A question of degree

Why we should cut graduates' taxes and pay for it by reducing the number of low value university courses

ONWARD

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Onward is a powerful ideas factory for centre-right thinkers and leaders. We exist to make Britain fairer, more prosperous and more united, by generating a new wave of modernising ideas and a fresh kind of politics that reaches out to new groups of people.

We believe in a mainstream conservatism – one that recognises the value of markets and supports the good that government can do, is unapologetic about standing up to vested interests, and assiduous in supporting the hardworking, aspirational and those left behind. Our goal is to address the needs of the whole country: young as well as old; urban as well as rural; and for all parts of the UK – particularly places that feel neglected or ignored in Westminster.

We will achieve this by developing practical policies that work. Our team has worked both at a high level in government and for successful thinktanks. We know how to produce big ideas that resonate with policymakers, the media and the public. We will engage ordinary people across the country and work with them to make our ideas a reality.

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Foreword

One of us went to university. The other started work as an apprentice in a car factory and took a degree later through her employer. We both ended up as MPs.

That's how it should be. There should be lots of different ways to learn and improve your skills.

You should be able to get to the top jobs and top qualifications whether you go to university, or learn on the job, or go to a technical college.

But at present we have a dramatically lop-sided system.

University education dominates at the top of every profession, and every institution.

In contrast, technical education and apprenticeships have been the poor relation for decades, neglected and underfunded. Until recently, these courses have not even provided any route to high level qualifications or top jobs.

In recent years that has started to change, with the creation of higher level technical education, degree apprenticeships and the forthcoming Institutes of Technology.

But still there's a long way to go. And a lot to change.

Thanks to new government data we now know that there are many people for whom it is not worth incurring over £50,000 of debt to obtain a university degree - either for them, or for the government. This paper concludes it is between a fifth and a quarter of university students.

We now know specifically which courses, at which institutions, see their graduates earning too little for their degree to have been worth it financially.

That's not the only way in which the facts have changed in recent years either. New data on the dramatic imbalances of wealth between generations makes it clear that we need to take urgent action to help younger generations enjoy the same opportunities their parents had.

This paper proposes that we boost the incomes of younger graduates with a graduate tax cut which will halve the repayments of anyone with a student loan. Unlike cutting tuition fees, which does nothing for those who have left university, it will benefit people whether they are past, present or future students.

It proposes that we pay for this tax cut by reducing the cost to the taxpayer of subsidising low value university courses that don't benefit their students. Roughly half of the student loans issued each year are now not expected to be repaid. 83 per cent of students won't repay in full. So if we could steer people away from low value courses towards either higher-value university courses, or towards upgraded technical options – like graduate apprenticeships – then we could save enough to pay for a tax cut that will benefit younger graduates, and to invest in further improving technical education.

In 1999 Tony Blair set a target for 50 per cent of young people to go to university. A goal to simply expand the numbers at university may have made sense before we had data on which courses were worth it. But we now know that many courses won't benefit their students financially. So our goal should change – we should aim instead to maximise the number of young people learning in ways that will actually benefit them in the long term.

Earning a living is not the only reason people study. Of course, education has a value in its own right. There will always be people studying things that are beautiful or important in ways that don't add to GDP.

But for most people, study is a route to a job, a career, a better income.

At the moment too many of those young people are being sold a false promise.

Too many are facing hefty repayments for degrees that won't help them financially, and too few are being offered quality technical and apprenticeship options instead.

It's time to rebalance the system, and create a country in which there are more good options and more ladders to climb up.

Neil O'Brien OBE MP and Gillian Keegan MP

Summary of the argument

A summary of the problems with our higher education funding system

The debate about student loans has been focusing on the wrong problem.

The problem is not just the quantity of debt students can accumulate. Nor is it just the high interest rate applied to student loans, which takes full repayment further out of reach for most graduates.

The real problem is that many graduates never earn enough to pay back these loans and those that do are taxed at rates deemed unacceptable elsewhere in the labour market. As this paper outlines, a tenth of current undergraduates will earn less than £25,000 a decade after they graduate. They will not be paying off any of their loans, even ten years after leaving. A total of 83 percent of student loans will now never be paid back in full. At the same time, those graduates that are paying back their loans can face a marginal tax rate of up to 51 pence in the pound.

This is an uncomfortable truth for policymakers who argue that current student loans are justified by the benefit to graduates' earnings potential. For many at university, and many who have already graduated, university is simply not going to be worth it economically – either for students saddled with debt they cannot pay off, or taxpayers who end up paying it instead. Indeed, nearly one in five graduates are no better off after five years than if they had chosen to do an apprenticeship instead.

Unsurprisingly, focusing on the wrong problems has led most policymakers to the wrong solutions.

This is particularly true of the proposal to abolish student loans entirely. Because only high earning graduates repay their loans this would by default only help the few, and do nothing for the many. It would also only help future students, creating a striking unfairness between current and recent students. It would have an implausible cost to the taxpayer, estimated at £100 billion. Finally, it would create a pressure to limit access, as seen recently in Scotland, where students with top grades are now denied places due to insufficient funding for places. Indeed, English students are now offered more choices at Scottish universities than Scottish students are.

Others mistakenly believe that reform of the interest rate for student loans or the threshold at which they start to be repaid will restore confidence in the system. While both are arguably set at the wrong level, up to 3 per cent plus RPI and £25,000 salary respectively, it is unlikely that minor changes will assuage public anger, and both reforms could considerably increase the stock of unpaid debt added to Public Sector Net Borrowing in thirty years' time.

For different reasons, the proposal that student loans should be replaced entirely with a graduate tax is also flawed. The current system already operates much like a graduate tax, albeit one that ends 30 years after graduation. A fiscally neutral move to a graduate tax would create some winners and losers, but leave most people paying pretty much what they were before. It would also worsen the UK's "brain drain", because people could avoid the tax by moving overseas.

The right answer, as we argue in this paper, is to address the fundamental issues of unfairness we outline above – excessive graduate marginal tax rates, the earnings trap of low value courses, and the failure to provide school leavers with a meaningful technical alternative to university. Doing so would build upon the advantages of the current system, which has supported a 34 per cent rise in the numbers going to university in the last decade, widened participation to those

from poorer backgrounds, and put Britain's universities on a sustainable financial footing – in turn supporting investment in world-leading research facilities and helping Britain to develop four of the top ten global universities in the world.

First, ministers should introduce a tax cut for graduates, halving the amount to be repaid by introducing a tax 'cashback' worth 50 pence in every pound repaid. This would reduce the striking 51 per cent marginal rate of tax paid by graduates earning over £46,350 a year. Having abolished the 50p tax rate for those earning over £150,000, we should not expect young graduates earning a third of that to be facing a 51 pence rate. Unlike cutting tuition fees, a graduate tax cut would be fair between generations, as it would apply to all student repayments, regardless of when the graduate studied. Unlike simply rebranding fees as a 'graduate tax', it would put a tangible cash return in the pockets of graduates. Finally, it would encourage graduates to stay and work in the UK, delivering a net 'brain gain' to the UK, because tax cuts would only apply to UK repayments. Compared to other options, 'halving how much you pay back' is also simpler to explain.

Second, we argue that ministers should crack down on courses that offer extremely limited economic value for money to students ten years after graduation. It should ring alarm bells that, according to Onward's analysis of the Department for Education's recent data, four in ten – 40.6 per cent – of graduates had studied courses which delivered median earnings of less than £25,000 after five years (so paying nothing back) and that the majority of graduates from creative arts courses will on average still earn less than the £25,000 repayment threshold a full decade after graduation. It should be noted that a wide range of courses are classified as creative arts courses and not all of them offer a poor return on investment.

Also this is not to say there are not many worthwhile non-economic reasons for going to university. But there is no good reason a student should be expected to take out a £9,250 a year loan to pay for a course of little or no economic value, and institutions that rely on the provision of such courses are exploiting taxpayers who are ultimately liable. By diverting people from such low value courses towards better higher education or technical education options we can make savings – enough to pay for the graduate tax cut described above, and possibly enough to invest in technical education.

Third, we argue for much greater attention to be given to the ugly duckling of British education: post-18 technical education. Despite neglect and underfunding, technical education is already a better option for many young people than low-value high-cost university courses. The Government should reduce the number of places in low value university courses. Some people should be diverted to higher value university courses. Others should flow to a dramatically expanded graduate level technical education sector – a sector that is only just emerging in Britain. This would deliver higher earnings for graduates, lower costs for taxpayers and fulfil the potential of the technical education system that has been neglected by policymakers for too long. It will also be welcomed by employers who have long argued that there is a significant skills gap between what the education system produces and what the workplace needs. This paper sets out a number of options for how ministers could bring about this shift.

The current system needs to change.

The current political debate is mainly about shifting the economic cost of higher education between the general taxpayer and the individual graduate. This paper looks at how we can reduce the underlying economic cost – which arises because too many people are studying courses with high costs which are not repaid by higher earnings. By reducing the underlying cost we can make the individual graduate and the collective taxpayer better off.

Today we have data on the returns from individual courses – data which didn't exist when the current system was set up. We can see which courses at which institutions lead to low earnings for their graduates. We now also have new data on the dramatic and accelerating imbalance of wealth between generations. We know that compared to their parents young graduates are dramatically less likely to own their own home, or to have generous defined benefit pensions. We know that a typical adult born during 1981–85 had half as much total net wealth at age 30 as a typical adult at the same age five years before them.

The facts have changed – now it's time for policy to change.

Recommendations

Problem with how we fund higher education	Recommendations
Graduates face high marginal tax rates of up to 51 per cent for those on the higher rate, and a 41 per cent rate for those earning over £25,000.	1. Halve repayments by introducing a graduate tax cut, worth 50 pence in every pound of loan repaid.
	2. The graduate tax cut should apply to all student loan repayments, whether paid by past, present or future graduates, thereby treating past, present and future students equally.
Many expensive university courses see their graduates with low earnings afterwards.	3. Protect students and taxpayers by reducing the flow of students into low value university courses.
	4. Divert students into either higher value university courses or graduate level technical education.
Technical education is already a better route for many students, despite political neglect. But technical education is underfunded and graduate-level technical education is very limited at present.	5. Grow higher technical education, re-investing the savings made from reducing low value university courses to support one-for-one investment in higher and graduate-level apprenticeships.
	6. Put technical education on the same footing as university courses in school leavers' application process with a single portal to apply for both.
Accounting for higher education loans in the public accounts is opaque, complex and has skewed decision making against technical education, while enabling the expansion of poor value university courses.	7. In the short term, make university funding more open and transparent, by including a measure of the Resources Accounting and Budgeting (RAB) charge in the ex-measures they publish.
	8. Over a longer period, deliver on the ONS' review suggesting that the element of the loan that will never be repaid should be treated as an in-year cost.

The challenge

A summary of the problems with our higher education funding system

This section describes the problems with our higher education funding model, which have led to falling public confidence, high costs for graduates and unsustainable long-term liability for the taxpayer. The next section goes on to explore some of the solutions proposed by others, and the problems associated with each of them.

A summary of the problems with how we fund higher education

1. **Graduates face some of the highest marginal tax rates of any taxpayers in England and Wales, compounding imbalances of wealth between the generations**

   - Young graduates pay an additional 9 per cent of their salary above the relevant earnings threshold. This means a basic rate taxpayer earning over £25,000 has a marginal tax rate, including tuition fee repayments, of 41 per cent on all earnings over the repayment threshold. Higher rate taxpayers pay a marginal tax rate of 51 per cent on all earnings at the higher rate.
   - This means that graduates earning over £46,350 (in 2018/19) face some of the highest marginal tax rates in Britain for many years after leaving university.[1] The Government has previously concluded that even the highest earners should not pay more than 50p of tax in every pound earned, cutting the additional rate from 50 per cent to 45 per cent for earnings above £150,000.
   - This high cost places an additional burden on graduates at exactly the time where they would previously be attempting to accumulate wealth. This is compounded by the fact that millennials, born 1981–2000, earn less than the previous generation did at the same age. This wage stagnation is particularly striking for those attending university given today's graduates experience no earnings premium compared to previous generations of graduates, despite investment in UK higher education over the last twenty years.[2]
   - When we turn from income to wealth, the imbalances between generations look much more dramatic. Over just the past 10 years, the proportion of 16–34-year-olds owning their own home fell from roughly half to a third, with the fall in ownership most concentrated amongst mid-income people aged 25–34, for whom ownership rates have more than halved to 27 per cent since 1996. Research by the Resolution Foundation has noted that baby boomer households were "50 per cent more likely to own a home at age 30 than millenials are."[3]
   - Low ownership rates mean that today's young people spend much more of their disposable income on housing costs, further reducing their ability to build up wealth. As Onward has noted previously, those renting can expect to spend on average over 30 per cent on rent outside London and nearly 40 per cent within the M25. This compares to 10 per cent and 15 per cent respectively as recently as the 1980s.
   - The young are also less likely to get access to generous defined benefit (DB) pension schemes.
   - Overall, a typical adult born during 1981–85 had half as much total net wealth at age 30 as a typical adult at the same age five years before them.

2. **In economic terms, university represents extremely poor value for money for some graduates, especially those studying certain subjects**

- Overall, graduates earn more than non-graduates. This was the original argument for a charge to go to university. However, new official data shows us that for a substantial minority of graduates, going to university fails to deliver a substantial earnings premium. In 2016/17, 40.6 per cent of graduates were studying subjects with expected median earnings of less than £25,000 after five years.
- For some, low returns persist over the longer-term. A tenth (9.8 per cent) of current undergraduates will earn less than £25,000, on average, ten years after they graduate, according to median earnings for their subject. This represents 134,000 students each year who won't be paying back anything even ten years after they leave.
- Earnings varies considerably by subject, as set out in Figures 1 and 2. Graduates studying medicine, law, economics and the hard sciences ("STEM subjects") enjoy high returns.
- Lower earning courses included degrees in creative arts, psychology, agriculture, combined studies, mass communications, english and social studies (excluding economics).
- The lowest earning subjects of all were creative arts courses, which had the largest number of graduates of any course type despite the lowest earnings. Ten years after graduating, the median creative arts graduate does not earn above the £25,000 repayment threshold and is not paying anything back.
- There is little evidence that market forces are driving students towards courses with high returns. Indeed, as shown in Figure 2, there also appears to be a small negative correlation between the number of graduates on different courses and the median level of their graduate earnings, though there is substantial variation in these figures.
- The hoped for variation in fees has not materialised and almost all courses have the same high fees. According to research by the House of Commons Library, all but one university charged the maximum student loan cost per course and the average tuition fee per course was £8,905 in 2016/17.[4]
- This means that with the same costs but radically lower earnings, some courses have a much higher long-term taxpayer burden given their graduates' lower repayment rates.
- Combined, these findings suggest that the costs of financing the universities system will be concentrated amongst certain subject areas, and that, on average, some courses will offer much lower returns, and cost the Government more, than other ones.

Figure 1: Average earnings of those in sustained employment, age 29, by course percentile (2015/16)

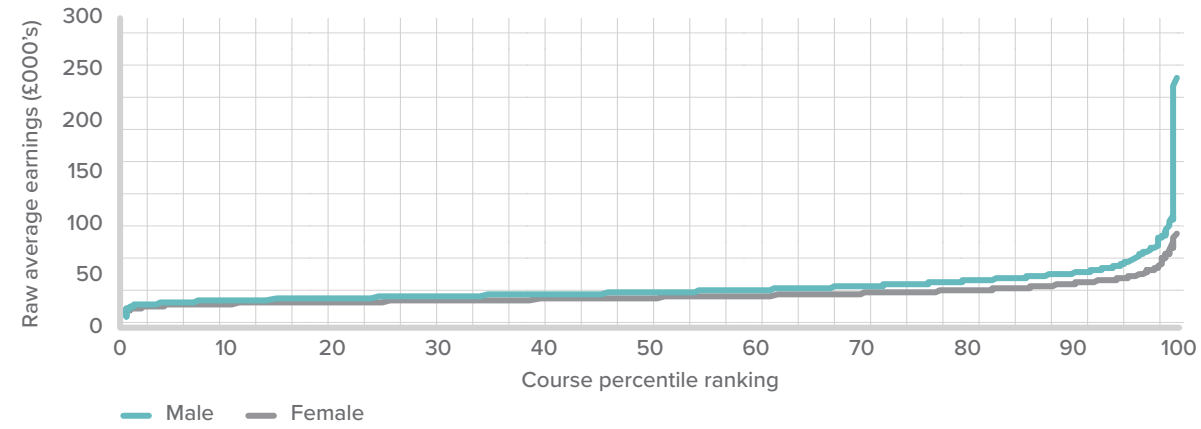


Figure 2: Number of new undergraduates (2016/17) & median earnings five years after graduation (2015/16), by subject

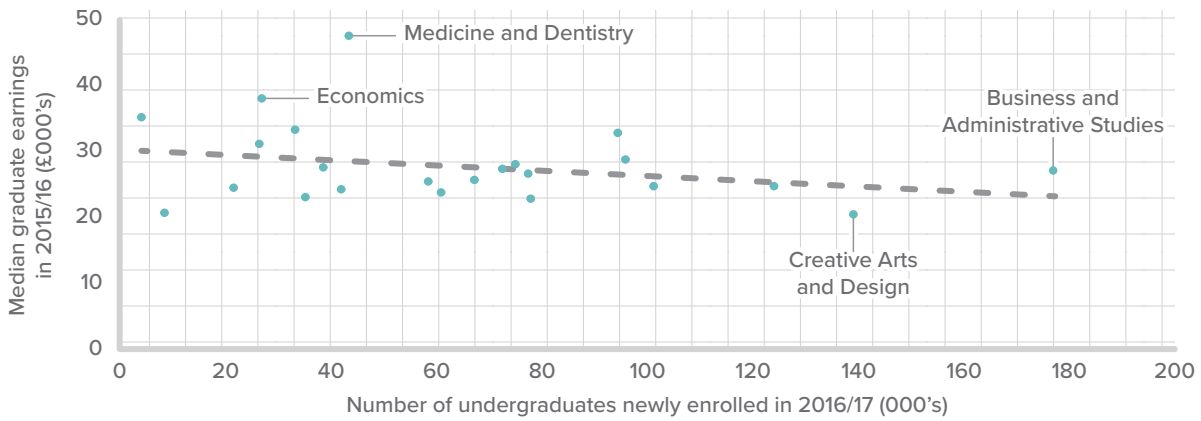
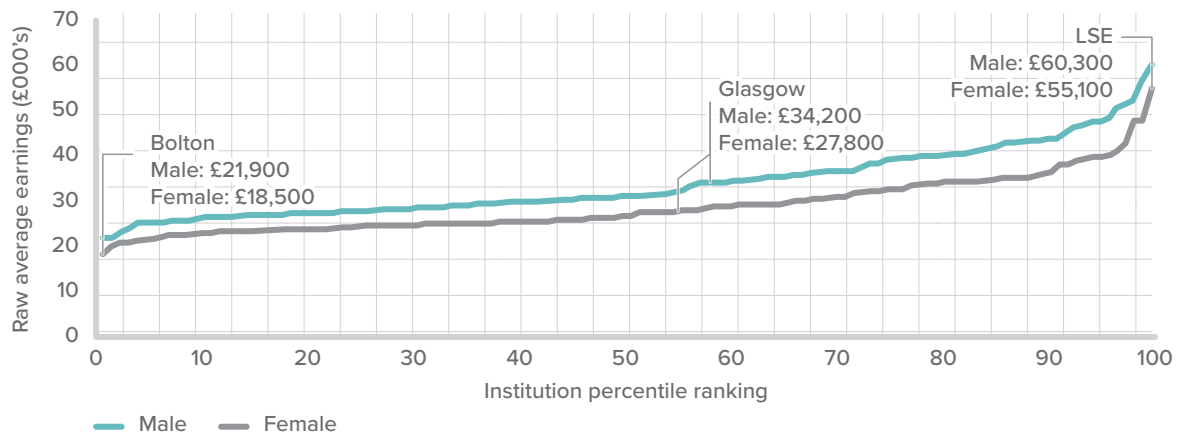


Figure 3: Raw average earnings of those in sustained employment, age 29, by institution percentile (2015/16)



Source: Onward Analysis, HESA enrollment data (2016/17), and LEO Graduate outcomes data (2015/16)

Table 1: Estimated number of new undergraduates enrolled (2016/17) and total median graduate earnings one, three, five and ten years after graduation (2015/16 tax year)

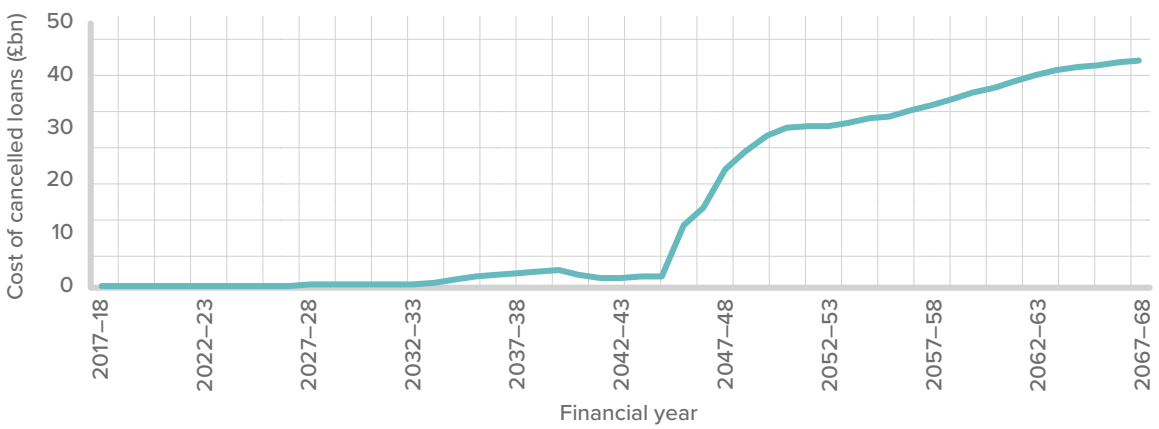
Subject	Number of undergraduates enrolled (2016/17)	Total median graduate earnings (2015/16 tax year)			
		One year after graduation	Three years after graduation	Five years after graduation	Ten years after graduation
Medicine & Dentistry	39,720	£36,000	£42,800	£47,300	£55,100
Economics	24,920	£24,500	£31,500	£37,900	£48,000
Mathematical Sciences	30,610	£22,500	£28,000	£33,100	£40,300
Engineering & Technology	85,885	£25,100	£29,500	£32,600	£40,000
Architecture, Building & Planning	24,595	£23,200	£28,600	£30,900	£36,600
Veterinary Science	4,455	£28,300	£32,400	£34,900	£36,000
Computer Science	68,285	£21,100	£25,200	£27,800	£34,200
Law	53,425	£17,200	£21,500	£25,200	£33,600
Physical Sciences	65,970	£19,600	£23,800	£27,100	£32,800
Business & Administrative Studies	159,870	£19,400	£23,400	£26,800	£32,200
Languages (excluding English Studies)	35,310	£19,300	£24,100	£27,400	£31,000
Biological Sciences (excluding Psychology)	91,660	£16,200	£21,100	£24,500	£30,700
Nursing	86,890	£25,500	£27,200	£28,500	£30,300
Subjects Allied to Medicine (excluding Nursing)	70,500	£21,000	£24,400	£26,400	£29,600
Historical & Philosophical Studies	61,280	£17,400	£22,200	£25,400	£29,300
Social Studies (excluding Economics)	112,290	£18,000	£21,800	£24,500	£28,900
English Studies	38,555	£16,300	£21,400	£24,000	£27,900
Education	55,400	£18,300	£21,600	£23,700	£27,500
Mass Communications & Documentation	32,490	£15,900	£19,700	£22,800	£27,300
Psychology	71,040	£16,300	£20,100	£22,600	£26,700
Combined	20,035	£19,600	£21,900	£24,200	£25,600
Agriculture & Related Subjects	8,425	£16,500	£19,100	£20,500	£24,300
Creative Arts & Design	125,910	£14,300	£17,800	£20,200	£23,200

Source: Onward Analysis, HESA enrollment data (2016/17), and LEO Graduate outcomes data (2015/16)

3. **Low returns and high interest rates combine to ensure most loans are never fully paid back**

- A combination of high fee levels, a relatively high repayment threshold, and the level of interest levied on student loans means that, in most cases, they will not be fully paid off before being eventually written off at a cost to the taxpayer.
- For example, a graduate earning a median wage of £28,000 attending university under the current system (post-2012) will pay off £270 of their student loan per year. Over the same period, their loan will accumulate interest of £280 after accounting for inflation, meaning their student debt will increase by £10 in that year.[5]
- This means that most loans will never be repaid, a fact exacerbated by recent changes. Prior to the 2017 changes to interest rates and repayment thresholds, it was estimated that approximately 77 per cent of loans would never be repaid. Since the changes, the Institute for Fiscal Studies (IFS) now estimates that 83 per cent of graduates will never fully pay off their loans before they are written off at the 30-year mark.
- This represents a substantial direct cost to government. At present, the expected losses against student loans do not score against the deficit, and will only count against the debt when the write-offs occur 30 years later. However, to give a sense of scale, expected write-offs in 2049–2050 will add an estimated £28.8 billion to the annual borrowing, and the size of write-offs will continue to grow after that.
- These are effectively costs being incurred by the government now, and paid for later when students fail to earn enough to fully repay their loans. As the Lords Economic Affairs Committee has noted, in this way the current system "mask[s] the true cost of higher education,"[6] and distorts the debate about post-school education. The Commons Treasury Select Committee has also raised the concern that current treatment allows the Government to commit funding to higher education with no impact on its deficit targets, incentivising poor fiscal discipline.[7]

Figure 4: Annual nominal cost of cancelled undergrate loans (2017–2068)



Source: Department for Education Student loan forecasts, England: 2017–18

4. **Despite being neglected, technical education is already a better route to higher earnings for many students. If we invested more in higher technical education, it could be even better**

   - Despite the fact that they typically have much higher achievement at school, nearly one in five (18 per cent) graduates are no better off five years after graduating than those who chose to do a non-university route, such as an apprenticeship. On average, graduate earnings overtake those for basic apprentices after age 24, although apprentices are likely to have enjoyed several years of earnings and will have avoided debts from their time at university as well as the need to make repayments in the future.
   - Higher level technical education and higher level apprenticeships are very new and limited in scope at present. What data we have for them suggests those who do these courses see comparable earnings to university graduates in the years after finishing their apprenticeships, despite typically lower prior attainment. This, plus the fact that apprentices will have several years of earnings and will not have debts of over £50,000, is likely to leave many of them better off overall.
   - If we improve and grow higher technical education, and more students with higher prior attainment go down this route, we are likely to see the earnings of those on graduate apprenticeships and other higher technical education further increasing relative to university graduates.

5. **Those with the lowest prior attainment are the most likely to be financial losers under the current system**

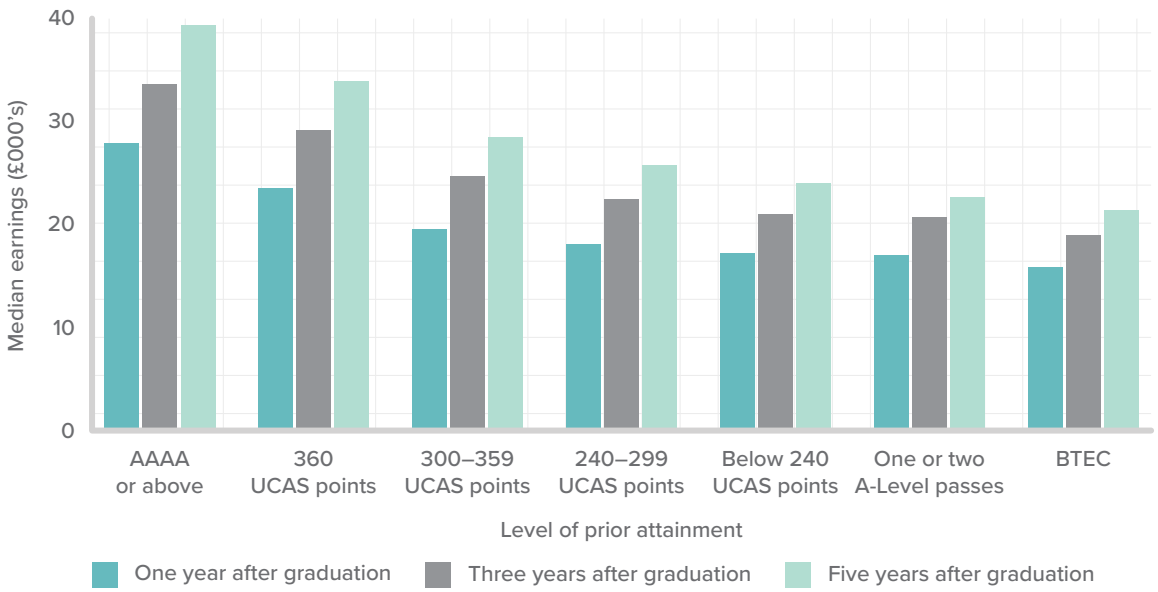
   - The most recent data suggests a clear relationship between pre-university academic attainment and post-university earnings, and that this gap widens over time.[8] With the cost of going to university uniform across courses and institutions, this means that those with the lowest prior attainment are, on average, the most likely to be net losers under the current system.

Table 2: Estimated return to apprenticeships, one to four years after study

Apprenticeship Level	One year after study	Two years after study	Three years after study	Four years after study
Intermediate	£15,100	£15,900	£16,500	£17,300
Advanced	£17,200	£18,100	£19,200	£20,300
Higher (Level 4)	£18,100	£20,100	£22,000	£23,600
Higher (Level 5)	£27,200	£27,800	–	–
University degree	£18,900	–	£22,800	–

Source: Department for Education, Statistical Working Paper: Average earnings post apprenticeship, England, 2010–11/2014/15, 2016 & Department for Education, Graduate outcomes (LEO): Employment and earnings outcomes of higher education graduates by subject studied and graduate characteristics, 2018.

Figure 5: Median graduate earnings by prior attainment and years after graduation (2015/16 tax year)



Source: LEO Graduate outcomes data (2015/16). AAAA equated to 480 UCAS points under the previous UCAS system.

6. **Perhaps unsurprisingly, the public do not believe the current system of student loans is fair or represents value for money**

   - Exclusive polling for this report reveals that 44 per cent of people believe that "there are too many students going to university", compared to just 25 per cent who believe there are not enough, and 35 per cent who believe there are the right number. The number who believe there are too many student places rises to 47 per cent of those with a Bachelor's degree, suggesting that those who go to university do not feel they receive the benefits of doing so.[9]
   - Polling by YouGov in June 2018 revealed that students narrowly support replacing the current system with a taxpayer-funded model, by 40 per cent, compared to 37 per cent who prefer a loan or graduate tax based system, while a significant majority (56 per cent) preferred a simple tuition fee cut over changes to interest rates or repayment threshold.[10]

Why many of the proposed remedies may end up exacerbating the problem, rather than fixing it

1. **Simply abolishing tuition fees does nothing for graduates, and is prohibitively expensive for taxpayers, including many who have not themselves attended university**

   - A popular solution to the problems set out above is to abolish the loan-based system and simply fund higher education from central government revenue. This was proposed in the 2017 Labour Party Manifesto and has since been supported by the former Universities Minister in place at the time of student loans' introduction, Lord Adonis.[11] The proposal is deeply flawed, for several reasons.
   - Scrapping fees would be highly regressive. The greatest beneficiaries would be the proverbial 'few' – high earning graduates who currently repay their loans who would thereafter be subsidised by taxpayers. It would cost £9 billion per year to scrap fees entirely, a cost that would fall on the 'many' – ordinary taxpayers, many of whom may earn low wages and have not been able to attend higher education. For context, raising £9 billion is the equivalent of putting nearly 2 pence on the basic rate of income tax.
   - Abolishing fees in the future would also do little for those who have already left university, who would still have contractual debts, and could create a year-on-year cliff-edge between cohorts that dwarfs those of previous changes in student fees. For school leavers at the time of such a reform, delaying university for a year could mean the difference between £50,000 graduate debt and being debt-free. This powerful incentive to delay could create chaos for universities.
   - During the 2017 General Election campaign, the Labour Party intimated that it was aware of this inequity and pledged to "deal with" outstanding debts as well as future repayments. There is some debate as to whether this was a pledge to cancel debts entirely, a conclusion the Shadow Chancellor invited at the time,[12] or merely a commitment to 'reduce the burden' of debt, as the Labour Leader clarified after the election. In any case, the taxpayer costs of cancelling outstanding student debt, in part or entirely, would create a considerable taxpayer burden. The IFS has estimated that abolishing student loans would cost £30 billion upfront and £6.5 billion-a-year thereafter.[13]
   - Without a student-funded system, the only way to control costs on higher education funding would be through a cap on the number of funded university places. This is the case in Scotland, where the cap has contributed both to shortfalls in training key staff, such as doctors,[14] and significant anger about Scottish students facing higher entrance requirements than other students who pay fees.[15] Front pages in the Scottish papers have highlighted their plight ("Straight As and can't get into Uni") while subject choice at Scottish universities is much more restricted for Scottish students than English students at the same institutions.[16]

2. **Reducing tuition fees from their current level would do little to reduce the day-to-day repayment burden of graduates**

   - There have been various proposals to reduce course fees,including to £6,500, the reported direction that the Augur review may recommend. However, marginally reducing fees would be a largely symbolic gesture: without changes to the repayment threshold or rate, it would do nothing to reduce day-to-day costs for graduates. Their payments above the threshold would remain the same.
   - The main effect of such a change would be to increase the proportion of loans that were paid off in full. This would, in theory, be good for the public finances, as it would reduce the long-term write off. However, it would only deliver that effect if there were no other direct investment into higher education to fill the funding gap created, which could in turn leave higher education institutions underfunded.
   - In short, this would come at significant expense to the Government, in terms of the investment it would have to make to sustain higher education funding, whilst doing little to improve the financial position of graduates in the short-to-medium term.

3. **Replacing loans with a graduate tax is simpler but is unlikely to lead to lower graduate repayments and would worsen 'brain drain'**

   - There is a good argument to be made that the current system operates much like a graduate tax, albeit without the upfront balance sheet cost to the Treasury and with a capped repayment. This is because, while all fee-paying students nominally take on student debt, only those earning above £25,000[17] pay it back and only 17 per cent of people pay off their loans in full.
   - If a graduate tax were fiscally neutral, it would therefore be unlikely to result in medium or high-earning students having lower marginal tax rates than they do now and may merely deliver a different way to ask the same people to pay (broadly) the same amount.
   - Given a graduate tax would, by definition, only apply to graduates working in Britain, it also creates strong incentives for students to study in the UK but then leave to work abroad, to avoid the higher rate the graduate would be liable for. This is not an issue with a loan-based system, given payments are required wherever in the world the debtor is earning.
   - This could exacerbate Britain's existing issue of high-skilled emigration, the so-called "brain drain" which already causes significant economic harm to the UK. One recent study, for example, found that approximately 40 per cent of male emigrants worked in professional or senior managerial jobs, compared to 30 per cent of the population who stayed to work domestically. There were also wide differences in the professional profiles between emigrants, those who stay in the UK, and immigrants.[18]

4. **Shifting the costs to employers would do little for graduates, and create significant distortions**

   - Some have suggested doing away with tuition fees altogether, replacing them with a tax on employers who hire graduates.[19] The intention is that this cost would be passed on to graduates in the form of a lower salary.
   - Aside from the frictional costs this could create for employers, the effect on graduate incomes would be identical to a revenue neutral graduate tax and would suffer from the same problems; increasing the incentive to leave the UK and doing little to reduce the effective tax burden graduates face.
   - Far from passing the costs of higher education to businesses, this reform would leave graduates no better off on a day-to-day basis, whilst creating distortions in favour of hiring foreign graduates, or encouraging British graduates to move abroad.
   - The apprenticeship levy is seen as a tax for the small number of larger employers who pay it. Instead of adding another skills-related tax burden to this, there may be greater value in broadening the levy criteria to ensure it can be used to improve technical education and more widespread access to degree-level apprenticeships.

5. **Altering rates and thresholds might have the desired effects, but compound other issues with loan forgiveness and accounting**

   - Finally, many have proposed changes to repayment thresholds, repayment rates, and the levels of interest charged. There are good arguments for this, especially around the high levels of interest charged. At up to 3 per cent plus RPI, these are considerably higher than commercial rates and, as set out above, can lead to the rapid accumulation of outstanding interest. It is hard not to agree with the Treasury Select Committee's conclusion that no "persuasive explanation" has been given for "why student loan interest rates should exceed those prevailing in the market."[20]
   - A further change to the repayment threshold, following the rise from £21,000 to £25,000 in April 2018, would have the effect of significantly reducing repayments for the vast majority of graduates, benefiting middle-earning graduates the most. However, it would come at a considerable long-run taxpayer cost. The IFS has found that the changes made in April increase the cost of providing higher education by approximately 41 per cent, or £2.3 billion a year.[21]
   - This cost primarily stems from increased write-offs. It is therefore hidden from public sector net borrowing (deficit) figures and forms part of the wider amount that will eventually be added to government spending in 30 years' time. It would therefore increase the stock of government debt from cancelled undergraduate loans, which as set out above is already expected to grow to £28.8 billion by 2049–50.

Solutions

How a graduate tax cut and fewer low value courses would deliver better value for money for students and taxpayers

The facts have changed. A new solution is needed

It is clear that many of the current options being discussed are not sustainable. They are either prohibitively expensive, and therefore likely accompanied by reductions in investment and access, or have little impact on the day-to-day situation graduates face. Those that would have an impact on the repayments of graduates have a high cost, and are not transparent about how that impacts public finances.

A new solution is needed. This would ideally achieve five key objectives:

- It would reduce the day-to-day burden that graduates earning over the repayment threshold face.
- It would protect access to higher education.
- It would continue to finance world class universities.
- It would be transparent about the impact on public finance.
- It would reduce incentives for highly skilled graduates to leave the United Kingdom.

In this chapter, we propose four ways to achieve this; the introduction of a graduate tax cut; moving a proportion of students from low-value university courses to higher-value alternatives; new measures to improve transparency and accountability about student loans; and boosting technical education.

Recommendation 1: Introduce a graduate tax cut, of 50 pence in every pound of loan repaid

As described previously, there are good arguments to characterise our student loan system as a graduate tax. Loan repayments are levied only on graduates earning over £25,000, at a fixed rate of 9 pence in the pound, and with the vast majority of graduates never fully paying back their nominal debt. The main difference is an accounting one, given loan debt has no immediate deficit impact, and is instead replaced with an increase in borrowing 30 years later.

If student loans are, to all intents and purposes, a graduate tax, it follows that ministers could consider a graduate tax cut. This would reduce the effective marginal rate paid by students, whilst delivering transparency on taxpayer costs, without perverse incentives against continued UK residence or unfairness between generations.

Such a tax cut could be set at any rate but this paper recommends a 50 pence in the pound rebate.

This would halve repayments. It would lower the effective repayment rate to 4.5 per cent, reducing the overall marginal tax rate paid by higher-rate-paying graduates from 51 per cent to 46.5 per cent and for basic rate payers from 41 per cent to 36.5 per cent.

Recommendation 2: Apply this graduate tax cut to all loan repayments, whether repaid by past, present or future graduates

The tax cut should apply to all student loan repayments, whether graduates have attended university in the past, are studying at universities at present, or enrol in the future. Doing so would avoid cliff-edges between different cohorts, while also avoiding the enormous costs associated with writing off all existing student debt.

This would be highly scalable, and give policymakers flexibility over time. Unlike simply reducing the repayment rate – which might be contractually difficult for the parts of the loan book that have been sold – this would also allow policymakers to adjust the effective tax rate in line with future earnings and the country's fiscal position. It would deliver the greatest annual repayment reductions for those graduating before 2012, due to a lower repayment threshold, but would deliver significant benefits for younger generations who have much lower levels of wealth, slower rates of wealth accumulation and greater pressures on their disposable incomes.

It would also have the beneficial side-effect of improving the incentives for those graduating with loans to remain in the UK, creating a "brain gain" rather than exacerbating a 'brain drain' as a graduate tax would.

Table 3 sets out the expected costs of a graduate tax cut, at 25 per cent and 50 per cent, using Department for Education data about the expected path of future repayments. The resulting cost is substantially lower than a number of other options proposed. Tax relief on repayment at 50 pence in the pound would cost £1.85 billion per year by the end of this Parliament. Relief at a lower level, for example 2.25 pence in the pound, would reduce the size of the effective tax cut, but also the cost of the policy package.

Table 3: Exchequer cost of a graduate tax cut, modelled at 25 pence and 50 pence in every pound repaid

£ billion	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25	2025–26	2026–27
Forecast repayments[23]	2.50	2.70	3.00	3.20	3.50	3.90	4.40	4.80	5.30	5.80
Exchequer cost at 50 per cent relief (4.5p)	1.25	1.35	1.50	1.60	1.75	1.95	2.20	2.40	2.65	2.90
Exchequer cost at 25 per cent relief (2.25p)	0.63	0.68	0.75	0.80	0.88	0.98	1.10	1.20	1.33	1.45

Source: DfE Student Loan forecasts, England, Plan 1 and 2 loan repayments, 2017–2018.

Note: With a reduction in total student numbers, as suggested later in the report, forecast repayments would be marginally lower, therefore slightly reducing the cost of the tax cut.

Table 4 sets out the number of people who would benefit from such a graduate tax cut, derived from official data on the number of individuals making repayments by the end of this Parliament. The number of beneficiaries is substantial: around 2.8 million people who stand to receive a 50 per cent rebate on their repayments in 2022/23.

The amount that individuals will benefit from a tax cut will depend on both their repayment plan (Plan 1 or Plan 2)[23] and how much they are earning. However, table 5 sets out the likely savings for those on different earnings.

Whilst in a given year the tax cut is more generous for those on Plan 1 who have high income levels, their total outstanding tuition fee balance at that level would be run down within 4–5 years in either case (excluding maintenance loans). Those on Plan 2 would receive a lower in-year benefit, but would, by virtue of the fact that they have a larger outstanding loan balance, continue to benefit for a much longer period of time. This imbalance reflects existing cohort effects between pre- and post-2012 schemes, rather than a new inequality created.

Table 4: Number of beneficiaries if a graduate tax cut were introduced for all student loan repayments

Financial year	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23
Borrowers liable to make repayments, earning above repayment threshold	2,050,000	2,060,000	2,140,000	2,235,000	2,345,000	2,460,000

Source: DfE Student Loan forecasts, England, 2017–2018.

Note: With a reduction in total student numbers, as suggested later in the report, forecast repayments would be marginally lower, therefore slightly reducing the number of beneficiaries of the tax cut.

Table 5: Estimated individual benefit from a graduate tax cut, by earnings level, at 50 pence in the pound

Earnings per annum	Plan 1		Plan 2	
	Annual repayments	Annual tax cut	Annual repayments	Annual tax cut
£20,000	£150.30	£75.15	£0.00	£0.00
£25,000	£600.30	£300.15	£0.00	£0.00
£30,000	£1,050.30	£525.15	£450.00	£225.00
£35,000	£1,500.30	£750.15	£900.00	£450.00
£40,000	£1,950.30	£975.15	£1,350.00	£675.00
£45,000	£2,400.30	£1,200.15	£1,800.00	£900.00
£50,000	£2,850.30	£1,425.15	£2,250.00	£1,125.00

Source: Onward Analysis, Salary Calculator Take-Home pay data.
Notes: Assuming a 5 per cent auto-enrolment pension deduction at all income levels.

Case study: A couple in the North West who are recent graduates

A couple in the North West earn £35,000 and £40,000 a year, respectively, and graduated in 2016. After pension contributions, they make combined annual student loan repayments of approximately £2,250 per year.

The graduate tax cut will give them 50 per cent of their graduate repayments. They are £1,125 a year better off. They save this sum for five years, giving them a saving of £5,625, or a quarter of the average deposit for a first-time buyer in the North West, which is £22,208.[24]

The amount of student loan repayments is already recorded as part of the PAYE system, and produced as standard on payslips as part of the monthly, and annual deduction. This only captures the required repayments as deductions from salary, so would not count additional discretionary payments that graduates had made, therefore avoiding creating a mechanism for richer graduates to pay off all of their loans at a vastly reduced rate.

From this repayment figure, the size of the graduate tax cut could be easily calculated as a proportion of the student loan repayments made. This could then be administered as a tax reducer and, if necessary, granted as a tax rebate by HMRC.[25] This could then be used by the recipient in whatever way they deemed suitable, allowing them to spend, invest, or accumulate wealth in the manner most appropriate for them.

Recommendation 3: Reduce the flow of students into low value university courses

At the moment, there are a significant number of students who do not receive economic gains from their course of choice, and which accordingly incur a substantial net cost to the taxpayer. If we could reduce this cost we could use it to fund the graduate tax cut described above, possibly with funding to spare for technical education.

We propose that the Government explores ways to reduce the flow of students onto low value courses and increase the flow onto higher value courses in either universities or in technical education. This would strike a balance; cutting the cost to graduates of attending university, but also ensuring that the investments being made by the taxpayer are justified. It would also reduce the overall cost of the higher education funding liability, thereby funding the graduate tax cut set out above.

This clearly does not mean ending all degrees in these fields. Within each subject category there will be high variation between students, institutions, and the contents of the individual courses that they study. Economics courses at universities such as London Metropolitan, the University of East London and the University of Central Lancashire offer relatively poor returns, whilst Creative Arts courses at universities such as Bristol, Oxford, and Bournemouth offer good prospects. The focus should be on ensuring that there is a sufficient case for investment by government, and that graduates are receiving a return on their investment. Whilst the data we have

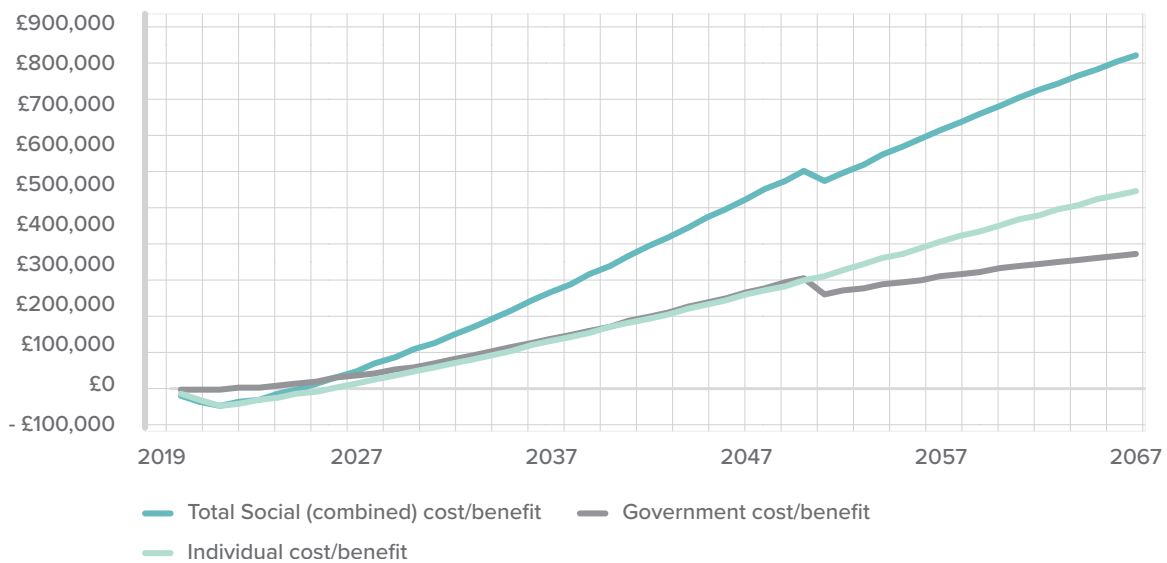
available in the LEO dataset uses subject bundles, in practice using subject and institution pairings it will be possible to take a much more granular view of which courses should be supported, and which should be gradually phased out.

Existing research shows clearly that the degree studied, and the institution attended, make a considerable difference to graduate earnings after five years.[26] Graduates from subjects such as medicine, maths and economics typically earn about 30 per cent more than the average graduate, whilst those studying subjects like creative arts earn around 25 per cent less.[27] Even after controlling for background, these differences persist to a large degree. This means that, holding all things constant, we can reach fairly strong conclusions about the likely returns students will have to their degrees.

Only one university was not charging the full level of fees at £9,000 a year in 2016–17. In total, 36 per cent of universities were planning to charge £9,000 for all of their courses,[28] regardless of the level of returns, and the average fee loan for students in 2016–17 was £8,440.[29] In addition, students take on loans for their maintenance to meet housing and living costs, which have consistently risen higher than inflation,[30] with a recent investigation estimating they had increased by as much as 77 per cent in the last decade.[31] As a result, the level of debt that students incur depends primarily on the length of study, rather than how much they will benefit from the qualification.

This creates the perverse situation where university is only worthwhile on average, for individuals or the taxpayer, for certain courses. For individuals, the cost of lost earnings and ongoing repayments may outweigh any graduate premium gained. For the taxpayer, the cost of forgiven loans may outweigh any repayments or higher taxes received. This is set out in different case studies here.

Figure 5: Estimated cumulative impact of a degree for the median female economics studies graduate (2019–2068), compared to not studying for a degree, adjusting for background characteristics and prior attainment



Source: Onward Analysis and modelling, LEO data, Labour Force Survey, Department for Education, and OBR data.

Case study: A median female economics graduate

A median female economics graduate earns on average £36,600 per year five years after graduating. This is significantly more than they would earn if they had not studied for a degree, and there is a strong economic case supporting financing their studies.

Figure 5 illustrates the costs and benefits to the graduate, the Government, and the total (combined) benefits. The grey line summarises individual benefits; the premium they receive compared to non-graduate earnings, minus the repayments and lost earnings they experience as a result of going to university. The Government cost represents both the delayed cost of forgiveness, but also the difference in tax and national insurance revenue, and the balance sheet effects of student loan interest and repayments. The combined line estimates the total impacts by combining these sums, therefore estimating the social benefit regardless of where it falls.

Initially attending university has a small cost for the individual (in the form of lost earnings), and the Government (in the form of lost taxation). However, as soon as the graduate starts earning, they receive a significant premium compared to if they had not studied at university. This means that within ten years the premium is enough to have clearly overtaken the level of their lost earnings, making the degree worthwhile to the individual.

In the meantime, the taxpayer benefits from increased income in the form of higher taxes, loan repayments, and interest on the loan they have offered. When, 30 years later, the remaining balance on the loan needs to be forgiven, this imposes a very small cost on government as most of it has been paid off due to the high level of earnings.

Over the course of their working life, the graduate benefits from a premium of approximately £470,000, and the Government sees a benefit of just under £360,000. University was therefore worthwhile for both the median female economics graduate, and for the taxpayer. Meanwhile, the employer will benefit from the skills and experience gained by the graduate at university. Graduates with high graduate premiums will have similar graphs to this one.

Case study: A median male social studies graduate

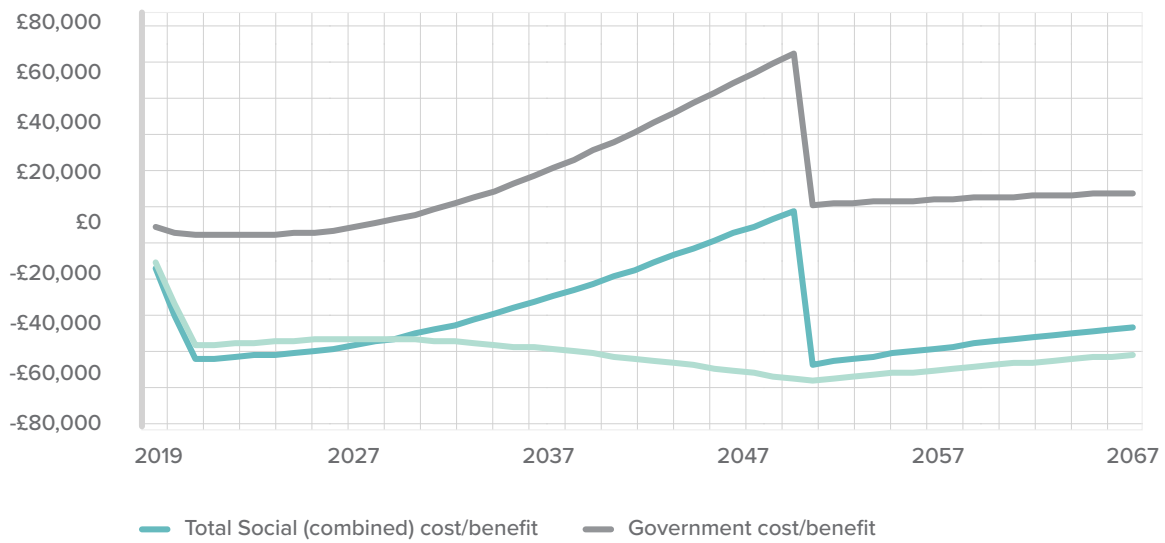
The picture for the median male social studies graduate is more mixed. They can expect fairly good earnings throughout their career, but most of this is due to their characteristics beforehand – the degree only offers them an estimated 2.4 per cent premium once accounting for these facts.

Most of this premium is swallowed up by their repayments. This creates a situation where government receives a substantial amount of repayment on the loan, indicated by the rising orange line, and even after forgiveness still receives a return on investment compared to if the graduate had not gone to university.

The picture for the graduate is much worse; what would have been fairly high earnings are instead eaten away by high levels of repayments that outweigh their graduate premium. This leads to a situation where they become steadily worse off until the repayment period where the grey line reverses its decline and begins to peak. Nonetheless, the graduate remains worse off when accounting for lost earnings than they would have otherwise been.

This outweighs the benefit to government – suggesting that the total impact is negative, and the individual should, in pure economic terms, perhaps not have gone to university. Graduates with low graduate premiums but high earnings will have graphs similar to figure 6.

Figure 6: Estimated cumulative impact of a degree for the median male social studies graduate (2019–2068), compared to not studying for a degree, adjusting for background characteristics and prior attainment



Source: Onward Analysis and modelling, LEO data, Labour Force Survey, Department for Education, and OBR data

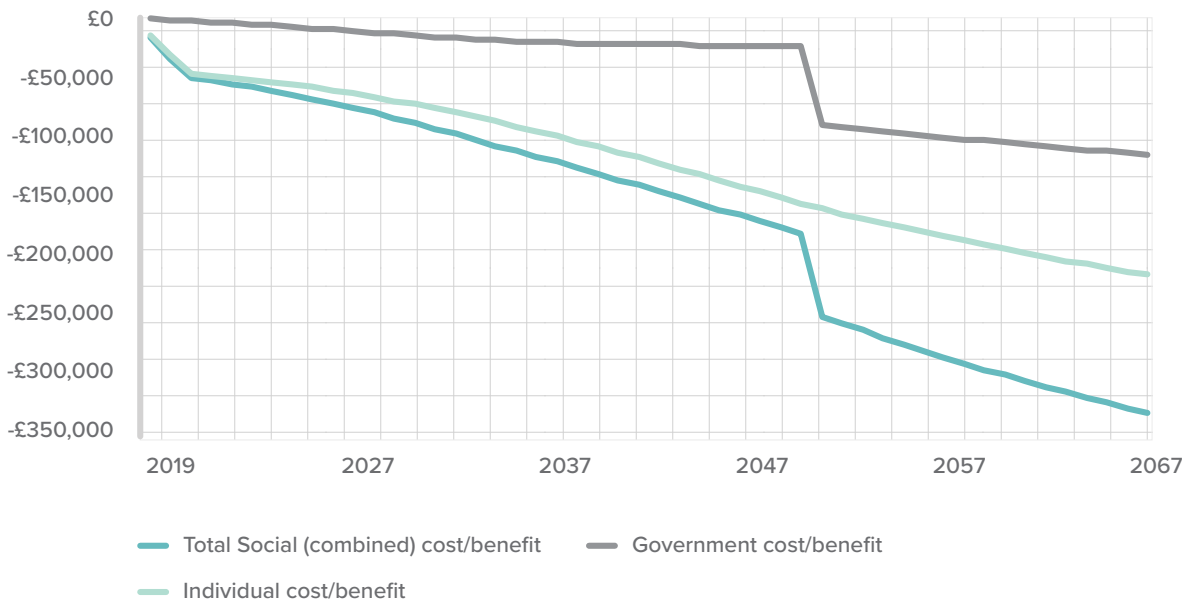
Case study: A median male creative arts graduate

If a student has a low graduate premium and low earnings potential then they are unlikely to ever make a substantial repayment of their loan. In this case their returns would look something like figure 7; the estimated impacts for a median creative arts graduate.

In this case the returns to the graduate begin negatively, as with other cases, as they forego earnings. However, after graduation, they receive a penalty compared to their estimated non-graduate earnings. This is indicated by the negative slope of the grey line; representing individual costs and benefits.

As they are paying less tax and not making repayments, the Government is also worse off, and becomes more so when forgiveness happens after 30 years, at a higher cost than if the graduate had made repayments. In totality, the choice to study represents a substantial cost to both government and individual. Degrees with poor returns will resemble this graph.

Figure 7: Estimated cumulative impacts of a degree for the median male creative arts graduate (2019–2068) compared to not studying a degree, controlling for estimated background factors



These analyses adjust for subject choice, and to some extent the earnings they would receive without a degree. However, they cannot predict the performance of individuals or the institution they attend. Nonetheless, it demonstrates starkly how returns can vary, and how much this alters the case that can be made for investing in an individual's higher education.

This leaves the important question as to whether some graduates would be economically better off, and incur less cost to the taxpayer, if they studied either different courses or at different types of institution. This corresponds with public opinion, where 43 per cent[32] of members of the public believe that too many young people now go to university, compared to 25 per cent who disagree, and where there is widespread concern about so-called low value courses.[33]

The counterfactual is not straightforward to calculate. It depends on employment rates, future earnings, estimated interest rates, and the level of graduate premium. These factors will vary depending on the university, subject, prior attainment and the individual's career path. However, it is possible to reach some stylised conclusions that suggest large numbers of students would be better off doing courses elsewhere, for example on a graduate apprenticeship.

Our analysis suggests that an individual would have to have had a cumulative graduate premium of approximately £50,000, net of tax, over their lifetime in order for the net costs of university to have been greater for them than taking alternative routes such as an apprenticeship.[34] The estimated graduate premium for an average graduate is in excess of £150,000 net of tax,[35] meaning that for the majority of students, university is worthwhile.

This calculation changes for the taxpayer, reflecting the implicit subsidy that low repayment rates on student loans entail from government to the higher education sector. For the taxpayer, the cumulative graduate premium would have to be approximately £120,000 over the graduate's working life to have generated a level of repayments and increased tax payments that equal the investment the Government made.[36]

Table 6 sets out the estimated cumulative lifetime earnings expected for graduates of different degrees, based on Onward modelling and the current long-term education outcome (LEO) data now available from the Department for Education (DfE). Using the LEO data we forecast expected earnings into the future, and using recent studies from the IFS and DfE use estimates of the graduate premium to calculate non-university earnings that roughly account for background characteristics and prior attainment. These are then modelled to look at expected tax and national insurance payments, loan levels and repayments, and the overall rate of loan forgiveness. This approach is experimental, and further details can be found in the appendix.

It estimates the premium a median graduate would receive, accounting for factors such as prior attainment, though not for other choices such as hours worked, or how many children a person is likely to have. If female graduates are more likely to delay having children than non-graduates, then this will tend to make the graduate premium look higher. Where there are negative numbers, this indicates that the lifetime premium a median graduate in the subject would expect is negative, and they would have been better off pursuing non-university alternatives.

Table 6: Cumulative lifetime graduate premium expected for median male and female graduates by degree, ranked by female lifetime graduate premium

Subject	Male		Female	
	Proportion of total students	Estimated lifetime graduate premium	Proportion of total students	Estimated lifetime graduate premium
Medicine & Dentistry	1.2 per cent	£628,433	1.5 per cent	£1,009,507
Economics	0.7 per cent	£662,918	1.1 per cent	£831,848
Mathematical Sciences	1.5 per cent	£165,948	0.8 per cent	£546,813
Law	1.6 per cent	£299,431	2.9 per cent	£459,633
Engineering & Technology	5.7 per cent	£233,297	1.1 per cent	£440,609
Business & Administrative Studies	7.7 per cent	£279,977	7.0 per cent	£419,151
Computer Science	4.0 per cent	£227,990	0.7 per cent	£378,143
Nursing	1.1 per cent	–	4.5 per cent	£370,499
Architecture, Building & Planning	1.3 per cent	£307,854	0.7 per cent	£348,960
Mass Communications & Documentation	1.1 per cent	-£24,955	1.5 per cent	£286,839
Languages (excluding English Studies)	0.7 per cent	-£25,568	1.7 per cent	£284,899
Subjects Allied to Medicine (excluding Nursing)	0.9 per cent	£72,840	3.6 per cent	£273,111
Physical Sciences	2.6 per cent	£24,624	1.8 per cent	£270,386
Biological Sciences (excluding Psychology)	2.3 per cent	£23,504	3.8 per cent	£270,037
Social Studies (excluding Economics)	3.1 per cent	£41,036	5.0 per cent	£253,847
Education	0.4 per cent	£179,332	3.0 per cent	£251,758
Historical & Philosophical Studies	1.8 per cent	£13,449	2.2 per cent	£249,626
English Studies	0.7 per cent	-£120,981	1.9 per cent	£249,379
Veterinary Science	0.1 per cent	–	0.2 per cent	£215,054
Psychology	1.7 per cent	-£22,549	2.9 per cent	£175,436
Agriculture & Related Subjects	0.2 per cent	-£56,269	0.4 per cent	£109,570
Creative Arts & Design	3.8 per cent	-£212,287	6.4 per cent	£90,516

Source: Onward Analysis and modelling, LEO data, HESA, Department for Education.[38]
See endnotes for a full explanation of medelling.

The fact that the female graduate premium is so high is unsurprising; it reflects recent evidence that significantly more of the additional earnings that female graduates receive is due to university.[37] The impact of undergraduate degrees on early-career earnings, Institute for Fiscal Studies) This reflects the fact that women who do not go to university have much worse labour market outcomes; primarily because not going to university puts them on a different life-track, making them more likely to have children earlier and be working part-time.[38] Why women who go to university are winning, Financial Times) From a personal perspective, it is nearly always worth it for a woman to attend university.

From a government perspective, our modelling suggests that, after accounting for background, a degree would need to offer a graduate a premium of around £120,000 over their lifetime to justify government funding of their degree. Analysis of the LEO data and five and ten year periods allows us to determine the rough proportion of students who are currently meeting this threshold, by looking at median earnings by subject grouping and institution, and cross-referencing these with student numbers.[39]

As the table above shows, an estimated 25 per cent of graduates could not be earning enough for university to have been worthwhile from a government perspective, and approximately 18 per cent may not earn enough for it to have been a worthwhile approach from their perspective. The salary required to meet this threshold depends on an individual's characteristics, and therefore what they would be expected to earn without a degree, but after ten years the bottom 25 per cent of graduates are expected to earn less than £23,700 per year if they are male, and less than £16,600 if they are female.

The costs of this are delayed, but significant. In 2044–45, the years where the first tranche of post-2012 loans are forgiven, the cost is expected to be £11.8billion per year, rising to £33.5billion per year in 2054–55 a decade later.[41] These numbers reflect both some of the principal of the loan, but also inflation and the substantial interest accrued over time, which counts as an asset every year it is accrued before eventually being written off.

These figures indicate that there are substantial sums that could be saved decades later if fewer people studied low value Higher Education (HE), and instead pursued higher return alternatives. Accounting for this is challenging; the Office for National Statistics (ONS) has recently recognised this and suggested that the costs of loans should be compartmentalised; with the element expected to be paid back treated as a loan, and the rest treated as an up-front cost to government.[42]

This means that there will be an immediate capital cost to the Government in the year loans are issued, and that reducing the amount of loans which are expected to be forgiven could generate immediate in-year reductions in borrowing, that could fund a graduate tax cut. Estimating the impact of a reduction is challenging; given that there is not sufficient information on how the up-front cost would be accounted for. Using a method deployed in an Office for Budget Responsibility (OBR) working paper, we have estimated the up-front cost as a proportion[44] of the in-year outlays, to give the estimated capital costs. From here we can estimate the in-year savings from a reduction in student numbers.[43]

Table 7: Estimated reduction in Public Sector Net Borrowing from a reduction in low-return courses

£ billion	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25	2025–26	2026–27
Total Loan outlays	14.6	16.0	17.2	18.0	18.6	19.1	20.0	21.0	22.0	23.0
Estimated up-front addition to PSNB	8.9	9.7	10.5	11.0	11.3	11.6	12.2	12.8	13.4	14.0
Estimated reduction in PSNB (10 per cent fewer students)	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.3	1.3	1.4
Estimated reduction in PSNB (15 per cent fewer students)	1.3	1.5	1.6	1.6	1.7	1.7	1.8	1.9	2.0	2.1

Of course, this would not have to mean 10 per cent fewer students going to university as the costs will not reduce in direct proportion to student numbers.

For starters, not all forgiven loans will have the same cost. For example, our estimates of the median male economics graduate suggest that the total loan forgiveness addition to borrowing would be £13,368, whereas for creative arts it would be £62,000.[45] So saving 10 per cent of the losses does not mean reducing the number of students by 10 per cent, provided that those who did not attend came disproportionately from the institutions and courses with the lowest returns.

In fact it does not need to mean reducing the number of students at all as long as we reduce the numbers on the least valuable courses and redirect people to higher value options. A shift from courses with a large forgiveness component onto courses with full repayment levels would mean a proportional reduction in the up-front capital cost, and therefore greater in-year savings. Calculating the impact might be complex and would turn on how able policy makers were to target the lowest value courses and redirect people to the highest value alternatives.

Ultimately what policy should aim to reduce is the number of people attending subject/institution pairings which lead to low earnings – because some less strong institutions might still have some high value courses – and vice versa. Later on in this paper will explore how this might be achieved in practice.

To get a sense of the magnitudes, if the Government were to accept the ONS definitions in full, figure 8 sets out the prospective savings from reducing loan cancellations by 10 per cent against the costs of a graduate tax cut, at 25 per cent and 50 per cent levels. A 10 per cent reduction could partially fund our proposed tax cut, while a 15 per cent reduction would cover costs until at least 2021. In reality, both are likely to cover much more of the costs, as we have been overly conservative with estimating savings.[46]

Figure 8: Savings from avoided loan cancellations compared to proposed graduate tax cut (2017–2027)

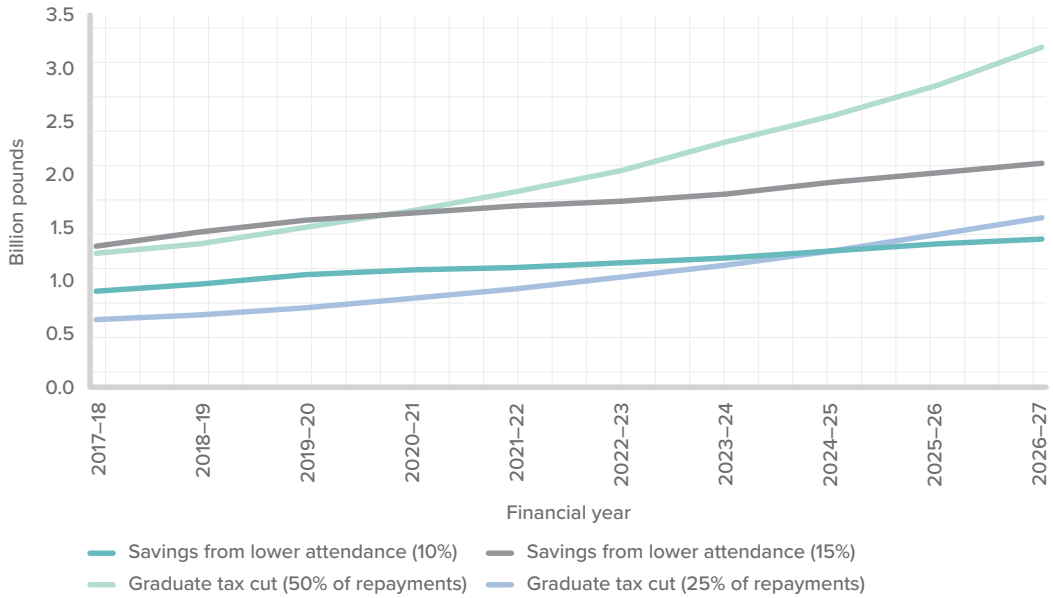
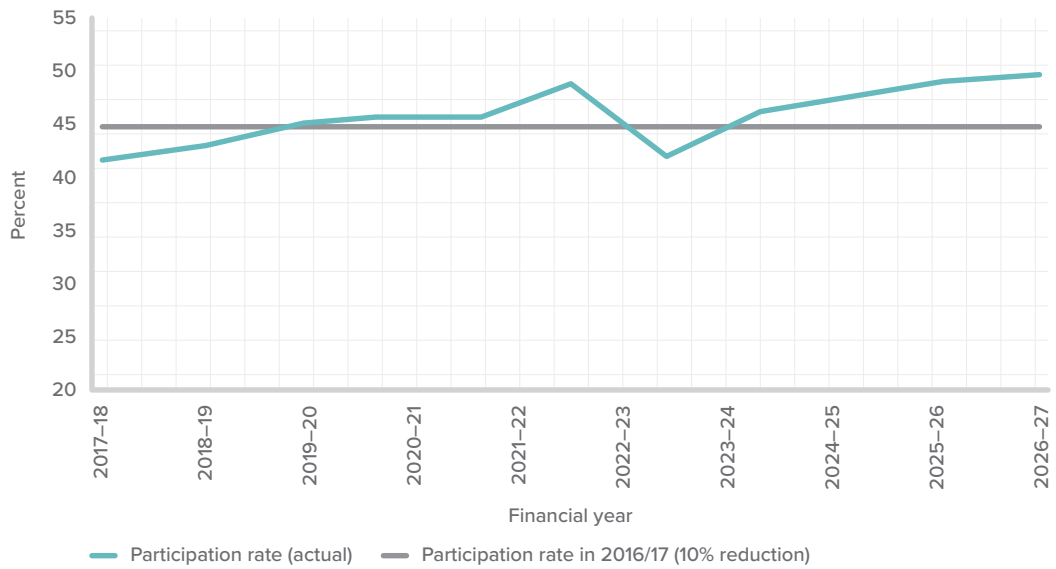


Figure 9: Higher education participation rates compared to 2016/17, if 10 per cent reduction



The net cost to the taxpayer from the degree with the lowest median return (creative arts) is approximately £62,000 of forgiven tuition fee loans, maintenance fee loans and interest.[47] According to official data, there are 45,000 creative arts students starting each year, or 9.6 per cent of the total number of students.[48] To put a reduction of 10 per cent into context, this would still leave participation at roughly the level of 2008/09 and 2012/13, meaning a relatively small overall reduction.

This suggests that ending creative arts degrees at university could deliver a net reduction in borrowing of £2.8 billion per year. This is clearly not a reasonable or desirable policy, not least because some arts graduates will earn much more than the median and some courses have high economic value. The upper quartile of creative arts graduates from universities such as Queen Mary University of London, Bournemouth, Loughborough, Oxford, and City University earn over £32,000 five years after graduating. Conversely, the bottom quartile of creative arts graduates from institutions such as Essex, Rose Bruford College, and the Liverpool Institute for Performing Arts have earnings of less than £10,000, often despite the top 25 per cent having a relatively strong level of earnings.

The point is simply that this demonstrates that a relatively small reduction in lower-value courses and institutions with low returns could deliver savings that would pay for a graduate tax cut of 50 pence in every pound repaid, and that this could be done by focusing not on any one subject, but by identifying and phasing out courses that are failing to deliver value to graduates or the taxpayer.

Recommendation 4: Discourage low value courses, either by making maximum fees conditional on earnings potential, or by introducing a minimum grade floor for low value courses

There are a number of different options that could be used to reduce the amount of students on lower-value courses and to redirect them to better options. A selection of these are summarised in Table 8, with our suggested approaches set out below.

A number of these different options could be used in combination – only options 2 and 3 are exclusive.

Parliament has the power to set maximum tuition fees, but since 2012 this has been dependent on having access agreements with the Office for Fair Access (OFFA),[49] now run by the Office for Students (OFS). We could build on this to make the OFS an effective economic regulator for universities. Courses would be required to deliver value to students, with exemptions for courses of particular social or cultural value.

There are some unavoidable policy trade offs with the options set out in Table 8. Options 2a or 2b would give the OFS strong powers to shut down or limit individual courses at particular universities, which would be controversial. It need not mean a return to the overall institutional student number controls which were in place before 2015, but many universities would protest that this constrains their freedom. In reality, against some of the proposed alternatives, such as a reduction in all student fees from £9,250 to £6,500, this option would be preferable for universities' balance sheets: enabling them to maintain higher fees for courses that deliver long term value while rooting out poor value in the sector.

Table 8: Options to reduce the flow of students into low value university courses

Policy option	Details
1) Rely on student choice	• Improve transparency data and the alternatives available to students on a new application portal. • Allowing students to make their own decisions and to gradually flow off low-return Higher Education (HE) and on to alternatives. • Unlikely to have a dramatic impact.
2a) Create a fee limit tied to course/institution value	• Mandate the Office for Students to impose a fee limit on course/institution pairings that offer low value. • Reduce the financial incentive for universities to offer low value courses, reducing their provision. • Compared to simply abolishing loans for low value courses, this would create the option to continue courses but with costs trimmed to align with lower benefits.
2b) Restrict loan access for low value course/ institution pairings	• Mandate the Office for Students to restrict eligibility for tuition fee and maintenance loans to courses that meet a minimum threshold for added value. • Directly cut the number of low value university courses. • Greater savings and certainty compared to a fee limit but more controversial.
3) Regulate through the maximum fees a university can charge	• Make charging the maximum level of tuition fees dependent on courses across the university on average providing a defined level of added value. • Lower the maximum fee threshold for universities not meeting this level, thereby creating an incentive not to offer low value courses. • Compared to direct targeting of low value subject/institution pairs, this devolves more discretion to the institution, though with risk that savings are lower as low value courses can be "carried" in generally strong institutions.
4) Restrict loan eligibility only to those meeting a minimum grade floor	• Restrict eligibility for tuition fee and maintenance loans to candidates meeting minimum UCAS thresholds. • Reduce the number of low entrance requirement courses where losses for students are most likely and redirect people to options which are more likely to have a positive return.
5) Encourage the use of two-year courses for certain subjects	• Encouraging some courses to be completed over a shorter time period would incur lower levels of debt and accelerate entry into the labour market, increasing value for money for taxpayers • This would be one way for the government to improve the system without the wholesale closing of low value courses • There will be some subjects for which this is not appropriate, and others where it still result in university being worthwhile economically.
6) Reduce maximum fee levels across the board to £6,500, and make up the difference for high-value courses with increased teaching grants	• This option would make a saving on all low-value courses and at this lower fee level some would become worthwhile for government and individuals, taken together. • This option is simple to deploy and explain. • However, this has a large cost to make up the difference for courses that are more valuable and also fails to fully eliminate low value courses with low graduate earnings, which continue to attract a subsidy at a lower level. • Without a graduate tax cut accompanying it, this option would do nothing for people who have already graduated, or those who do not pay off their loans at the new fee level.

** Accounting for extenuating circumstances and background.*

One constraint on options 2a and 2b is the availability of granular enough data. Some courses will have small numbers of students. Courses start and stop all the time. It may not be realistic to restrict access to fees at the individual institution/subject pairing level. One variation might be to manage them at the level of bundles of courses (subject areas), along the lines of the 23 bundles in the LEO data.

On the other hand it would be harder to make controls on an institution by institution basis (Option 3) bite – not least because it would less precisely target low value courses. However, given data limitations (courses open and close, and may have numbers of students too small to draw meaningful conclusions) we might think some flexibility and averaging out across a whole institution might be more plausible to deliver in practice. It might be better to be "roughly right than precisely wrong".

Some combination of options 2 and 3 might be possible. Policy could dictate that loans would not be available or fees would be capped for subjects below a given threshold at the same time that institutions' ability to levy full fees would be conditional on the overall value of their degrees.

Option 4 protects students with low prior attainment from racking up large debts on high cost courses which are unlikely to give them an economic return. It would be relatively simple to apply across the whole system.[50] It turns on making sure they are redirected into options with a better chance of boosting their earnings. But it would prevent the problem set out recently by UCAS, where universities have lowered their grade expectations while simultaneously offering maximum fees.[51] These students are the most likely to see the costs of university outweigh the benefits.

There is no question that this option would tend to mean that students with lower prior achievement would be less likely to go to university than a system without such a minimum requirement. But the data we now have suggests that these students are the people most likely to suffer an overall loss from the combination of high debts, repayments and low graduate wages. Boosting university numbers should not be an end in itself, but a means to improve the lives of young people.

Option 5, to reduce the length of some low value course to two years, would reduce the debt burden that graduates of those courses incur by a third and therefore reduce the taxpayer liability at write-off. It would also bring forward the point at which the graduate enters the labour market, which is likely to have a positive effect on their earnings.

Option 6, reducing tuition fees and filling the gap for some courses with an increased grant, would mean that some courses become worthwhile, and higher value courses are not hindered by reduced funding. However, this comes with a direct cost to the Government, and does not fully eliminate the subsidy to low value courses which offer little return. Additionally, without an accompanying graduate tax cut, it would do nothing for those who have already graduated, and only assist those who already pay off their loans in full, or are able to at the new total level of debt.

Recommendation 5: Encourage students to gain qualifications through better technical education

Students are in low-value higher education because university has, in many cases, become the only option. There are few alternatives for post-secondary education: fewer than 2 per cent of qualifications available to adults are at the tertiary level, and the majority are low skilled.[52]

To reduce low value university courses, we need to develop better alternatives. A reduction in the flow of students onto courses with low economic returns should be complemented by the expansion of courses for those subjects at other levels in the tertiary system, including through higher level apprenticeships and degree apprenticeships.

This would complement the reforms the Government has already introduced to technical education, including the introduction of graduate apprenticeships and the introduction of T-Levels at 16–18. It would also maintain student choice while ensuring that students and taxpayers are receiving a higher level of return on the individual's study.

Even at the lower levels, apprenticeships in areas such as warehousing and distribution, public services, and ICT can offer significant earnings boosts.[53] As seen in Table 2 in the first chapter, higher level apprenticeships increase this return. Degree apprenticeships were launched in 2015 and so data is not yet available on outcomes, but it is likely they will offer better returns.

The long-term data we do have for higher level apprenticeships suggests that the earnings premium exceeds many university courses after four years, without the need to take out £50,000 worth of student debt. Yet their availability is low. In the first two quarters of 2017–18, there were just 59,600 apprentices participating at higher level, and 20,400 higher level apprenticeship starts.[54] This is dwarfed by the 2.3 million people in higher education.

This speaks to doing much more to unblock higher level technical qualifications, including speeding up the process by which new courses are approved by the new Institute for Apprenticeships. There is also a case for using any extra funding saved by the reduction in low value university courses to support the rollout of higher level and degree apprenticeships in similar subject areas, or alternatively broadening the apprenticeship levy criteria to allow levy funds to be used.

Recommendation 6: Put technical education on the same footing in school leavers' applications

These courses should be considered as equal to higher education, by students and schools alike. The Government's recent announcement that higher technical training will be counted as equivalent to university attendance in school performance tables is a welcome first step.[55]

The next stage should be to integrate the applications process for technical routes and higher education on UCAS, offering both as equal options, alongside information about expected long-term returns for the students. This would simplify the process of applying for technical education, demonstrate parity between the options, and help students to directly compare courses on the basis of long-term value.

Last, the underlying cause that has allowed technical education to wither compared to higher education needs to be addressed. Many further education and technical courses are funded by day-to-day borrowing, whereas the costs to government of the higher education system are through large individual loans, the costs of which are deferred into the future. This means it has been easier to grow spending in one area, and to trim it in another.

This distortion needs to be removed so a more honest debate about the prioritisation of post-secondary education funding can be had. The exact reforms required depend on the decision as to how student loans are treated in the national accounts, but the principles are clear; expenditure on both options should be clearly comparable, and not creative incentives to fund one over the other purely because of the effects on the Government balance sheet.

Figure 8: Timeline of recent changes to technical education

2010	Government's Skills Strategy commits to improve apprenticeship standards, committing to fund 20,000 Higher Apprenticeships of Level 4 or more by 2015. Review of Vocational Education commissioned, led by Professor Alison Wolf.
2011	Government accepts the recommendations of the Wolf Report in full, commits to introduce new funding model, reduce low value courses, and ensure all students leave college with good literacy and numeracy. Access to Apprenticeships Pathway announced. Education Act 2011 introduces Apprenticeship Grant for Employers for 16–24 year olds.
2012	The Richard Review of Apprenticeships in England published, recommending the introduction of recognised industry standards as the basis for every apprenticeships. Statement on Apprenticeship Quality published, mandating that every apprenticeship must last 12 months, include 280 hours of guided learning and employment for 30 hours a week.
2013	Extra £40 million announced in Autumn Statement for Higher Apprenticeships.
2014	Government announces the introduction of Degree-level Apprenticeships.
2015	Independent Panel on Technical Education established, chaired by Lord Sainsbury. Degree Apprenticeships launched.
2016	Government publishes the Post-16 Skills Plan, accepting all of the recommendations of the Sainsbury Panel, including the introduction of a common framework of 15 routes – T-Levels – to cover employment- and college-based technical education at levels 2 to 5. Enterprise Act 2016 establishes the Institute for Apprenticeships.
2017	Apprenticeship Levy of 0.5 per cent introduced for all firms with payroll over £3 million. Technical and Further Education Act 2017 gains Royal Assent. Ministers announce new T-Levels will be rolled out from 2020, with full roll-out by 2023, and launch of Institutes of Technology. Prime Minister announces a major review of post-18 education funding, led by Philip Augur, due for publication in early 2019.

Recommendation 7: The Government should make university funding more open and transparent

A graduate tax cut would not in itself mean a change in the treatment of loans within the public accounts, which currently allow student loans to be taken off balance sheet and added to Public Sector Net Borrowing (PSNB) only when loans are forgiven 30 years later.

The current accounting framework however does make it difficult, in practice, to use the savings from a reduction in forgiven loans to pay for an in-year graduate tax cut. This is because decisions taken on tuition fees have no impact on public finances until forgiveness.[56] Indeed, if the portfolio is sold off then they are never recognised in borrowing at all. If it is not, they are recognised as part of PSNB, but only belatedly.[57]

The OBR has noted that "large-scale write offs far in the future recognise the subsidy cost of today's lending decisions."[58] This subsidy distorts public spending choices and channels funding into a subset of education that at present does not offer good value for students, or for taxpayers. It is also incredibly opaque. As the House of Lords Economic Affairs Select Committee have argued, the "debate over post-school education funding is hampered by the treatment of student loans in the public accounts. The accounting masks the public subsidy going into higher education by delaying its appearance in the deficit." Others have made clear the perverse incentives created by deferred debt, rather than in-year deficit, costs.[59]

There is not a clear way that student debt should be accounted for, and the OBR have explored five alternatives.[60] The ONS has since reported with a new approach on how tuition fees should be treated, including accounting for the estimated forgiveness in the year the loan is issued.[61] For the purpose of our proposals, it is logical that we should be able to offset some of the costs of the proposed tax cut against a certain set of savings, delivered by not lending money that will never be repaid.

One way this could be achieved immediately is that the Treasury publishes a range of "ex" measures, which allow users to see the measures of deficit and debt including or excluding things that might otherwise give a distorted picture. These measures include or exclude the effects of the nationalised banks, the Bank of England Asset Purchase Facility (APF), and others.

One element that could be included in these is the Resources Accounting and Budgeting (RAB) charge; the estimated cost to Government of borrowing to support the student finance system. This represents estimated write-offs and the expected income streams from interest.[62] As an interim measure, prior to the ONS decision, this paper suggests that the Treasury should continue to use the same aggregate of debt and deficit against which it currently measures performance.

It should also additionally and proactively publish a measure of the deficit, including the RAB charge, as a way to focus minds on whether all student finance represents good value for money for the taxpayer and students. Measures such as the ones we propose above, which aim to limit the number of people who will later have their loans written off, would reduce such a measure of the deficit, including the RAB charge.

Recommendation 8: Over a longer period, deliver the ONS decision on whether student loans liabilities should be treated as in-year costs

The decision to recognise the large portion of the tuition fees that will be forgiven as an up-front cost[63] is welcome, creating significant opportunities for the kind of reforms we recommend removing the distortion that the treatment off balance sheet had previously created will allow spending on HE to be more directly compared to alternatives. The exact implications for public sector finances are not yet clear and depend on future forecasts of earnings, though in the fiscal year 2018/19 the move is expected to increase recorded borrowing by approximately £12billion.[64]

Having government borrowing figures that are dependent on uncertain projections, either in the main measure of the deficit, or in an ex-measure, is understandably something to be cautious about. However, ensuring that the costs of HE are recognised as accurately as possible is key. Spending on universities should be subject to the same level of scrutiny and debate as other expenditure, and the approach suggested by the ONS allows this to happen.

Delivering this decision will require an improved understanding of expected graduate earnings, which can then be used to determine the forecasted level of the write off. Over time, this information can also be used within the higher education budget to determine which courses are good investments for individuals and the Government, and to direct funding to the places where it will generate the most impact. The new approach to accounting for loans would encourage this behaviour; improving incentives to reduce low value courses, and to increase and improve alternatives.

Appendix

Data sources and limitations

The Longitudinal Education Outcomes (LEO) framework was the primary source of data for this paper, and provides the best possible insight into historical graduate earnings.

For all of the analysis in this paper, we have drawn on recent releases by the Department for Education, along with analysis conducted by bodies such as the Institute for Fiscal Studies. This constrains our analysis in two ways:

- We are dependent on high-level summaries, such as median earnings, and upper and lower quartiles of earnings at defined points in time.
- The data is necessarily historical, in that it reports on the past performance of past cohorts of graduates.

Our work therefore makes the assumption that the experiences of past cohorts are predictive of future cohorts, and we conduct analysis for the median student in a given subject grouping, assuming that they are representative. Within these figures there will be high levels of variation by institution, background, and individual courses that we cannot account for in this analysis.

Estimating graduate incomes

Our modelling sought to determine the extent to which, for a median graduate in a given subject group, university was justified for both the individual, and for the government. To determine this, we first calculated an approximate lifetime earnings pattern for the median graduate in each subject, and the estimated comparison earnings pattern for the appropriate control; a similarly qualified non-graduate.

To achieve this, we took LEO data estimating median earnings 1, 3, 5 and 10 years after graduation. We then set earnings at retirement as approximately equivalent to earnings at 5 years after graduation; reflecting both reduced earnings potential close to retirement, and the substitution of income for leisure. This decision was justified by looking at earnings by age of graduates and non-graduates in the Labour Force Survey, which showed a similar reversion back to early career earnings levels over time. Using these data points we modelled an earnings pattern across the individual's life, using a quadratic polynomial curve. This provided an estimated set of earnings at a given age, for each subject type and age.

To compare this to non-graduate earnings, we drew on recent studies by the Institute for Fiscal Studies which estimated the proportion of the earnings premium that could be attributed to university, as opposed to control factors. Using these we took the percentage of difference that was due to a degree, and used this to estimate the income the median graduate would have otherwise received if they had instead pursued a non-university alternative. This does not account for differences within non-university alternatives. In reality, one would expect higher level technical qualifications to have a higher premia than merely entering the labour market at age 18."

Comparing costs and benefits

Using these two earnings distributions, we directly compared the costs and benefits of the graduate compared to the non-graduate, after tax, tuition fee costs, lost earnings, and repayments. The non-graduate was assumed to earn for three years while the graduate was in university, and the graduate was assumed to study for three years, taking on £9,250 of tuition fees per year, in addition to a maintenance loan equivalent to if they lived away from London and had parents with a household income of £30,000. This creates a debt burden of approximately £60,000 per student.

The income figures in each year was used to calculate figures such as the total take-home pay, tax paid, the level of repayment, interest on the loan, and the total loan forgiveness after 30 years for both the graduate and the non-graduate. These were then directly compare the graduate and non-graduate across all years to provide an estimate of:

- The total individual benefit: Defined as the difference in individual earnings after the graduate premium, minus additional tax payments and student loan repayments.
- The total government cost: Defined as the total additional tax and NI contributions (as a result of higher pay), tuition fee repayments and tuition fee interest, minus total tuition fee forgiveness.
- The total effect: Combining the total individual benefit and the total government cost to assess the total impact, regardless of incidence.

These figures were combined across the individual's assumed working life, to determine the point at which the degree would be a worthwhile investment for the individual and the government. This allowed us to reach conclusions about the estimated lifetime graduate premium for each gender and subject, and whether this was sufficient to justify the cost of a degree.

Determining the thresholds for whether a degree was economically worthwhile

There were two possible methods to determine whether a degree was worthwhile. The first was to use the above model to determine the returns for both the government and the individual, and to use this to designate whether it was worth it for a subject group. This has the advantage of providing a subject-responsive answer, but the disadvantage that certain high-earning groups with low premiums are viewed as worthwhile for the government, but not the individual, distorting the results. As an example – this would suggest that males studying mathematical sciences would not be justified from an individual perspective, despite a lifetime premium of £166,000.

The second, and chosen method, was to calculate the estimated lifetime premium for each group, and compare these to an estimated benchmark for whether a degree was worthwhile for a given graduate, or for the government. This chosen approach provides a simple benchmark, and a rule of thumb that

does not overly rely on the dynamics of the median earner. The threshold for an individual considering the degree worthwhile was calculated as £50,000 as this was the point above which the premium appeared to outstrip lost earnings, assuming that the degree did not offer a negative or extremely low premium. The threshold for the government considering the degree worthwhile was calculated as £120,000 – as this was the point at which the group closest to being a marginal case (female agricultural students) became a 'break even' case for the government.

We then used Higher Education Statistics Agency (HESA) enrolment data to calculate the proportion of students in each gender and subject bundle, and to designate if, according to their median student, it would have been worthwhile for them to obtain a degree. While this approach categorises individuals by subject bundle, we make the assumption that there would be low earners in other subject groupings that would offset those we had falsely included.

This approach yielded an estimate that university was not worthwhile for 17.9 per cent of graduates, and that in 25.7 per cent of cases it was not worthwhile for the government. The alternative approach yielded results of 20.3 per cent and 14.3 per cent respectively – illustrating that, despite the weaknesses in the data, the alternative approach would have yielded answers that were broadly of the same magnitude.

For any queries or further details please contact: **guy.miscampbell@ukonward.com**

Endnotes

1 A graduate earning at the higher rate will have an income tax rate of 40 per cent, plus 2 per cent national insurance contributions and 9 per cent student loan repayments, creating a marginal rate of 51 per cent. A graduate earning at the basic rate will have an income tax rate of 20 per cent, plus 12 per cent national insurance contributions and 9 per cent student loan repayments, creating a marginal rate of 41 per cent.

2 Gardiner, L. and Rahman, F. (May 2018), A New Generational Contract, Resolution Foundation.

3 D'Arcy, C. and Gardiner, L. (June 2017), The Generation of Wealth: Asset Accumulation Across and Within Cohorts, Resolution Foundation.

4 Hubble, S. and Bolton, P. (2018) Higher Education Tuition Fees in England, House of Commons LibraryHubble. S, & Bolton. P, 'Higher education tuition fees in England', House of Commons Library, 2018.

5 With RPI of 3 per cent and a total graduating debt of approximately £60,000, the interest accumulated before accounting for inflation would be approximately £1,900. These calculations assume a pension saving of 3 per cent per annum.

6 Economic Affairs Committee (June 2018) Treating Students Fairly: The Economics of Post-School Education, House of Lords.

7 Treasury Select Committee (February 2018) Student Loans, House of Commons.

8 Five years after graduation, the median earnings of people who went to university with AAAA or above was nearly £40,000. Those with 240 points or less were not earning enough to reach the £25,000 threshold for repayment.

9 Polling by Hanbury Strategy, Nov-Dec 2018, 10,000 nationally representative sample.

10 Polling by YouGov, 4th-5th June 2018, YouGov Students University Funding Preference.

11 Labour Party Manifesto (2017) For the Many, Not the Few, p.43; Adonis, A. (7 July 2017) I Put Up Tuition Fees. It's Now Clear They Have to be Scrapped, Guardian.

12 McDonnell, J. (16 July 2017) Interview with John McDonnell, Andrew Marr Show.

13 Johnson, J. (4 July 2017) Why Would We Scrap £9,000-a-year Tuition Fees When We Know They Work?, Guardian.

14 Christie, K. (2 June 2018) New Scottish GP Medical Courses 'Too Little, Too Late' For Crisis, Scotsman.

15 Ferguson, J. (2 December 2018) Outrage as Straight-A Students Rejected by Scotland's Top Universities For Being Scottish, Daily Record.

16 Spectator, (17 August 2018), 'Revealed: the Scottish uni courses for (fee-paying) English students only'.

17 Those on Repayment Plan 2.

18 Jerrim, J. (2015) Emigrants from Great Britain: What Do We Know About Their Lives?, University College London.

19 Rich, J. (November 2018) The Case For A Graduate Levy, Higher Education Policy Institute.

20 Treasury Select Committee (February 2018) Student Loans, House of Commons.

21 Belfield, C., Britton, J. and van der Erve, L. (3 October 2017) New Higher Loan Repayment

Threshold is a Big (and Expensive) Giveaway to Graduates, Institute for Fiscal Studies.

22 Student Loan Forecasts, England: 2017 to 2018, Department for Education and Student Loans Company.

23 The repayment plan depends on when the loan was issued. Plan 1 loans were issued before September 2012, with repayment beginning at £18,330. Plan 2 loans were issued after Septermber 2012, and repayment begins at £25,000.

24 Halifax (11 August 2018) First-time Buyers Stumping Up £209,000 To Get On Property Ladder, Halifax press release.

25 There are a number of tax reducers that already exist in similar formats, including maintenance relief and relief through the Enterprise Investment Scheme.

26 Belfield, C. et al. (June 2018) The Relative Labour Market Returns to Different Degrees, Institute for Fiscal Studies.

27 Belfield, C. et al. (June 2018) The Relative Labour Market Returns to Different Degrees, Institute for Fiscal Studies.

28 Hubble, S. and Bolton, P. (25 June 2018) Higher Education Tuition Fees in England, House of Commons Library.

29 Hubble, S. and Bolton, P. (25 June 2018) Higher Education Tuition Fees in England, House of Commons Library.

30 Rushall, M. et al. (2016) Accommodation Costs Survey 14–16, National Union of Students.

31 Gray, J. (3 December 2018) Cost of Accommodation at Top Universities Soars By Up To 77 per cent During the Past Decade, Huffington Post.

32 Polling for Onward by Hanbury Strategy, Nov-Dec 2018, 10,000 nationally representative sample.

33 Polling for Onward by Hanbury Strategy, Nov-Dec 2018, 10,000 nationally representative sample.

34 This is the approximate total liability for their lost earnings over the course of the three years, though the figure varies depending on prior attainment and earning potential. In some cases repayment figures in excess of the graduate premium can increase this figure, depending on subject, institution, and prior attainment.

35 Bolton, P. and Hubble, S. (31 October 2018) Returns to a Degree, House of Commons Library.

36 This figure varies depending on earnings trajectory, prior attainment (and therefore what comparison earnings we would expect), gender, institution, and subject. Male graduates in education are the closest category to 'break even' and to their premium is used for this analysis.

37 Belfield. C, et. al. (November 2018)

38 O'Connor. S. (December 2018)

39 Absolute differences in labour market returns were modelled using data from the DfE/IFS study released November 2018. These did not have figures for men studying certain subjects, presumably due to sample size issues. These subjects (nursing, veterinary science) are indicated with dashes. Percentages of total students were estimated from HESA data.

40 Graduate Outcomes (LEO): 2015 to 2016, Department for Education.

41 Student Loan Forecasts, England: 2017 to 2018, Department for Education and Student Loans Company.

42 Bailey. D, Foyzunnesa, K. and Moskalenko, E. (17 December 2018) New treatment of student loans in the public sector finances and national accounts, Office for National Statistics.

43 Ebdon, J. and Waite, R. (July 2018) Student Loans and Fiscal Illusions: Working Paper No. 12, Office for Budget Responsibility.

44 60.9 percent, the estimated total of the total accrued sum paid off across all loans.

45 Figures in real terms. In practice, due to the variable rate of interest – the earnings potential at the median means that most loan forgiveness costs approximately the same amount for each course as increased earnings and therefore repayments are offset by increased interest. This is a limitation of our modelling and in reality there will be substantial variation in incomes, but the total expected loss with our modelling is approximately equivalent to the forecast PSNB liabilities under DfE projections.

46 As noted above, a 10 per cent reduction of bottom performing courses would reduce forgiveness by proportionately more than 10 per cent.

47 Assuming a household income of £30,000 and therefore tuition fees of £9,250 per year and maintenance loans of £10,719 per year, plus interest adjustments.

48 HESA data, UK students, first-year indicator, Creative arts & design (44,850 students), compared to total (465100). Source: www.hesa.ac.uk/data-and-analysis/students/what-study, Accessed December 2018.

49 Hubble, S. and Bolton, P. (25 June 2018) Higher Education Tuition Fees in England, House of Commons Library.

50 Although creating a fair scale to make pre-university qualifications from multiple countries comparable is not simple.

51 In UCAS' study, 7,890 students aged 18 were accepted on courses having attained three Ds or lower at school or college university, and 3,045 were enrolled with two Ds and an E. In 2018 This year, the percentage number of applicants with three D's being accepted was 81.3 per cent, compared to 59.8 per cent in 2011.

Bennett, R. and Roller, M. (13 December 2018) Fee-hungry Universities Lower the Barrier to Entry, The Times. 'Fee hungry universities lower the barrier to entry'.

52 Wolf, A. et al. (November 2016) Remaking Tertiary Education: Can We Create a System That Is Fair and Fit For Purpose?, Education Policy Institute.

53 Department for Education (15 December 2016) Statistical Working Paper: Average Earnings Post Apprenticeship, England, 2010/11 – 2014/15.

54 Department for Education (March 2018) Further Education and Skills.

55 Hinds, D. (6 December 2018) Damian Hinds Technical Education Speech.

56 Treasury Select Committee (February 2018) Student Loans, House of Commons.

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About the authors

Neil O'Brien OBE MP

Neil O'Brien was elected as Member of Parliament for Harborough in June 2017. Prior to entering Parliament, Neil served as a Special Adviser in both Theresa May's Number 10 Policy Unit and within George Osborne's team in HM Treasury. He is the former Director of Policy Exchange and Open Europe.

Will Tanner

Will Tanner advised the Prime Minister Theresa May between 2013 and 2017, as a Special Adviser in the Home Office and as Deputy Head of Policy in 10 Downing Street. He has also previously worked for the leading communications firm, Portland, and for the independent thinktank, Reform.

Guy Miscampbell

Guy is a Senior Research Fellow with Onward. He is also a senior consultant at WPI. He has previously worked for the Ontario Public Service, Policy Exchange, the Institute on Municipal Finance and Governance, and in the U.S. House of Representatives. He has a Masters of Public Policy from the University of Toronto, where he was a Cadario scholar.

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