

FINANCING HIGHER EDUCATION IN ENGLAND: THE FISCAL IMPLICATIONS OF REFORM

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Classification: H2, H52, I22

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1. Introduction

The financing of higher education in England has changed radically in recent years.² From 1962 to 1998, the costs of tuition and means-tested maintenance grants to cover student living costs were paid for by the state out of general taxation. This meant that the education of students from less well-off households was highly subsidised. The current system, broadly as introduced in 2012 when tuition fees rose to £9,000 per annum, is very different. Higher education in England is now largely paid for by tuition fees levied on the students themselves.³ Most students finance their tuition fees and their own living costs by income-contingent student loans provided through the government-owned Student Loans Company (SLC). The government's eventual contribution to these costs is uncertain because the loans may not be repaid in full as repayment is dependent on the future income of the students after graduation.

This shift in the financing of higher education from general taxation to the students themselves has had profound implications for the students, the public finances, and the universities and other providers of higher education (referred to from here on as universities). But because of the terminology used and non-transparent accounting methods, these implications have not always been clear.

New graduates now leave university with substantial income-contingent debt (often around £50,000).⁴ But, as the recent *Augar Review* emphasised, this is not the same as conventional debt (Augar, 2019). Income-contingent repayment rules mean that loan repayments are calculated and deducted from the income of recent graduates in exactly the same way as a hypothecated tax on graduate income would be: high earners eventually make a much larger contribution than low earners. The main difference between the current system and a graduate tax is that it does not apply to earlier vintages of graduates or those who have repaid their loans in full. Whereas those graduates in their forties and older who left university before 2000 were not required to contribute to the cost of their higher education, younger graduates have contributed at different rates depending on when they attended university and their subsequent income. In generational terms the largest contribution has been made by 'Millennials', born after 1980.

The change in the financing of higher education has also given rise to 'fiscal illusions' that flattered the public finances (Ebdon and Waite, 2018). Until September 2019, the value of the loans provided by the government did not count as government expenditure unless and until those loans were written off. This had important implications for the public finances as discussed by Ebdon and Waite (2018) and ONS (2019). According to ONS (2019), the more realistic accounting treatment of student loans that was introduced in September 2019 added £12.4 billion (over half of one per cent of GDP) to public sector net borrowing (PSNB) in the financial year ending March 2019. It is also estimated to add £59.2 billion to public sector net financial liabilities, a measure of public sector debt, reflecting the value of outstanding student loans that are not expected to be repaid.

University resources were also boosted by recent reforms. This is because the increase in tuition fee income following the 2012 reforms exceeded the loss in teaching grant income. As Belfield *et al.* (2017) note, 'university funding per student is currently [in 2017] at the highest level it has ever been'.

There is significant dissatisfaction with many aspects of the current system, most prominently with the apparently high levels of student debt. In the 2017 general election, the Labour Party won support for its proposal to abolish university tuition fees and reintroduce maintenance grants, effectively returning to the pre-1998 system.

² Devolution has meant that different arrangements apply in England, Scotland, Wales and Northern Ireland. In this paper we focus on the arrangements that apply in England.

³ Teaching grants cover the costs of more expensive courses.

⁴ The average loan balance on entry into repayment was £35,950 for the 2019 repayment cohort (Student Loans Company, 2019).

Partly in reaction, in February 2018, the then Prime Minister Theresa May announced a wide-ranging Review of Post-18 Education and Funding led by Philip Augar. The *Augar Review* was published in May 2019 and recommended changes to the current system of financing higher education, including a reduction in tuition fees and a lengthening of the maximum repayment period from thirty to forty years. The recommendations, that also included more focus on further education and delivering technical education at levels 4 and 5, were intended to maintain a ‘fair balance between taxpayers and students’.⁵ The fiscal implications of the *Augar Review* proposals have been explored by Britton and van der Erve (2019) and by Conlon and Halterbeck (2019).

A different approach has been proposed by Green and Mason (2017). They argue that the current system is inequitable, especially across generations, and difficult to sustain. Instead they have suggested that the current loan system be replaced with an all-age graduate tax designed to make a substantial and immediate contribution to the costs of first-degree tuition and maintenance. They also propose the reintroduction of means-tested maintenance grants to replace maintenance loans.

They identify three key advantages of a graduate tax: first, in the interests of inter-generational equity, the tax would be applied to all existing generations of graduates and not just recent graduates; second, annual graduate tax payments would be lower than loan repayments under the current system and so represent less of a financial burden on young generations; third, an all-age graduate tax would immediately contribute to the public finances and so provide a more secure fiscal foundation.

Finally, Schuller, Tuckett and Wilson (2018) have recommended that a National Learning Entitlement (NLE) pitched at around £5,000 per annum be provided to all those aged 18 and over that could be used to finance two years of education and training. The NLE would be valid for further and adult education colleges as well as higher education. Students in higher education would be able to use a reformed version of the current loan system to pay for any additional tuition fees and maintenance. The cost of the NLE would be paid for out of general taxation.

The contribution of this paper is to assess the long-term fiscal implications of the different alternatives to financing higher education in England. Our focus is on the cost of educating full-time first-degree ‘home’ students studying at English universities. We do not consider part-time or post-graduate students though some of the aggregate figures we quote include them.

⁵ In England, Wales and Northern Ireland, qualification levels 4 and 5 refer roughly to technical qualifications between A level (level 3) and a degree (level 6). See here [what different qualification levels mean](#) for a complete list.

Our key findings are as follows:

- Supporting over a million full-time undergraduates at English universities costs in the region of £15 billion per year, including the costs of tuition and maintenance.
- Under the current system, just over half of this (55 per cent on some estimates) is expected to be recouped over time in student loan repayments by graduates, the remainder is to be paid for out of general taxation. The estimated value of future student loan repayments is uncertain because it depends on the future earnings of graduates, but generally reckoned to have a present value of about £8 billion for each cohort of full-time undergraduates. This means that around an additional £7-8 billion per year would be needed from the taxpayer if tuition fees were to be abolished and maintenance loans replaced with maintenance grants. Such a policy would mainly benefit higher earning graduates at the expense of often poorer taxpayers, though the distributional impact would depend on the mixture of tax changes put in place.
- The alternative of levying an all-age graduate tax to replace student loans, as proposed by Green and Mason (2017), would have very different distributional consequences and raise more money in the short term than expected from the current student loan scheme. Green and Mason calculated that a graduate tax rate of 2½ per cent would currently raise just under £4 billion per year. However, we calculate that an all-age graduate tax rate of around 4p in the pound would be necessary to replace the stream of future income expected from the current Plan-2 student loan scheme.
- The provision of a National Learning Entitlement to students in higher education would reduce the amount that they would need to borrow, benefitting mainly higher earning graduates. We calculate that the additional cost to the taxpayer of the proposed NLE scheme as it would be used by university students would be about £2 billion per annum.

Of course, the long-term cost of financing higher education is not the only criterion by which to judge the system. The current system involves a significant subsidy to higher education and it is not clear that this subsidy is of the right magnitude or directed to the right type of educational activities. A common complaint is that too many students have been encouraged to embark on low value courses that do little for their career prospects or wider society. We have a lot of sympathy with this view, though it is beyond the scope of this paper.

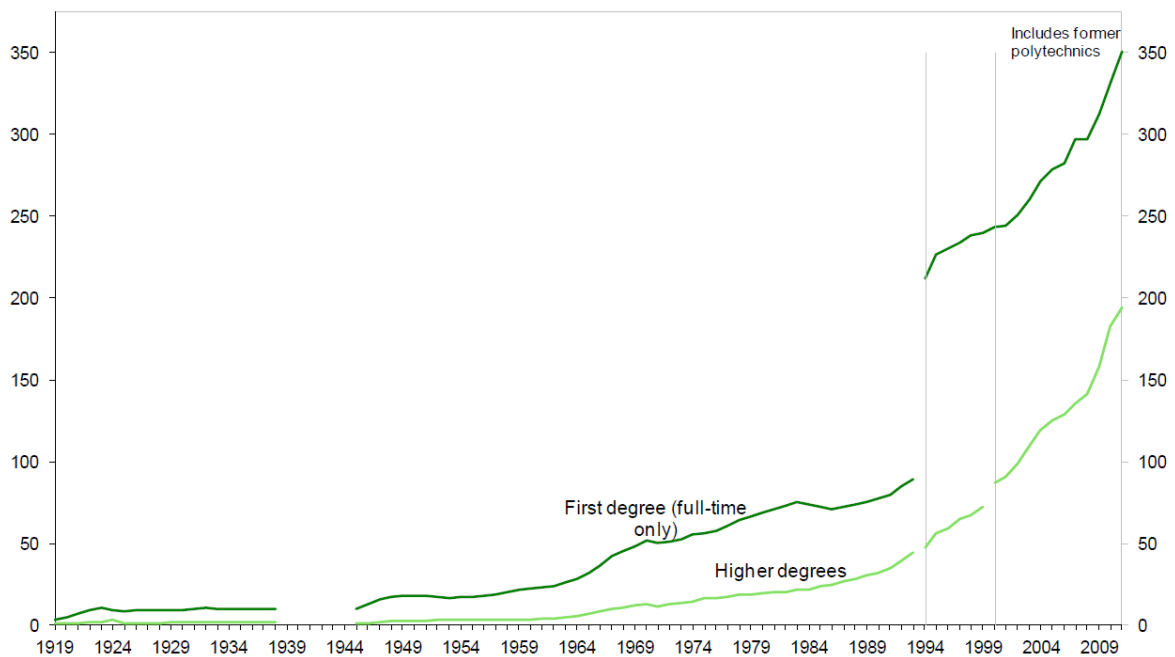
This paper is organised as follows. Section 2 describes how higher education in England is currently financed. Section 3 describes the current Plan-2 student loan scheme and how future revenues from the scheme are forecast, drawing on DfE data. It also summarises the effects of some of the reforms suggested in the recent *Augar Review*. Section 4 sets out how an all-age graduate tax would work and estimates what rate it would need to be set at if it were to raise the same amount of money as the current system. Section 5 outlines the costs and benefits of recent proposals for reform, including the NLE and recent Labour Party proposals and discusses how some legacy issues could be addressed with an all-age graduate tax.

2. How higher education is financed in England

Recent changes in the way higher education in England is provided and financed are described in Belfield, Britton, Dearden and van der Erve (2017) and Bolton (2019). They document both the growth in the number of students and the associated shift in its financing away from the state towards participants by way of income-contingent student loans.

Figure 1 shows the sharp rise in the number of degrees awarded over the past twenty-five years and more (though the figures are distorted by the exclusion of former polytechnics before 1994 and cover the whole of the United Kingdom rather than just England).

Figure 1 Students obtaining university degrees in the United Kingdom (thousands)



Source: Bolton (2019)

Universities

There has been a big shift over the past twenty or more years in the way English universities are paid for educating first-degree students. Until 1998, universities were paid by direct teaching grants from the government (Belfield *et al*, 2017). When tuition fees were introduced at a £1,000 per year in 1998, following the 1997 Dearing Report into higher education, they were seen mainly as a means of boosting university resources, rather than as a replacement for teaching grants. Since then tuition fees have become the main source of finance for undergraduate teaching and teaching grants have been restricted to supporting more expensive subject areas.

In 2017-18 there were 1,010,520 UK-domiciled full-time first-degree students at higher education providers in England, mostly paying fees capped at £9,250 per annum.⁶ In total HE providers in England received £11.4 billion in fee income from UK and EU students, including fees for part-time and postgraduate students (table 1). On top of that they received £1.2 billion in Office for Students (OfS) teaching grants for teaching these students. This puts the income that English universities received in 2017-18 for educating UK and EU students at £12.6 billion. Universities also received income for teaching overseas students, research and other activities (table 1).

⁶ Source: Higher Education Statistics Agency, HE student enrolments by personal characteristics.

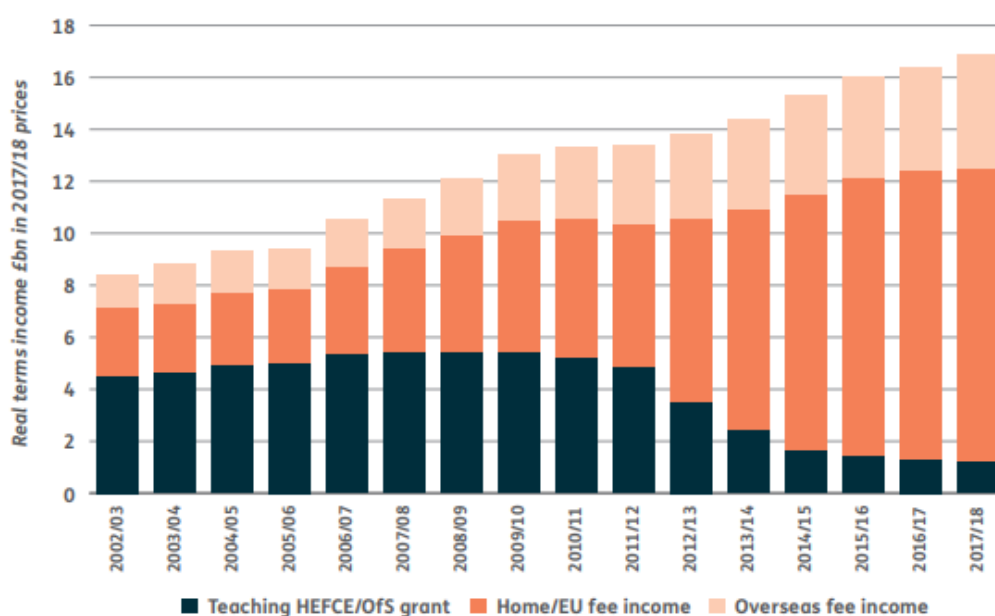
Table 1 Income of HE providers in England 2017-18 (£, million)

Category of Income	Amount	Percentage of Total
Tuition Fees and education contracts	16,623	51
<i>Of which UK and EU fees</i>	<i>11,355</i>	<i>35</i>
Funding body grants	3,617	11
<i>Of which OfS teaching grants</i>	<i>1,234</i>	<i>4</i>
Research grants and contracts	5,103	16
Other income	6,252	20
Investment income	200	1
Donations and endowments	533	2
Total	32,328	100

Source: Higher Education Statistics Agency. Note: other income includes income from residences, catering, other services rendered and other operating income.

Figure 2 shows a time series of HE-related teaching income at English universities (taken from Figure 3.3 in the *Angar Review*). This shows an increase of around £2 billion in income from the total of home/EU fee income and teaching grants following the 2012 reforms, and a shift in the composition of income from teaching grants to fee income.⁷

Figure 2 Teaching income at English universities in 2017/18 prices



Source:

Angar Review, 2019, figure 3.3.

⁷ Britton, Farquharson and Sibieta (2019) report that university resources increased by 22 per cent following the 2012 reforms.

Students

From the perspective of students, higher education has private benefits and costs. On average, the private pecuniary benefit to those who gain a degree is estimated to be significantly higher than its cost. The average private market benefit to having a degree compared with two A levels is estimated at ‘comfortably over £100,000’ over a working life in present value terms, according to a 2013 government literature review (Department for Business, Innovation and Skills, 2013).

The cost of higher education to students is what they pay for tuition and the earnings that they forgo by studying when they might otherwise be working. Tuition was free for UK-domiciled students until 1998 when tuition fees were first introduced at around £1,000 per annum. Tuition fees were subsequently increased in large steps to £3,000 in 2005 and £9,000 in 2012.⁸

At various times, students have been eligible for means-tested maintenance grants to support themselves. These were scrapped in 1998, reintroduced in 2006, and then abolished again in 2016. Since the early 1980s, the government has offered maintenance loans as either a supplement or alternative to grants to cover living costs. Student loans were extended to cover student tuition fees from September 1998, when they became income-contingent. Prior to this, the loans were like mortgages as repayments depended on the amount borrowed and not the income of the borrower.

The student loans scheme is administered by the Student Loans Company (SLC). The SLC is a not-for-profit, government-owned organisation. In 2017-18, the SLC lent out £14.1 billion in Plan-2 higher education full-time loans to English domiciled students studying in the UK or EU domiciled students studying in England. Of this £8.7 billion was for fee loans and £5.4 billion for maintenance loans.

Not all students eligible for student loans opt to use them, SLC figures indicate that 87 per cent of eligible students took out income-contingent maintenance loans and 90 per cent took out tuition fee loans on average over September 2010 to August 2016. According to Britton and Gruber (2019), most non-borrowers have their university education financed by their parents.

In return for student loans, students sign up for income-contingent repayments set at 9 per cent on all income above a threshold, set at £26,575 per annum for the financial year starting in April 2020. These repayments are due to continue until the loan and interest have been repaid or are written off after thirty years. Depending on their future income, some students will pay off their loans in full, while others may make no contributions at all. As discussed in the next section, it is estimated that only around 30 per cent of borrowers will pay off their loans in full. In principle, income-contingent loans could affect labour supply, though Britton and Gruber (2019) find no evidence of this so far.

Government and public finances

From the perspective of the government and the public finances, the amount paid to educate and support UK students at English universities consists of direct teaching grants and the disbursement of student tuition fee and maintenance loans through the SLC net of any repayments. Adding up annual outlays by the SLC and teaching grants comes to over £15 billion in 2017-18.

The overall net cost to the government of providing student loans depends on the extent to which they are repaid in the future. This is uncertain and depends on several factors including the future income of graduates and future policy. Official estimates of the cost are reflected in the so-called Resource and Budgeting (RAB) charge. This is calculated as the proportion of the loan outlay that is expected not to be repaid when forecast future repayments are valued in present value terms. This is estimated officially at 45 per cent for full-time higher education loans (DfE, 2018), though the estimate is sensitive to assumptions made about future earnings and policy parameters, including the discount rate (currently 0.7 per cent plus RPI inflation) and future threshold indexation.

⁸ Tuition fees were increased by smaller amounts in most years. They are currently capped at £9,250 per annum.

The fiscal arithmetic means that a subsidy of around £7-8 billion per annum is being paid for the higher education of those at university.⁹ A subsidy from general taxation can be justified when the social returns to higher education exceed the private returns because of positive social benefits associated with a more educated population. Because of the income-contingent loan scheme, the subsidy depends on future earnings and is lowest for high future earners and highest for low future earners. We do not discuss in detail whether this is appropriate or not, though there is no obvious reason that the subsidy should be allocated in this way. We are not aware of any evidence that larger subsidies are being directed to people or courses where the social return to education, itself hard to measure, is highest.

Other taxpayers

Any changes to the financing of higher education would have implications for other taxpayers through the effects on the public finances and the size of the subsidy paid to students. From the perspective of other taxpayers, shifting the funding of higher education from the state to the students themselves reduces their tax liability, depending on the extent of student loan repayment. Shifting the funding back, either by general taxation or an all-age graduate tax, would create some losers. In the case of an all-age graduate tax the losers would include those whose own higher education had been heavily subsidised. But, depending on how it is applied, other losers could be those who had already paid the full cost of their higher education, either because they had repaid their student loans or because their family paid full costs. A key issue with any reform is how to deal with these legacy issues.

⁹ This is the difference between the £15 billion outlay by the government on teaching grants and SLC disbursements and the estimated £8 billion that will be recouped in student loan repayments.

3. The current system: Plan-2 full-time higher education loans

The main form of student loans in 2019 are the so-called Plan-2 full-time higher education loans. Such loans have been available to full-time students eligible for undergraduate student support since the scheme began in September 2012. In 2019/20 these cover tuition fees of up to £9,250 per annum and a maintenance loan of up to £8,430 for a student living away from home outside of London. Interest is added at a rate of RPI inflation plus 3% while studying and at a variable rate depending on income after the course has been completed. This means that a typical student borrowing the maximum amount available leaves a three-year course with a student loan of just over £50,000. The new graduate would then be liable to start making student loan repayments on the 1 April after they complete their course (the Statutory Repayment Due Date, SRDD). Loan repayments are made at a rate of 9% on any income above the repayment threshold set at £26,575 per annum for the financial year starting in April 2020. The repayment term is for thirty years after SRDD.

Forecasting outlays and repayments for individual graduates

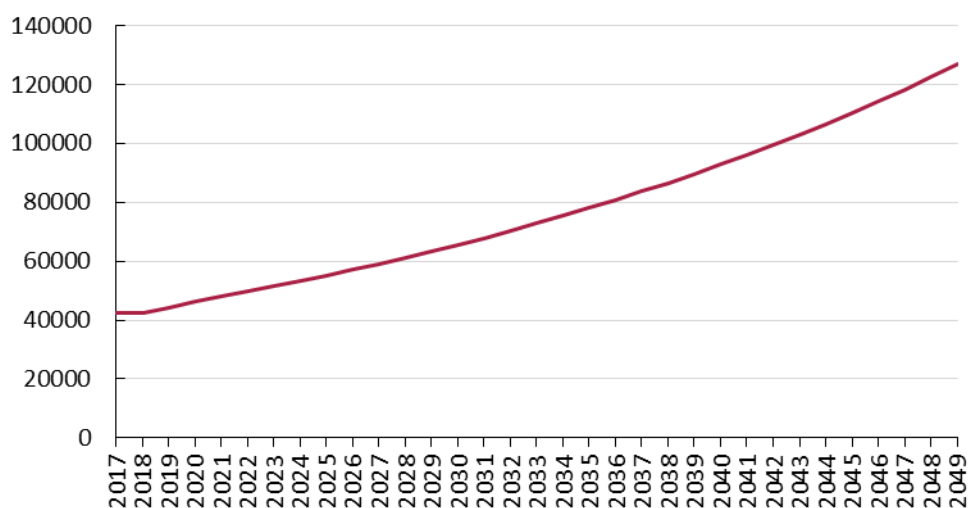
The average nominal amount of debt for each cohort that reaches their SRDD (debt at graduation) can be described by the following relationship:

$$D_t^G = P_t \sum_{i=0}^5 \alpha_i ROUTS_{t-i} \quad (1)$$

Where $ROUTS_{t-i}$ is the average amount loaned, or real outlay, provided to each cohort reaching the SRDD (in base-year prices), P_t is the price level at date t , and α_i is the proportion of those graduating at date t that were borrowing students at date $t - i$.¹⁰ The real outlay per student is assumed in the future to grow in line with GDP per head.

Figure 3 shows that estimated average debt at graduation was £42,500 in 2017 and is projected to rise over time in line with real per capita economic growth (assumed here to be 1.5% pa) and inflation (assumed here to be 2% pa).

Figure 3 Debt at Graduation (£, nominal)



Source: NIESR projections.

¹⁰ The values used for α_i are 1, 0.86, 0.72, 0.24, 0.04, 0.004 based on DfE (2018, p9).

Debt repayments and the level of debt outstanding beyond graduation are designed to be income contingent. For an individual, there are many different paths that income can take, and the amount of debt repayment will depend on the exact path that their income takes. For a cohort, the interaction of heterogeneous income paths, together with repayment thresholds and accrued interest on accumulated debt mean that the repayments made by a graduate cohort will depend on the time path of their income after graduation and how that income is distributed. Existing analysis of future loan repayments deals with this by forecasting the income of individual graduates based on their characteristics (DfE, 2018). We take a different approach in this paper and focus instead on the income of different types of graduates distinguished by their place in the income distribution, defined relative to the income of new graduates assuming this distribution remains unchanged in the future.

In particular we model the nominal income of a type of graduate (indexed by years since graduation, g , and skill level, s) at date t as:

$$y_t^{g,s} = \phi^g * \theta^s * NGRADY_t \quad (2)$$

where ϕ^g is an experience premium related to the number of years since graduation (g), θ^s is a premium related to the personal characteristics and skills of the individual (s) and $NGRADY_t$ is the nominal income of a median new graduate at date t .

In line with evidence on graduate incomes, discussed further in Section 4, the median nominal income of a new graduate in our calculations is set at £21,000 in 2018. The median nominal income of new graduates is then assumed to grow at 3½ per cent per annum, in line with a stylised assumption of growth in nominal GDP per head. We set ϕ^g to be equal to 1 in the first five years after graduation, 1.4 in the next six years, 1.8 in the following six years and 2 thereafter. We also distinguish six skill groups, and assume that θ^s is 3 for the highest paid 5% in a cohort, 2 for the next 5%, 1.8 for the next 10%, 1.6 for the next 10%, 1 for the next 20%, and 0.8 for the lowest paid 50%. In combination this means that the model includes 24 different rates of pay for graduates in the population at any time, depending on skill and experience. Our calculations suggest that this is enough to capture the essence of the graduate income distribution as far as student loan repayments are concerned.

The student debt of an individual graduate then evolves according to the following formula:

$$DEBT_t^{g,s} = (1 + i_t)DEBT_{t-1}^{g-1,s} - \tau \cdot \max((y_t^{g,s} - THRESH_t), 0) \quad (3)$$

Where τ is the repayment rate on student loans (currently $\tau = 0.09$) and $THRESH_t$ is the student loan threshold ($THRESH_t = £25,000$ in 2018-19). We assume that the threshold for repayment grows in line with nominal GDP per capita, though this is a policy option.

Because of the rule that graduate debt is written off after thirty years, $DEBT_t^{30,s} = 0$.

Using this formula provides profiles for the amount owed by all current and future cohorts of the six types of graduates in the current scheme. On this basis, and in line with other estimates, the top 30% of the income distribution pay off their student loans completely within 30 years. Within this group, the highest income group (the top 5%) will have paid off its loan within 11 years, the next highest (the next 5%) within 17 years, the next highest (the next 10%) within 19 years, the next highest (the next 10%) within 22 years.

Total nominal outlays on student tuition fee and maintenance loans depend on how many university students there are. In 2017-18 there were 366,000 UK and EU domiciled entrants into full-time undergraduate courses, of whom 20,000 were EU domiciled. In our calculations, we use published DfE forecasts of entrants up to 2022. Beyond that we have assumed that the number of entrants grows in line with the number of 18-24 year olds in England as estimated by the ONS in their long-term population projections.

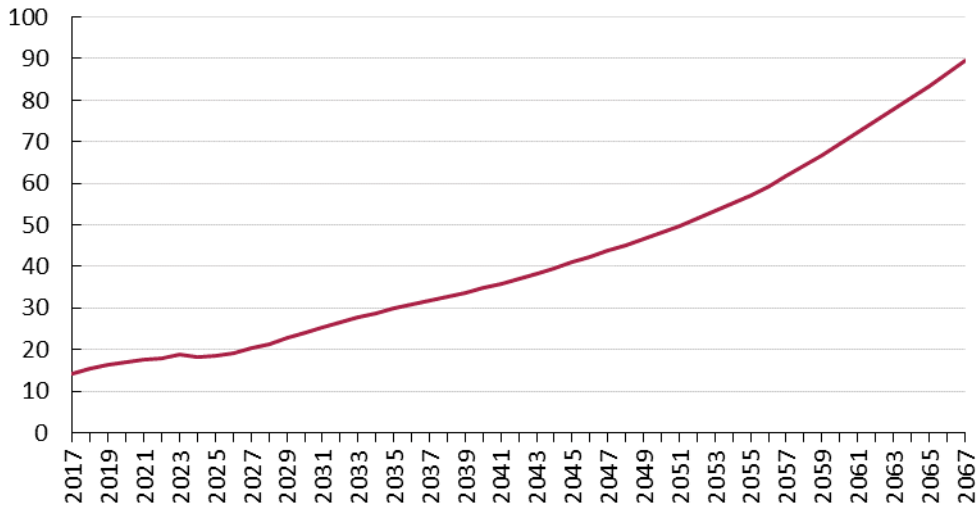
Total nominal outlays (£, billion) are given by the following formula:

$$TNOUT_t = P_t ROUS_t \sum_{i=0}^5 \alpha_i ENTS_{t-i} / 1000000 \quad (4)$$

where $ENTS_{t-i}$ is the number of students entering the higher education system at date $t-i$.

Figure 4 shows that total nominal outlay in 2017-18 was £14.2 billion and is projected to rise over time as costs per student increases and the number of students changes.

Figure 4: Total Nominal Outlay on Plan-2 Loans (£, billion)



Source: NIESR projections.

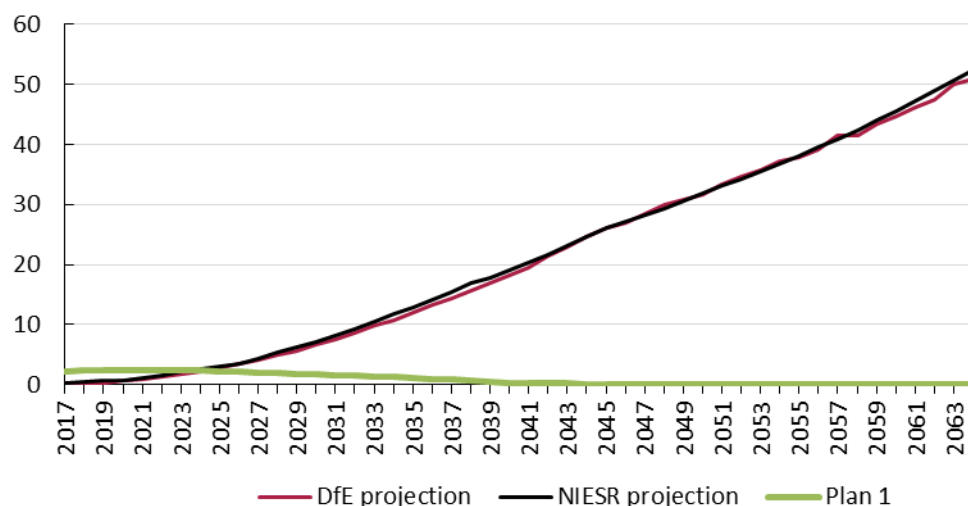
Total nominal repayments of student loans are given by the repayments of all cohorts that have not repaid their student loans:

$$REPAY_t = \tau \sum_{g=1}^4 \sum_{s=1}^6 \max((y_t^{g,s} - THRESH_t), 0) n_t^{g,s} \quad (5)$$

Figure 5 shows forecast nominal repayments using our model plotted against DfE forecasts of repayments. For reference, the figure also shows DfE projections of Plan 1 student loan repayments which reach a peak of £2.5 billion per annum in 2019-20 and then gradually decline as Plan 1 loans are paid off.¹¹

¹¹ Expected future Plan 1 repayments from 2020 cumulate to £35 billion.

Figure 5: Total Nominal Repayments of student loans – central case (£, billion)

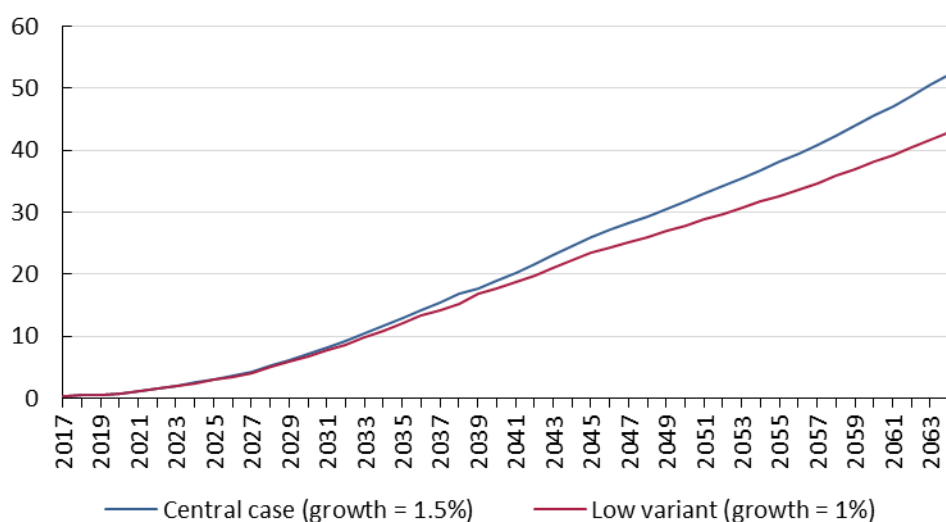


Source: DfE (2018), NIESR projections.

As figure 5 shows, there is a high degree of agreement between the two projections. This reflects similar assumptions made. Forecast repayments are uncertain. They are clearly sensitive to future income growth, its distribution and political choices over parameters such as the threshold at which repayments begin.

To illustrate this sensitivity, figure 6 shows a projection of repayments on the assumption that real incomes grow at 1% pa rather than 1.5% pa. It shows the extent to which loan repayments are sensitive to the development of real incomes. This is despite the assumption that the threshold for repayments would also rise more slowly when there is lower economic growth.

Figure 6: Total Nominal Repayments of student loans – central case (blue) and lower growth variant (red) (£, billion)



Source: NIESR projections.

Different growth assumptions affect the amount that graduates repay. This is summarised by the Resource and Budgeting (RAB) charge calculated for each cohort as:

$$RAB_t = 100.(TNOUT_t - GCONT_t)/TNOUT_t \quad (6)$$

Where $GCONT_t$ is the present discounted value of repayments by the cohort that graduated at t . For the 2017 cohort, this is estimated at 37 per cent using a discount rate of 3.6 per cent on the basis of our assumptions. The RAB charge rises to 40 per cent in the lower growth variant. This indicates that the RAB charge is sensitive to future outturns.

Angar Review

The *Angar Review* proposed a number of changes, including a shift of resources towards more technical education and bearing down on low value higher education courses. As far as higher education funding is concerned, the proposals include a reduction in tuition fees to £7,500 per annum and a lengthening of the repayment period to 40 years. The overall and distributional effect of these proposals has been assessed independently by Britton and van der Erve (2019) and by Conlon and Halterbeck (2019). The main conclusion of this analysis is that the *Angar Review* proposals for higher education funding may save the public sector about £0.5 billion per annum, so are broadly cost-neutral. The main effect is distributional, with higher earning graduates repaying less than under the current system and middle-income graduates repaying more.

4. An all-age graduate tax

In this section we extend the methodological approach set out in section 3 to assess the public finance implications of an all-age graduate tax.

Green and Mason (2017) have proposed an all-age graduate tax that would apply to the income of all graduates, not just those who have taken out Plan-2 student loans. The three key aims of this proposal are to increase inter-generational equity; reduce the financial burden on younger generations; and contribute to a more secure fiscal foundation for higher education finances.

Whereas the total amount raised from Plan-2 student loans depends on the incomes of those who have been through the scheme, the amount that can be raised from a graduate tax depends on the stock of all graduates and how their income is distributed.

In this section we first outline how we estimate the number of graduates who would be liable to pay a graduate tax in a given base year. To remain consistent with Green and Mason (2017), we set this base year to 2016 but also provide updated estimates for 2018 and forecasts beyond that. We also estimate the distribution of income amongst the group of liable graduates and finally model the impact of an all-age graduate tax.

Number of graduates

To estimate the number of potentially liable graduates, we identify graduates in the Labour Force Survey (LFS) using the definition in Green and Mason (2017) and apply LFS population weights to calculate total numbers. We focus on people aged 20 to 64 that were not currently enrolled on any educational course, held a Bachelor degree or higher qualification and were domiciled in England. We consider only graduates that were in employment using the standard ILO (International Labour Organization) definition. In 2016, there were 8.7 million people in England that met this definition and 9.3 million in 2018 (table 2).

Table 2 **Number of graduates**

	2016		2018	
	million	per cent	million	per cent
Graduates aged 20-64 in employment domiciled in England	8.7		9.3	
of whom				
born in England	6.1	70%	6.6	71%
EEA born, arrived in UK before age 21	0.2	3%	0.2	2%
Total English-educated graduates, domiciled in England, aged 20-64, in employment	6.3	73%	6.8	73%
Total English-educated graduates, domiciled in England, aged 20+, in employment	6.5		7.0	
Total English-educated graduates, domiciled in England or abroad*, aged 20+, in employment	6.8		7.4	

Note: Data averaged over all four quarters per year, population-weighted. *See text for estimation.
Source: Labour Force Survey.

Of these, only graduates that received subsidised undergraduate education in England would be liable to pay the proposed graduate tax. Information about where respondents received their education is not directly available from the LFS. We therefore follow Green and Mason (2017) and identify those graduates who were either born in England or who were born in another country of the European Economic Area (EEA) and had arrived in the UK before the age of 21. This yields a total of 6.3 million graduates in 2016 (6.8 million in 2018), corresponding to 73 per cent of graduates aged 20-64 domiciled in England and working. Of these, 0.2 million graduates were born in another EEA country. A caveat is that a share of those born in England or of those that had arrived in the UK at a young age may not have received subsidised undergraduate education, for example because they went to university abroad, which we are not able to identify. At the same, we are not able to account for graduates born in Scotland, Wales or Northern Ireland or those that were born in another EEA country and arrived in the UK at an older age than 21 and who received subsidised education at English universities. The latter number is most likely larger than the former which means that estimates provided in table 2 provide a conservative lower bound.

In principle, it would be possible to extend the tax base to all employed graduates that received undergraduate education in England but are older than 64. Table 2 suggests that this would currently add only 0.2 to 0.3 million liable taxpayers.

The tax base for a graduate tax could be further extended to graduates that received subsidised undergraduate education in England but now work in other countries of the UK or abroad. This would maintain the same approach as under the student loan scheme where graduates are liable to make repayments whether they reside in England or not.

UK citizens working abroad are only liable to pay income tax in the UK if they remain domiciled in the country, i.e. spend 183 days or more in the UK in a given tax year, have a UK home for 91 consecutive days and work full-time.¹² Estimates reported in table 2 therefore capture the large majority of those earning income abroad while being liable to pay income tax in the UK. The Student Loan Company collects student loan repayments from graduates abroad that earn income above a country-specific threshold that in a given period depends on the UK earnings threshold in that period, the general price level and exchange rates.¹³ It may be possible to collect a graduate tax in a similar way from graduates abroad that currently are outside the UK tax system. This would require graduates that live abroad to submit self-assessment tax returns which identified the level and provenance of their graduate qualifications. In 2017, 4.9 million UK-born emigrants were living abroad, a third of which resided in Australia and New Zealand, a third in the United States and Canada and quarter in the EU.¹⁴ No information is available on how many of those are employed and would potentially be liable to pay the graduate tax. We therefore use data on student loan borrowers to provide us with an estimate. According to data from the Student Loan Company, 3 per cent of borrowers are resident overseas and hold an open account (making them liable to repay conditional on income), see table 3. 5 per cent of borrowers in employment holding an open account reside abroad. Using this share and assuming that demographic characteristics are comparable, we extrapolate from figures reported in table 3 and estimate that in 2018, around 7 million employed English-educated graduates resided in England, corresponding to slightly more than 90 per cent of all graduates, and 0.4 million resided abroad (0.3 million in 2016, see bottom row of table 2), abstracting also from beforementioned measurement difficulties regarding studies abroad and arrivals of older students.

¹² KPMG based on UK tax legislation, <https://home.kpmg/xx/en/home/insights/2011/12/united-kingdom-income-tax.html>.

¹³ Student Loans Company, 'Overseas earnings thresholds for Plan 1 student loans', <https://www.gov.uk/government/publications/overseas-earnings-thresholds-for-plan-1-student-loans>.

¹⁴ Office for National Statistics 'Living abroad: British residents living in the EU', <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/livingabroad/april2018>.

Table 3 Student loan borrowers by repayment status and residence

	Thousands	Per cent of total	Per cent of employed (account open)
Account closed (loan repaid or cancelled)	1,024.7	20%	
in UK, employed and liable	1,916.3	37%	66%
in UK, employed, not liable	816.8	16%	28%
in UK, not employed/liable	1,154.0	22%	
Abroad, employed and liable	84.6	2%	3%
Abroad, employed, not liable	66.5	1%	2%
Abroad, income unclear	18.4	0%	
Repayment status not clear	50.3	1%	
Total	5,131.9	100%	

Source: Student Loan Company.¹⁵

Note: cohorts 2000-2019, as at April 2019.

Income distribution

To arrive at estimates of how income is distributed amongst graduates potentially liable to pay a graduate tax, we calculate salary statistics from the LFS. While earnings information in the LFS is inferior to sources like the Annual Survey of Hours and Earnings, the latter does not contain information on educational qualifications. Consistent with Green and Mason (2017), we compute gross annual salaries by multiplying gross weekly earnings by 52, excluding self-employed graduates and those whose reported hourly pay is less than £1 or more than £100.

Table 4 provides an overview. There is a wide dispersion in salaries across two dimensions: age and income group. This suggests that an analysis of tax revenue from a graduate tax needs to take account of salary premiums due to experience and individual characteristics like skills. Overall, more than 10 per cent of the graduate population earn less than half of the median salary, while more than 10 per cent earn twice as much. Earnings tend to be highest for the 40-49 age group who earn nearly twice as much as 20-24 year olds who are at the beginning of their working life. The number of graduates in the LFS that meet the earnings criteria set out above and are younger than 20 years old is very small and so we exclude them from our subsequent analysis. Graduates older than 64 in employment for which the LFS contains information on hourly pay earn significantly less than those in the 60-64 age bracket but the number of available observations is very small, making the information less reliable. With this caveat in mind, we use these estimates as a starting point to analyse the impact of extending the tax base to older generations.

¹⁵ Student Loan Company, 'Student loans in England, financial year 2018-19'.

Table 4 Graduate salary distribution (2018 prices)

	Mean	10th percentile	25th percentile	median	75th percentile	90th percentile	unweighted N
<20	12,774	2444	2,444	21,008	21,008	21,008	2
20-24	21,849	10,816	16,432	21,008	26,000	31,980	503
25-29	29,971	15,600	21,580	27,976	35,984	47,008	1,153
30-39	38,895	14,560	24,024	34,996	47,996	66,976	2,722
40-49	43,347	14,976	25,220	39,520	54,184	79,196	2,298
50-59	42,414	12,012	24,024	38,376	53,976	79,196	1,645
60-64	36,315	8,424	16,484	30,992	47,008	71,500	367
>64	23,377	2,028	5,980	16,224	35,984	53,976	176
Total	37,375	13,000	21,580	32,500	46,800	66,976	8,866

Note: Gross annual pay, English-domiciled, English-educated graduate employees, excludes self-employed graduates and those whose hourly pay is less than £1 or more than £100. Definition of graduates as explained in the text. Population-weighted. Source: Labour Force Survey, 2018 (all four quarters).

All-age graduate tax

The proposed all-age graduate tax is described in detail in Green and Mason (2017). In their original proposal, Green and Mason recommended that the graduate tax be levied on all graduates domiciled in England that have graduated from English universities. These would be liable for the all-age graduate tax on all earnings over the chosen threshold at the graduate tax rate. Unlike the Plan-2 student loan scheme, this would exclude English-university graduates who are resident outside England. As an addition to the original proposal, we also explore the impact of including non-resident English-university graduates.

As with student loan repayments, graduate tax payments would be dependent on the distribution of graduate income. Using the same methodology as for student loan repayments total repayments would be:

$$GRADTAX_t = \tau^{tax} \sum_{g=1}^4 \sum_{s=1}^6 \max((y_t^{g,s} - THRESHTAX_t), 0) N_t^{g,s} \quad (6)$$

Where τ^{tax} is the all-age graduate tax rate, $THRESHTAX_t$ is the threshold for the graduate tax and $N_t^{g,s}$ are all English educated graduates, rather than just post-2016 graduates $n_t^{g,s}$ as in the case of loan repayments.

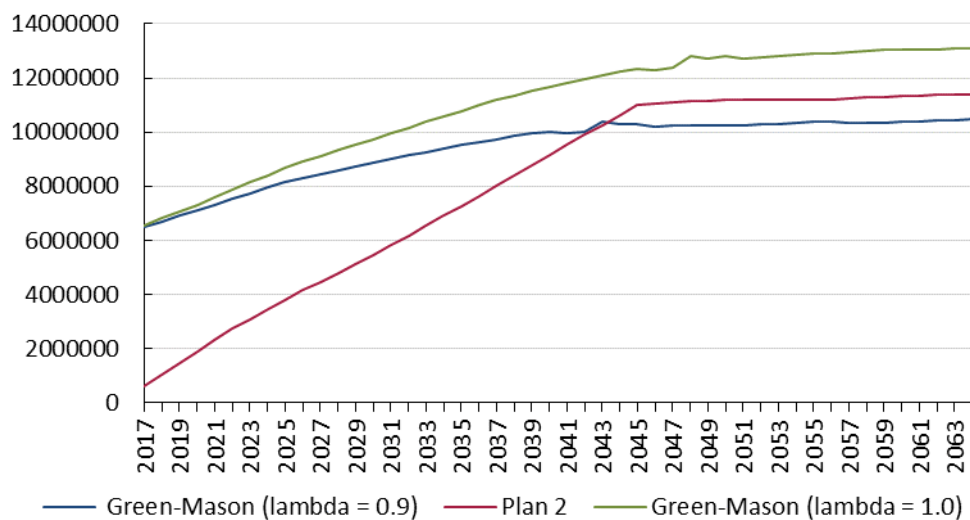
It is assumed that the graduate population eligible for the all-age graduate tax evolves as

$$\Delta GRAD_t = \lambda \cdot (NEWGRADS_t - NEWGRADS_{t-N}) \quad (7)$$

where λ is the proportion of English-university graduates that are liable for the graduate tax for residence reasons and N is the number of years that they remain liable for the tax, which we set to forty years. We use two values of λ : 0.9 and 1. In the case where $\lambda = 0.9$, 90 per cent of new graduates enter the stock of people liable for the graduate tax and remain in the stock for forty years. The assumption that 90 per cent enter the stock is to take account of the fact that a minority of graduates will not work in England. In the case where $\lambda = 1$, all graduates are assumed to be liable to the graduate tax whether they reside in England or not. This matches the treatment of student loans where income earned outside of England is taken into account.

Figure 7 compares the population eligible for student loan repayments (red) and the all-age graduate tax on the assumption that $N = 40$ years and $\lambda = 0.9$ and 1 . As is clear, currently the number of people who would be eligible to pay the all-age graduate tax is much larger than the number who are repaying Plan-2 student loans. This gap would narrow over time as those who graduated 40 years earlier drop out of the Green-Mason stock until all pre-2016 graduates have retired, then the difference reflects assumptions about exemptions from the graduate tax and the length of time after graduation that loans and taxes are payable. In the case where $\lambda = 0.9$ the size of the population eligible to pay the graduate tax is smaller than that eligible to repay student loans because student loans are repayable by those who live abroad. When $\lambda = 1.0$ the size of the population eligible to pay the graduate tax is larger than that eligible to repay student loans because while both loans and taxes are repayable by those who live abroad, the graduate tax is levied up to 40 years after graduation rather than 30 years as with Plan-2 student loans.

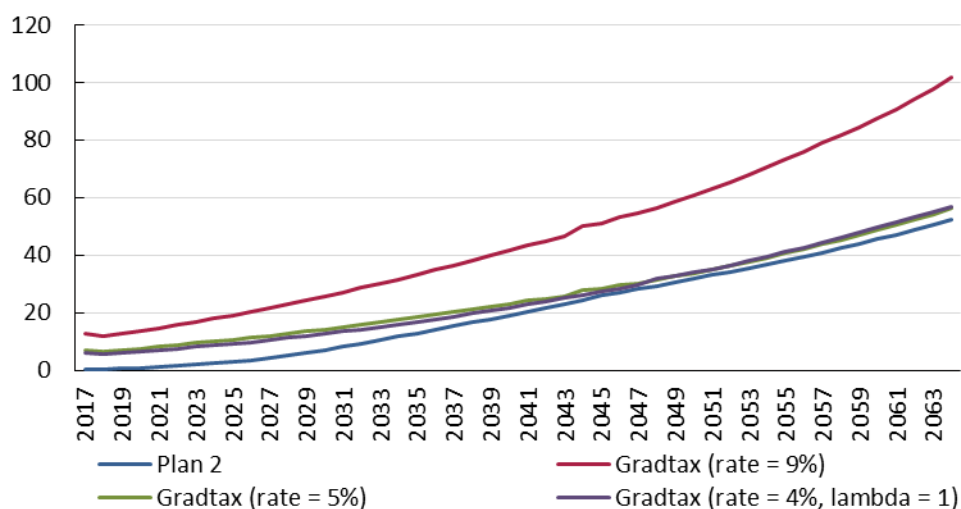
Figure 7: Number of graduates eligible for Plan-2 student loans (red) and variants of all-age graduate tax (green and blue)



Source: NIESR calculations.

The amount of money that would be raised by the all-age graduate tax depends on the size of the liable population, their incomes, the rate of tax and the threshold chosen. Figure 8 shows three estimates: one where the rate is set at 9% (red), one where it is 5% (green) and one where the rate is 4% and $\lambda = 1.0$. These are plotted against estimated repayments of Plan-2 student loans. For comparability, the threshold for the graduate tax is set at the same level as for student loan repayments.

Figure 8: Graduate tax receipts when rate is 9% (red), 5% (green) and 4% with $\lambda = 1.0$ (purple) compared with repayments of Plan-2 student loans (blue) (£ billion)



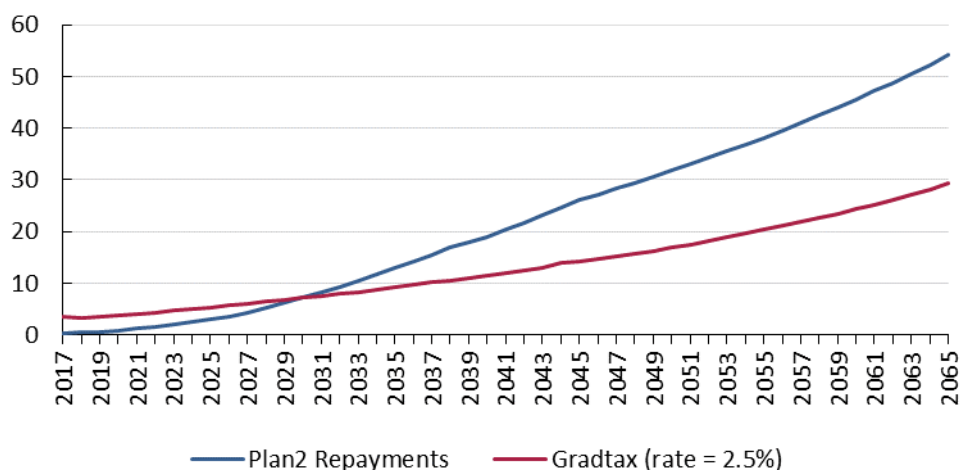
Source: NIESR calculations.

As figure 8 shows, for the same tax rate (9%), receipts from an all-age graduate tax are much higher than receipts under the present Plan-2 student loan scheme. This is for two reasons. First, as figure 7 shows, the population eligible for the tax is higher at least until the late 2030s while the student loan scheme is maturing. Second, an all-age graduate tax does not have the feature of a student loan scheme that a graduate's liability is limited to repaying their loan plus interest. As such, an all-age graduate tax would be levied on the income of higher-income graduates past the level at which they would have repaid their student loans. That is why the revenue raised from the all-age graduate tax would be higher beyond the 2030s, even though when $\lambda = 0.9$ the number of people paying the tax would then be smaller than the number of people repaying student loans.

These features mean that an all-age graduate tax could raise the same amount of money as a student loan scheme with a much lower tax rate. Figure 8 shows that in the long run (when pre-2016 graduates have retired) an all-age graduate tax rate of about 5% would raise roughly the same amount as the student loan scheme with a rate of 9%, even when the tax is not payable by non-residents. A rate of 4% would be sufficient if the population liable to the tax were extended to non-residents. Of course, in the short run, the all-age graduate tax would raise more because it is levied on a bigger population.

In fact, Green and Mason suggested levying the all-age graduate tax at a rate of 2.5 per cent on income over £21,000, rather than the £25,000 threshold assumed here for 2018, with tapered rates for earnings between £21,000 and £25,000. They calculated that this package would raise £3.6 billion in 2016. Our calculations are consistent with this. As figure 9 shows, a graduate tax at 2.5 per cent on income over a £25,000 threshold would have raised £3.6 billion in 2018. This would continue to generate more revenue than Plan-2 student loan repayments until around 2030, but would then raise substantially less than student loan repayments.

Figure 9: Graduate tax receipts when rate is 2.5% (red) compared with repayments of Plan-2 student loans (blue) (£ billion)



Source: NIESR calculations.

The reasons for the lower amount raised from an all-age graduate tax set at 2.5% in the longer term are: first, that the rate at which the tax is levied (2.5%) is lower than the rate at which student loans are repaid (9%); second, that the population that the tax is levied on is smaller because it is restricted to people working in England who attended English universities and excludes the income of those who attended English universities but work outside England. The lower amount raised is despite the fact that the tax would be levied on income for a longer period after leaving university (here 40 years rather than 30 years as with the student loan scheme) and that some very high earners could end up paying more because their liability is not restricted to repaying their student loan plus interest.

Legacy issues

One issue that would need to be addressed if an all-age-graduate tax were to be introduced is whether to compensate graduates who had already contributed to the costs of their higher education through student loan repayments and what to do about past graduates making Plan 1 student loan repayments.

Green and Mason (2017, p25) suggest that those who had already repaid their student loans in full be exempted from an all-age graduate tax, and those making Plan 1 repayments be offered the choice of whether to switch to the all-age graduate tax. But this would be inequitable. It would result in higher earning past graduates who had either repaid their student loans in full or who opted to stay within the Plan 1 scheme having a lower tax liability than both their older and younger counterparts who would be liable to an all-age graduate tax on all their income.

An alternative, and fairer, approach would be to provide graduate tax credits for all earlier student loan repayments, including repayments of Plan-1 student loans.¹⁶ This would reduce the amount of graduate tax collected by reducing the amount collected from graduates of the past twenty years. So, for example, a graduate who had already repaid £10,000 to the SLC would not pay any graduate tax until their graduate tax liabilities exceeded £10,000. This would mean that graduate tax payments would be lower than in our earlier calculations. Over time this concession would lower graduate tax payments by up to around £15 billion, the cumulated amount of student loan repayments so far.¹⁷ In addition, cancelling all scheduled future Plan 1 student loan repayments from 2020 would cost £35 billion cumulatively.

Despite these concessions, replacing the current student loan system with an all-age graduate tax set at 4% would collect more revenues over time. Table 5 shows that the amount collected from an all-age graduate tax if it were introduced in 2020 would nevertheless exceed the amount expected to be collected in Plan-1 and Plan-2 student loans even after allowing for the cost of compensating those who have already repaid their student loans.

¹⁶ As shown in figure 5, Plan-1 student loan repayments are flattening out at around £2.5 billion (DfE, 2019).

¹⁷ Table 4A(ii) 'Student loans in England financial year 2018-19', Student Loan Company.

Table 5 Public finance implications of switching to all-age graduate tax in 2020 (£ billion)

Component of policy	Cumulated revenue 2020-2060
Introduce all-age graduate tax at 4%	+ 1254
Cancel Plan-2 student loans	-1079
Cancel Plan-1 student loans	-35
Compensate for past student loan repayments	-15
Total	+ 125

Rows (1) and (2) are undiscounted cumulated values of future nominal repayments from 2020 to 2060, as shown in the purple and blue lines in figure 8.

Row (3) is the undiscounted cumulated value of future nominal repayments from 2020 to 2060 of plan 1 student loans, as shown by the green line in figure 5.

Row (4) is the undiscounted sum of past nominal student loan repayments.

Source: NIESR calculations, SLC (2019).

5. Comparison of different proposals and conclusions

A useful organising framework to explore the effects of different reform proposals on the public finances is the identity showing the cost to the general taxpayer (C_t) of providing higher education in England to each cohort of students:

$$C_t = G_t + M_t + O_t - PV_t - T_t \quad (1)$$

where G_t is direct payments, either to universities in teaching grants or to students to use at universities by way of a National Learning Entitlement, M_t is the amount paid out to students in maintenance grants, O_t is the outlays of the Student Loan Company that are repayable in the future, PV_t is the present value of loan repayments by the year t students, and T_t is the amount raised by an all-age graduate tax.

Table 6 summarises these amounts for the current system as it applies the most recent academic year (2018-19) and as set out in recent reform proposals, including the *Augar Review*, the Green-Mason (2017) all-age graduate tax proposal, the abolition of tuition fees and restoration of maintenance grants, as proposed by the Labour Party, and the Schuller *et al.* (2018) National Learning Entitlement proposal.

Because the different proposals are nuanced, refer to different years, generate flows of repayments or taxes at different dates, and make a range of detailed assumptions such as about take-up of the various schemes, these costings are deliberately stylised so as to make the proposals directly comparable in terms of their financing implications. In particular, it is assumed that the overall outlay on higher education by the government is unaffected by the different proposals. In other words, replacing student loans with maintenance grants, for example, would not change the amount paid out by the government. It would, of course, affect the amount the government got back in loan repayments and hence the cost to the general taxpayer.

Table 6 Public finance implications of current system and recent proposals (£ billion, 2018)

	Outlays			Receipts		Cost
	Teaching Grants/NLE	Maintenance Grants	Outlays of the SLC	Present Value of loan repayments	Graduate tax receipts	Cost to general tax payer
	G_t	M_t	O_t	PV_t	T_t	C_t
Current System ⁽¹⁾	1.2	0	14.1	8.0	n/a	7.3
<i>Angar Review</i> ⁽²⁾	2.7	Y	12.6 – Y	8.5	n/a	6.8
All-age graduate tax ⁽³⁾	15.3 – Z	Z	0	n/a	8.0	7.3
Abolition of student loans ⁽⁴⁾	15.3 – Z	Z	0	0	n/a	15.3
National Learning Entitlement ⁽⁵⁾	4.7	0	10.6	6.0	n/a	9.3

Notes:

(1) Outlays of SLC include £8.7 billion of tuition fee loans and £5.5 billion of maintenance loans.

(2) *Angar Review* costings refer to 2022/23 in 2019 prices. Cutting tuition fees would cost £1.5 billion, this would instead be paid directly to universities in higher teaching grants. Maintenance grants would be at £3,000 pa for poorest students, the overall cost (£Y) of which would reduce outlays of SLC.

(3) Estimate based on graduate tax rate of 4 per cent and broader tax base than suggested by Green and Mason (2017). An upward adjustment is made to 2018 figure to account for expected growth in incomes of graduates. The costing assumes SLC outlays are reallocated to maintenance grants and teaching grants (£Z).

(4) Similar to Labour Party proposals. Labour notes that spending on maintenance grants in the last year before abolition was £1.57bn (2015-16 prices). The costing assumes SLC outlays are reallocated to maintenance grants and teaching grants (£Z).

(5) NLE cost of £3.5 billion per annum, based on a million full-time students receiving £5,000 for each of the first two years of degree study. This would be additional to teaching grants of £1.2 billion. Assuming that the NLE is used to reduce borrowing from the SLC this would reduce the outlay of the SLC to £10.6 billion.

As the figures for 2018 in Table 6 show, the current system results in an expected cost to the general taxpayer in the region of £7-8 billion per year.¹⁸ This is the difference between government outlays in teaching grants and loans for fees and maintenance of around £15 billion and the present value of expected future loan repayments of around £8 billion. This can be thought of as the taxpayer subsidy to the current group of full-time undergraduates. With around a million undergraduates at university, this is worth an average of around £8,000 per annum for each year of study, just under £25,000 per student for a typical three-year course.

A common criticism of the current system is that students leave university with levels of student debt that are too high. This criticism is to some extent misplaced in that graduates of the scheme do not start to make repayments until their income is relatively high. A more valid criticism would focus on the direction of the taxpayer subsidy. It can be argued that, by providing the largest subsidies to those who turn out to be low earners, the current system is directing students to low value courses. A well-designed subsidy would encourage students and courses where the social benefit to higher education was largest. That would include a subsidy to those who turn out to be higher earners.

Augar Review

The *Augar Review* made recommendations to reshape the financing of post-18 education, including more investment in level 4 and 5 further education. The *Review* recommended broadly cost-neutral changes to the current system for higher education. These included reducing the cap on tuition fees to £7,500 per year and replacing lost fee income for universities by increased teaching grants (worth around £1.5 billion per annum when there are a million students), reintroduction of maintenance grants for the most disadvantaged students, reducing the threshold at which loan repayments start, extending the period over which student loan repayments are made to forty years and reducing the interest rate on student loans during study. The recommended changes to higher education are estimated to save £0.5 billion, but involve some redistribution of the taxpayer subsidy from middle income students who would have longer to make student loan repayments to higher earners who would make smaller loan repayments and to those who would benefit from maintenance grants.¹⁹ The changes would also mean that a lower proportion of student loans would be expected to be written off, so that the RAB charge would be lower.

Britton and van der Erve (2019) analyse the *Augar Review* proposals and conclude that, while broadly cost neutral, they would improve the current system by cutting the debts of students from poorer backgrounds and by being more tightly regulated. In particular, a claimed advantage is that the government would have more leverage over universities in the type of courses that are provided and that this would enable it to reduce the subsidy to poor value courses.

All-age graduate tax

The all-age graduate tax proposal of Green and Mason (2017), analysed in section 4, aims to address inter-generational fairness by reducing the financial burden on younger graduates who have been subject to fees and loans, and by requiring a contribution from older generations of graduates who received their higher education free of charge or with much lower tuition fees.

As demonstrated in section 4, an all-age graduate tax at a rate of around 4 per cent would in the longer-term raise a similar amount as the current Plan-2 student loan scheme. In the short term it could raise considerably more as it would be levied on a larger group of graduates (figure 8). As also discussed in section 4, enough revenue would be generated to compensate those graduates who had already made substantial student loan repayments so that they were not taxed twice for the cost of their university education.

¹⁸ Britton *et al* (2019) put the figure at £8 billion for the 2019 cohort of undergraduates.

¹⁹ Calculations based on 2024-25 steady state (p204 of Augar Review).

The main difference then between an all-age graduate tax and the current student loans system is distributional. The winners from this policy would be those graduates who would pay a graduate tax of 4% rather than a student loan repayment at 9% on their marginal income. For graduates at the median of the earnings distribution, this would have corresponded to annual savings of around £1,300 in 2018. Some high earning graduates would be worse off because eventually they would pay more tax than they would save in student loan repayments. This is because the all-age graduate tax would be levied on all of their income whereas their liability under Plan-2 student loan scheme is capped at the amount borrowed plus interest. The main losers from this policy would be those who graduated before student loans were introduced who have hitherto made no explicit contribution to the costs of their higher education.

Labour Party policy

Labour Party policy is to 'remove university tuition fees and reinstate maintenance grants' which in 2018 it estimated would cost £11.2 billion annually (Labour Party, 2018). It is not clear that the policy would be that costly, though the cost would depend on the level at which maintenance grants were reintroduced and whether existing student debt was also written off. Britton *et al.* (2019) calculate that the policy would cost just over £6 billion if maintenance grants were brought back for the poorest students. If the policy were to replace tuition fees with teaching grants and existing maintenance loans with maintenance grants so that students no longer made a direct contribution to their higher education then the additional cost to the taxpayer would be closer to £8 billion, representing the present value of student loan repayments no longer collected. There would be some additional expense as those students who are currently self-funding would also be able to take advantage of free tuition.

This policy is similar to the Green-Mason proposal in that it eliminates student debt for future entrants to higher education but it does so by pushing the cost of subsidising them on to the general taxpayer rather than the graduate taxpayer in the Green-Mason case. According to HMRC, increasing the basic rate of income tax by 1p in the pound currently raises £5.6 billion and increasing the higher rate by 1p raises £1.3 billion (HMRC, 2019). So, it would take a rise in the basic rate of 1½p in the pound or a rise in the higher rate of 5p in the pound to cover the cost of the Labour Party's proposals. Depending on how it was financed, the winners from this policy would be recent graduates whose effective tax rate would be reduced by no longer being liable to student loan repayments at 9p in the pound. The losers from this policy would be non-graduates and those who have already graduated, who would face higher taxes. Compared with the Green-Mason proposal the main losers would be high earning non-graduates.

A National Learning Entitlement

Schuller, Tuckett and Wilson (2018) have proposed a National Learning Entitlement (NLE) that would enable all those aged 18 and above subsidised access to publicly provided, or publicly recognised, education and training for the equivalent of two years. Schuller *et al.* suggest that the NLE be set at £5,000 per year and that it could be used for study at Levels 4-5 where further education overlaps with higher education. Loans would be available where university fees are higher than £5,000 and to cover maintenance. One of the aims of the proposal is to equalise public support for students across further and higher education, though it is unlikely it would have that effect once student loan subsidies are taken into account.

Schuller *et al.* (2018) set out estimates of the total costs of the proposal, including the costs for those who choose further education and older learners. Here we focus on how it would affect the cost for those going in to higher education.

On the assumption that the same numbers of students went to university and that fees were unchanged, the annual outlay on the NLE for university students would be around £3.5 billion, which would reduce the amount that they would need to borrow and repay (table 6). The overall outlay that the government would make for higher education would be unaffected: NLE payments would be matched by lower SLC outlays. The key question for the overall cost of the proposal is how it would affect loan repayments. Lower student debt liabilities would result in lower loan repayments, primarily by higher earning graduates. On the assumption that repayments fall in line with loans, the overall additional cost to the taxpayer of the NLE scheme as used by university students would be about £2 billion per annum.

The NLE has some features in common with the *Angar Review* proposals. Whereas the *Angar Review* proposals would reduce university fees and student debt by expanding teaching grants, the NLE effectively provides the teaching grant to students for them to decide where they spend it. The additional cost of the NLE could be reduced further by adopting some other elements of the *Angar Review* proposals such as longer loan repayment periods.

Assessment

The current approach to financing higher education by tuition fees and income-contingent student loans has some merit in subsidising a socially desirable activity and providing insurance to students that they will not be liable for the costs in all eventualities. But it is by no means clear that the level of subsidy to higher education is socially optimal or well-directed. The lack of transparency over the impact on the public finances has not helped clarify this issue.

Many experts agree that there are aspects of the current system that need to be reformed. The system is seen to promote higher education at the expense of other forms of education and training and to be unfair in loading the costs on to recent higher-earning graduates. Simply abolishing tuition fees and reinstating maintenance grants, as proposed by the Labour Party, would address some issues but do little to address some other failings of the current system. Suggestions for a National Learning Entitlement and an all-age graduate tax should be considered. Some form of National Learning Entitlement would make the subsidy to higher education more transparent, foster student choice and discourage low value university courses. An all-age graduate tax would help distribute the costs more fairly across the graduate population and ensure that those who have benefitted from subsidies to higher education in the past would contribute more to the cost of higher education than those who have never been to university.

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