SOCIAL FINANCE

WIDENING PARTICIPATION: INTOUNIVERSITY UNIT COST

JUNE 2016

EXECUTIVE SUMMARY

Through analysis of the cost effectiveness of widening participation across the sector, we estimated that the cost of supporting an additional young full-time undergraduate living in a POLAR3 Q1 postcode to progress to higher education (HE) is £7,160.

In this paper we have evaluated the comparable unit cost for IntoUniversity (IU) to support an individual from a disadvantaged background to progress to HE. We have based this analysis on historical activity and impact data for a cohort of c.9,000 students that IU worked with between 2007 and 2015 to determine a conservative estimate of progression outcomes which may be attributable to IU, comparing this to the charity's financial expenditure on working with the same cohort to reach a cost per outcome.

We estimate the cost to IU of supporting a young person from a disadvantaged background to progress to HE who wouldn't have done otherwise to be £3,100.

£3.4m expenditure by IU on outreach services for the cohort

1,080 predicted HE entrants which may be attributable to IU based on historical impact data

IU unit cost:
£3,100

National unit cost:
£7,160

METHODOLOGY

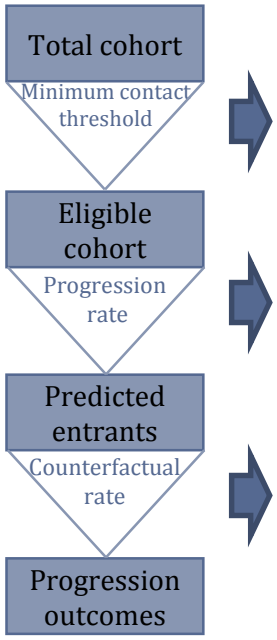
In this analysis we have looked at a cohort of c.9,000 students who engaged with IU and were of university attending age in 2013, 2014 or 2015. This group is referred to as the **total cohort.**

As with the National Unit Costing analysis, there are two key elements to determining the unit cost of each successful progression outcome: total expenditure, and the total number of outcomes which may be attributable to IU as a result of that expenditure.

Total expenditure:

Evaluating the proportion of IU's costs between 2007 and 2015 which could be allocated to working with the total cohort would be impractical given IU also worked with other students during this period. Instead, we have estimated the expenditure specifically related to the total cohort by calculating the lifetime cost of IU services per student and scaling this to the size of the cohort (*see slide 4*).

Total outcomes:



We have used the filtering process shown to the left to derive the number of progression outcomes for the total cohort. The notes below explain key considerations in our analysis:

- Due to the nature of IU's programme, students will engage with their services for different amounts of time. To ensure that only outcomes for students who have had a meaningful level of engagement with IU are included, we have only included those with a minimum number of IU contact hours in our outcomes analysis (*see slide 5).*
- IU collects information on how many of its students will progress to Higher Education; taking this as a proportion of the total cohort allows us to derive a progression rate. However, IU is not able to collect progression data for all of the students it engages with. We have prudently estimated progression outcomes for those without data available to account for this (*see slide 6).*
- Of the total number of predicted HE entrants, it is likely that a significant proportion would have progressed to university anyway even without engaging with IU. To evaluate attribution of outcomes to IU's services, our analysis uses the concept of a counterfactual progression rate in order to determine deadweight (i.e. the share who would have entered HE anyway, *see slide 7*).

TOTAL EXPENDITURE

The lifetime cost per student is a measure of how much IU spends in engaging a student on average over the course of their total engagement with the charity. It has been calculated as follows:

$$Avg.cost\ (per\ student\ per\ year) \times Avg.years\ of\ engagement = £\ Lifetime\ cost\ (per\ student)$$
$$\sim £190 \qquad\qquad \sim 2 \qquad\qquad \sim £370$$

- **Average cost per student per year** has been derived by taking IU's total charitable expenditure in 2015 (£4.0m) and dividing by the number of students seen in that year (21,000). This assumes that the cost per student per year in 2015 is representative of the cost in previous years.
- **Average years of engagement** is derived by analysing 'churn' (the number of students finishing with the programme each year divided by the total number of students worked with in that year). In our analysis, this churn rate was 51%, indicating on average ~2 years of engagement per student.

Using this average lifetime cost (c.£370) per student engaged with IU, we can approximate the IU's spend on the total cohort, as follows:

$$Lifetime\ cost(per\ student) \times Total\ cohort\ size = Total\ cohort\ expenditure$$
$$c.£370 \qquad\qquad c.9{,}000 \qquad\qquad c.£3.4m$$

It is important to note that the total cohort expenditure is not the same as IU's charitable spend as reported in statutory accounts. Instead, it is an approximate measure of how much IU spent on services for what we have defined as the total cohort (all of the students engaged with that would have been at university attending age in 2013, 2014 and 2015, over the years IU worked with that cohort)

Total cohort of **9,000**

Eligible cohort of **3,900**

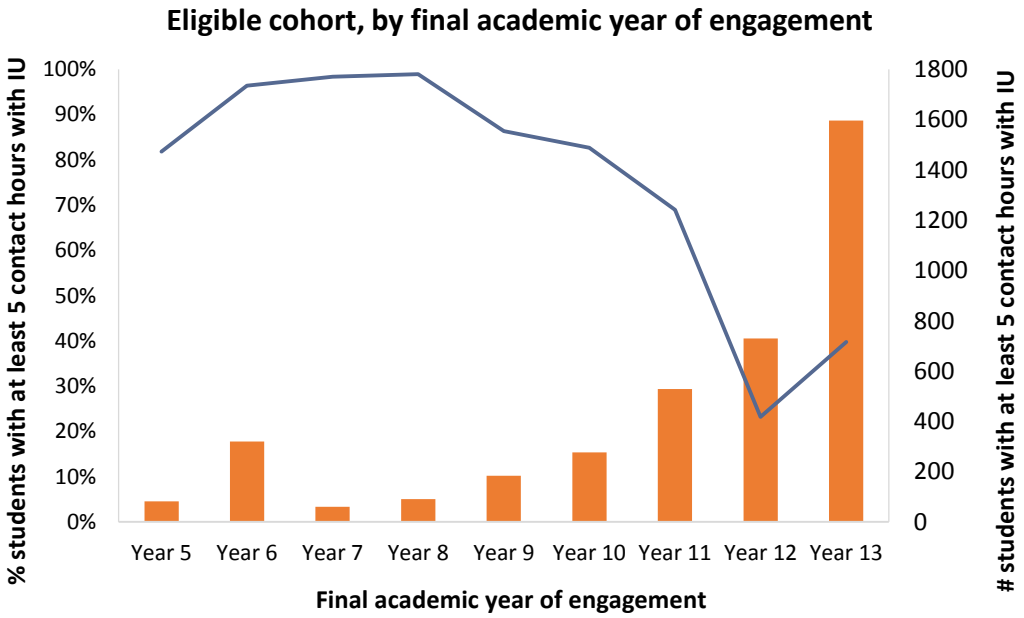
2,500 predicted entrants

1,080 progression outcomes

ELIGIBLE COHORT

As IU works with children from Year 5 up until Year 13, it is anticipated that young people will engage with the programme at different points. IU's theory of change indicates that targeted outreach work with primary school children can change their trajectory and impact future likelihood of attending university - as such this analysis looks at a total cohort that includes students seen by IU from school years 5 through to 13.

- To ensure only students with a meaningful level of engagement with IU are included in the analysis, we looked only at students in the total cohort who have engaged with IU for at least 5 hours (the **minimum contact threshold**). 5 hours has been selected as students would have needed to attend two or more sessions with IU to reach this threshold.
- By investigating 2013-2015 alumni data, it is possible to derive the exact number of unique students who received this minimum contact threshold (the **eligible cohort**), broken down by final academic year of engagement. 43% of the total cohort meet the 5 hour minimum contact threshold, giving an eligible cohort of c. 3900.



-(line graph) % of students which meet minimum contact threshold
-(bar graph) # of students which meet minimum contact threshold

Total cohort of **9,000**

Eligible cohort of **3,900**

2,500 predicted entrants

1,080 progression outcomes

PREDICTED ENTRANTS

IU collects rates of HE progression, broken down by school year and number of contact hours with IU before disengagement from the programme. Given that IU launched in 2007, only in 2013 was it possible to record the HE progress of students who joined a programme in Year 5. As mentioned previously, our progression rate analysis is based on 3 years of impact data from 2013 - 2015.

The completeness of progression rate data decreases the further back the final academic year of engagement with IU[1] *(see graph, right)*. As such it is important to take into account reducing data quality (and therefore confidence) when evaluating progression rates.

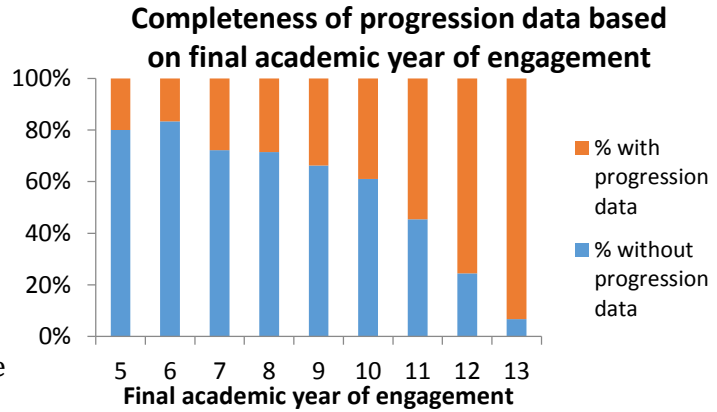
To account for this, we have used the concept of a discount factor (D.F.) to allow us to estimate progression rates for students within the eligible cohort for whom IU does not have data:

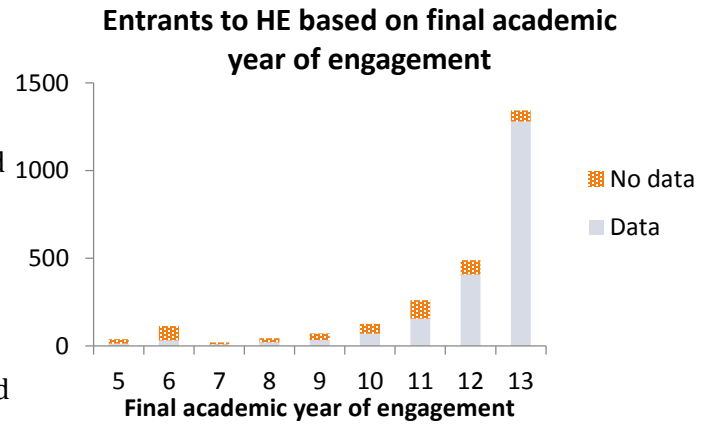
- D.F =0%: assumes that none of the students for whom there is no data will participate in higher education
- D.F. =100%: assumes that students for whom there is no data will have the same progression rate as comparative students for whom there is data

In this analysis, progression rates for students without data have been weighted by a discount factor of 50%[2].

Numbers of confirmed students progressing to HE are indicated by the "data" bars in grey (*see graph right)*. Using these progression rates along with the discount factor allows us to estimate of the number of HE entrants for the students that IU could not record data, as indicated by the "no data" bars in orange.

Based on this analysis, of the eligible cohort **c. 2,500** progressed to HE (65%).





Total cohort of **9,000**

Eligible cohort of **3,900**

2,500 predicted entrants

1,080 progression outcomes

[1] Usually due to a change of contact details or because IU centres at that time had not collected this information.
[2] 50% was chosen as a conservative assumption, to recognise the reduced confidence in progression data for those where progression outcomes aren't recorded.

PROGRESSION OUTCOMES

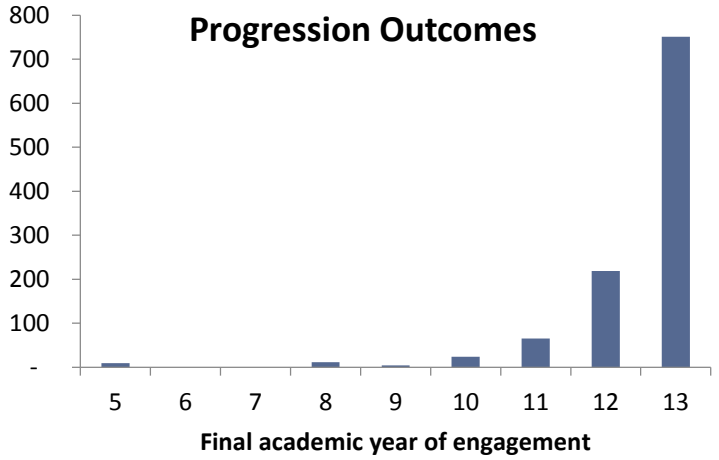
In arriving to a comparable unit cost figure for IU, it is important to account for deadweight (i.e. students who may have been expected to progress to HE without IU's support). We have used a counterfactual rate to estimate how many students progressed to HE because of IU's support, defined as **progression outcomes**, where:

Progression Outcomes = Predicted Entrants - Deadweight

We have calculated deadweight based on a counterfactual rate derived from POLAR3 data. This dataset allows us to measure the historical HE progression rates for individuals from a particular ward based on their postcode, which can then be averaged for the cohort. Based on this POLAR3 counterfactual analysis, 37.1% of the eligible cohort (1,430) would have been expected to progress to HE anyway.

Therefore, of c. 2,500 predicted entrants to HE from the cohort, our analysis predicts approximately **1,080 IU-attributable progression outcomes**, i.e. 1,080 students from disadvantaged backgrounds progressing to HE due to IU support (*see graph right).*

Throughout this analysis we have assumed a 5 hour minimum contact threshold to filter for students with a meaningful engagement with IU. Choosing other thresholds has a significant impact on the predicted number of progression outcomes (*see table, right).*



Contact Hour Threshold	Progression Outcomes	IU Unit Cost
1-2	2,494	£1,359
2-4	1,570	£2,158
5-8	1,084	£3,127
9-12	589	£5,751

Total cohort of **9,000**

Eligible cohort of **3,900**

2,500 predicted entrants

1,080 progression outcomes

Given an expenditure of £3.4m, Into University has a unit cost ranging between £1,400 and £5,800.

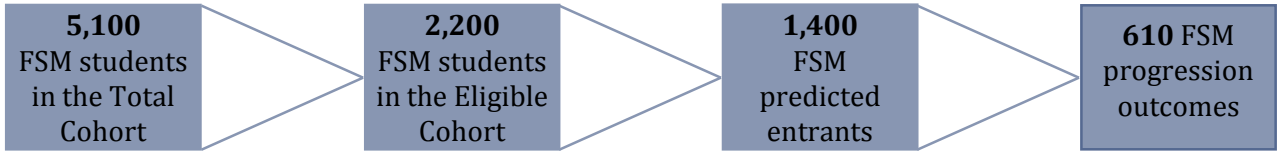
FSM STUDENTS

In order to enable direct comparability between the National vs IU unit cost analysis, we have adjusted the IU unit cost analysis to consider just Free School Meal eligible (FSM) students.

As IU does not have student-level information on FSM eligibility for the total cohort (this information was not historically collected), in order to estimate how many of the progression outcomes can be attributable to students who are FSM-eligible this analysis uses the following assumptions:

- The proportion of FSM-eligible students in the total cohort is the same as for those who attend IU's Academic Support. Currently, **56%** of Academic Support students are eligible for free school meals.
- That the rate of FSM-eligible students who meet the contact hour threshold, progress to HE and whose counterfactual is the same as for the total cohort as a whole.

Based on these assumptions:



With 610 progression outcomes for FSM-eligible students, assuming the fixed total expenditure of £3.4m, we estimate the unit cost to IU of supporting each FSM student progress to HE who wouldn't have otherwise to be £5,600.

(FSM-based) IU unit cost: **£5,600**

(FSM-based) National unit cost: **£9,670**