



## Press Release

### What and where you study matter for graduate earnings – but so does parents' income

Graduates from richer family backgrounds earn significantly more after graduation than their poorer counterparts, even after completing the same degrees from the same universities. This is one of many findings in new research published today which looks at the link between earnings and students' background, degree subject and university attended.

The research used anonymised tax data and student loan records for 260,000 students up to ten years after graduation. This is the first time a 'big data' approach has been used to look at how graduate earnings vary by institution of study, degree subject and parental income. The data set includes cohorts of graduates who started university in the period 1998–2011 and whose earnings (or lack of earnings) are then observed over a number of tax years. In the paper, we largely focus on the tax year 2012/13.

Funded by the Nuffield Foundation, and carried out by researchers at the Institute for Fiscal Studies (IFS), Institute of Education (IoE), Harvard University and the University of Cambridge, the study found that those from richer backgrounds (defined as being from approximately the top 20% of households of those applying to higher education in terms of family income) did better in the labour market than the other 80% of students:

- The average gap in earnings between students from higher- and lower-income backgrounds is £8,000 a year for men and £5,300 a year for women, ten years after graduation in 2012/13.
- Even after taking account of subject studied and the characteristics of the institution of study, the average student from a higher-income background earned about 10% more than the average student from other backgrounds. The gap is bigger at the top of the distribution – the 10% highest-earning male graduates from richer backgrounds earned about 20% more than the 10% highest earners from relatively poorer backgrounds *even after taking account of subject and the characteristics of the university attended*. The equivalent premium for the 10% highest-earning female graduates from richer backgrounds was 14%.

**The study also showed that graduates are much more likely to be in work, and earn much more than non-graduates:**

#### Embargo

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- Non-graduates are twice as likely to have no earnings as are graduates ten years on (30% against 15% for the cohort who enrolled in higher education in 1999 and observed in 2011/12).
- Partly as a result of this, half of non-graduate women had earnings below £8,000 a year at around age 30. Only a quarter of female graduates were earning less than this. Half were earning more than £21,000 a year.
- Among those with significant earnings (which we define as above £8,000 a year), median earnings for male graduates ten years after graduation were £30,000. For non-graduates of the same age, median earnings were £22,000.
- The equivalent figures for women with significant earnings were £27,000 and £18,000.

**There are particularly big differences in earnings according to which university was attended. This is in large part driven by differences in entry requirements, but the numbers are very striking:**

- For instance, more than 10% of male graduates from LSE, Oxford and Cambridge were earning in excess of £100,000 a year ten years after graduation in 2012/13, with LSE graduates earning the most. LSE was the only institution with more than 10% of its female graduates earning in excess of £100,000 a year ten years on.
- Even if we do not focus on the very top, a large number of institutions (36 for men and 10 for women) had 10% of their graduates earning more than £60,000 a year ten years on.
- At the other end of the spectrum, there were some institutions (23 for men and 9 for women) where the median graduate earnings were less than those of the median non-graduate ten years on. It is important to put this in some context though. Given regional differences in average wages, some very locally focused institutions may struggle to produce graduates whose wages outpace England-wide earnings, which include those living in London where full-time earnings for males are around 50% higher than in some other regions, such as Northern Ireland.<sup>1</sup>

**Differences in earnings according to subject studied are also very substantial:**

- Medical students were easily the highest earners at the median ten years out, followed by those who studied economics. For men, median earnings for medical graduates were about £50,000 after ten years, and those for economics graduates were about £40,000.

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<sup>1</sup> Annual Survey of Hours and Earnings: 2012 Provisional Results, <http://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/bulletins/annualsurveyofhoursandearnings/2012-11-22#regional-earnings>.

- For males, it is estimated that approximately 12% of economics graduates earned above £100,000 some ten years after graduation; by contrast, 6% of those studying medicine or law earned more than £100,000.
- For females, it is estimated that approximately 9% of economics graduates earned above £100,000 some ten years after graduation; by contrast, just 1% of those studying medicine and 3% of those studying law did so.
- Those studying the creative arts had the lowest earnings, and indeed earned no more on average than non-graduates.

Some of these earnings differences are, of course, attributable to differences in student intake since students with different levels of prior achievement at A level take different subject options. When we account for different student intakes across subjects, only economics and medicine remain outliers with much higher earnings at the median as compared with their peers in other subjects.

- After allowing for differences in the characteristics of those who take different subjects, male medical graduates earn around £13,000 more at the median than similar engineering and technology graduates; the gap for females is approximately £16,000.
- Both male and female medical graduates earn around £14,000 more at the median than similar law graduates.
- For medicine, male graduates earn a premium of £21,000 at the median over graduates taking the subject that attracted the lowest earnings, namely creative arts; the comparable figure for female medical graduates is £22,000. For economics, male graduates earn a premium of £14,000 at the median over those in creative arts, and female graduates a premium of £20,000. These differences between the highest- and lowest-paying subjects are sizeable in relation to the median earnings across all subjects of £26,600 for males and £22,900 for females.

**Jack Britton, a research economist at the IFS and an author of the paper, said:** “This work shows that the advantages of coming from a high-income family persist for graduates right into the labour market at age 30. While this finding doesn’t necessarily implicate either universities or firms, it is of crucial importance for policymakers trying to tackle social immobility.”

**Neil Shephard of Harvard University, another author of the paper, said:** “Earnings vary substantially with university, subject, gender and cohort. This impacts on which parts of the HE sector the UK government funds through the subsidy inherent within income-contingent student loans. The next step in the research is to quantify that variation in funding, building on today’s paper.”

**Anna Vignoles of the University of Cambridge, and another author of the paper, said:** “The research illustrates strongly that for most

graduates, higher education leads to much better earnings than those earned by non-graduates, although students need to realise that their subject choice is important in determining how much of an earnings advantage they will have.”

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**Notes to Editors:**

1. The IFS working paper ‘How English-domiciled graduate earnings vary with gender, institution attended, subject and socio-economic background’ by Jack Britton, Lorraine Dearden, Neil Shephard and Anna Vignoles was published on Wednesday 13 April 2016 and is now available on the IFS website with an accompanying Executive Summary: <http://www.ifs.org.uk/publications/8234>
2. This research has been funded by the Nuffield Foundation. The Nuffield Foundation is an endowed charitable trust that aims to improve social well-being in the widest sense. It funds research and innovation in education and social policy and also works to build capacity in education, science and social science research. The Nuffield Foundation has funded this project, but the views expressed are those of the authors and not necessarily those of the Foundation. More information is available at [www.nuffieldfoundation.org](http://www.nuffieldfoundation.org).
3. The research team used administrative data from both the Student Loans Company (SLC) and Her Majesty’s Revenue and Customs (HMRC) to observe how the earnings of students who take out a loan from the SLC vary across institution of study, degree subject and parental income status.
4. The researchers note that they can only identify graduates who have borrowed money from the Student Loans Company. This is around 85% of English graduates in the period under consideration. There are therefore some graduates for whom there are no data, but the authors of the study have reason to believe that they are likely to be higher-earning graduates, on average. As a result, if anything, the administrative data are likely to underestimate graduates’ earnings.
5. The researchers were granted access to records in a secure HMRC data enclave after all identifying material in the data had been anonymised. Team members who use these data have been subject to the same strict confidentiality and data protection requirements as HMRC staff and are liable to legal penalties for breaches.
6. Students from higher-income families are identified from information about how much the student borrowed from the Student Loans Company for their undergraduate studies. Since students whose parents had incomes above a minimum threshold (approximately £35,000–41,000 depending on year of study) could only borrow a lower maximum, the researchers used this to identify students from higher-income households. Using this method, approximately 20% of the cohort are identified as being from a higher-income family.