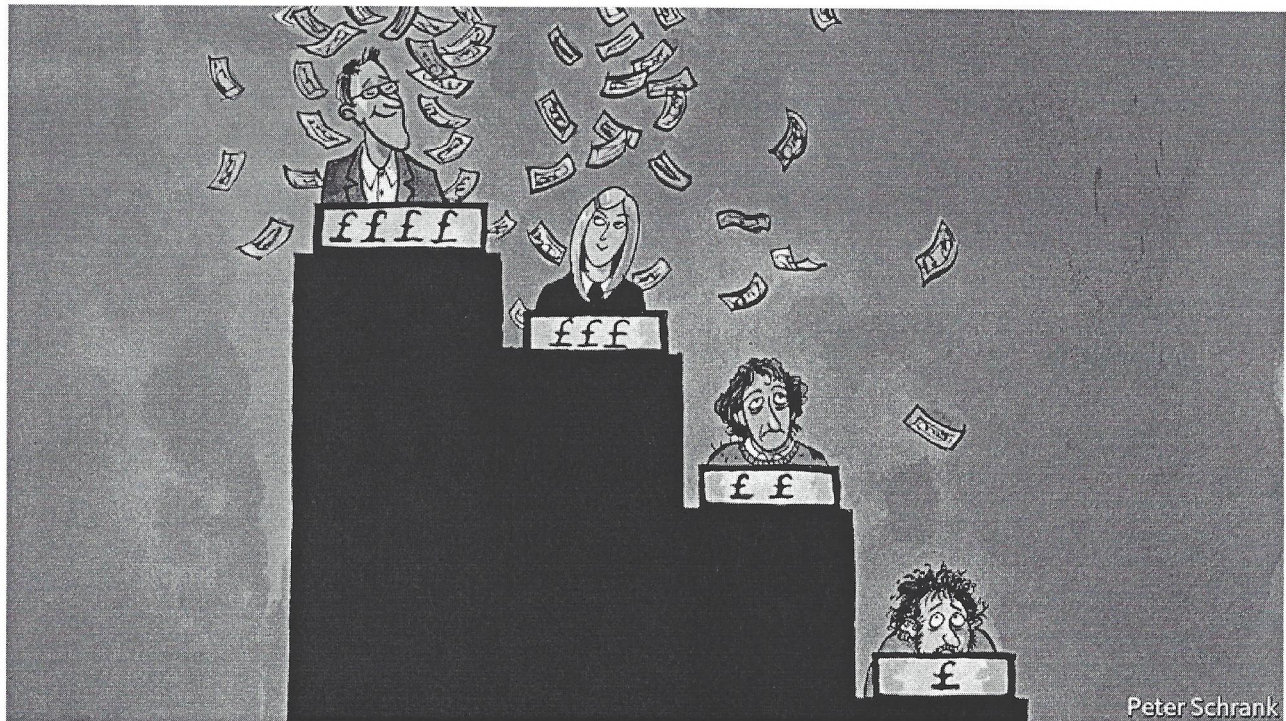


Higher education and wages

Which British universities do most to boost graduate salaries?

Our new guide to the answers



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THE Conservative-Lib Dem coalition formed in 2010 wanted universities to expand. Much to the chagrin of thousands of youngsters, it got its way in 2012 by nearly trebling the tuition-fee ceiling to £9,000 (\$14,000) a year. With students shouldering the bulk of the cost of teaching at universities, the government was able to remove the cap on the numbers that universities were allowed to accept. An

additional benefit of the shift, hoped officials, was that increased competition for students should drive up standards.

So far competition has not had that desired effect. Most universities charge the maximum, and there has been little change in the quality of teaching. In a bid to ensure that students and taxpayers get better value for money, the government has created a ranking, the “Teaching Excellence Framework” (TEF), which tries to categorise universities by their teaching quality, not their reputation. It hopes to be able to link the fees that universities may charge to instruction.

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One way to measure a university’s impact is to look at earnings data, which the government also hopes to include in future versions of the TEF. On June 13th the Department for Education released the latest wave of its “longitudinal education outcomes” data, which analyse tax returns to show how much people earn five years after they graduate. To find out which factors are most relevant, *The Economist* has

analysed the data and created a ranking that compares graduates’ wages with how much they would have been expected to earn regardless of their university.

Our estimate of expected earnings is built from a statistical model that predicts wages based on the subjects people study, their exam results at school, age, family income, whether they went to private or state school and where the university was located. The difference between the predicted and actual amounts that students earn ought to reflect a university’s impact on graduate wages. Our analysis measures how well universities perform compared with the average institution, and is blind to their prestige.

Wait, what about Oxbridge?

The rankings have their flaws. They are based on a single cohort of graduates, who

left university in 2009 in the middle of a financial crisis. Using median earnings as a measure understates how much variability there is in graduates' incomes, especially at the top. Nevertheless, the data offer a glimpse of which universities do most to boost earnings. Those at the top are a mix of the illustrious (Nottingham and Oxford) and the unfamiliar (Brunel and Robert Gordon)—see rankings table below.

British university rankings

Median salary five years after graduation, 2014

Search for a university:

Oxford, Cambridge, LSE

Select a programme of study:

All

Rank	University	Actual earnings	Expected earnings	Value added
1	University of Portsmouth	£26,168	£23,075	£3,093
2	Aston University	£29,050	£26,084	£2,966
3	Newman University	£24,357	£21,557	£2,801
4	Bournemouth University	£26,671	£23,942	£2,730
5	Robert Gordon University	£28,858	£26,155	£2,703
6	University of Nottingham	£33,011	£30,703	£2,308
7	City University	£31,075	£28,901	£2,174
8	Harper Adams University	£28,367	£26,249	£2,118
9	Brunel University London	£28,569	£26,535	£2,034
10	University of Oxford	£42,788	£40,855	£1,933
11	University of Brighton	£27,753	£26,116	£1,637
12	Southampton Solent University	£24,810	£23,239	£1,571
13	University of Chichester	£22,600	£21,182	£1,418
14	Leeds Trinity University	£22,238	£20,820	£1,417
15	University of the West of Scotland	£23,400	£22,063	£1,337
16	Heriot-Watt University	£27,190	£25,867	£1,323
17	University of Warwick	£33,865	£32,647	£1,218
18	University of Hertfordshire	£26,211	£25,050	£1,161
19	Loughborough University	£31,664	£30,560	£1,105
20	University of Reading	£28,967	£27,980	£987
21	Swansea University	£25,163	£24,211	£952
22	St Mary's University Twickenham	£24,811	£23,896	£916
23	Leeds Beckett University	£23,659	£22,751	£908
24	Glasgow Caledonian University	£24,892	£23,993	£900
25	University of York	£30,007	£29,163	£844
26	University of Sunderland	£21,629	£20,813	£815

Most of the differences in median earnings can be explained by just two factors: how selective a university is and what subjects their students choose to study there. Once these are accounted for, graduates' wages are remarkably predictable. Differences in entry tariffs, as defined by UCAS points mostly earned in exams taken at 18, account for nearly 70% of the variation in median earnings. Swots from Cambridge, the most selective university in Britain, earn almost £40,000 a year on average five years after graduating. Their peers at Bedfordshire, the country's least-selective institution, make only half as much.

Subjects which include some element of maths are well-rewarded. Our analysis finds that the five fields with the highest salaries are medicine, veterinary science, economics, engineering and mathematics. By contrast, creative arts, agriculture and communications graduates earn the least. There is a big difference between top earners and poorer ones. After half a decade, medicine and dentistry graduates earn £47,000 a year on average; creative-arts graduates just £20,000.

Encouraging more students to sign up for maths-related degrees may be hard. One problem is that schools in Britain produce few maths whizzes compared with those in other countries, says Anna Vignoles, an economist at Cambridge. Portsmouth, which tops our rankings, provides remedial maths and literacy catch-ups for those needing them. Another difficulty is that universities are not allowed to vary their prices by subject, which means they have little incentive to nudge students towards courses like engineering or science, since it is cheaper to teach the humanities.

Alison Wolf, an economist at King's College London, worries that today's financing system means the number of low-quality courses will grow. A recent study by the Institute for Fiscal Studies, a think-tank, found that funding per student for humanities and business courses has increased by 47% since the reforms of 2012, whereas for laboratory sciences it has risen by just 19%. Yet although some business graduates earn a fortune, there is a large gap between those from higher- and lower-ranked universities. For instance, graduates who study economics and management at Oxford, the most lucrative course according to our data, can expect to be earning three times as much as their contemporaries at the least-selective

universities five years after they leave.

Although graduates from research-intensive universities tend to earn more, research quality is no guarantee of a good performance in our rankings. Some of Britain's grandest institutions do well. Oxford, which comes tenth, adds £1,900 to graduate earnings compared with the average university. But the top three universities—Portsmouth, Aston and Newman—are not often found leading the rankings.

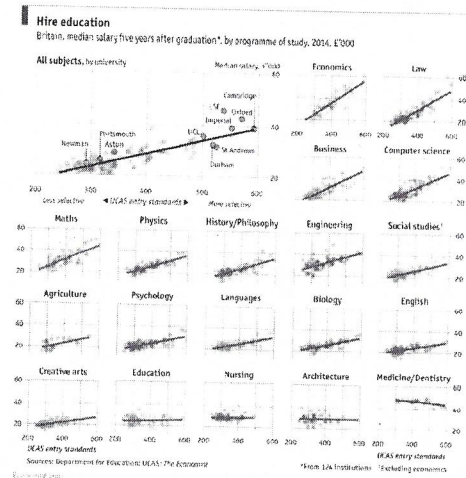
Less reputable universities may struggle to attract the brightest students, but they can do plenty to ensure that their graduates do well in the labour market. Many of the universities at the top of our rankings convert bad grades into good jobs. At Newman, a former teacher-training college on the outskirts of Birmingham, classes are small (the staff:student ratio is 16:1), students are few (around 3,000) and all have to do a work placement as part of their degree. (Newman became a university only in 2013, though it previously had the power to award degrees.)

Part of Newman's excellent performance can be explained because more than half its students take education-related degrees, meaning many will work in the public sector. That is a good place for those with bad school grades. Indeed, in courses like education or nursing there is no correlation between earnings and the school grades a university expects (see chart).

Other universities punch above their weight by establishing links with successful industries. At Southampton Solent, on England's south coast, many students take degrees in courses related to the maritime industry. The university, which comes 12th in our rankings, has one of only five ship-handling lakes in the world, where students can be trained using large-scale models of ships and yachts in a variety of conditions. Similarly, Bournemouth, which comes fourth, has strong links to the film industry and a global reputation for visual effects. John Fletcher, a senior administrator at the university, boasts: "We've won many Oscars."

Some things are beyond a university's control. Graduates from universities in richer areas will tend to earn more—we estimate that, all else being equal, those

from a typical university in Glasgow can expect to earn £4,200 a year less than graduates of a university in London. Our model attempts to account for geographical differences by being more generous to universities in poor parts of the country. That graduates from Durham and St Andrews, two highly selective universities far from London, fare so poorly is surprising given these adjustments.



First-class universities

The reforms of 2012 increased funding for all universities, but may also have encouraged wasteful spending. Universities now have an incentive to invest in things that will lure more students. There has been a big rise in new buildings. In 2013 universities spent £2.4bn on construction, 43% more than a year earlier, and they have continued to spend at that level since. Spending on marketing has grown (Hull University has the naming rights to the local football team's training ground, for instance). Surveys suggest that students are more satisfied with the state of their campuses, and some were shabby before the investment. But critics question whether this was the best use of extra cash.

Many universities at the top of our rankings are struggling to recruit enough students. This is partly because of the tough climate: there is a demographic dip in the number of 18-year-olds, Brexit is reducing the numbers of European Union students and the abolition of nursing bursaries has had predictable consequences. Yet it also reflects the fact that many students choose their university on the basis of prestige, not teaching quality. Much may depend on whether the government can begin to shift that calculation.

Even if it does, the importance of selectivity in determining graduate outcomes suggests that much of a university education is about "signalling", rather than learning useful skills. This is no bad thing if it makes it easier for employers to spot the best employees, making the labour market more efficient. But, since there has

been little improvement in teaching quality, it is not clear how much students have benefited from the increased fees.

Two years ago we built an American ranking using a similar methodology. In comparing the two countries, we find that the school grades of 18-year-olds are a closer predictor of future earnings in Britain than in America. This helps students, because earnings data can provide guidance about what to study, and where. It also helps policymakers, because the analysis shows that it is not always the famous universities that make the biggest difference. Focusing too much attention on elite universities may be ill-advised if much of their success is attributable to the calibre of students they attract. It can be better to study what goes on in Portsmouth and Aston than in Oxford and Cambridge.

Read about the methodology behind the rankings here (<http://www.economist.com/blogs/graphicdetail/2017/08/graduate-earnings>) and a letter from Exeter University here (<https://www.economist.com/news/letters/21726670-populism-north-korea-childlessness-renewables-shipping-eurocrats-bullets-iceland-st>).

This article appeared in the Britain section of the print edition under the headline "University challenge"

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