can eliminate the gap if and only if (i) they are significant determinants of pay and (ii) men systematically outperform women in teaching, service and citizenship. If this is not the case, not being able to measure these variables limits our ability to fully explain pay but does not bias our estimate of the gap.

[1] We lose 19 observations for staff for whom no predicted REF scores exist.

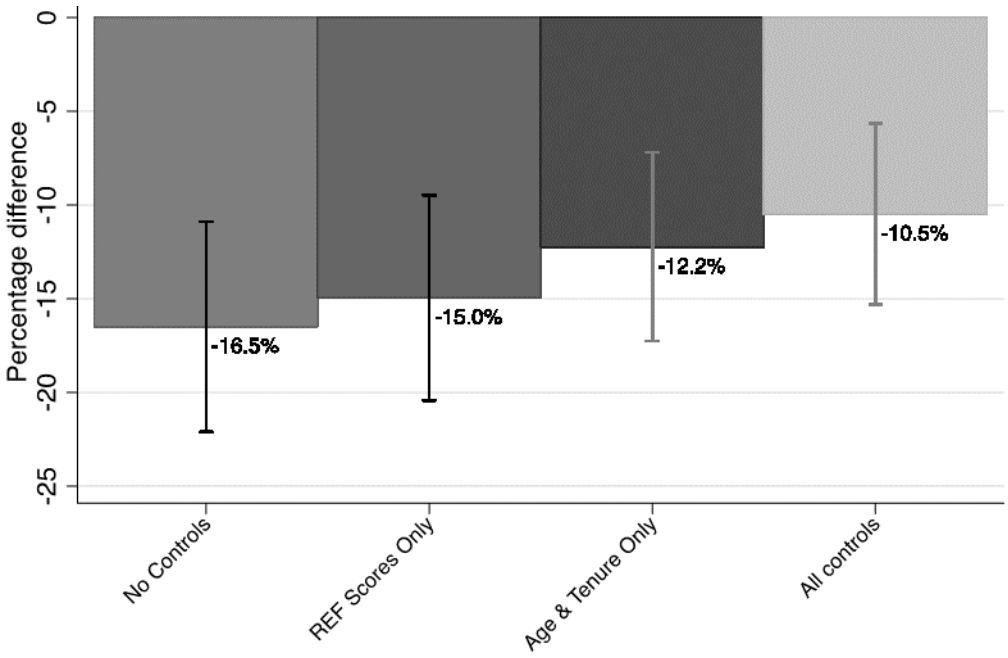


Figure 1: Female earnings gap among academics

2. The glass ceiling

There is a glass ceiling as the earnings gap is particularly large for the top earners: women at the 90th percentile earn 30% less than their male counterparts

The analysis so far has focused on the comparison of averages across male and female academics. Next we investigate whether the wage differential is most pronounced for those who earn the lowest salaries versus those who earn the highest.

To shed light on this, Figure 2 reports quantile regression estimates. Each bar in the figure shows the gender gap at different points on the wage distribution. The first bar compares women at the 10th percentile of earnings to men at the same percentile. These are low wage earners since only 10% of academics have wages that are lower than theirs. The second bar and the bars that follow repeat the comparison at the 25th, 50th (median), 75th and 90th percentile. Throughout, we control for age, tenure and research productivity (as identified by the REF score).

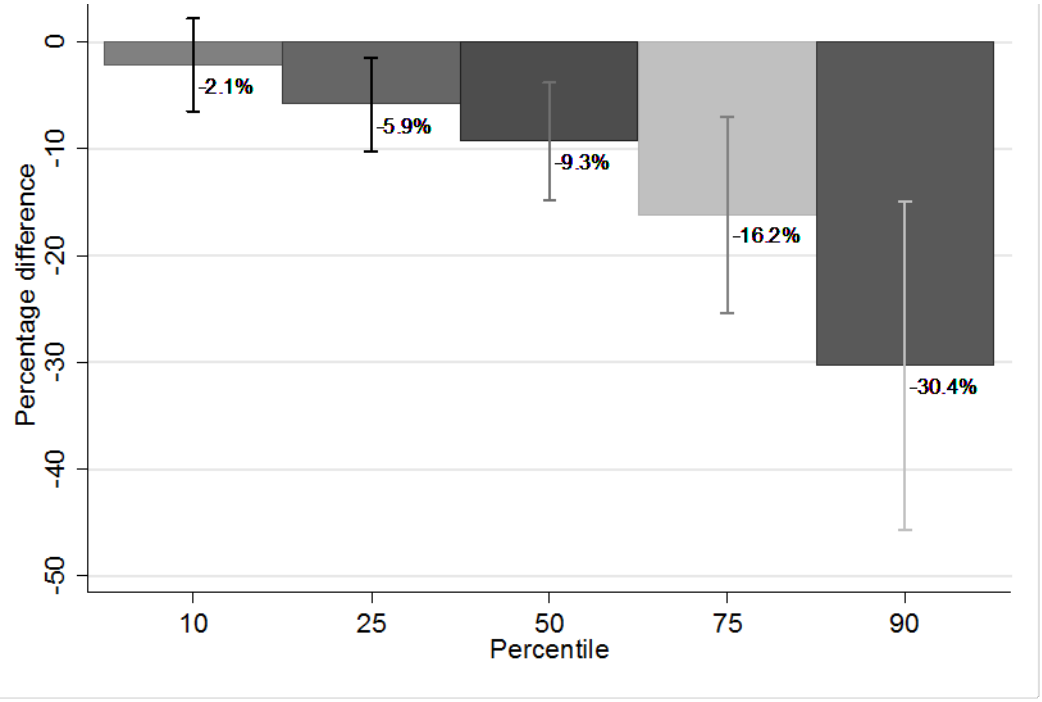


Figure 2: Female earning gap by percentile of earnings

Figure 2 shows that there is no statistically significant wage differential within the bottom 10% of wage earners since the 95 percent confidence interval extends to both sides of zero. The wage differential is statistically significant first at the 25th percentile. If we look at a woman at the 25th percentile of the wage distribution and compare her to a man at the 25th percentile, there is a difference of 5.9%. The higher we go in the wage distribution the bigger the gap. The biggest wage differential is at the very top of the wage distribution, i.e. within the 75th and the 90th percentiles. While the gender wage difference is 16.2% for the 75th percentile, a woman who is at the 90th percentile, earns 30.4% less than her male counterpart at a similar level. This suggests that there is potentially a glass ceiling for female academics and those who have advanced in their careers face greater inequality than those who have not.

3. Is the earnings gap due to differences in sorting to different departments?

Women are more likely to work in departments that pay lower salaries: adding department controls reduces the gap to 6%. However, differences remain within department type. The gap is much larger in departments that pay market

supplements (19% vs. 6%).

The wage differential estimated in section 2 might reflect a different sorting by department. For instance, individuals in some departments are more likely to be paid market supplements and it is possible that men simply systematically sort into the high paying departments and earn more.

To begin, Figure 3 looks at the share of female academics by department. To aid legibility we restrict the figure to departments with more than 15 academics but these are included in the rest of the analysis. Each dot represents the share of female academics in that department.

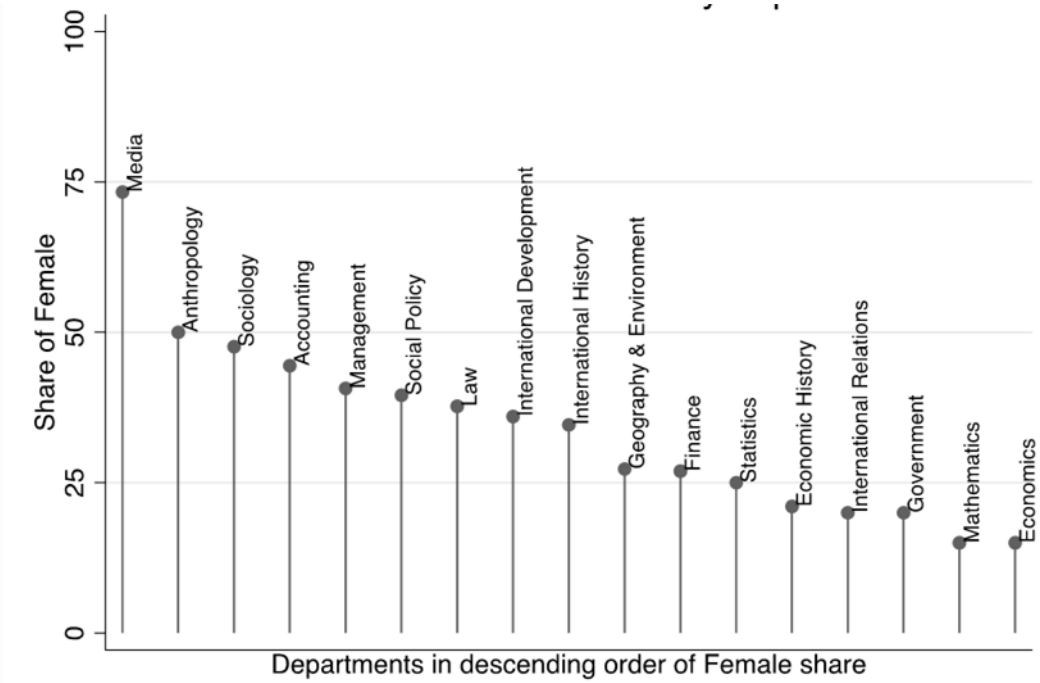


Figure 3: Share of women by department

The figure shows a great deal of sorting, that is, the share of women varies widely across departments. The highest percentage of female academics is in the Media and Communications department, followed by Anthropology and Sociology. The lowest share of female academics is in Economics and a close second to last is Mathematics.

When we estimate the gap by adding departments to the set of controls, the gap falls from 11% to 6% and remains significantly different from zero. In what follows we try to investigate which departmental characteristics drive the difference. We focus on two dimensions: the share of women and the frequency of market supplements in a given department.

Figure 4a presents estimates of the gender gap controlling for the share of women in each department. This captures a host of factors such as, for example, a more egalitarian culture or the fact that women sort into lower paying disciplines. The first bar in Figure 4a shows the gender differential when controlling for age, tenure and REF scores. As we saw earlier, this equals 10.5%. The second bar additionally controls for whether the individual is in a department with a high share of women (higher than the median). The gap falls slightly to 7.7% and remains statistically significant. Thus, *differences in the share of women across departments explain a small portion of the overall gap.* The third and fourth bars estimate the gap separately for departments with a small share of women and those with a large share. The gap is larger in the former group (10.5% vs. 5.8%) but this difference is not precisely estimated.

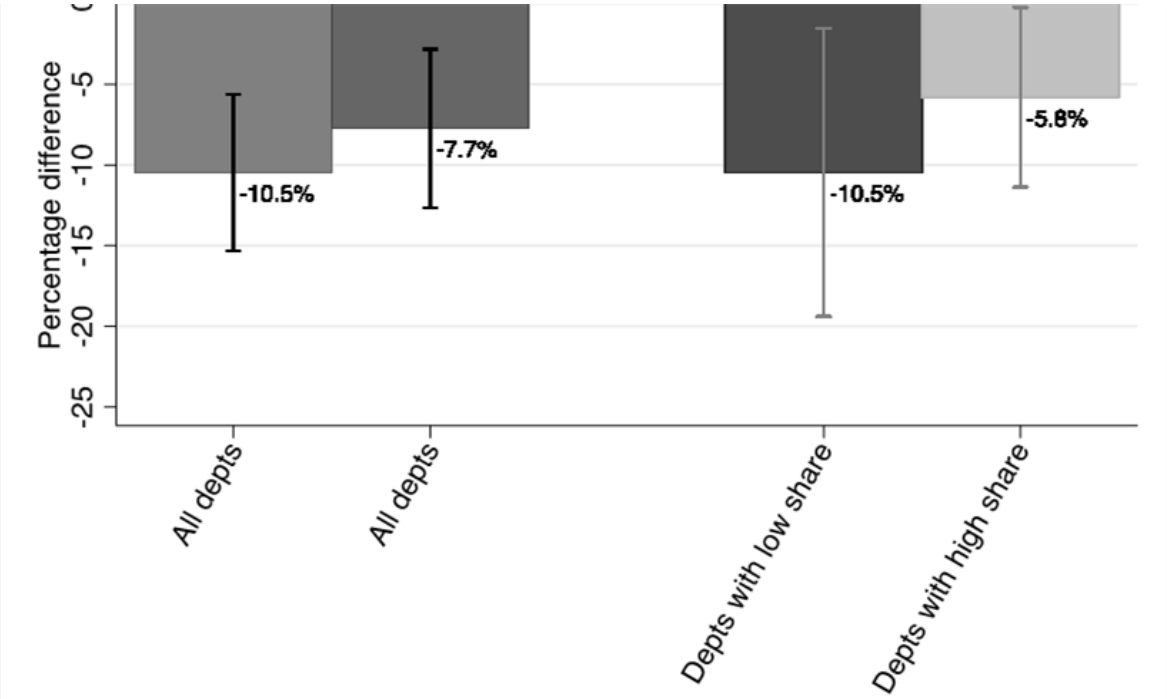


Figure 4a: Earnings gap by High/Low female share

Next we test whether the overall gap is explained by the fact that women are less likely to work in departments that tend to pay market supplements.[2] The data reveals that these are Accounting, Economics, Management and Finance. The share of women in these departments is 32%, somewhat lower than in the other

[2] According to LSE Pay Supplement Policy (2015, p.1), Market Supplement "recognises that certain disciplines / professions may be highly demanded by employers and consequently the School's basic salary derived from the single salary spine is not sufficient to attract an appointment in line with the recruitment criteria. A supplement is therefore paid to attract and retain the individual (or all individuals that have the relevant skills)." Available from: http://www.lse.ac.uk/intranet/LSEServices/policies/pdfs/school/paySupPol.pdf

departments where it is 37% on average.

The first bar in Figure 4b again shows the gender differential when controlling for age, tenure and REF scores. As above this is 10.5%. The second bar additionally controls for whether the individual is in one of the market supplement departments. The gap falls to 8.9%. *This implies that sorting explains 15% of the gap and a substantial 85% remains.*

The next two bars look at the gap for the two types of departments separately and show that the gender wage differential is most pronounced in departments that pay a market supplement. An average female academic within these departments receives 18.8% less than her male counterpart. Again this is despite controlling for the fact that women might have a different age, tenure and research productivity than their male colleagues. Those departments that pay no market supplements have a lower gender wage inequality as compared to those that pay market supplements. Females earn 5.4% less than their male counterparts after controlling for differences of age, tenure and quality.

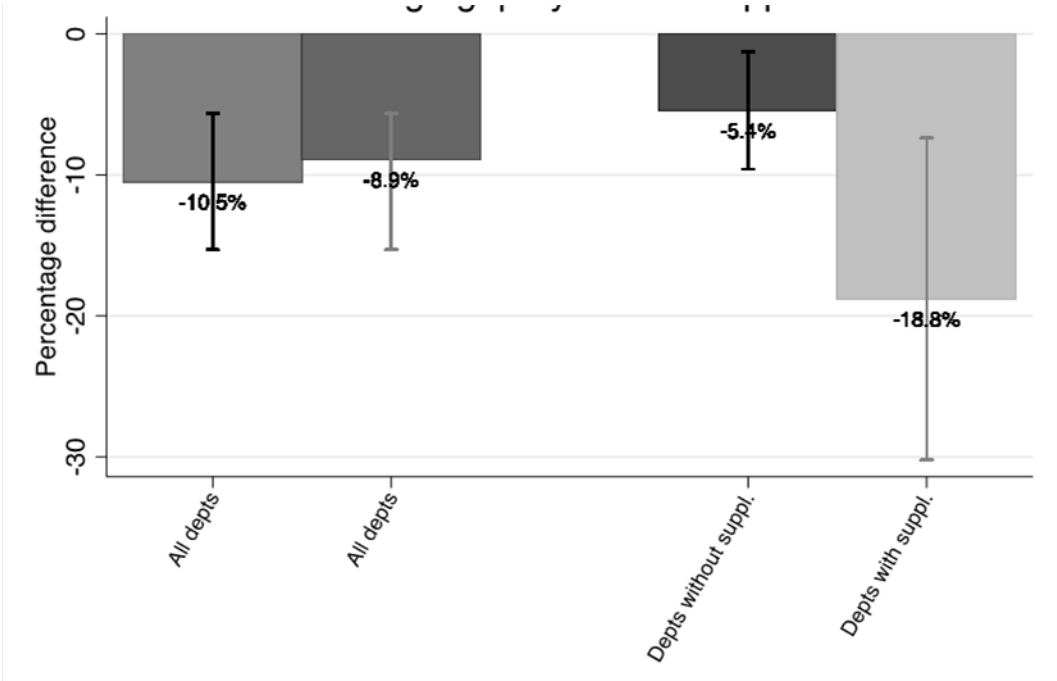


Figure 4b: Earnings gap among academics by department types

One possible interpretation of the findings is that since bargaining skills play a bigger role in determining supplements, the gap might be due to the fact that men are intrinsically better at bargaining or can more credibly generate outside offers because they are more mobile.

4. Is the earnings gap due to differences in rank?

Differences in rank explain one quarter of the wage gap. The gap increases with seniority: it is 2% for Assistant Professors, 7% for Associate Professors and 11% for full Professors.

Do differences in rank explain the gap? To answer this question it is important to note that promotions are decided within the School and women might be less likely to be promoted, other things equal. In other words, rank itself is likely to be a function of gender.

The first bar of Figure 5 shows that controlling for differences in age, tenure, research productivity (measured using REF scores) and rank, women academics earn 7.5% less than their male counterparts. Thus, differences in rank account for 25% of the earnings gap. In other words, *women earn less both because they are less likely to belong to the higher ranks and because they are paid less at parity of rank.*

The next three bars test whether the gender wage differential varies according to rank. We find that women Assistant Professors earn 2% less than their male counterparts. This difference is not significantly different from zero. The gender wage differential is markedly larger for Associate and especially for full Professors: female Associate Professors earn 7% less than their male counterparts, female full Professors earn 11% less than their male counterparts.

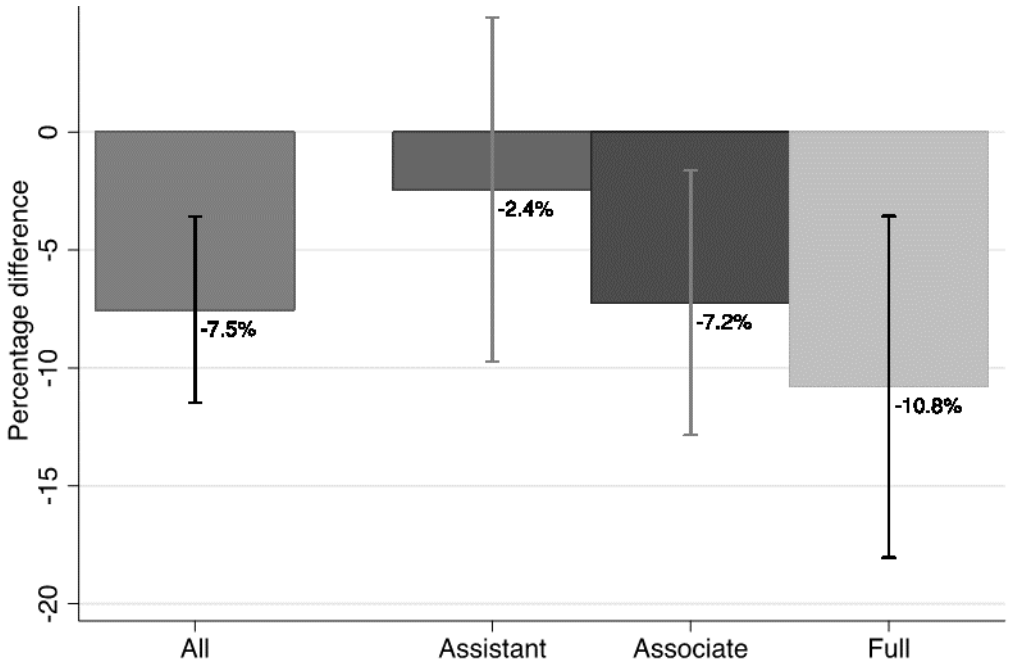


Figure 5: Earnings gap by rank

An implication of these findings is that there are few professorial role models for junior academics and those that are available and have reached the most advanced stages of their careers as Professors, face greater wage gaps. This can potentially have a discouraging effect on junior women academics, resulting in a further perpetuation of gender differences. The question is then whether the earnings gap is accompanied by a promotion gap, that is, whether women's careers progress more slowly. We tackle this in Part II.

Part II: The earnings and promotion gap over the academic career

To study the evolution of the gap over time and to measure promotions gaps, we obtained payroll data from 1998 to 2015. These contain 1216 unique individuals, of which about 30% are women.

5. Gender earnings gap over time

The average female academic earns 12% less than her male counterpart of a similar age and years at the LSE. The gender earnings gap has been increasing over time from around 3% in the late '90s.

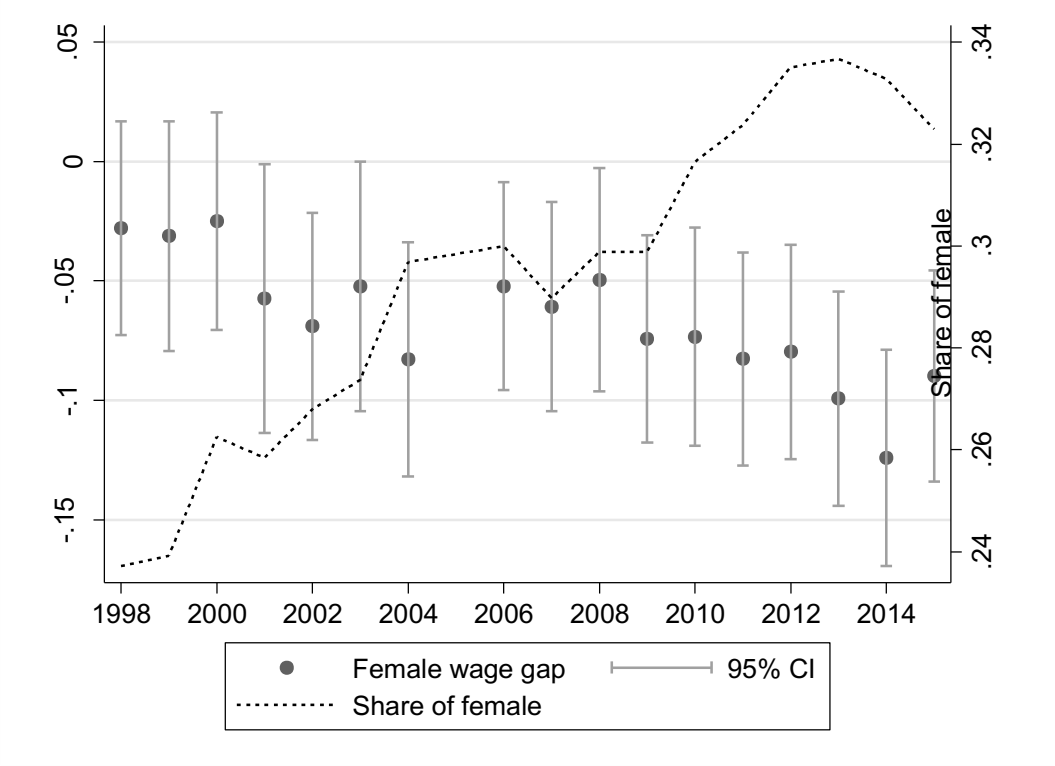


Figure 6a: Share of women and earnings gap over time

Figure 6a shows the estimated earnings gap controlling for age, years at the School (tenure) and department. REF scores are not available before 2014 but, as shown in the previous section, they do not explain the gap. For each year Figure 6a reports the point estimate (grey dot) and the 95% confidence interval (grey line). The gap is measured on the left vertical axis. We also report the share of women on the right vertical axis.

The figure shows that while the share of women has increased from 24% to 32% over the 17 year period, the earnings gap has become worse over time, dropping from -3% in 1998 to -9% in 2014. Further analysis, available from the authors on request, shows that the interaction between the female indicator and a linear trend is negative and precisely estimated, that is we can reject the null of no trend.

One possible explanation is that the share of women Professors increases in this period and, since the earnings gap is larger for Professors, we see a widening of the gap. To check whether this indeed explains the widening gap, Figure 6b reports estimates controlling for rank. The gap is somewhat reduced, but the pattern remains: *the gender earnings gap widens over time.*

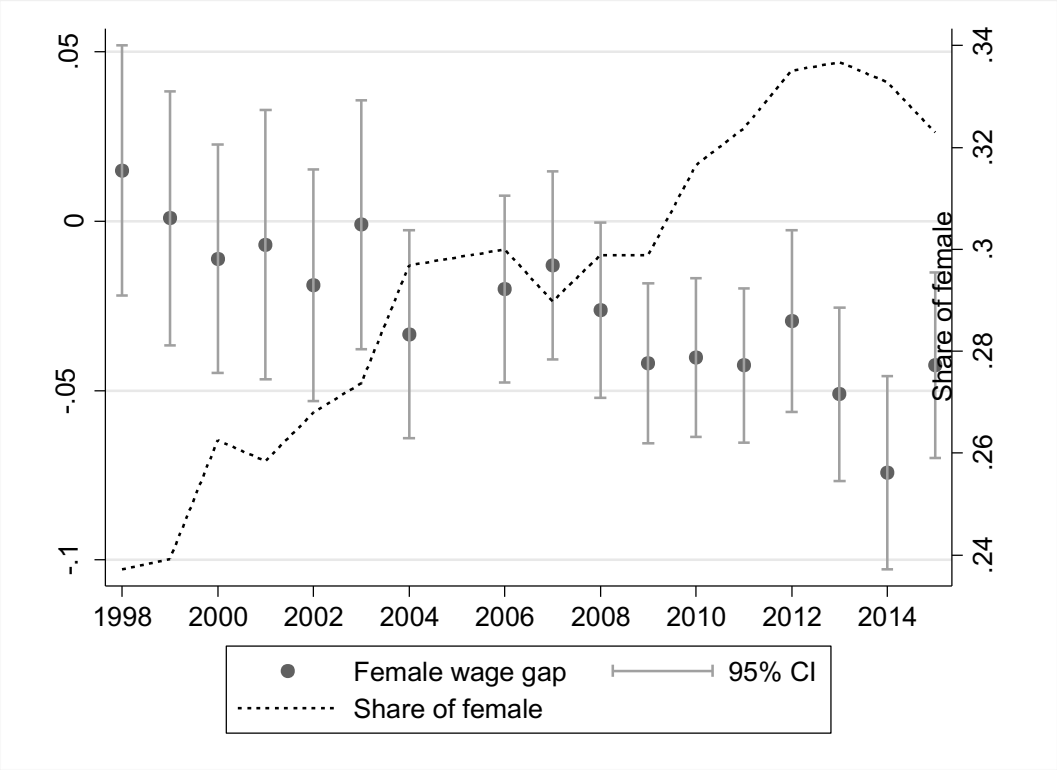


Figure 6b: Share of women and earnings gap over time, controlling for rank.

Figures 6a and 6b lead to the conclusion that the gap widens over time. We cannot be sure whether this trend is likely to continue but the record of the past 17 years suggests that, in the absence of corrective policies, women's earnings will keep falling short of men's.

6. Gender earnings gap over the academic career

Women's earnings grow more slowly over time: comparing women and men who started at the LSE as Lecturers between 1998 and 2002 shows that the gap in median earnings materialises after 4 years and widens after that.

We now investigate how the earnings gap evolves through the academic career. To do so we follow the same cohort through the years and test whether, at any given point in time, the earnings gap materialises and whether it gets larger over time.

We select the cohorts of men and women hired as lecturers between 1998 and 2002. We choose this period because we wanted a long enough observation period for these Lecturers to have been promoted to Professors as the earlier analysis suggested that the earnings gap is larger for Professors.

Figure 7 plots the median earnings along the career path. The graph is built by taking the median earnings in each year by cohort. Thus year 0 is equal to 98 for the first cohort, 99 for the second and so on. We truncate the data at 13 years so that all five cohorts are observed in each year.

We see that there is no gap until year 4: when they are first hired and for the following three years, men and women earn the same amount. The gap starts to appear in year 4 and widens steadily until it "jumps" after year 10. Section 4 showed that there is an earnings gap due to differences in rank with female full Professors earning 11% less than their male counterpart. In the next sectionwe further show that there is a gender gap not just in earnings but in promotion to professor as well. Since most of these promotions occur after 10 years it coincides with the widening of the gap.

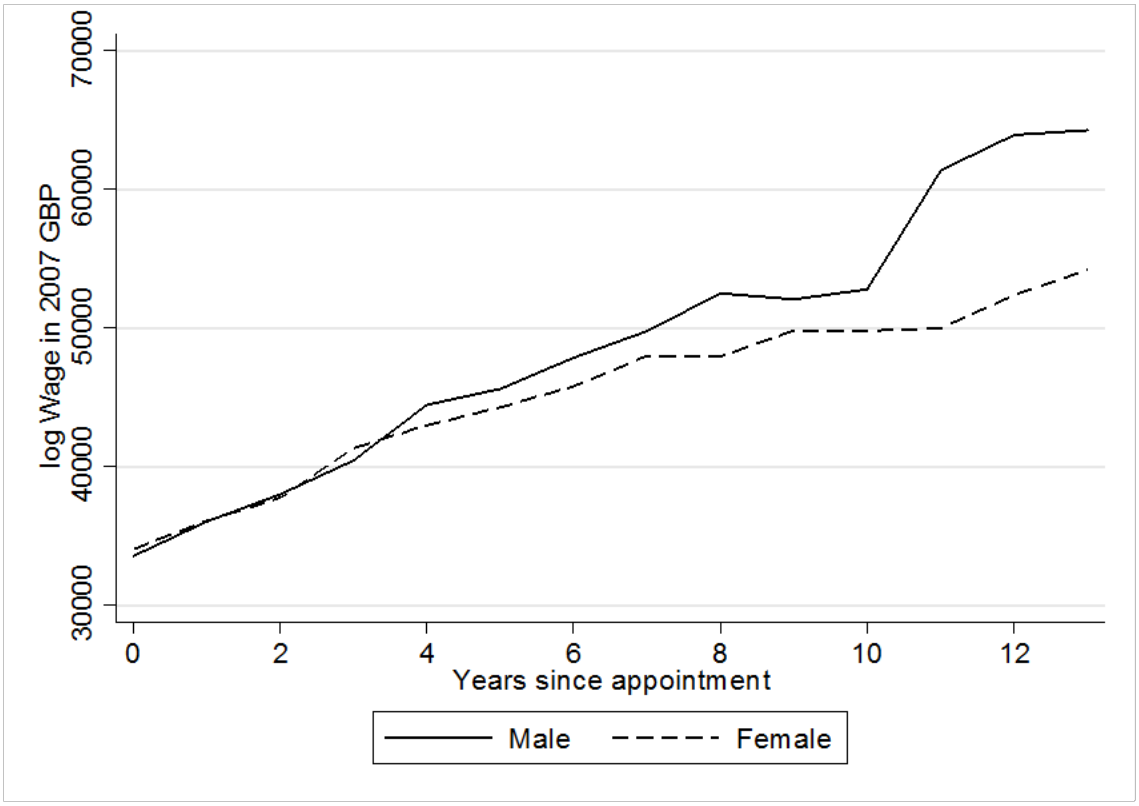


Figure 7: Median earnings along the career path

7. Gender promotion gap over the academic career

Women are promoted to Senior Lecturer at the same rate as men but promotion to Reader and Professor happens much more slowly. After 15 years at the LSE more than twice as many men (24% of men vs. 11% of women) are estimated to become full Professors.

Promotion to higher ranks may be one of the underlying factors that determine gender earnings inequality. To analyse gender inequalities in promotion we compare the career path of men and women hired at the same time to test whether women are less likely to be promoted (or promoted later) than men. The sample is the cohorts hired as lecturers between 1998 and 2002 as above.

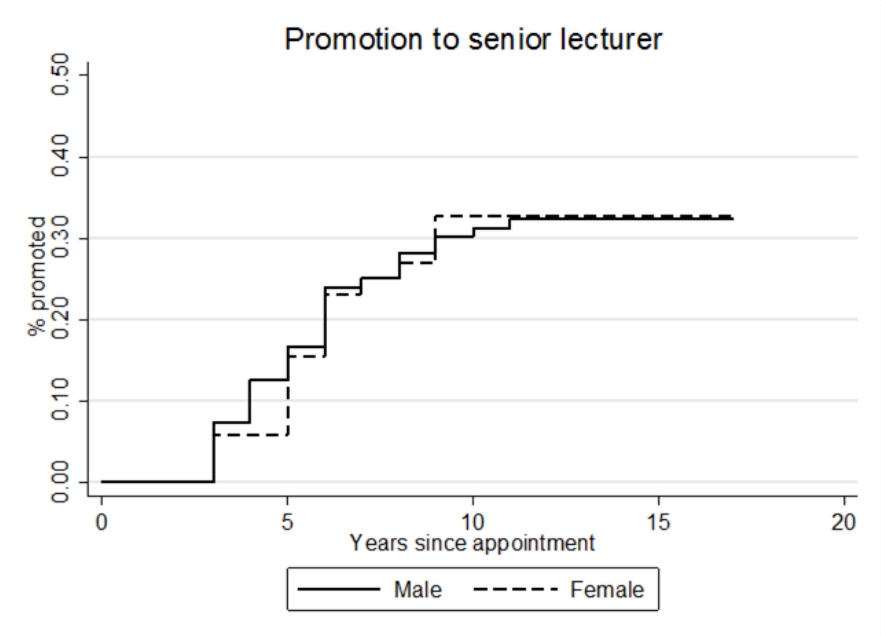


Figure 8a: Gender promotion gap – Senior Lecturer

In each year individuals are either promoted to the next rank, stay at the same rank, or leave. Figures 8a, 8b and 8c report the estimated probability of promotion to Senior Lecturer, Reader and Professor as a function of years since appointment.[3] The solid line represents men, the dashed line women. For any year on the horizontal axis, the curve gives the estimated probability that an

[3] We use Kaplan-Meier estimates of the survivor function where promotion is the event that makes an individual drop out of the population "at risk" of the event.

individual will have been promoted to that position by that year. Thus, perfectly overlapping curves imply no promotion gap. If the dashed curve is below the solid curve, there is a gender promotion gap such that women are less likely to be promoted in a given year. For instance, looking at figure 8a we see that between years 0 and 3, nobody is promoted to Senior Lecturer, but by year 5, 7% of women and 12% of men are promoted. Overall, however, the promotion gap for Senior Lecturer is minimal.

A clear gap emerges at promotion to Reader. The women's curve is below the men's curve throughout, suggesting that women are less likely to be promoted to Reader in a given year. The differences grow over time so that after 10 years, 35% of men, but only 20% of women are estimated to be readers.

Figure 8b: Gender promotion gap-Reader

After year 11 the two curves start coming closer together, indicating that the probabilities of promotion converge. By year 17, both men and women have a 50% chance of having been promoted to reader. Note that this does not imply that 50% are still readers in year 17 because a share would have been promoted to Professor.

Indeed, as the Reader promotion gap starts to close, the Professor promotion gap widens. Figure 8c shows that men start being promoted earlier than women and, by year 15, the probability that a man has been promoted to Professor is more

than twice as large: 24% for men and 11% for women.

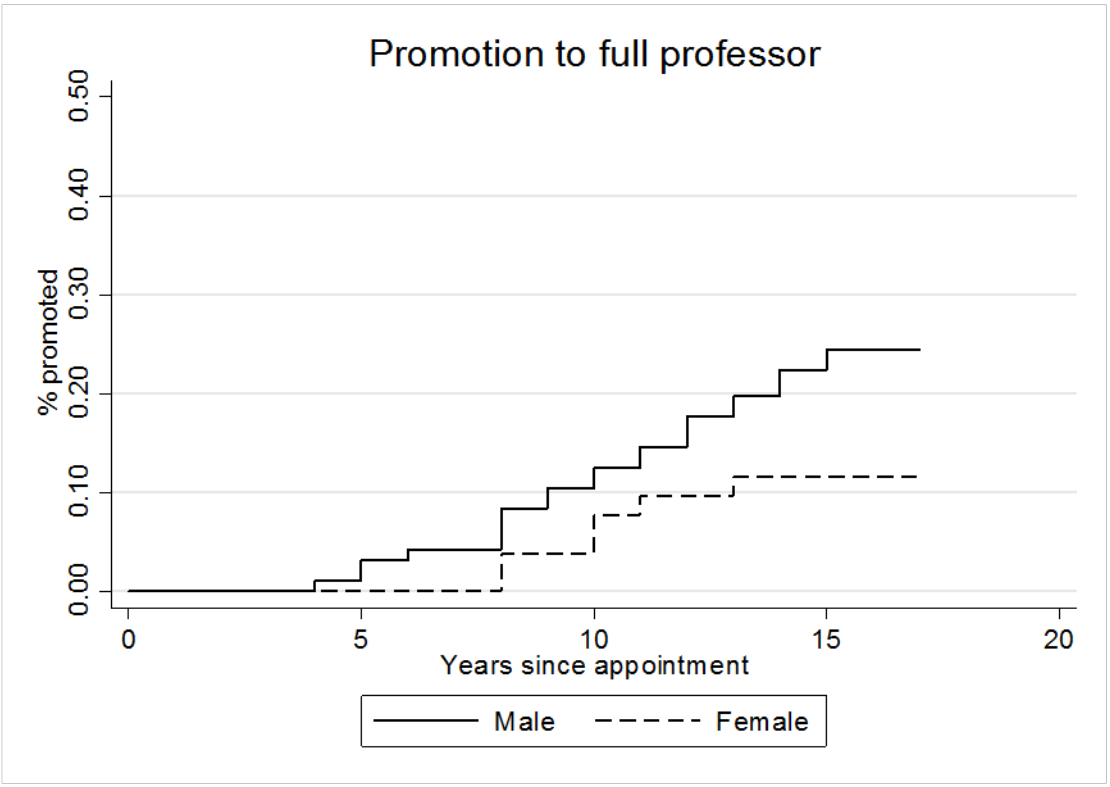


Figure 8c: Gender promotion gap - Professor

The Professor promotion gap does not close in our sample period. Instead the curves flatten out, indicating that each additional year after 13 for women and 15 for men does not increase the probability of promotion. It is of course possible that the gap will eventually close, but given the differences in earnings between Lecturers, Readers and Professors, the size and duration of the promotion gaps documented here have a large impact on the gender earnings gap.

Chapter 2: The gender and ethnicity earnings gap among professional service staff

This chapter analyses gender and ethnicity gaps in earnings among professional service staff at the LSE in 2015. The School has 1,781 individuals on the payroll and their average annual earnings are £34k.

Of these individuals, 58% are women and 26% are non-white. Figures 1a and 1b show the average earnings gap for these two groups. We see that there is a 5% gap between men and women and a 20% gap between whites and non-whites.

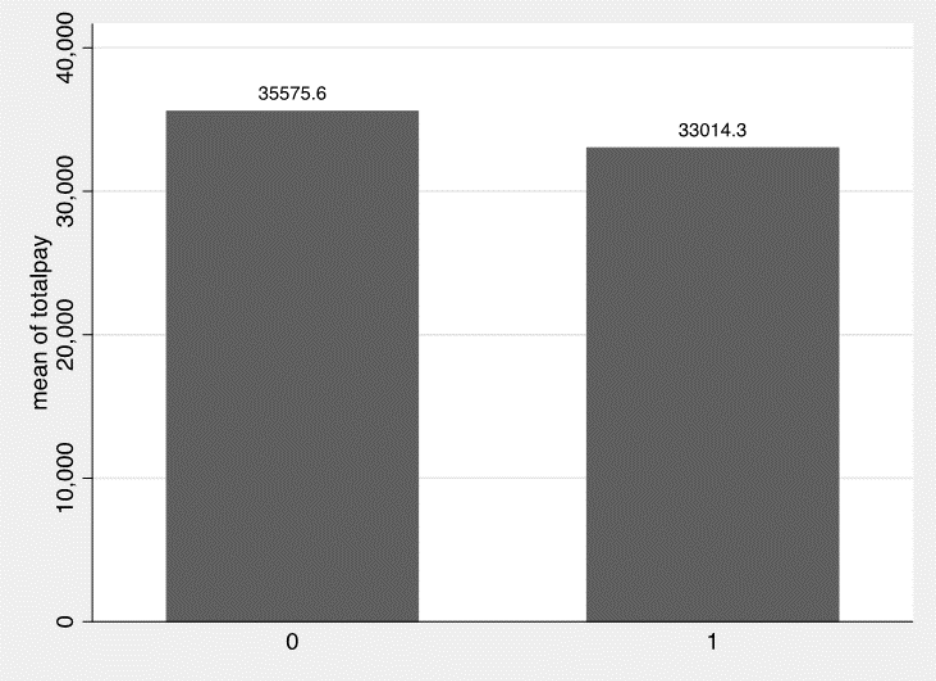


Figure 1a: Mean earnings by gender (1=woman)

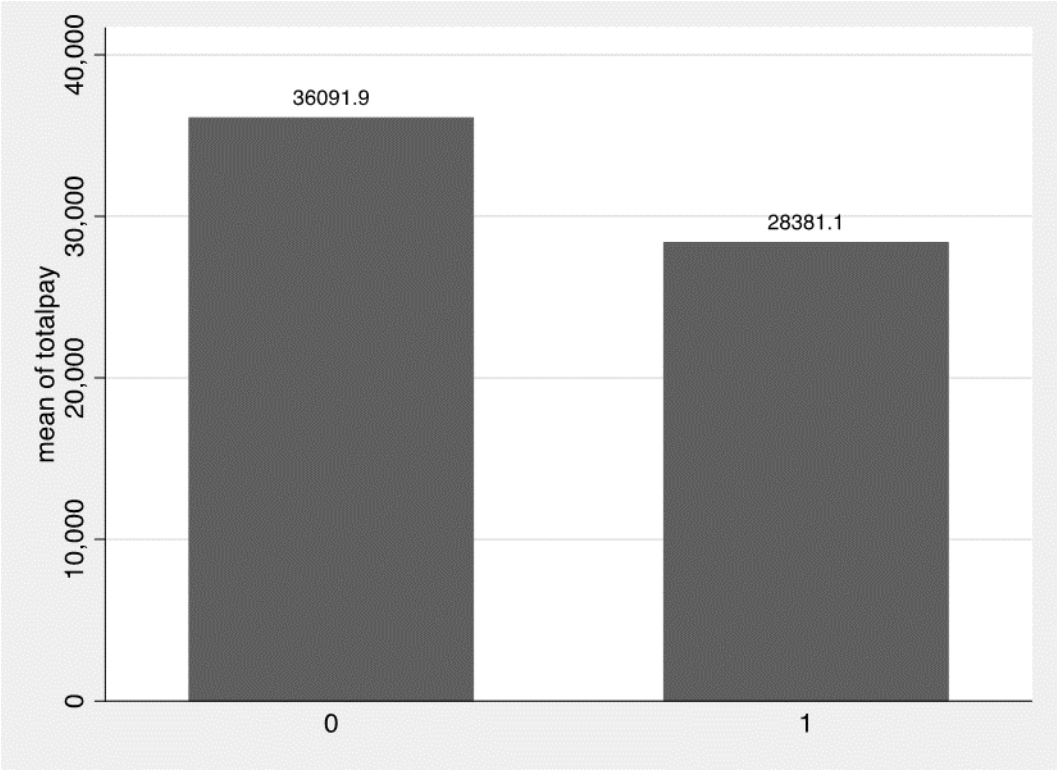


Figure 1b: Mean earnings by ethnicity (1=non_white)

These individuals differ on a host of dimensions other than gender and ethnicity. The aim of this chapter is to estimate the earnings gap accounting for these factors. The data contain information on age, duration of employment at LSE, full-time/part-time status, whether a member of staff is salaried or hourly paid, and their division. With advice from HR, we grouped divisions into 17 clusters. Figure 2 illustrates that earnings vary substantially across divisions and thus accounting for differential sorting might be important.

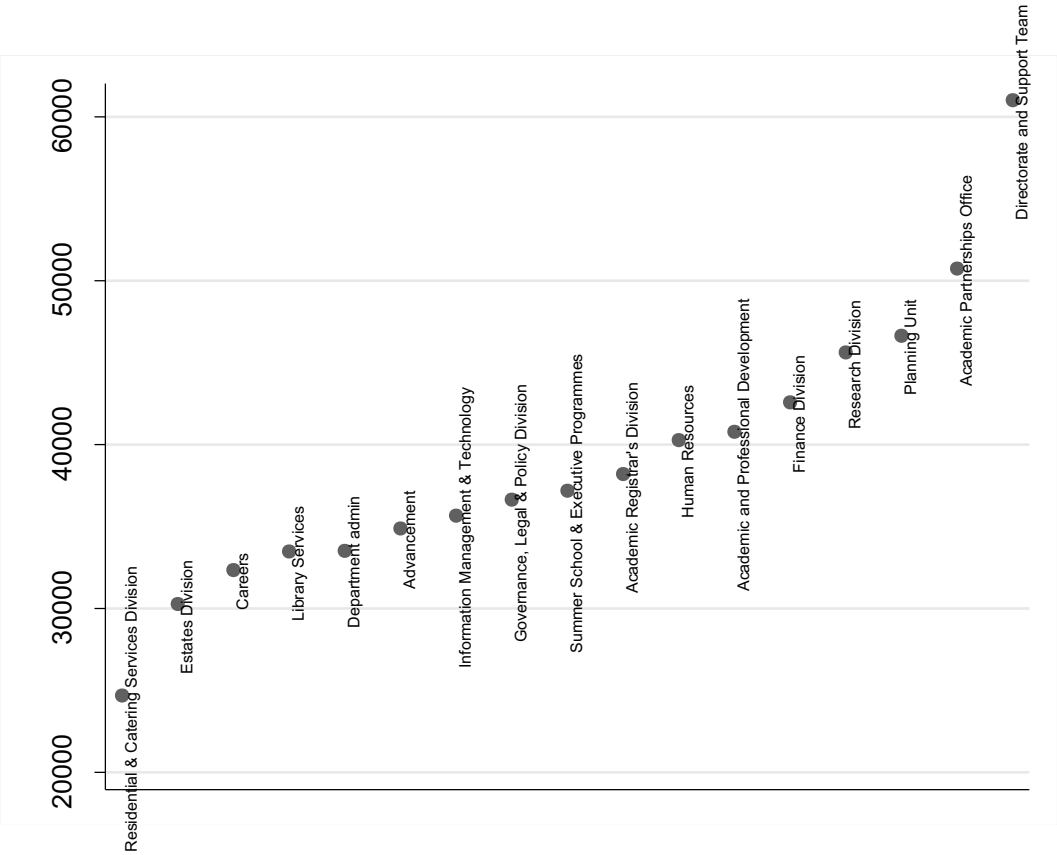


Figure 2: Earnings by division

1. The gender earnings gap

Women are younger, have shorter employment duration and are more likely to work part-time, all of which are associated with lower salaries. Figure 3 shows that controlling for these factors reduces the estimated gap from 5.1% to 1.6% as shown by the comparison of the first bar (without controls) with the second (with controls). Women, however, are more likely to work in high-paying divisions:

Women by division

Divisional ID	Total	Share female
Academic partnerships office	3	66.6%
Academic registrar's division	151	60.3%
Academic and professional development	43	67.4%
Advancement	68	69.1%
Careers	49	69.4%
Department administration	597	66.6%
Directorate and support team	6	66.6%
Estates	160	30.0%
Finance Division	63	53.9%
Governance, Legal & Policy Division	38	84.2%
Human resources	45	82.2%
Information Management and Technology	195	41.5%
Library services	92	61.9%
Planning unit	6	33.3%
Research division	29	72.4%
Residential & Catering services	188	48.9%
Summer school & executive programs	12	50%
Total	1,779	58.2%

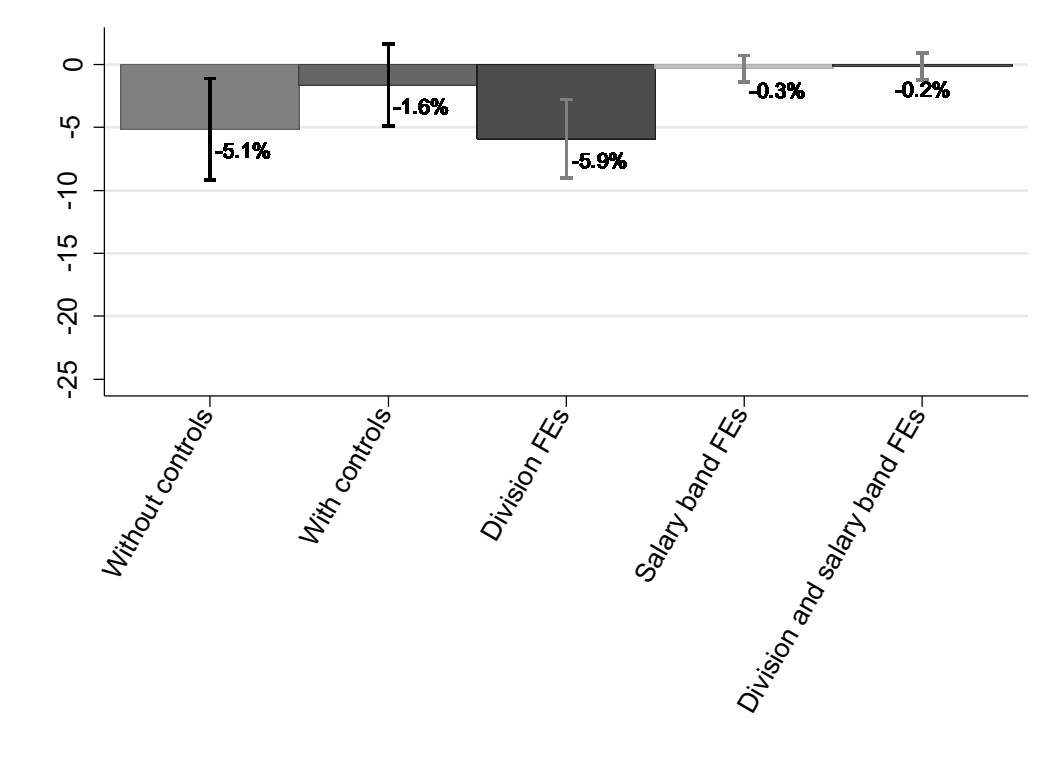


Figure 3: The gender gap

Controlling for the division an individual works in increases the estimated gap to 5.9%. In other words, given the divisions they work in, women earn 5.9% less than comparable men.

The last two bars in Figure 3 analyse whether the gap is due to women being assigned to different bands or different steps within salary bands. The evidence supports the first interpretation. Indeed when we control for salary bands, the gap disappears.

Next we analyse whether the gap differs at different points of the earnings distribution. Similar to our analysis for academic staff, we use quantile regression techniques to find out. The first bar in figure 4 compares women at the 10th percentile of earnings to men at the same percentile. These are low wage earners since only 10% of professional services staff have wages that are lower than theirs. The second bar and the bars that follow repeat the comparison at the 25th, 50th (median), 75th and 90th percentile. Figure 4 illustrates that the gap differs at different points of the earnings distribution: there is no gap at the low end, the gap only materializes at high percentiles. This means that, for example, comparing a woman who earns at the median of the female earning distribution to a man who earns the median of the male earnings distribution, the difference between the two is only 2.6% and not statistically significantly different from zero (the 95% confidence interval bar crosses zero). In contrast, the difference between men and women is large among high earners. Looking at the very top (the 90th percentile) the difference is 6.6%. That the 95% confidence interval marginally crosses zero suggests that there is substantial uncertainty associated with this estimate. With this caveat in mind, as we found for academics, women seem to face a glass ceiling. They have equality at low pay levels but the top-paid men are on average paid more than the top-paid women.

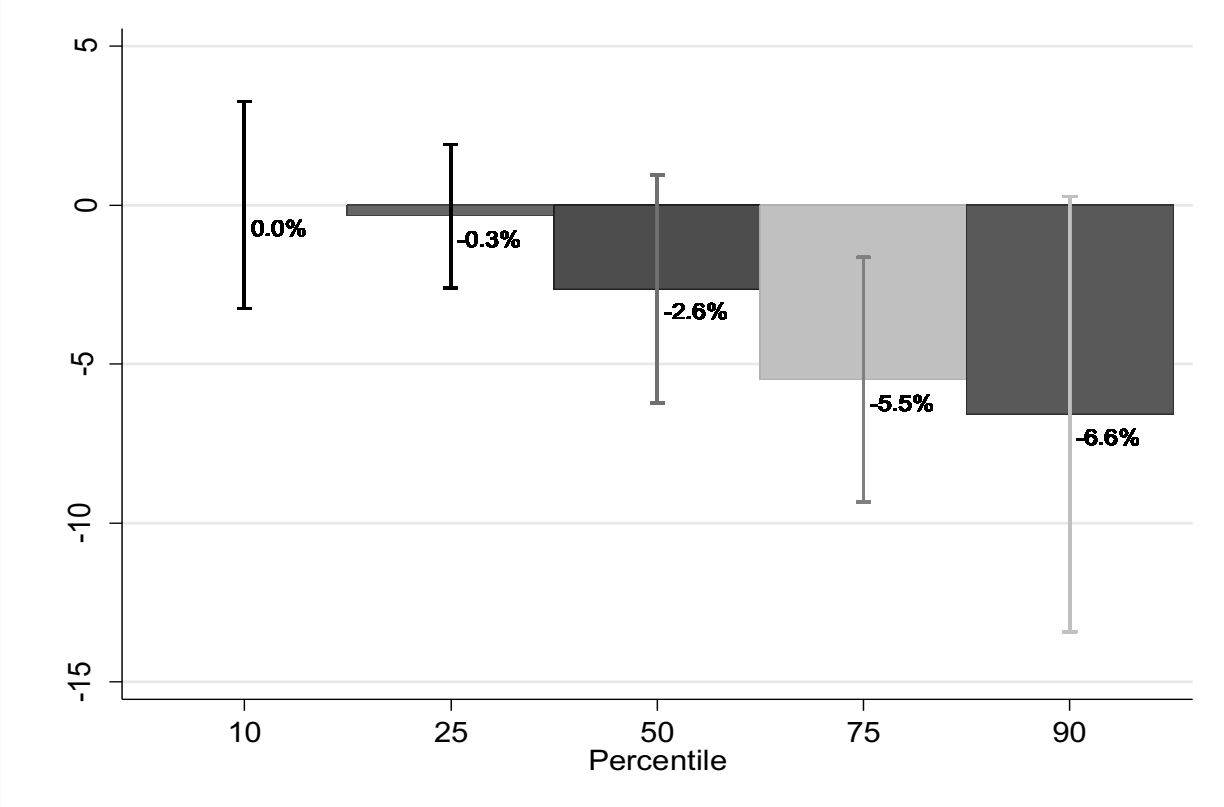


Figure 4: The gender earnings gap across the earnings distribution.

Due to data limitations, we cannot test whether women are less likely to be promoted as we did for academics. We can however show whether in 2015 women are equally distributed across salary bands. Figure 5 shows that this is not the case. Women are the majority in all salary bands up to 7. Thereafter the share falls quickly and only 10% of women hold the best paid jobs in band 10.

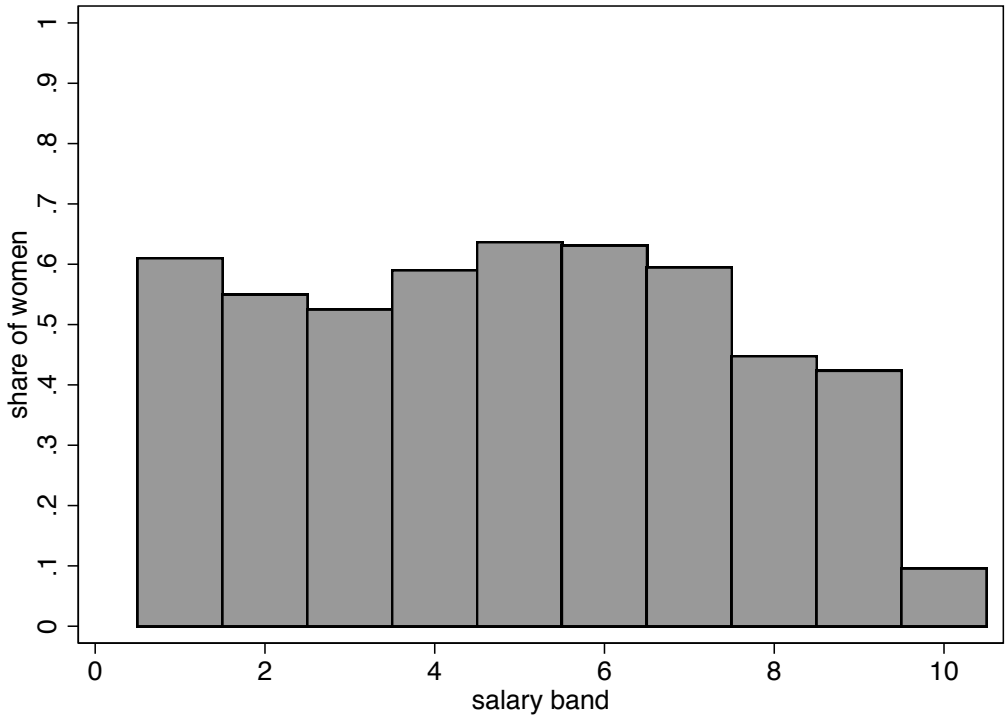


Figure 5: Share of women by salary band

2. The ethnicity earnings gap

Similar to the arguments around gender wage and promotion gaps, non-whites are younger, have shorter employment duration and are more likely to work part-time or on hourly contracts, all of which are associated with lower salaries. Figure 6 shows that controlling for these factors reduces the estimated gap from 19.7% to 13.4% as shown by the comparison of the first bar (without controls) and the second (with controls).

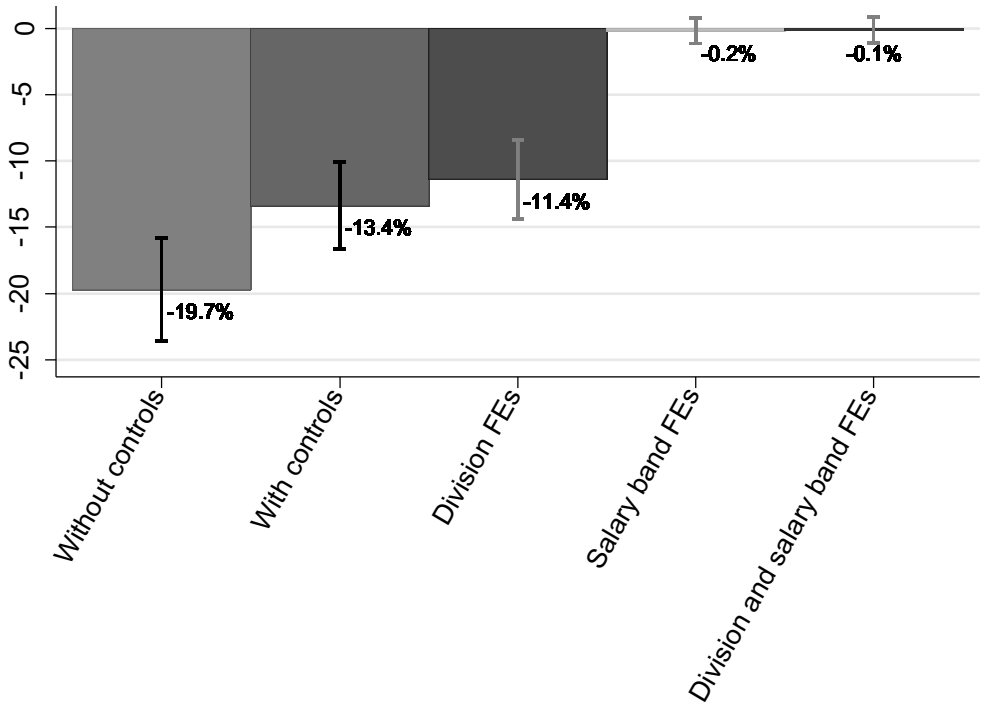


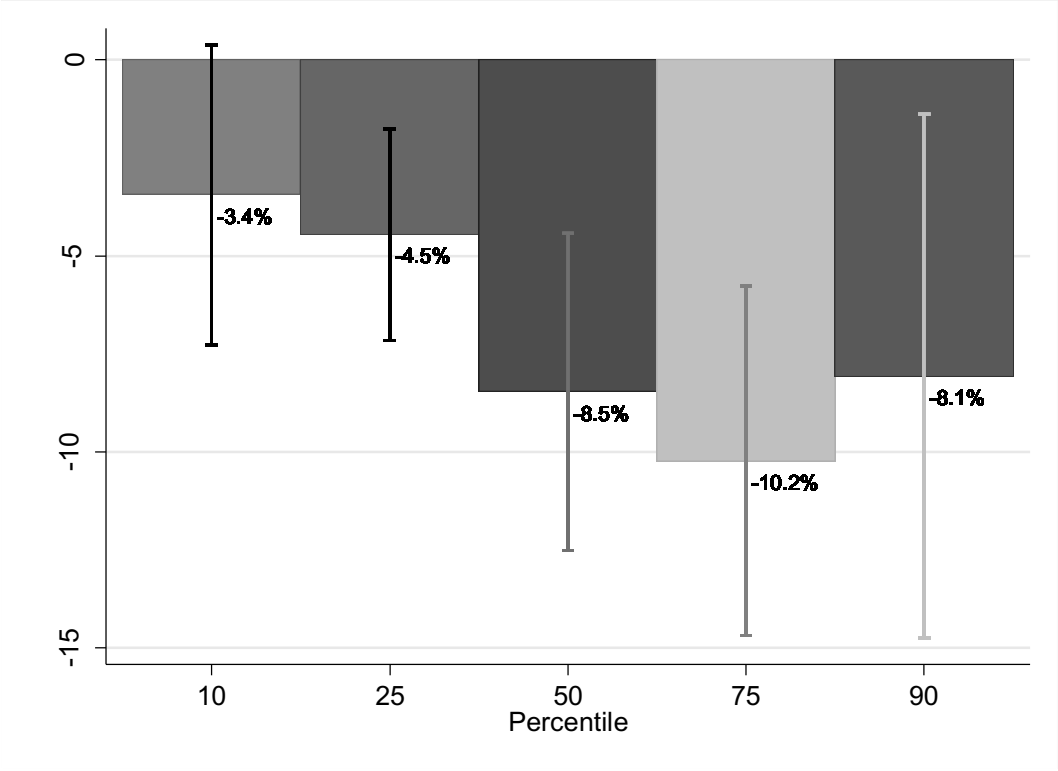
Figure 6: The ethnicity gap

Non-whites are also more likely to work in low-paying divisions as shown below:

Divisional ID	Total	Share non-white
Academic partnerships office	3	0%
Academic registrar's division	151	23.2%
Academic and professional development	43	25.6%
Advancement	68	22.1%
Careers	49	18.4%
Department administration	597	20.3%
Directorate and support team	6	33.3%
Estates	160	37.5%
Finance Division	63	25.4%
Governance, Legal & Policy Division	38	44.7%
Human resources	45	31.1%
Information Management and Technology	195	37.9%
Library services	92	14.1%
Planning unit	6	16.7%
Research division	29	27.6%
Residential & Catering services	188	30.3%
Summer school & executive programs	12	8.3%
Total	1,745	26%

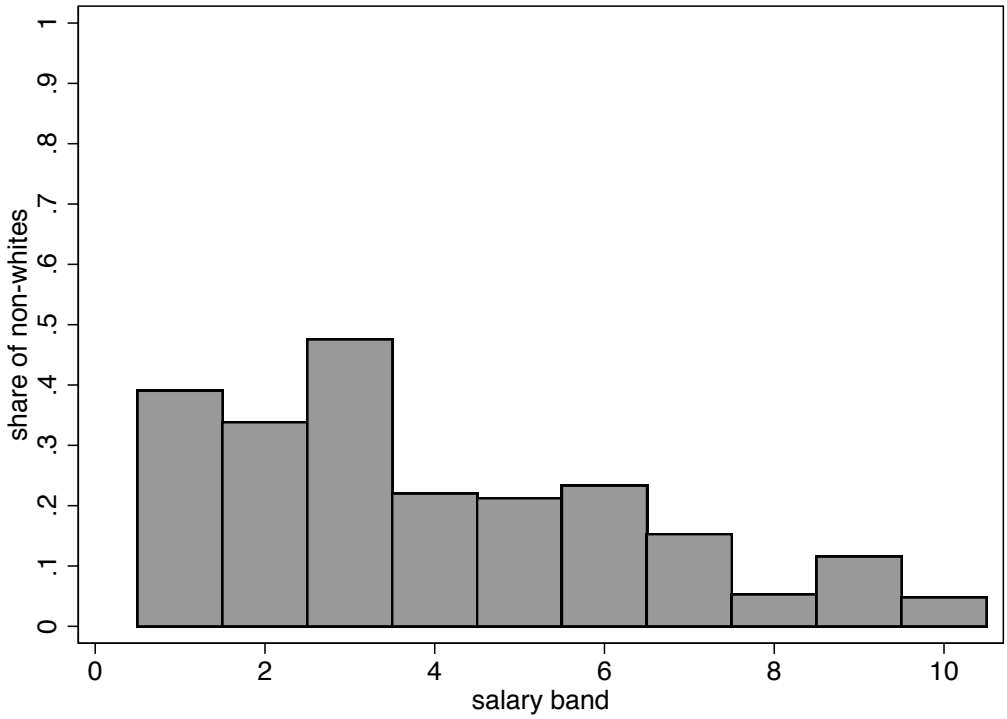
Controlling for the division an individual works in decreases the estimated gap to 11.4%. The last two bars in Figure 6 analyse whether the gap is due to non-whites being assigned to different bands or different steps within salary bands. As for women, the evidence supports the first interpretation. Indeed, when we control for salary bands, the gap disappears.

Next we analyse whether the gap differs at different points of the earnings distribution. Figure 6 illustrates that, in contrast to the gender gap, the ethnicity earnings gap exists across the distribution: the difference in pay between non-whites and whites is negative and significantly different from zero at every point except the very lowest. The gap grows at higher quantiles but is negative throughout. Contrary to women who face no gap at low pay levels, non-whites are paid less than whites at every point of the distribution.



Finally, we analyse the distribution by race across salary bands. Figure 7 clearly shows that non-whites are concentrated in the lower salary bands from 1 to 3, where they account for 40% of all employees. The share falls to around 20% for bands 4 to 6 and to less than 10% in the three highest bands.

For both women and non-whites we cannot say whether these patterns are due to discrimination because we do not know the qualifications that these individuals hold. What we can say with certainty is that the top management and service jobs in the School tend to be done by white men.



3. Concluding remarks

Controlling for all the relevant factors we are able to measure, women earn 5.9% less than men and non-whites earn 11.4% less than whites. In contrast to the results for academics, analysed in Chapter 1, we do not have a productivity measure for support staff so we are unable to examine whether, and to what extent, the gap reflects differences in productivity.

Moreover, we have seen that women face a glass ceiling as the earnings gap only appears at the top of the earnings distribution while non-whites are paid less at every point. Finally we see a marked drop in the share of women and non-whites in top jobs. Without more data on qualifications and productivity we cannot say whether this is due to discrimination but we can say without doubt that the top jobs are systematically more likely to be held by white men.

Appendix A: academic staff

Table 1: Female wage gap, OLS regressions

	(1)	(2)	(3)	(4)
	Dependent variable: ln(Wage)			
Female	-0.165***	-0.150***	-0.122***	-0.105***
	(0.03)	(0.03)	(0.03)	(0.02)
REF score		0.170***		0.189***
		(0.03)		(0.03)
Age			0.016***	0.016***
			(0.00)	(0.00)
Tenure			-0.003*	-0.000
			(0.00)	(0.00)
Observations	572	553	572	553
R-squared	0.047	0.140	0.229	0.340
Mean of dep. var	11.34	11.34	11.34	11.34

Robust standard errors. *** p<0.01 ** p<0.05 * p<0.1

Table 2 Female wage gap, quantile regressions

	(1)	(2)	(3)	(4)	(5)
	Dependent variable: ln(Wage) by percentile				
	10	25	50	75	90
Female	-0.021	-0.059**	-0.093***	-0.162***	-0.304***
	(0.02)	(0.02)	(0.03)	(0.05)	(0.08)
Age	0.010***	0.015***	0.019***	0.020***	0.010**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Tenure	0.003**	-0.000	-0.000	-0.002	-0.000
	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)
REF Score	0.117***	0.147***	0.209***	0.218***	0.148**
	(0.02)	(0.02)	(0.02)	(0.04)	(0.06)
Observations	553	553	553	553	553
Mean of dep. var	11.34	11.34	11.34	11.34	11.34

Robust standard errors. *** p<0.01 ** p<0.05 * p<0.1

Table 3 Breakdown of female wage gap by department

	(1)	(2)	(3)	(4)	(5)
	Dependent variable: ln(Wage)				
		High vs. low female share		Market Supplement	
Female	-0.105***	-0.077***	-0.105**	-0.089***	-0.054**
	(0.02)	(0.03)	(0.05)	(0.02)	(0.02)
Age	0.016***	0.017***	0.017***	0.018***	0.018***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Tenure	-0.000	-0.001	-0.001	-0.002	-0.002
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
REF Score	0.189***	0.177***	0.177***	0.178***	0.173***
	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
High female share dept. (above 35%)		-0.104***	-0.119***		
		(0.03)	(0.03)		
High female share dept. x Female			0.047		
			(0.05)		
Market Supplement				0.336***	0.377***
				(0.03)	(0.03)
Market Supplement x Female					-0.134**
					(0.06)
Observations	553	553	553	553	553
R-squared	0.340	0.359	0.360	0.515	0.521
Mean of dep. var	11.34	11.34	11.34	11.34	11.34

Robust standard errors. *** p<0.01 ** p<0.05 * p<0.1

Table 4 Breakdown of female wage gap by rank

	(1)	(2)	(3)
	Dependent variable: ln(Wage)		
Female	-0.105***	-0.072***	-0.024
	(0.02)	(0.02)	(0.04)
Age	0.016***	0.002	0.002
	(0.00)	(0.00)	(0.00)
Tenure	-0.000	-0.002	-0.002
	(0.00)	(0.00)	(0.00)
REF Score	0.189***	0.085***	0.085***
	(0.03)	(0.02)	(0.02)
Assistant professor		0.102***	0.124***
		(0.03)	(0.03)
Assistant professor x Female			-0.048
			(0.05)
Full professor		0.531***	0.562***
		(0.03)	(0.04)
Full professor x Female			-0.084
			(0.05)
Observations	553	553	553
R-squared	0.340	0.563	0.565
Mean of dep. var	11.34	11.34	11.34

Robust standard errors. *** p<0.01 ** p<0.05 * p<0.1

Appendix B: professional service staff

Table 1 Estimates of the gender gap, OLS regressions

VARIABLES	(1) lwage	(2) lwage	(3) lwage	(4) lwage	(5) lwage
Female	-0.051**	-0.016	-0.059***	-0.003	-0.002
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)
Tenure		0.004**	0.005***	0.003***	0.004***
		(0.00)	(0.00)	(0.00)	(0.00)
fullTime		0.065**	0.077***	-0.011*	-0.016***
		(0.03)	(0.03)	(0.01)	(0.01)
Job type FE (HSS/SSS)	No	Yes	Yes	Yes	Yes
Age group dummies	No	Yes	Yes	Yes	Yes
Divisional FE	No	No	Yes	No	Yes
Salary band FE	No	No	No	Yes	Yes
Observations	1,745	1,745	1,745	1,745	1,745
R-squared	0.004	0.364	0.484	0.920	0.921
Mean of dep. var	10.34	10.34	10.34	10.34	10.34

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 2 Estimates of the ethnic gap, OLS regressions

VARIABLES	(1) lwage	(2) lwage	(3) lwage	(4) lwage	(5) lwage
Non-white	-0.197***	-0.134***	-0.114***	-0.002	-0.001
	(0.02)	(0.02)	(0.02)	(0.00)	(0.01)
Tenure		0.004**	0.005***	0.003***	0.004***
		(0.00)	(0.00)	(0.00)	(0.00)
fullTime		0.068**	0.081***	-0.010*	-0.015**
		(0.03)	(0.03)	(0.01)	(0.01)
Job type FE (HSS/SSS)	No	Yes	Yes	Yes	Yes
Age group dummies	No	Yes	Yes	Yes	Yes
Divisional FE	No	No	Yes	No	Yes
Salary band FE	No	No	No	Yes	Yes
Observations	1,745	1,745	1,745	1,745	1,745
R-squared	0.044	0.383	0.493	0.920	0.921
Mean of dep. var	10.34	10.34	10.34	10.34	10.34

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1