

# Do Students Work Harder if University Costs More?

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## Abstract

How do higher fees affect the motivation, effort and performance of university students? We use detailed data on student background and performance in university to study the effect of the 2012 fee rise (from £3000 to £9000 for home/EU students). We find that first year undergraduate students performed better after the fee rise, second year performance remained much the same, and third (final) years performed worse. One way to explain these results is that the “price shock” effect is largest for those just starting university, while at the end of the programme, the need to pay back university loans and therefore look for a job dominates this price effect and distracts from academic effort.

## How do we establish causality?

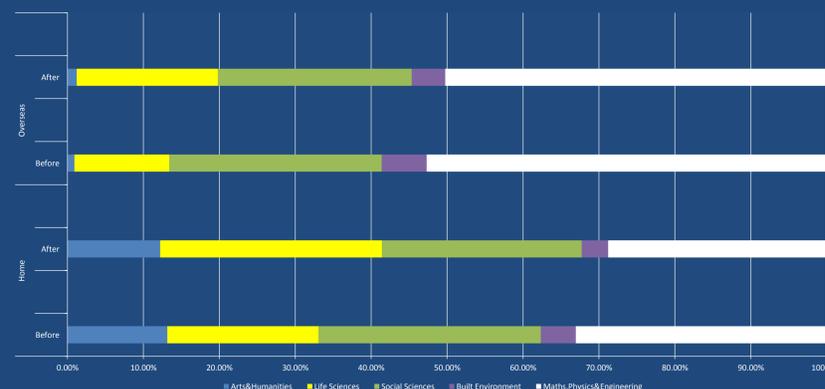
One obvious difficulty with this kind of study is establishing that higher fees actually *caused* changes in student behaviour. After all, the makeup of the student body, the setup of the university, the organization of modules and so on may have also changed post fee-rise, and it may be these changes that are affecting outcomes. In order to establish causality, we note that any post-fee rise change in modules or lecturers will affect both domestic and overseas students. Therefore any difference in domestic students’ outcomes before and after the fee-rise should be similar to the relevant pre- versus post-fee rise differences for overseas students. If this is not the case, then the pre- versus post-fee rise difference for domestic students must be *caused* by the fee rise.

	Home		Overseas	
	Before (1)	After (2)	Before (4)	After (5)
Exams Score				
First Years	60.90 (16.43)	64.08 (13.94)	60.63 (18.15)	62.74 (17.38)
Second Years	61.52 (15.07)	62.85 (15.21)	60.62 (16.02)	61.61 (16.56)
Third Years	63.76 (14.43)	61.14 (20.31)	60.60 (15.70)	61.58 (16.26)
All	62.00 (15.74)	63.12 (15.63)	60.37 (16.84)	62.10 (16.88)
Age	18.52 (1.09)	18.49 (1.05)	18.80 (0.91)	18.73 (0.97)
Tariff Points	470.98 (96.46)	497.87 (91.67)	492.77 (99.96)	523.66 (92.53)
Ethnicity				
White	0.63 (0.48)	0.63 (0.48)	0.07 (0.25)	0.09 (0.29)
Chinese	0.04 (0.19)	0.03 (0.19)	0.55 (0.49)	0.61 (0.48)
Asian	0.17 (0.38)	0.17 (0.38)	0.26 (0.44)	0.21 (0.41)
Others	0.11 (0.32)	0.12 (0.33)	0.06 (0.25)	0.06 (0.25)
Females	0.49 (0.49)	0.50 (0.50)	0.51 (0.49)	0.51 (0.49)
Observations	187841	66576	56862	26987

Notes: Cohorts taken into account: 2007,2008,2009,2010,2011 before the new policy; 2012, 2013 after the policy. Third year results from 2013 are still not available.

Table 1 above shows that the trends in cohort characteristics pre- and post- fee rise are similar for domestic and international students. So there is little to suggest that the fee rise has changed the makeup of the domestic student body relative to the overseas one. Figure 1 below shows that this is also true of programme choice – both domestic and overseas students were slightly more likely to do a life sciences degree and slightly less likely to do a degree in maths, physics and engineering post-fee rise

Figure 1: Distribution of students across faculties before and after



	Year 1	Year 2	Year 3	Degree
All	1.15*	0.29	-3.60*	-1.48*
Female	0.64	-0.13	-3.01*	-1.39*
Male	1.60*	0.72	-4.43*	-1.60*

Notes: These results are based on percentage marks in individual modules. Individual differences in demographic characteristics as well as UCAS tariff points on entry to the programme. \* designates a statistically significant result.

## Results

Table 2 above shows the effect of the fee rise on students’ academic performance. In the first year, the average marks rose by more than 1 percentage point, while in the final year, they fell by almost 4 percentage points. These effects are larger for male students. In the degree overall, the effect of the fee rise was to lower marks by more than 1 percentage point. Table 3 below shows the effect of the fee rise on the probability of various academic outcomes. In the first two years, the probability of failing a module fell by 1 percentage point, while in the third year, it rose by 4 percentage points. The probability of getting a II.1 (often a requirement for a job offer) rose by 2 percentage points in the first year, but fell by 6 percentage points in the third year. The results in both these tales show that the fee rise resulted in slightly better academic results in the first year, but significantly worse results in the final year

(Probabilities)	Year 1	Year 2	Year 3	Degree
Failure	-1%*	-1%*	4%*	10%*
II.1 (>60%)	2%*	0.1%	-6%*	-3%*
First (>70%)	2%	2%	-3%*	-0.7%

Notes: These results are based on percentage marks in individual modules. Individual differences in demographic characteristics as well as UCAS tariff points on entry to the programme. \* designates a statistically significant result.