

## Calculating the Cost of an Undergraduate Education

A number of people have commented on the cost of £17.1k quoted for an undergraduate education at Cambridge and it might be helpful (to those who really want to know) if I explained how this cost is derived.

Firstly, I should dispel any notion that the WG on Fees and Bursaries invented this number. It is derived from firm data. Cambridge in common with all other UK Universities is required to submit a "Finance Statistics Return (FSR)" to the Higher Education Statistics Agency (HESA) every year. These statistics are derived from our accounts and they are subject to audit. So we take great care to get them right.

The HESA statistics record costs under a variety of headings. However, they do not separate out teaching costs from research costs, and we need the latter for a number of purposes including the derivation of our FEC indirect cost rates. We do this using a methodology called Transparent Approach to Costing (TRAC).

TRAC data is derived directly from HESA data using a number of drivers for identifying teaching vs research. The principal driver is the Time Allocation Survey (TAS) data which uses a sampling approach to generate an overall average percentage of time spent by academic staff on teaching, research and other.

This methodology is prescribed by HEFCE and the methods used in calculating our FEC rates are audited by the Research Councils since they determine how much overhead they have to pay us on research grants.

From our TRAC data, we also pull out our teaching costs. Again we are required to do this by HEFCE. They then require these costs to be disaggregated by subject to create our "Full Average Cost of Teaching a Student" (subject FACTS) return. HEFCE compare these returns from across the sector with the subject weights in their funding method for teaching.

So we have a succession of data sets, all derived from our accounts, all subject to audit and all scrutinised in various aspects by both HEFCE and the Research Councils. I hope therefore that members of the University will accept that these calculations are as robust as they can be.

So why do we see various answers to apparently the same question? The primary reason for this is that we have to use different rules for different purposes, and (for good reason) the rules are not consistent.

Firstly, the TRAC-based subject FACTS data returns require that we do not use our actual expenditure for non-subject related costs (eg premises costs) because to do so would distort cross sector comparison. So instead we are required to use a specified portion of our HEFCE income as a proxy. This results in reported subject costs being significantly lower than our true costs. In addition to the use of proxy costs, subject FACTS also includes post-graduate taught course students but excludes Home/EU ELQ students.

TRAC on the other hand requires our actual costs but it also requires us to include the opportunity costs of the capital investment in our infrastructure which, for example, in 2008-09 was about £0.75k per student.

The HESA FSR includes the cost to the University of the College Fee Transfer but this understates the full cost of education by the further costs that Colleges incur. Colleges do not make HESA returns nor

report under HESA headings; they do not conduct the TAS or produce TRAC based costings, instead they record their expenditure on education in an Education Memorandum which, under a long standing agreement with HEFCE, forms part of the University's audit process and enables Cambridge to comply with HEFCE audit requirements. These costs are also published in the audited accounts of the Colleges (in Note 4 of the standard "Recommended Cambridge College Accounts (RCCA)" form as set out in University Ordinances. The different reporting requirements on the University and Colleges make it difficult simply to absorb College data into the University's costings. To establish the full Collegiate University costs, we subtract the fee transfer from University costs and add in the full College costs derived from the Education Memorandum.

As an example, for Cambridge in 2008/09, the full economic cost of a student education (in £k) breaks down as

University expenditure reported to HESA	12.09
College fee transfer included in HESA return	-3.61
TRAC adjustment for cost of capital	0.75
College expenditure reported in Education Memorandum	7.28
<b>Total</b>	<b>16.51</b>

This is the most recent year for which there is sector data and for which we can make direct comparisons. Note that although the figure of 12.09k for the University costs is based on HESA data, it differs from the number reported as our subject FACTS cost (which was £11.36k in 2008/09) for all the reasons listed above.

The full economic cost of a student education in 09/10 was £17.5k and in 10/11 it will be £18.0k, but obviously the latter is still a tentative figure based on trending forward and it is not yet based on audited accounts. The TRAC cost of capital was 0.8k in 2009/10 and it will be about 0.9k in 10/11. Since the inclusion of the cost of capital is arguable, it is only added when we wish to describe the full economic cost of an undergraduate education. Thus, the underlying cost of an undergraduate education for the last 3 years is estimated to be

	2008/09	2009/10	2010/11
TRAC Full Economic Cost	16.5	17.5	18.0
TRAC Cost of Capital	0.8	0.8	0.9
Underlying Cost	15.7	16.7	17.1

What is the sensitivity of these estimates? The main sensitivity is the TAS analysis. I do not have accurate estimates for this, but the percentage time spent on teaching in the University in 07/08 was estimated to be 19.3%; in 08/09 it was 21.3%; and in 09/10 it was 21.0%. My guess is that the standard deviation is about 1% and these data look to be consistent with that hypothesis. A 1% variation in TAS would result in a variation of about £600 per student or about 5% of the total cost. The Colleges use a different method for apportioning costs, but the accuracy is probably similar so allowing a further 1% for other sources of error such as coding errors of rooms, I think it would be reasonable to say that the TRAC derived cost of teaching excluding the adjustment for cost of capital in 10/11 is £17.1k +/- 6% ie somewhere between £16.1k and £18.1k. I could of course refine this sensitivity analysis by going to the raw TAS data and doing a proper analysis, and also looking carefully at all of the other possible sources of error. But the point would surely remain that given our income is less than £9k per student in total, Cambridge is injecting a tremendous subsidy into undergraduate education, and furthermore this subsidy is more than we can afford. It was more than we could afford before the cuts began and it is certainly more than we can afford now.

I hope the above explains something of the background to our costings.

Steve Young, 24<sup>th</sup> Feb 2011