The determinants of university selection

A research brief prepared by London Economics

LE London Economics

December 2016

About London Economics

London Economics is one of Europe's leading specialist economics and policy consultancies. Based in London and with offices and associate offices in five other European capitals, we advise an international client base throughout Europe and beyond on economic and financial analysis, litigation support, policy development and evaluation, business strategy, and regulatory and competition policy.

Our consultants are highly-qualified economists who apply a wide range of analytical tools to tackle complex problems across the business and policy spheres. Our approach combines the use of economic theory and sophisticated quantitative methods, including the latest insights from behavioural economics, with practical know-how ranging from commonly used market research tools to advanced experimental methods at the frontier of applied social science.

London Economics' Education and Labour Markets Team, led by Dr Gavan Conlon, has extensive experience in the higher education sector.

We have undertaken a vast array of studies for the **Department for Education** and (former) **Department for Business, Innovation and Skills** relating to higher education student support regimes (here) and the economic returns to higher education qualifications (here). We are also leading analysts across the higher education policy landscape, having undertaken analyses relating to HE Fees and funding for **million+** (here); the viability of postgraduate loan provision for the **Institute for Public Policy Research** (here); resource benchmarking across higher and further education for the **University and College Union** (here); as well as a recent analysis of part-time provision for the **Higher Education Policy Institute** (here). We are currently completing a major piece of analysis for the **Higher Education Policy Institute** that considers the determinants of international demand for UK higher education.

In addition, we have conducted analyses directly on behalf of Higher Education Institutions on a number of occasions. For example, we recently undertook two analyses of the economic and social impacts of **Cardiff University** (the second report can be found here); four studies for **The Open University** that assess the economic and social impact of the university across the UK, and separately in Wales, Northern Ireland and Scotland; and an economic and social impact analysis for **Anglia Ruskin University**. We are in the final stages of completing a similar analysis for the **University of Birmingham**.

We are committed to providing customer service to world-class standards and take pride in our clients' success. For more information, please visit www.londoneconomics.co.uk.

Head Office: Somerset House, New Wing, Strand, London, WC2R 1LA, United Kingdom.

w: londoneconomics.co.uk
t: +44 (0)20 3701 7700
e: info@londoneconomics.co.uk
f: +44 (0)20 3701 7701
: @LondonEconomics
@LE_Education

Authors

Dr Gavan Conlon, Partner, +44 (0) 20 3701 7703, gconlon@londoneconomics.co.uk

Ms Maike Halterbeck, Economic Consultant, +44 (0) 20 3701 7724; mhalterbeck@londoneconomics.co.uk

Cover picture credit: Dragana Gerasimoski / Shutterstock

Introduction

London Economics undertook an analysis of the determinants of university selection, based on the choices made by almost 700 parents in an online choice experiment administered by YouGov. The aim of the analysis was to identify and evaluate the characteristics that are most likely to make a parent choose one university over another, and to explore how the importance of these factors differs across higher education institutions. In some cases, the key factors included information such as university **rankings** or the **employment outcomes of graduates**; in other cases, the main determinants included financial considerations such as the **tuition fees** charged, or the availability of **bursaries** (e.g. **fee or accommodation waivers, or cash subsidies**). In addition to these factors, we were also interested in understanding the intrinsic brand value of a **university's name** on student choice, and the positive or negative associations that this may generate in parents' minds.

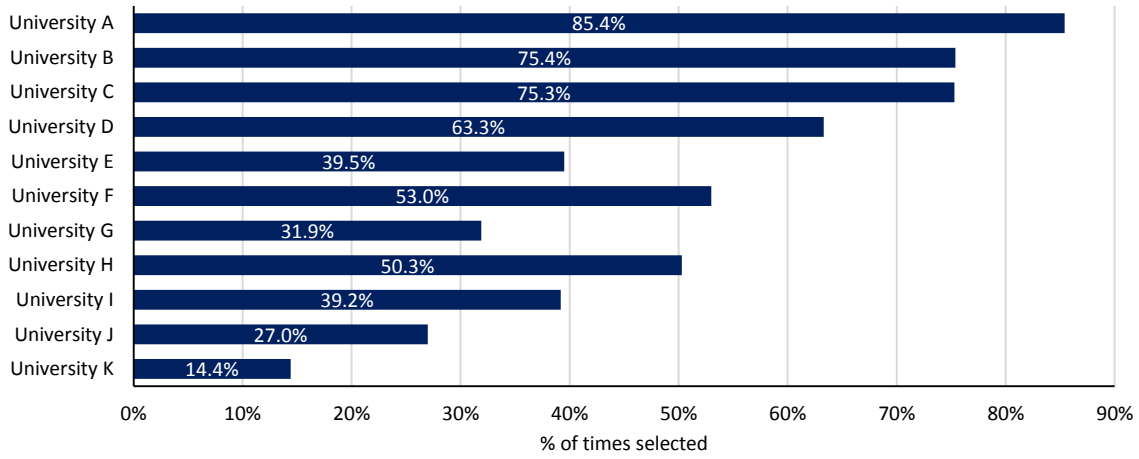
Experiment setup

The 'choice experiment' involved a random sample of **almost 700 parents** with children either undertaking or approaching 'A' Levels. To inform the experiment, we assembled a range of information on **11 different universities** in England. These universities were selected to represent a variety of higher education institutions, from universities at the top of higher education ranking tables to institutions ranked outside the top 100. The labels given to these universities reflect their Guardian league table rankings, with "**University A**" representing the highest-ranked institution of the group and "**University K**" representing the lowest-ranked.

On six separate occasions, parents were presented with a range of information about two randomly selected universities, and, based on the information presented, were asked to select their preferred option. Although universities have been anonymised in this paper, in roughly 50% of cases, respondents were shown the actual names of the institutions. In addition, in some randomly selected cases, universities' rankings were hidden. We also varied the information presented on the level of tuition fees and bursaries within a relatively small range, in order to identify the impact of these factors on parental choice. Using econometric analysis, this approach allowed us to assess the impact of the various pieces of information presented (i.e. tuition fees etc.) on parental choice, as well as the separate impact of the university's name and ranking.

Figure 1 presents information on the proportion of times each university was selected (of the total number of instances that it was given as an option) when the **complete set of information** was provided (i.e. university name, ranking, the fees/bursary package, and graduate employment rates).

Figure 1 University selection rates under complete information



Source: London Economics and YouGov

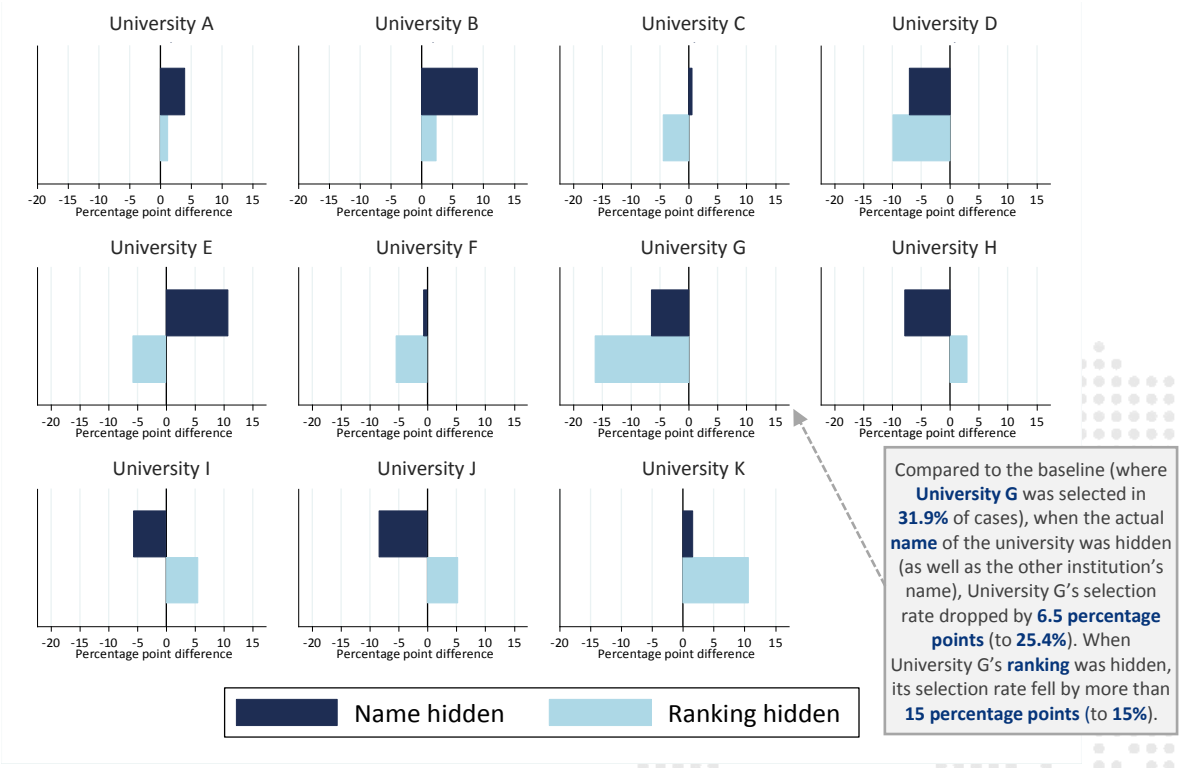
The main result to note is the large difference in selection rates between the most popular university (University A, **85.4%**) and the least popular university (University K, **14.4%**). Given that respondents thus have clear preferences for particular universities, we were motivated to analyse the factors driving these preferences.

What is the impact of name and ranking on university selection?

Figure 2 shows how selection rates for each university were impacted by **obscuring either the university's name and/or ranking**.

For instance, for parents who were asked to choose between '**University G'** and another university, the selection rate for University G dropped by **6.5 percentage points** when the **names** of the two institutions were hidden (selection rate of **25.4%**) relative to the case where both names and rankings were shown (**31.9%**). In contrast, the selection rate for University G dropped by over **15 percentage points** when both universities' **rankings** were hidden. This suggests that, while University G benefits from both its name and ranking, the effect associated with its ranking is relatively stronger.

Figure 2 Difference in selection rates when name or rank hidden



Source: London Economics and YouGov

For four other universities (**Universities C, D, E and F**), selection rates dropped when their **ranking** was hidden, suggesting that these institutions could benefit from making potential applicants more aware of their rankings.

Further, five institutions (**Universities A, B, C, E and K**) had a higher selection rate when their **name** was hidden than when it was shown. The implication of this result is that the names of these universities have a potentially *negative* perception in parents' minds – at least relative to their opinions of the university based on other objective attributes such as ranking, graduate employment rates, fees and bursaries. These universities may thus benefit from highlighting these other attributes, rather than relying on name alone.

Estimating the value of university rankings and graduate employment

While university name and ranking were provided on some but not all occasions, parents were *always* presented with information relating to graduate employment levels, potential tuition fee levels, and the level and type of bursary (cash, accommodation or fee waiver) that their children might expect to receive from each university based on their household income level[1].

Using the variation in tuition fees and the other variables presented, we were able to estimate a **monetary 'value'** associated with these different factors. For instance, we were able to assess the additional tuition fee that a university might be able to charge (per student per annum) if its ranking were to be one place higher. The results of this analysis are presented in Table 1.

A key finding is that, on average, the analysis suggests that each **ranking** place is worth approximately **£43** per student per annum in additional tuition fees. In other words, for every upward shift in rankings by one place achieved by a university, tuition fees could be increased by £43 per student per annum without negatively impacting the university's selection.

The results also provide insights on the value that parents place on **graduate employment rates**. Specifically, the analysis suggests that an increase in the graduate employment rate by 1 percentage point is 'worth' approximately **£122** in additional tuition fees per student per annum. This implies that the impact of a 1 percentage point increase in the graduate employment rate is approximately **three times more valuable** than a one place upward shift in ranking.

To put these estimates into context, the findings suggest that an institution with 3,000 new students starting undergraduate degrees (of a 3 year duration) in 2015/16 could potentially generate an additional **£1.1m** in tuition fee income if its graduate employment rate was 1 percentage point higher than currently the case (equivalent to less than 25 additional students in employment or further education 6 months after graduation[2]). Using a comparable approach for university rankings, an upward shift in a university's ranking by one position would be expected to increase the total fee income associated with new undergraduate degree students by almost **£0.4m** per cohort.

Table 1 Estimated value of different university characteristics

University characteristic	Estimated value (£ per annum)
University ranking	£43
Graduate employment rate	£122
Fee waiver (per £1,000)	£280
Accommodation waiver (per £1,000)	£210
Cash (per £1,000)	£530

Note: In order to estimate the value of a ranking place, the model was estimated using the data where participants were shown the ranking of the universities. For the other characteristics, the estimation was undertaken using the data where participants saw the name of the university but did not see the ranking. Since not all participants were eligible for bursaries, the estimated values for bursaries were scaled upwards to represent the value of the bursary to a recipient.

Source: London Economics and YouGov

[1] The personal characteristics of parents such as age, gender, social grade, job type, region of residence were also noted.

[2] This is based on 2014/15 results to the Destinations of Leavers from Higher Education (DLHE) survey (available here), indicating that a total of **90.5%** of UK domiciled graduates from UK higher education institutions were in employment or further study six months after graduation (equivalent to approximately **337,435** out of **372,905** graduates with known destinations; see Table C). An increase of this proportion by 1 percentage point would imply an additional total of **3,730** students in employment or further study six months after graduation. Divided by the total number of higher education institutions included in the DLHE target population (167, see here), this implies that a 1 percentage point increase in the graduate employment rate is equivalent to **22** additional graduates in employment or further education six months after study, on average per institution.

Estimating the value of fee waivers, bursaries and scholarships

It was also possible to assess the relative **economic value** of different types of bursaries, in terms of the additional tuition fees which universities might charge for each £1,000 of subsidy without negatively affecting university selection rates (again see Table 1).

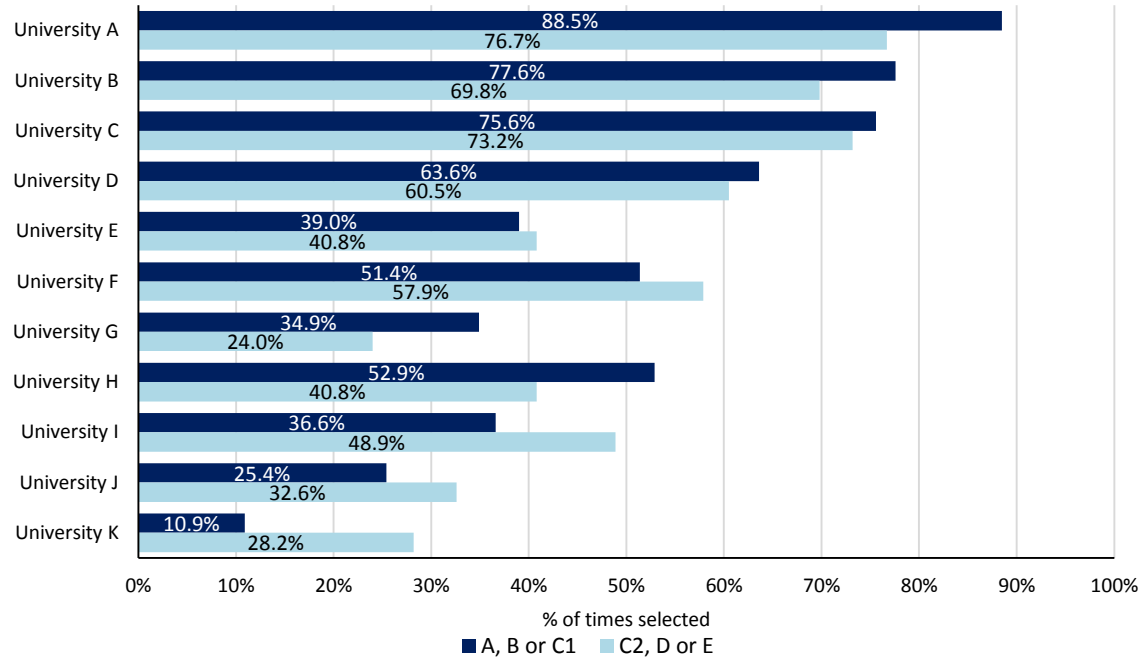
For instance, the analysis suggests that the provision of a £1,000 **fee waiver** would allow institutions to charge an additional **£280** per year in tuition fees, on average, while maintaining current university selection rates. Unsurprisingly, direct cash subsidies are the most highly valued financial incentives, whereas accommodation subsidies have the lowest value to parents. While a £1,000 **cash bursary** would sustain a **£530** per annum increase in fees, a £1,000 **accommodation waiver** to eligible students would sustain a **£210** per annum increase in tuition fees.

Are all parents (or students) the same?

As part of the above-described experiment, we collected information on the personal characteristics of participants such as age, gender, social grade, job type, salary and region of residence. This information allowed us to study how university choice and the factors that influence university choice vary across different groups of parents.

One particular personal characteristic of interest is self-reported **social grade**, as it is becoming increasingly important for universities to be able to attract students from non-traditional backgrounds – and because of the associated requirements faced by universities charging tuition fees in excess of the basic amount via Office for Fair Access (OFFA) Access Agreements. Figure 3 presents information on university selection rates by social grade.

Figure 3 University selection rates by social grade



Note: Based on the social grade classifications used by the National Readership Survey (available here).
Source: London Economics and YouGov

University E in particular had the most balanced rate of selection across different social groups (selected by 39.0% of parents in class A/B/C1, and 40.8% of those in class C2/D/E), while **University K** was most likely to achieve relatively high selection rates amongst parents with social class C2/D/E

(**10.9%** in class A/B/C1, and **28.2%** in class C2/D/E (**2.6** times more likely compared to parents in the higher social classes)).

Conclusions

There are **three main conclusions** from the analysis:

- It is possible to identify a number of factors that influence university choice and how these might depend on the personal characteristics of parents or students (such as gender, social grade, student prior attainment, or household income);
- It is possible to place monetary values on these factors, which are substantial when aggregated across the student cohort; and
- The importance of these factors varies across different universities, and the choice of comparator universities.

This analysis was undertaken for students considering **undergraduate study**. An equivalent exercise could be undertaken with **specific regions** within the UK – or **internationally**, for other levels of study (e.g. **postgraduate** study), or in respect of pupils with different education characteristics (i.e. **state school attendance**).

We would be delighted to have the opportunity to conduct an analysis of this type for your institution. If you are interested in such a possibility, or would like to discuss any of our services or capabilities in more detail, please do not hesitate to get in touch with us, or **visit our website**.

We look forward to hearing from you.

Dr Gavan Conlon, Partner
gconlon@londecon.co.uk; 020 3701 7703

Ms Maike Halterbeck, Economic Consultant
mhalterbeck@londecon.co.uk; 020 3701 7724

LE London Economics

Somerset House, New Wing, Strand
London, WC2R 1LA, United Kingdom
info@londoneconomics.co.uk
londoneconomics.co.uk
: @LE_Education @LondonEconomics
+44 (0)20 3701 7700