

Analysis of the Labour Force Survey 'Institution Question'

Background to the data

bestCourse4me shows two linked data sets from the Higher Education Statistics Agency (HESA) and the Office for National Statistics (ONS)'s Labour Force Survey (LFS) on our site. Our aim is to show longitudinal salary and career outcomes linked to the university course studied.

Historically the Labour Force Survey collected data on subject studied at university, but not on the institution attended. That meant that there was no data collected anywhere in the UK that showed what lifetime outcomes linked to institution attended looked like.

In 2011, Steve Edwards OBE, the founder and funder of bestCourse4me, worked closely with the BIS Ministerial Group on Data Sharing and the Minister of State for Universities and Science to successfully lobby for an Institution question to be added to the Labour Force Survey.

The data started being collected in 2012 and the cell sizes (the number of people from the survey data that are in each category or "cell") are now large enough in some cases for analysis of the data to be undertaken. Access to this data set is limited (primarily to academics), so the analysis here is the first that the public will see. Due to the limited amount of time that the data on institution has been collected, the cell sizes are within the acceptable limits for release but they are still small.

The data has allowed us to analyse how salaries differ for different university groups and non-graduates, how UCAS entry points correlate with lifetime salary outcomes, regional differences in salaries for different university groups and non-graduates, the representation of various university groups and non-graduates in nine LFS career categories, the proportion of graduates and non-graduates in different careers, and the average salary by career for various university groups and non-graduates.

Because of the rules about cell size, not all data can be displayed on all of the charts that follow. Also, the ONS does not allow individual universities to be identified, and so any values with a definite owner need to belong to groups of 3 or more universities, such as Russell Group, Northern 8, etc. We have included non-graduate outcomes on all of the graphs for comparison. The salary figures are adjusted for inflation.

There are two groups – global top 20 and global 25 – that are taken from the Times Higher Education's World University Rankings 2015-2016 (<https://www.timeshighereducation.com/world-university-rankings/2016/>). The groups list the UK universities that are in the global top 20 and global top 25. The UK universities in the global top 20 are: Oxford, Cambridge, Imperial College London and University College London. The UK universities in the global top 25 are the global top 20 plus LSE and Edinburgh.

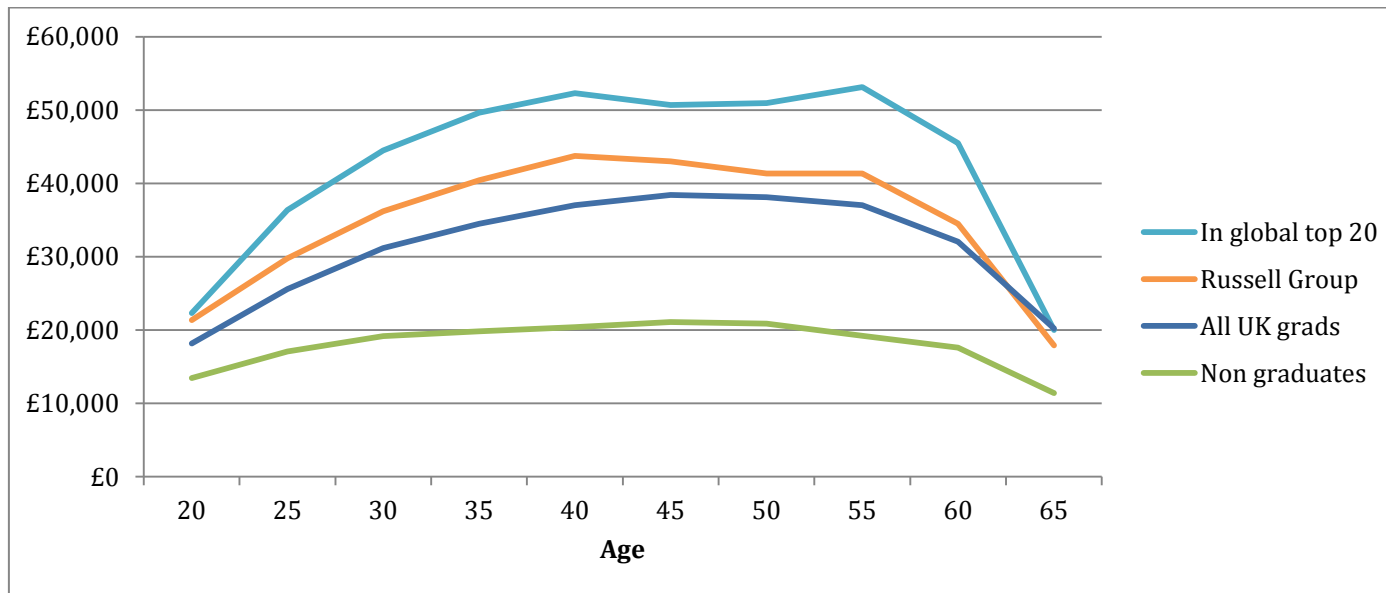
The nine career headings shown in the graphs are the categories used by the Office for National Statistics, called the Level 1 Standard Occupational Classification (SOC) Hierarchy.

Each graph below shows data for people whose reply to the LFS includes the data relevant for that graph. As different people might choose to answer different LFS questions, the group of people shown in one graph isn't necessarily exactly the same group of people shown in another graph. Picking only people who had answered all the relevant questions (across all graphs) led to cell sizes that were too small.

In the graphs below, data relating to UCAS points comes from HESA data; everything else came from the LFS. Note that university groups can overlap; for instance the University of Manchester is in UK, England, N8 and Russell Group. Both the global top 20 and global top 25 groups are contained within the Russell Group.

HESA Student record 2005/06 – 2013/2014 and HESA Destinations of Leavers from Higher Education record 2005/06 - 2013/14 are Copyright Higher Education Statistics Agency Limited. Neither the Higher Education Statistics Agency Limited nor HESA Services Limited can accept responsibility for any inferences or conclusions derived by third parties from data or other information supplied by HESA Services.

Chart 1: Salary by age, for graduates and non-graduates [[download the data](#)]



It pays to be a graduate

This chart clearly shows the value of a university degree in relation to salary outcomes over the course of a lifetime. The median salary for non-graduates at the peak of their earnings, aged 45, is £21,095, compared to the median salary for a UK graduate at the same age of £38,415 – 82% more than the non-graduates. Both the graduate and non-graduate data is for all types of employment i.e. full-time and part-time.

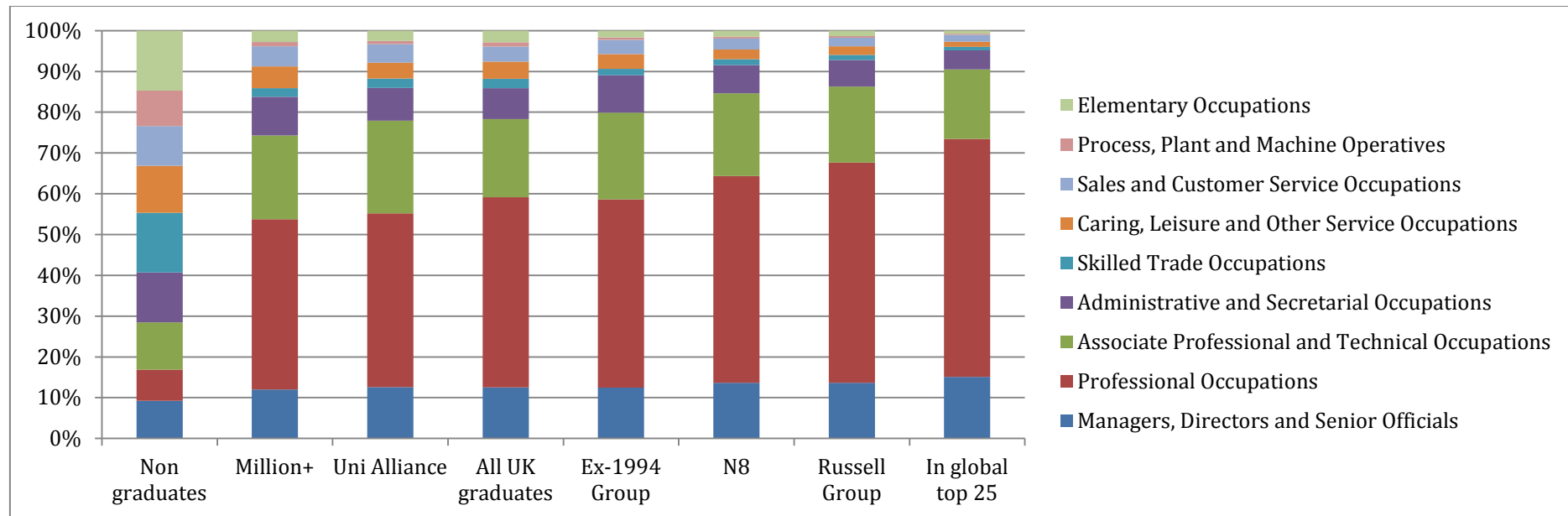
The Russell Group premium

The orange line on the graph shows the lifetime salary premium for graduates of Russell Group universities. At the age of forty, Russell Group graduates are making £43,745, compared to £37,025 for all graduates (18% more), and £20,420 for non-graduates (114% more).

Not all Russell Group universities are the same

Students just from global top 20 universities earn £52,295 aged forty, which is 19% more than students from the Russell Group as a whole. Global top 20 university students earn £53,130 at age fifty five, which is 28% more than students from the Russell Group as a whole.

Chart 2: Proportion of people in careers by university group, plus for non-graduates [[download the data](#)]



This chart shows the nine LFS career categories that graduates of different university groups and non-graduates end up in.

Non-graduates work across the categories

Non-graduates are pretty equally distributed among all of the career categories, including 17% working in the first two categories - Professional Occupations or as Managers, Directors or Senior Officials.

Elite universities are a gateway to the highly-paid professions

73% of global top 25 graduates are working in the first two career categories as Professional Occupations or as Managers, Directors or Senior Officials. This is compared to 54% of graduates of Million + institutions. In all, 60% of UK university graduates are working in these top two career categories.

Degrees clearly lead at the top of the career tree

Only 10% of global top 25 graduates are working in the bottom six career categories (out of nine in total). 21% of all UK university graduates are working in the bottom six categories, compared to 72% of non-graduates. So it can be argued that a degree from any higher education institution is associated with a highly-skilled career.

Chart 3: Proportion of graduates and non-graduates in different careers [\[download the data\]](#)

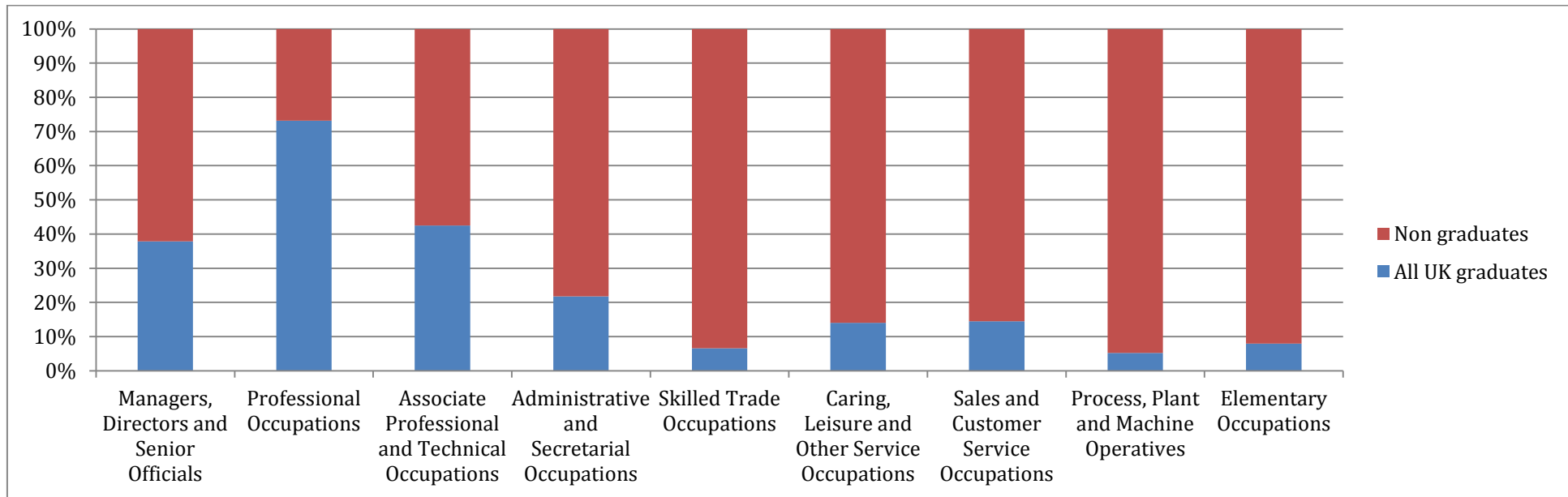


Chart 3 is a simplified version of Chart 2. It shows percentages of graduates vs non-graduates in each of the nine LFS career headings.

It is interesting to note that just over 60% of the people in the top group (Managers, Directors and Senior Officials) and a similar percentage in the third group (Associate Professionals and Technical Occupations) do not have a degree. This could be explained by the fact that the Managers, Directors and Senior Officials category includes people who are Directors of one person or very small businesses such as builders. Also, the proportion of the population that attends university has increased over time, which means that older people are less likely to have gone to university than young people are. As the graph does not control for age, the top group might have more older people than in the other groups.

Non-graduates make up the majority of eight out of the nine career categories, and represent 78% - 95% of the workers in the last six categories.

The only career category where graduates make up the majority is in Professional Occupations.

Chart 4: Median Salary by Career, for Graduates and Non-Graduates [[download the data](#)]

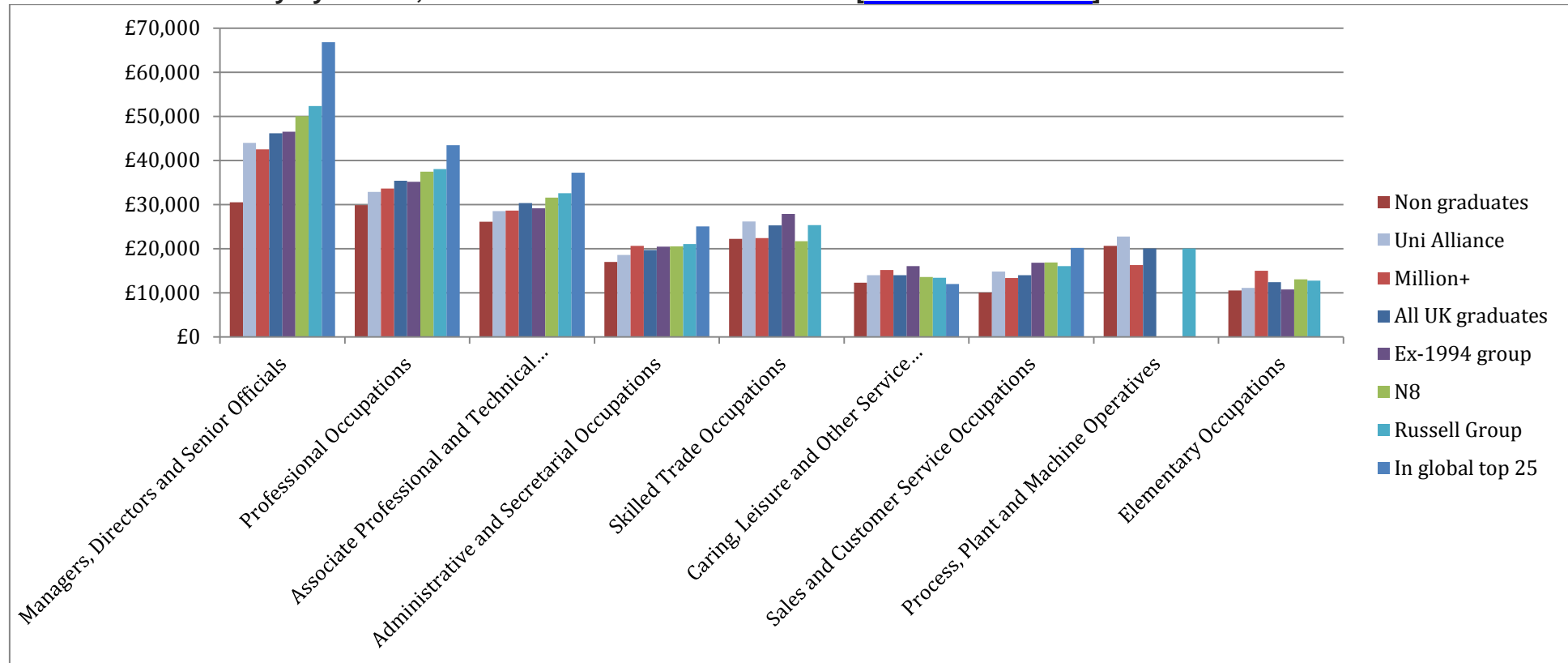


Chart 4 is a companion for Charts 2 and 3. It shows the average lifetime salaries for people in university groups and non-graduates. The same career categories are used here as were used in Charts 2 and 3. The missing points are due to small sample sizes.

Non-graduates are Directors but they make significantly less than graduate Directors

As mentioned in the analysis about Chart 5, above, non-graduates make up just over 60% of the Managers, Directors and Senior Officials, but when you look at the salaries non-graduates in this career category make, it is significantly less than their graduate counterparts. Non-graduates are making £30,525 on average while graduates in this category earn £46,145. This difference is even starker when you look at the median salary of a global top 25 graduate in this career category – they are making £66,785.

It pays to be a graduate in almost all careers

In many of the career categories, graduates can expect to make between 14%-18% more than non-graduates. In two of the categories the salary differences are significant – 51% more for graduates in Managers, Directors and Senior Executives and 39% more for graduates in Sales and Customer Service Professions. There is only one career category where non-graduates earn more than graduates – Process, Plant and Machine Operatives non-graduates make 3% more than graduates in this category.

A Russell Group degree doesn't always guarantee a higher salary

The salary premium for Russell Group graduates isn't always very much over other university graduates – graduates of University Alliance Group institutions have similar salary outcomes in four of the career categories, and University Alliance graduates earn more than Russell Group graduates in two categories. And although there is a large difference between global top 25 salaries and the rest in the first career category, that difference becomes smaller as you move down through the categories.

Chart 5: Median points on entry vs. median graduates' salary [[download the data](#)]

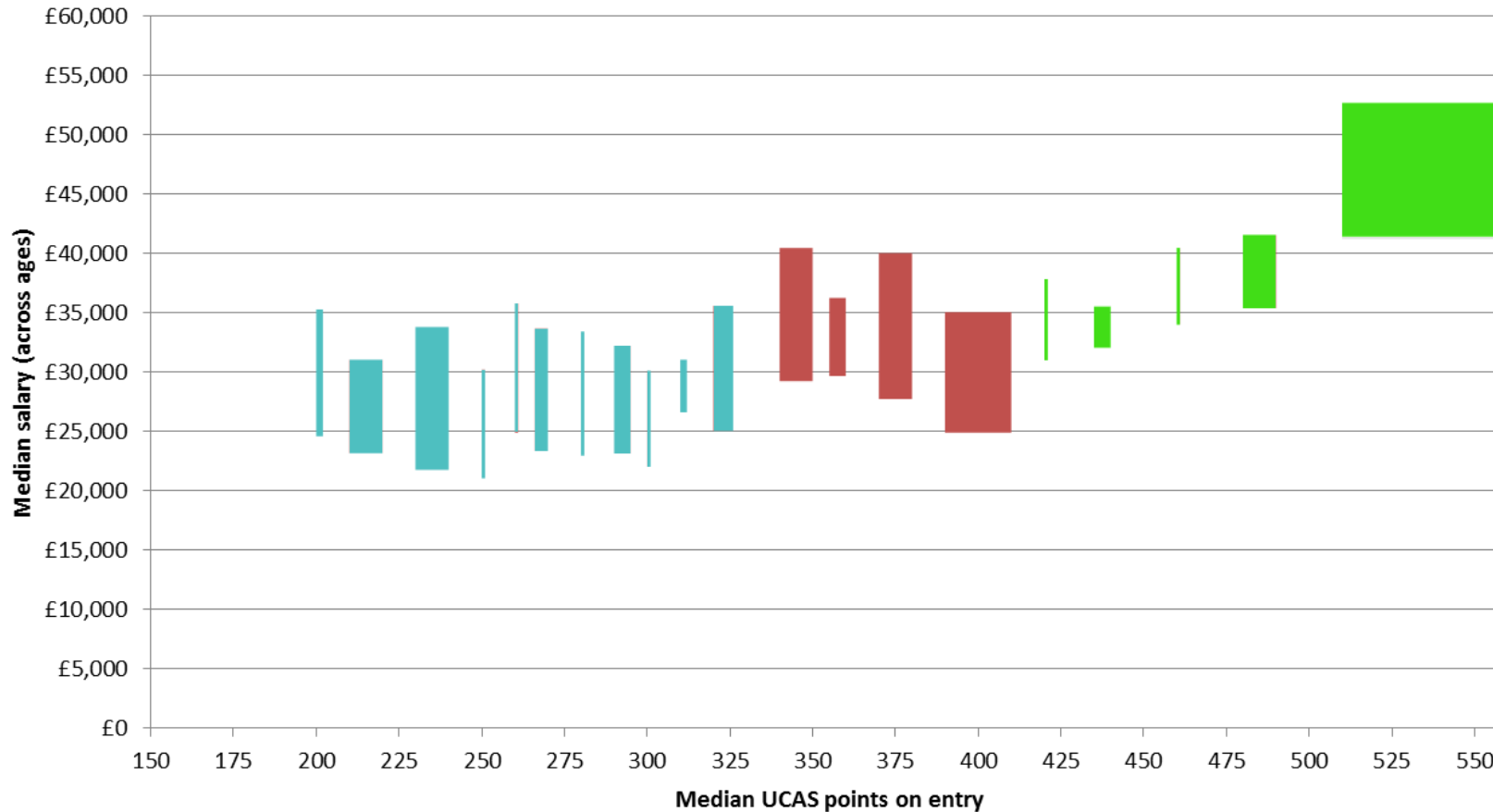


Chart 5 shows the correlation between UCAS points on entry to an institution and the lifetime salary outcomes of that institution's graduates. This data does not allow for age, subject, region or career family, therefore some of the variation between university salary outcomes could be due to these factors. In order to protect the identity of individual universities, each line or rectangle on the chart represents 3 or more universities. A vertical line represents 3 or more universities with the same UCAS points but different salary values. A rectangle represents 3 or more universities that have a range of values for both points and salary. Note that there isn't necessarily a university at each corner of a rectangle. There is at least one university at each edge of the rectangle (which includes, but isn't limited to, the corners), and there will be 0 or more universities towards the middle of the rectangle.

Same salary outcomes for a wide range of UCAS entry points (at the low end)

The blue section on the left of Chart 5 shows that if you attend an institution with entry requirements anywhere between 200 and 325 UCAS points, your lifetime salary outcomes will be in the same range (£20,000 - £35,000). So, attending a university with A-level requirements of BBB doesn't necessarily mean you will be more successful financially than graduates of institutions that accept A-level grades of CDD. This could be linked to the subjects studied at the institutions, but we can't do that analysis yet, due to cell sizes.

Significant variation in salary outcomes for similar UCAS points on entry (at the low end)

These data points also show that there can be up to a £15,000 salary difference for graduates of institutions with the same UCAS point entry requirements. The vertical line on the far left of the graph demonstrates this fact – the line represents institutions with 200 UCAS point entry requirements, but the graduates from those universities have very different salary outcomes that range from £24,560 - £35,250. We can't be certain about why this is the case; it could be caused by a number of factors including, for example, the subjects offered at that institution or their geographical location.

Correlation between high UCAS points on entry and salary outcomes (at the high end)

The universities shown by the green section on the right, however, shows that there is an obvious correlation between UCAS entry points and lifetime salaries for the most competitive universities, i.e., the higher the UCAS points, the higher the salary outcomes.

Chart 6: Median salary by region [[download the data](#)]

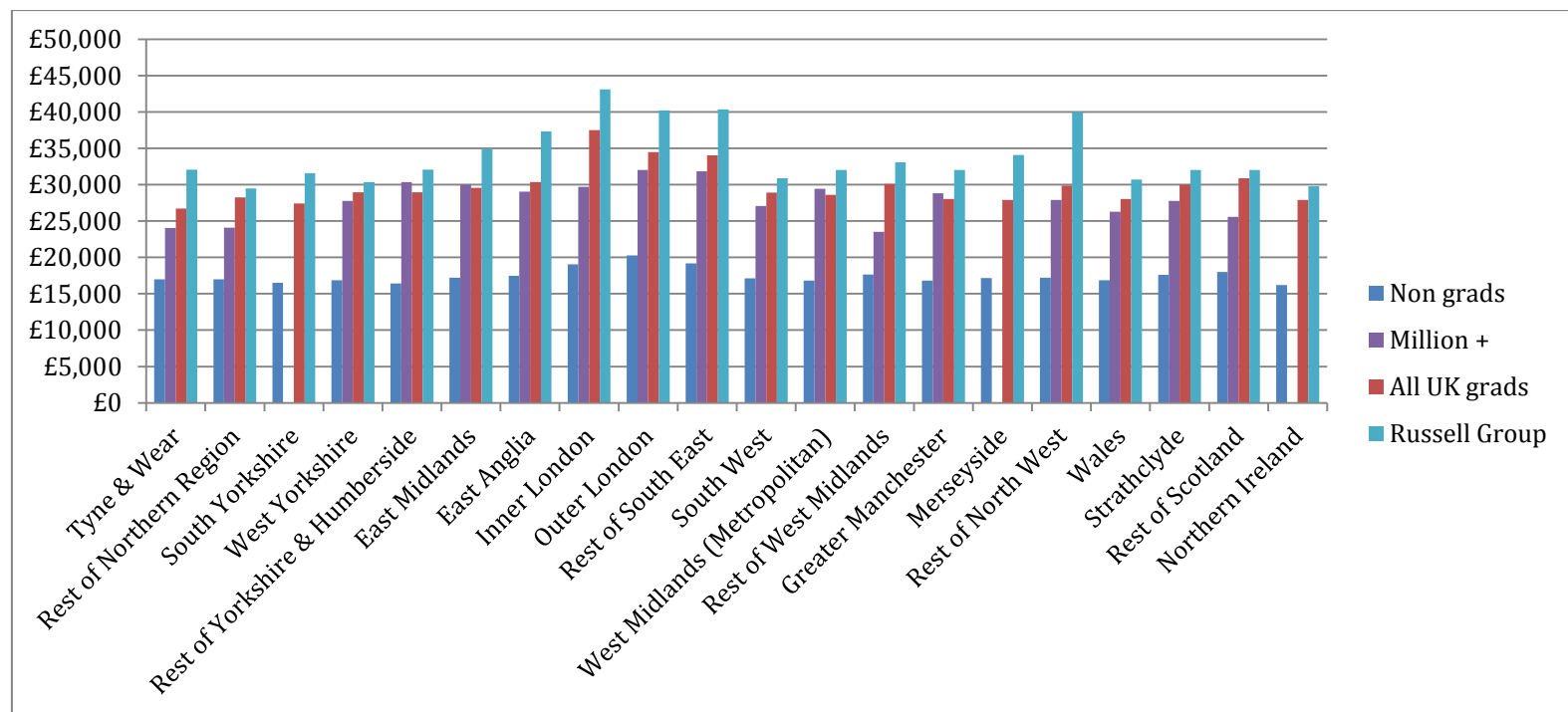


Chart 6 compares the salary outcomes of all UK graduates, Million+ Group graduates, Russell Group graduates and non-graduates by region of residence. Click [here](#) to see a map with the LFS regions shown.

Non-graduates make a similar salary across the country but there is a significant difference in graduate salaries across the regions

The salary for non-graduates is pretty consistent across the regions, but the salaries of graduates can vary significantly. The most obvious example is Russell Group graduates, who, not surprisingly, have high salary outcomes in London and the Southeast compared to the other groups, but also perform very well in the area categorised as ‘the Rest of North West’ (which excludes Great Manchester and Merseyside).

Salary outcomes linked to institution groups get smaller as you leave the South East

In general, the differences in salary outcomes linked to institution group become less significant the further you get from London. For example, Russell Group graduates in Inner London make 45% more than Million + graduates, but in the West Midlands the salary difference between those two groups’ graduates is only 8%.

Chart 7 Graduate / non-graduate breakdown by region [[download the data](#)]

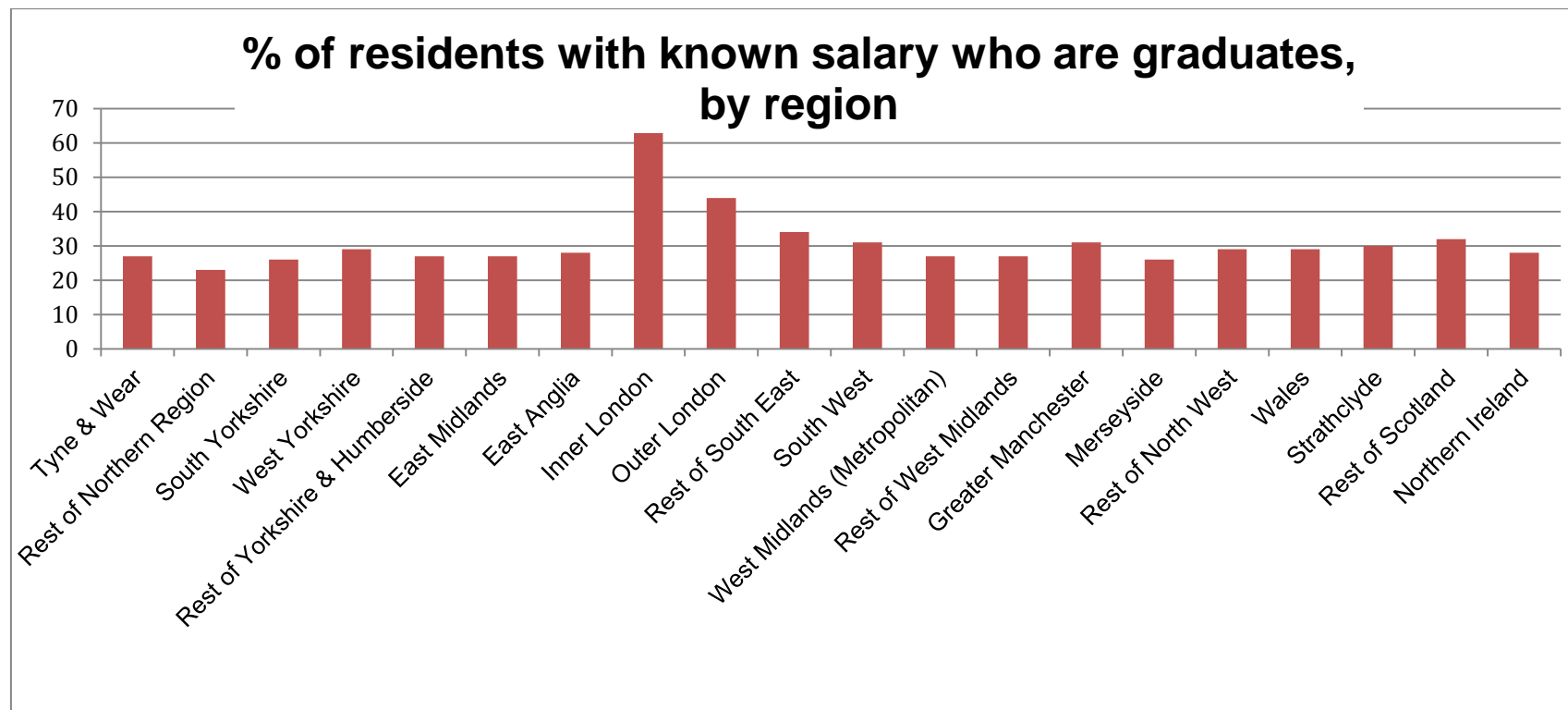


Chart 7 is some background to chart 6. It shows, per region, what percentage of the people living there (whose salary is known) are graduates.

Non-graduates outnumber graduates at least 3:1 in most regions, and in all but one region non-graduates are the majority

While most regions have 23% to 31% graduates, Rest of South East has 34% graduates, Outer London has 44% graduates, and Inner London has 64% - the only region where the majority of residents are graduates.

Graduates in Inner London make a large difference to the average salary for their region

The peak in the relative size of the graduate population in Inner London, coupled with the peak in salary of graduates in the same region as shown in chart 6, means that there will be a disproportionately large peak in the average salary across all residents in Inner London.

Appendix A: LFS Regions Map

