Saving student loans[1]

Nicholas Barr and Alison Johnston[2]

1.   This note estimates the cost of different policy packages compared with the current student loan system. The policy implications are summarised in Table 1 and paras 10-14. The central message is that for the time being the threshold of £21,000 at which loan repayments start should remain constant in nominal terms. The reason is simple: because otherwise – as before the reforms – the loan system will be fiscally expensive. The result is a tight constraint on student numbers, which is (a) inequitable (it is students from disadvantaged backgrounds who are most likely to be crowded out), (b) inefficient, because of underinvestment in skills, and (c) politically nasty.

Assumptions

2.   The benchmark is the current system: fee loans are £3,290 per year and maintenance loans £5,500, so that the total loan per student over three years is about £26,000; the threshold at which graduates start to repay is £15,000 per year; and there is a zero real interest rate. Our starting point (updated from Barr and Johnston, 2010) is an estimate that averaged across all borrowers non-repayment is 25.8% of borrowing in present value terms, i.e. about £6,800 per student.

3.   The proposed system has an assumed average fee loan of £8,000 and maintenance loan of £5,500, so that the total loan is just over £40,000, about £14,000 larger than the present loan; the proposed repayment threshold is £21,000 indexed to earnings; and the real interest rate varies between zero and 3%.

4.   We make the following assumptions.

- The government's borrowing rate is 2.2% in real terms.

- All the options include modified New Zealand-type protection, where real debt is allowed to rise during university years, but low earners are then protected so that real debt does not rise further thereafter.

The costs of different policy options

5.   In assessing the proposed changes it is helpful to distinguish several effects. First, the size of the loan will increase, which will increase losses. Secondly, the terms of the loan have been changed: the higher interest rate will reduce losses; the higher repayment threshold will increase losses. In the analysis that follows, we hold the size of the loan constant at the new, higher level of about £40,000 and discuss options for different interest rates and different loan thresholds.

---

[1] We are grateful to Neil Shephard for comments on an earlier draft. The views expressed in this note and any remaining errors are our responsibility.

[2] London School of Economics.

6.   The first three bars in Figure 1a show the cost of the proposed system with different interest rates.

- The first (blue) bar shows the gross cost of higher fees and higher repayment threshold indexed to earnings, holding other things constant, including the interest rate.   This system adds 17.3% to the cost of loans, i.e. increases non-repayment (and hence the RAB charge) by £173 for every £1,000 lent. Thus, as Table 1 shows, the increase in a typical loan of £14,000 means that loans add £2,444 per student to the cost of the present system of £6,800.

- The second (yellow) bar shows the cost of the proposed system with a real interest rate of 2.2% and modified New Zealand-type protection. This option costs 5.9% more than the present system, i.e. an extra £834.

- The third (red) bar shows the cost of the proposed system with a real interest rate of 3%. This option costs 1.9% more than the present system, i.e. an extra £268.

7.   The cost of the government's proposals, with a sliding interest rate from 2.2% to 3% lies somewhere between the second and third bars. Thus the government's proposals are more expensive than the present system. Put another way, the gains from charging a higher interest rate are largely lost by raising the repayment threshold and indexing it to earnings.

Figure 1a: Costs and savings of different policy options
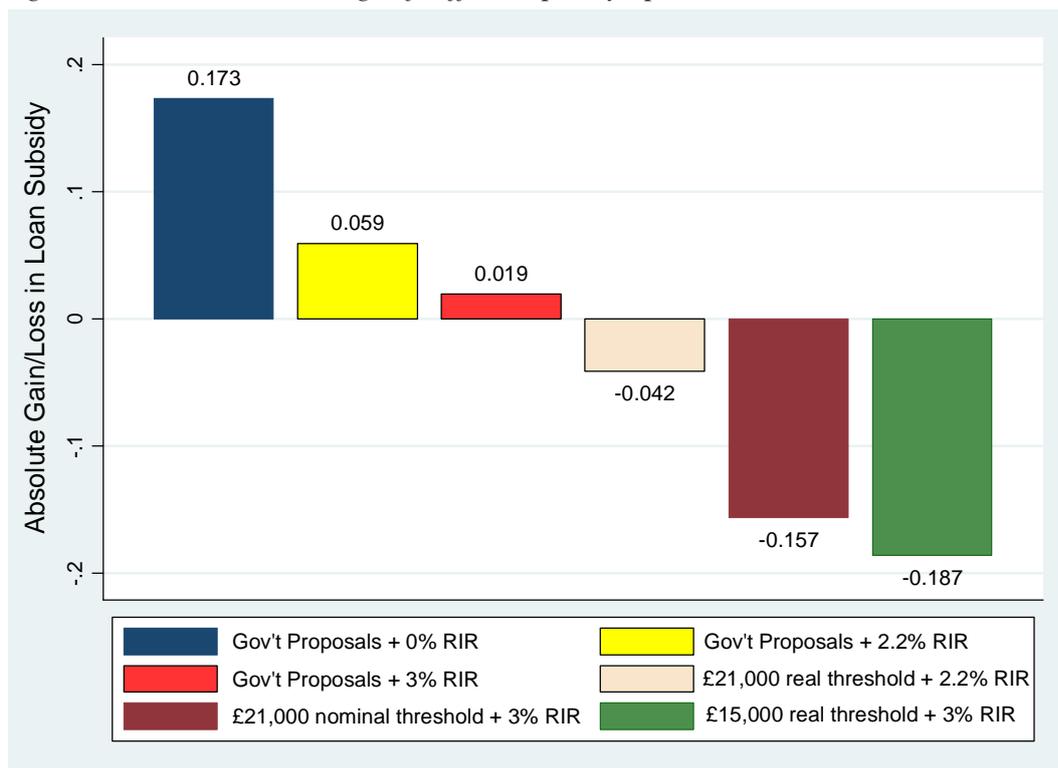
8.   The next three bars show potential savings.

- The fourth (pink) bar shows the savings from indexing the repayment threshold to prices with a 2.2% real interest rate, assuming an inflation rate across the life of the loan of the Bank of England's central target of 2% CPI. Compared with the cost of the present system, this arrangement would save 4.2% of lending to students, i.e. just below £600 per student.

- The fifth (brown) bar shows that if the repayment threshold remains at £21,000 in nominal terms with a 3% real interest rate, the savings for the 2012 cohort would be 15.7% of lending, or £2,218 per student, and larger if fees on average are higher than our assumption of £8,000. It is important to note that these are the savings for the cohort of students starting in 2012. The savings for later cohorts would be larger.
- The sixth (green) bar shows that with a threshold of £15,000 indexed to prices, with a 3% real interest rate, the savings would be 18.7% of lending, or £2,640 per student.

The distribution of loan subsidies

9.   Figure 1b shows that the distribution of these costs remains strongly progressive across all deciles of graduate earners. Considering in particular the case where the repayment threshold remains at £21,000 in nominal terms, the bottom half of the distribution receives a larger subsidy than under the present system and the top half a smaller subsidy.

Figure 1b: Loan subsidy by decile of graduate earners
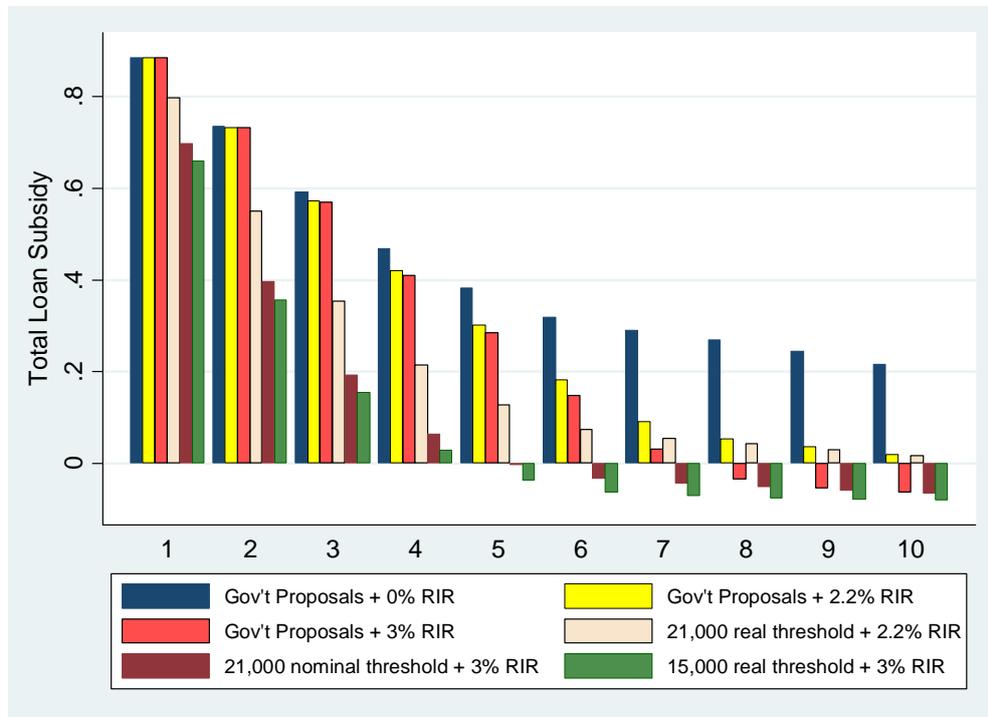
Table 1: Loan subsidy per student, proposed system		
	Extra cost/saving compared with current system	Total cost per student
Current system		£6,803
Fees £8,000, threshold £21,000 indexed to earnings, 0% real interest rate	£2,444	£9,248
Fees £8,000, threshold £21,000 indexed to earnings, 2.2% real interest rate	£834	£7,637
Fees £8,000, threshold £21,000 indexed to earnings, 3% real interest rate	£268	£7,072
Fees £8,000, threshold £21,000 indexed to prices, 2.2% real interest rate	-£593	£6,210
Fees £8,000, threshold £21,000 fixed in nominal terms, 3% real interest rate	-£2,218	£4,585
Fees £8,000, threshold £15,000 indexed to prices, 3% real interest rate	-£2,642	£4,161

Policy implications

10.   KEEPING THE REPAYMENT THRESHOLD AT £21,000 IN NOMINAL TERMS, with a 3% real interest rate reduces the taxpayer cost of loans (i.e. the RAB charge) by £2,218 per student. Thus the loss on the loan on average is about £4,580 per student (i.e. £6,800 - £2,218), and smaller for later cohorts, correspondingly reducing the fiscal cost of increasing student numbers. On average, students will borrow around £40,000 and repay about £35,420. The system remains progressive.

11.   The reason why the change has such a powerful effect is easily explained: raising the threshold from £15,000 to £21,000 reduces monthly repayments not only for someone earning £20,000, but also for someone earning £100,000. Someone earning £21,000 repays £540 less per year (i.e. 9% of £6,000) under the proposed system than under the current system, and anyone above £21,000, however high their earnings, also repays £540 less per year. Thus most graduates benefit, which is expensive.

12.   However, graduates earning below £21,000 benefit least: someone earning £17,000 repays £180 less per year (i.e. 9% of £2,000); someone earning £15,500 repays £45 less per year; and anyone earning below £15,000 does not benefit at all. Thus increasing the repayment threshold is (a) expensive and (b) gives the least benefit to low earners; and indexing the threshold to earnings retains this regressive pattern.

13.   BASING INTEREST SUBSIDIES ON LIFETIME INCOME. The estimates in Table 1 give an interest subsidy to graduates with low current income, even if they have high lifetime income. This feature adds to the cost of loans and reduces the progressivity of the system. As an option for the future, it would be both desirable in policy terms and feasible administratively to award interest subsidies only to people with low lifetime income.

14.   IN SUM. There is a trade-off between indexing the repayment threshold, which gives the smallest benefit to low earners, or retaining a constant nominal threshold, thus reducing the cost of loans, hence making it possible to allow more people into the system. Keeping the threshold of £21,000 contributes more to access and expansion than indexing the threshold to prices, let alone to earnings.

Nicholas Barr and Alison Johnston (2010), Interest subsidies on student loans: A better class of drain, http://econ.lse.ac.uk/staff/nb/BarrJohnston_Interestsubsidies100528.pdf