

BIS | Department for Business
Innovation & Skills

INTERIM IMPACT ASSESSMENT

**URGENT REFORMS TO HIGHER
EDUCATION FUNDING AND
STUDENT FINANCE**

NOVEMBER 2010

Title: Higher Education Reforms - Interim IA Lead department or agency: BIS Other departments or agencies:	Impact Assessment (IA)
	IA No: BIS0147
	Date: 26/11/2010
	Stage: Final
	Source of intervention: Domestic
	Type of measure: Primary and secondary legislation
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Summary: Intervention and Options

What is the problem under consideration? Why is government intervention necessary?

There is a need for reform in the Higher Education (HE) system. An independent review by Lord Browne in October 2010 identified several failings with the current system and recommended a new approach for a sustainable funding system with incentives to drive participation and quality. Any reform must continue to address the inherent market failures (such as positive externalities) for the provision of HE and associated equity issues. But consistent with evidence that, of the total social benefits, the private benefits are large relative to external benefits and with reduced public investment in HE announced in the Spending Review 2010 (reflecting Government's efforts to reduce the fiscal deficit) there is a need for reform which rebalances public/private contributions, creates sustainable funding for institutions and incentives to drive participation and quality.

What are the policy objectives and the intended effects?

- To put the English higher education system on a sustainable financial footing so that it can maintain its world-class status.
- To promote teaching quality by making institutional income more responsive to student choice and enable those institutions that do this well and are popular to expand.
- To introduce a student support system which is affordable and more progressive, offers greater support to the most disadvantaged and enables participation to be maintained.

What policy options have been considered? Please justify preferred option (further details in Evidence Base)

1. Do-nothing (baseline scenario, current system with no reduction in government funding)
2. Under reduced government funding; cut in student entrants (58%)
3. Under reduced government funding; revert to 03/04 system including 49% cut in student entrants
4. a) Under reduced government funding; Browne approach – fully implemented
4. b) Under reduced government funding; Browne approach – alternative package

Option 1 is not viable given Spending Review 2010. Options 2 and 3 are not viable because the large reduction in student entrants results in large negative net marginal benefits. The Browne Approach options (4a and 4b) are consistent with the rationale for reform and feasibility within SR2010. Option 4b is the proposed option given the non-quantifiable benefits of the progressive repayment system, generous grant and loan provision, the introduction of an upper cap on graduate contributions (to prevent barriers to access and introduce incentives for efficiency), and the National Scholarship Programme targeted at bright potential students from poor backgrounds.

When will the policy be reviewed to establish its impact and the extent to which the policy objectives have been achieved?

It will be reviewed in 2015

Are there arrangements in place that will allow a systematic collection of monitoring information for future policy review?

Yes

Ministerial Sign-off For final proposal stage Impact Assessments:

I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) the benefits justify the costs.

Signed by the responsible Minister:...



..... Date: 29 November 2010

Summary: Analysis and Evidence

Policy Option 4b

Description: Option 4b is based on the Browne Approach, consistent with Spending Review 2010 (detailed further on page 9)

Price Base Year	PV Base Yr 2012/13	Time Period Years 3	Net Benefit (Present Value (PV)) (£m)		
			Low:	High:	Best Estimate: -£2020m

COSTS (£m)	Total Transition (Constant Price) Years	Annual (Present Value)	Total Cost (Present Value)
Low			
High			
Best Estimate		190/710/1120	2020

Description and scale of key monetised costs by 'main affected groups'

For Government: increased maintenance grant, student support RAB charge and administration costs are estimated to be offset by savings to teaching grant estimating total savings of £2520m in net present value across the three years (£380m in 12/13, £870m in 13/14 and £1270m in 14/15). For graduates: loan repayments expected to increase, resulting in total marginal cost of £4540m (£570 in 12/13, £1580 in 13/14 and £2390m in 2014/15). For businesses, additional implementation costs estimated to be £4m in 2014/15 (upper range).

Other key non-monetised costs by 'main affected groups'

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	Optional	Optional	Optional
High	Optional	Optional	Optional
Best Estimate			0

Description and scale of key monetised benefits by 'main affected groups'

No monetised benefits due to assumption that demand for student places does not change (see sensitivity analysis on page 15)

Other key non-monetised benefits by 'main affected groups'

Non-quantified benefits from the proposed reforms may arise from improved incentives for higher education institutions to drive efficiency and quality by placing power and influence into the hands of students, as well as equity and distributional impacts from generous grants and the progressive repayment system. These non-monetised benefits are one of the main reasons for the overall estimate of negative net benefits with this proposed option.

Key assumptions/sensitivities/risks

Discount rate (%) 3.5

This purpose of this analysis is to provide an indicative analysis to assess one of the potential economic impacts of the proposed policy change. All figures are based on modelling assumptions based on currently proposed policy positions and do not affect the figures announced in the Spending Review on the financial impact on HE. The main cost benefit analysis refers to full-time students. Changes to the part-time funding and student support system are also being proposed, but data limitations mean that the costs/benefits are much harder to quantify in the case of part-time study. Part-time students are therefore dealt with separately on page 18. Student numbers are assumed not to change as a result of the reform. It is impossible to predict how demand and supply will react under the new system. If excess demand is high under the current system, then student numbers could increase under the new system but if the current system operates near equilibrium, the increase in the cost of HE is likely to discourage some potential students leading to a fall in student numbers. Some sensitivity analysis around this assumption is presented.

Impact on admin burden (AB) (£m):		Impact on policy cost savings (£m):	
New AB: £4m	AB savings:	Net: £4m	Policy cost savings:

Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?	England ¹				
From what date will the policy be implemented?	Academic Year 2012/13				
Which organisation(s) will enforce the policy?	BIS				
What is the annual change in enforcement cost (£m)?	n/a				
Does enforcement comply with Hampton principles?	yes				
Does implementation go beyond minimum EU requirements?	no				
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)	Traded: n/a		Non-traded: n/a		
Does the proposal have an impact on competition?	Yes				
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?	Costs: 0		Benefits: 0		
Annual cost (£m) per organisation (excl. Transition) (Constant Price)	Micro < 20	Small	Medium	Large	
Are any of these organisations exempt?	n/a	n/a	n/a	n/a	n/a

Specific Impact Tests: Checklist

Set out in the table below where information on any SITs undertaken as part of the analysis of the policy options can be found in the evidence base. For guidance on how to complete each test, double-click on the link for the guidance provided by the relevant department.

Please note this checklist is not intended to list each and every statutory consideration that departments should take into account when deciding which policy option to follow. It is the responsibility of departments to make sure that their duties are complied with.

Does your policy option/proposal have an impact on...?	Impact	Page ref within IA
Statutory equality duties ² Statutory Equality Duties Impact Test guidance	Yes	24
Economic impacts		
Competition Competition Assessment Impact Test guidance	Yes	24
Small firms Small Firms Impact Test guidance	No	24
Environmental impacts		
Greenhouse gas assessment Greenhouse Gas Assessment Impact Test guidance	No	24
Wider environmental issues Wider Environmental Issues Impact Test guidance	No	24
Social impacts		
Health and well-being Health and Well-being Impact Test guidance	Yes	24
Human rights Human Rights Impact Test guidance	No	24
Justice system Justice Impact Test guidance	No	24
Rural proofing Rural Proofing Impact Test guidance	No	24
Sustainable development Sustainable Development Impact Test guidance	No	24

¹ This Impact Assessment relates to policy proposals concerning England only, and therefore considers impacts which relate to England only. In accordance with standard practice for such Impact Assessments, it does not therefore consider impacts on the UK's Devolved Administrations, nor on EU or overseas jurisdictions or their students.

² Race, disability and gender Impact assessments are statutory requirements for relevant policies. Equality statutory requirements will be expanded 2011, once the Equality Bill comes into force. Statutory equality duties part of the Equality Bill apply to GB only. The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

Evidence Base (for summary sheets) – Notes

Use this space to set out the relevant references, evidence, analysis and detailed narrative from which you have generated your policy options or proposal. Please fill in **References** section.

References

Include the links to relevant legislation and publications, such as public impact assessment of earlier stages (e.g. Consultation, Final, Enactment).

No.	Legislation or publication
1	“Securing a sustainable future for higher education” AN INDEPENDENT REVIEW OF HIGHER EDUCATION funding & STUDENT FINANCE http://hereview.independent.gov.uk/hereview/report/
2	OECD Education at a Glance 2010 http://www.oecd-ilibrary.org/docserver/download/fulltext/9610071e.pdf?expires=1287049668&id=0000&acname=oid009374&checksum=6333328DD882A5995CAFE1E3FF942B6A
3	IFS (2010) The impact of the “2006-07 package” of reforms to HE funding available at: http://www.ifs.org.uk/docs/fees_review.pdf
4	Feinstein, L. (2002) “Quantitative Estimates of the Social Benefits of Learning, 1: Crime Rates 2: Health (Depression and Obesity)” The Centre for Research on the Wider Benefits of Learning Discussion, available at: http://www.learningbenefits.net/Publications/ResRepIntros/ResRep5intro.htm
5	PWC (2005) The Economic Returns from Higher Education
6	Chevalier, A et al (2002) The returns to Higher Education teaching: A review of the literature”, Centre for the Economics of Education Discussion Paper
7	NESS (2009) https://ness.ukces.org.uk/NESS09/default.aspx
8	ONS (2009) Annual Survey of Hours and Earnings http://www.statistics.gov.uk/statBase/product.asp?vlnk=15313
9	Walker, I. & Zhu, Y. (2010) “Differences by Degree: Evidence of the Net Financial Rates of Return to Undergraduate Study for England and Wales” Discussion Paper No. 5254, Institute for the Study of Labour (IZA), Bonn
10	UniversitiesUK (2009) The economic benefits of a degree available at: http://www.universitiesuk.ac.uk/Publications/Documents/research-gradprem.pdf
11	UCAS (2010) Total UCAS applications, applicants and accepted applicants over six years available at: http://www.ucas.ac.uk/about_us/stat_services/stats_online/data_tables/datasummary
12	Barr & Johnston (2010) Interest subsidies on student loans: A better class of drain http://econ.lse.ac.uk/staff/nb/BarrJohston/Interestsubsidies100215.pdf

Evidence Base (for summary sheets)

Evidence Base

Ensure that the information in this section provides clear evidence of the information provided in the summary pages of this form (recommended maximum of 30 pages). Complete the **Annual profile of monetised costs and benefits** (transition and recurring) below over the life of the preferred policy (use the spreadsheet attached if the period is longer than 10 years).

The spreadsheet also contains an emission changes table that you will need to fill in if your measure has an impact on greenhouse gas emissions.

Annual profile of monetised marginal costs and benefits* - (£m net present value)

	Y ₀	Y ₁	Y ₂	Y ₃	Y ₄	Y ₅	Y ₆	Y ₇	Y ₈	Y ₉
Transition costs										
Annual recurring cost										
Total annual marginal costs	187	712	1127							
Transition benefits										
Annual recurring benefits										
Total annual marginal benefits	0	0	0							

- For non-monetised benefits please see summary pages and main evidence base section

1. Problem under consideration:

In October 2010 Lord Browne published an independent review of Higher Education (HE) and student finance. This identified three main problems with the current HE system namely sustainability, participation and quality. Later in October 2010, as part of Government's efforts to reduce the fiscal deficit, the Spending Review 2010 resulted in reductions to government expenditure in HE; reducing the overall resource budget for HE, excluding research funding, from £7.1 billion to £4.2 billion by 2014-15. The purpose of this impact assessment is to assess the possible options following the recommendations Browne made for reform of the funding system in the context of the Spending Review announcement. Broader aspects (for example, on governance of the HE sector, student number controls and early repayment penalties) are out of scope as will be consulted on by Government this winter.

2. Rationale for intervention:

The Browne Review identified how the current nature of government intervention in the HE sector prevents it from operating efficiently. The current system involves a system of imbalanced contributions that do not appropriately reflect the beneficiaries and presence of information barriers. It is also an unsustainable funding system given the Spending Review 2010 announcement of reductions to government expenditure in HE (of a reduction in the overall resource budget for HE, excluding research funding, from £7.1 billion to £4.2 billion by 2014-15) which further necessitates the need for reform.

On top of this, there are several issues in Higher Education (HE) which the current system is designed to address, which any reform must continue to do. These are to:

- Ensure the positive externalities from HE are exploited. The spillovers from investment in HE (innovation and economic growth) and social benefits (improved health outcomes, reduced crime rates and social cohesion) suggest there would be a sub-optimal market outcome without government intervention.
- Provide credit based on the lower cost of borrowing available to government enabling them to offer credit where private markets cannot (relevant in HE because benefits accrue in future and thus are uncertain which limits the collateral available to secure a loan) and particularly for those from lower-income households for whom this presents particular problem,
- Overcome risk aversion and information asymmetries, particularly among potential students on the returns from HE which reduces their willingness to undertake/finance HE and would lead to socially sub-optimal levels of investment.

2.1 Why the system needs to change

2.1.1 Imbalanced public and private contributions

Currently, public contributions to HE are greater than private contributions. For example, in 2007, public investment in HE in the UK was greater than private investment at 0.7% of Gross Domestic Product (GDP) compared to 0.6% (OECD, 2010). However, there is evidence that the private benefits to an individual of undertaking HE in the UK are relatively 50% higher than public benefits and these are high on international comparisons (the net benefit for UK graduates is 33% higher than the OECD average; OECD evidence cited in Browne Review).

Private benefits include greater employability and productivity gains which translate into higher earnings for graduates over their working life (equivalent to £100,000 more, on average, than an individual whose highest qualification is 2 or more A-levels, net of taxes and in today's valuation; BIS internal analysis). There are also health benefits; individuals with higher qualifications have improved health (Sabates and Feinstein, 2004) and are less likely to be depressed or obese (Feinstein, 2002, who showed HE reduces the likelihood of depression by 6-10%).

Therefore, in the current system, the costs incurred by individuals and government do not accurately represent their benefits; for example, the general taxpayer (even if they did not enter HE) contributes towards the cost of HE whether they benefitted privately or not.

2.1.2 A lack of student choice

The mechanism for distributing public funding (block grants distributed to institutions through the Higher Education Funding Council for England; HEFCE) means that power and influence is taken out of the hands of students and weakens the incentives on institutions to improve their performance, including quality and choice. Similarly, because students do not face the full cost of undertaking HE, this lessens the incentive for them to pressure the institutions to provide a better service. The lack of incentives on HEIs to drive quality and efficiency is reflected in recent evidence. The Browne Review highlighted that there is no clear evidence that the student experience has significantly improved in recent years and identified evidence which shows the UK's "inadequately educated workforce" is the 4th most problematic factor for doing business in the UK. The need to improve our international competitiveness and thus maximise the benefits from HE is evident; in 2010 the OECD (2010) found that only 33% in the UK have a higher education qualification; ranking 12th among the 31 OECD countries.

2.2 The rationale for government intervention in HE

Market failures and equity issues inherent in HE provided the justification for intervention in HE in the past and remain important in the present. Any reform must continue to address these.

The presence of positive externalities presents the rationale for government intervention so as to ensure the wider economic and social benefits are exploited. Positive externalities include spillover effects on innovation, economic growth, skills to ensure international comparative advantage. There is evidence, for example, that higher education drives innovation and economic growth. Between 2000 and 2007, the increase in employed university graduates accounted for 6% of output growth in the private sector (Browne Review, footnote 6). In 2009, the HE sector contributed 2.3% of GDP and UK HEIs generated over £59bn of output and nearly 670,000 Full-Time-Equivalent jobs throughout the economy and directly employing 370,000 people (Universities UK). Social benefits include improvements in health outcomes, crime rates (thus lowering public expenditure in these areas) and social cohesion and mobility. These were reviewed in Chevalier et al (2002) (although its worth nothing that some impacts are gained indirectly from increased labour market participation and earnings which are generated from undertaking HE).

The different points in time at which costs of HE are incurred (during period of study) and the benefits accrued (in future lifetime earnings) creates information barriers for potential students on the potential future benefits (additional lifetime earnings) from investing in HE. This generates risk aversion among potential students and as a result, there would be a sub-optimal level of investment in HE.

If potential students cannot afford to pay costs up-front they may also face credit constraints in obtaining the finance they need to cover those costs that enables them to repay in future when they are benefiting from the HE investment. The lack of information about future earnings creates uncertainty about the collateral available to acquire loans in a private market, which would thus be unlikely to offer individuals the necessary finance. These credit constraints particularly fall on low-income households for whom the need to acquire credit is greater. Therefore, the rationale for government intervention to overcome these credit constraints by ensuring there are no up-front costs to HE and providing the up-front finance required is justified on equity grounds so that all those who have the ambition and aptitude to undertake HE can do so.

These issues remain important. There is evidence that much progress has been made in the area of widening participation with participation by those from least disadvantaged backgrounds having increased substantially in the past decade. However, there remains the potential for improvements to be made on fair access; access to the top third of institutions has not increased since the mid-1990s (see Sir Martin Harris' report cited in the Browne Review).

Therefore, these inherent market failures and pursuit of equity objectives present the rationale for government intervention to ensure the benefits (both private and social) from HE are maximised. Government intervention has been addressing these issues; for example by overcoming credit constraints through the provision of grants and loans for tuition fees and maintenance; mitigating against risk aversion by providing grants for those from low-income households and repayment protection for low future earners; and exploiting the positive externalities through all of the above as well as offering teaching grants to institutions to increase the supply of places. These aspects will have to form an integral part of any new system proposed.

2.3 Conclusion: market failures, equity, government failures and budget constraint

The existence of market failures and equity objectives present a rationale for intervention in HE. The presence of failures caused by the current government intervention in HE provides a rationale for reform, alongside the need to reassess the HE system given the reductions to government expenditure in HE announced in the Spending Review 2010.

In response to the Opinion from the RPC we have:

1. strengthened the analysis and evidence of the non-quantifiable benefits of the preferred option by more clearly summarising this on the summary page, presenting some additional analysis on page 14 and more clearly outlining these points in Table 6, and;
2. provided an additional explanation of choice of baseline option on page 9.

Policy Objectives:

The Government has three goals in the area of reforming Higher Education:

1. To rebalance the power and influence into the hands of those who use higher education; i.e. students.
2. Enable a long-term sustainable HE sector with incentives for efficiency and quality.
3. Manage the announced reduction to the overall resource budget for Higher Education, excluding research funding, from £7.1 billion to £4.2 billion by 2014-15.

These specific objectives are to be taken into account alongside the Coalition Government's overall objectives in HE which demonstrated a commitment to analysing HE reform so as to:

- increase social mobility;
- take into account the impact on student debt;
- ensure a properly funded university sector;
- improve the quality of teaching;
- advance scholarship; and
- attract a higher proportion of students from disadvantaged backgrounds.

4 Description of options:

Option 1: Do-Nothing

This option would maintain the current system with the levels of public funding pre Spending Review 2010 (SR2010) announcement. This is not possible given the reduction to the overall resource budget for Higher Education, excluding research funding, from £7.1 billion to £4.2 billion by 2014-15. Despite the unfeasibility of this option, it represents the most appropriate baseline on which to form the analysis to demonstrate the effects of each alternative option available. The use of this baseline was agreed as appropriate by the BIS Peer Review Group as part of the Chief Economist sign-off so as to treat the SR2010 announcement and need for HE reforms as one issue. The analysis for all other options, as is the norm for impact assessments, considers the marginal impact compared to the status quo.

Option 2: Current funding system with reduced government funding

If we chose to maintain the current system, then the planned reduction to public expenditure in HE over the Spending Review period announced in October 2010 would have to be met either through a reduction in the resource available for teaching or through a reduction in the number of student places available. A reduction in the unit of resource would have serious implications for the standard of service that HEIs would be able to provide. If the current unit resource is to be maintained, then the only alternative is a reduction in student numbers which we have estimated would have to be in the order of 58% to remain within the spending envelope set for HE. This reduction in student numbers is the option explored here.

Option 3: Return to previous funding system with reduced government funding

In the context of reduced government funding for HE (excluding research) another option might be to return to the previous funding system, prior to the 2004 reforms, which was characterised by a fee of £1200 for all students payable up-front, reduced student support (including fee loans up to £1000, means-tested fee grants but no maintenance grants). Maintaining the teaching grant as in the baseline but remaining within SR2010 budget constraints would require a 49% reduction in student numbers.

Option 4: Browne approach

The independent review by Lord Browne (published in October 2010) assessed the options for HE reform and recommended a sustainable approach to funding which more appropriately reflects the costs and benefits involved for individuals and government, drives quality and widens participation. This approach has been broadly endorsed by the Government as consistent with the rationale presented above. Option 4a presents the impact of implementing the full Browne package and Option 4b that of an alternative package of reforms.

The main element of the Browne approach is the rebalancing of contributions between public and private contributors; with HEIs able to set a higher graduate contribution levels for undergraduate courses (where justified) and thus enables a reduction in the publicly funded teaching grant. Students meet the cost of their course through contributions upon graduation and are provided with financial support as students so as they get at least as much support as under the current system. The graduate repayment system also more accurately reflects the government's cost of borrowing through the interest rate charged and increases the repayment threshold from which repayments are expected to be made, benefitting lower future earners.

5 Analysis of Options:

5.1 Scope of analysis

The purpose of this document is to provide an indicative analysis to assess one of the potential economic impacts of the proposed policy change. All figures presented are based on modelling assumptions based on currently announced policy positions. Therefore, they should only be considered within this context. The assumptions are discussed on page 16. The Government published figures on the financial impact of the Spending Review on HE which are not affected by this analysis.

The relevant time period for this analysis is the first year of introduction of the proposed reforms (2012/13) to the end of the Spending Review period (2014/15); beyond which the uncertainty on government funding prevents further analysis. The conventional ten year period for impact assessment analysis is not appropriate.

The scope of this impact assessment covers the impacts of the different options for the student finance package in the context of the recently announced government funding. It does not cover broader issues such as governance and regulatory bodies which, whilst among recommendations in the Browne Review, are to be consulted on and assessed in due course. Also out of scope are the broader options (such as moving to a graduate tax repayment system rather than income contingent repayments) which were debated in Browne.

5.2 Identifying costs and benefits

The main costs and benefits involved in the HE funding system are identified in Table 1. Benefits accrue to government and graduates over the future working lifetime of the graduate. The cost to government of providing loans and contributions graduates make also depend on the future earnings profile of the graduate over their working life. The costs and benefits have therefore been calculated accordingly, as detailed below.

Table 1: Costs and Benefits of Higher Education

For:	COSTS	BENEFITS
GOVERNMENT	Teaching grant allocated to institutions through Higher Education Funding Council for England	Increased tax and National Insurance contributions from additional graduate earnings
	Student maintenance grants	
	Loan provision (including non-repayment and interest subsidy)	
	Administration costs (mainly to HMRC and Student Loan Company)	
	Foregone taxation from students not earning while in HE	
GRADUATES	Graduate contributions (loan repayments)	Graduate premium - increased earnings over working life from HE attainment
	Foregone earnings while in HE	
BUSINESS	Administration cost of student loan repayment system	Labour productivity gains*

* it is assumed that in monetary terms, there are no benefits to businesses above and beyond those reflected in the graduate premium paid by firms to their graduates.

There is evidence of the broader benefits from HE some of which are not financial and therefore not as simple to allocate a monetary value to. Data limitations or future uncertainty prevent their inclusion in this analysis. Some of these are thought to be:

- Health benefits to individuals (reduced depression and obesity rates) and thus to government through health care savings
- Social benefits (reduced crime rates, social cohesion etc)
- Contribution to wider economy through innovation and economic growth (these are assumed to be reflected by businesses willingness to pay the “graduate premium”) and reduced unemployment (and thus benefit payments from government) from graduate’s enhanced employability.

5.3 Quantifying costs

For Government the costs include the teaching grant allocated to the Higher Education Funding Council for England (HEFCE) to distribute among HE institutions (HEIs) and the maintenance grants provided to students from low income households to enable them to overcome financial barriers of undertaking HE. The government also incurs a Resource Accounting Budget (RAB) charge on the student loans it provides; for example due to those loans which are never repaid or the differential between the interest rate charged and the government's cost of borrowing. These costs to government were modelled by assuming an average graduate contribution under each option, modelling future expected earnings profiles and take up of support available. It is assumed these costs are incurred in the year a student entered HE; thus presenting an estimate of the lifetime cost. It is also assumed that 90% of the population take up tuition fee loans and 80% maintenance loans (based on internal BIS evidence). In option 4b the forecast cost of the National Scholarship Scheme is additional.

Administration costs are incurred by HMRC and the Student Loan Company (SLC) to administer student loan repayments. These are based on indicative estimates by BIS, SLC and HMRC made before taking into account any further efficiency savings and are thus subject to revision.

There are also opportunity costs for Government from having students in HE, in terms of the foregone taxation and national insurance (NI) contributions when students are not in the workforce. Based on average foregone earnings of £10,000 (from PWC, 2005), a basic tax rate of 20% and primary NI contribution of 11% on those earnings, this amounts to £1175.8 per student per year in HE. These were aggregated for the student population for each year based on internal BIS forecasts of the "HEFCE fundable" population.

For graduates, the costs involved are the costs of tuition of a course (either upfront or through loan repayments upon graduation) and the repayments on maintenance loans. The repayments of these loans is equivalent to the cash outlay government made minus the RAB charge expected to be incurred on those loans, discounted accordingly over a graduate's future lifetime earnings. BIS analysis suggests that 90% of students take out a loan from government to cover the tuition costs of their course and 10% pay upfront, therefore to calculate the cost for 100% of students the following calculation was made:

Cost of tuition = [(cash outlay for cost of tuition – RAB charge) / 90] * 100

Aggregating in this way based on the estimated repayments is likely to be an underestimate because the repayments on the loans for the cost of tuition are less, due to the RAB charge, than the full cost were it faced up front.

Maintenance loans cover the cost of living whilst at university and BIS analysis assumes that 80% of students undertake such loans. It is assumed that full tuition costs and loan repayments occur in the first year the student enters university.

The opportunity cost of undertaking HE are the foregone earnings from not entering the workforce immediately upon completing A levels/equivalent. There is evidence this amounts to, on average £10,000 per student per year (PWC, 2005). However, the graduate premium calculation (see quantifying benefits below) incorporates these foregone earnings so it is not appropriate to double count as a cost.

For businesses, there are costs of administering the student loan repayment system. In the baseline case it has not been possible to quantify this, however the additional cost of any proposed change are estimated and, for example, include compliance costs in the time taken by payroll administrators to understand and implement the changes (see page 20).

5.3 Quantifying benefits

For graduates, the benefit from undertaking HE is the graduate premium in the form of additional lifetime earnings. There is evidence (external reports/analysis and BIS internal analysis) which suggests the additional lifetime earnings (over 46 year lifetime upon entering HE) are on average £100,000 compared to employees who are qualified to no more than A level/equivalent level. This figure is net of taxes and discounted across the working lifetime at 3.5% for 30 years and 3.0% thereafter.

For Government, the “exchequer benefits” are the additional tax and National Insurance Contribution which graduates make due to their additional earnings. BIS internal analysis of the average graduate premium suggests these exchequer benefits are £80,000 per student.

These benefits were aggregated based on the number of expected graduates from each year’s student entrant forecasts, based on the “Full-Time HEFCE fundable” student population. BIS analysis estimates student entrants on this basis to be 343,653 each year of the SR period in the baseline, with around 73% actually graduating, giving a total figure of 251,000 each year. Whilst this “HEFCE fundable” population is an underestimate of the overall student body (because some students are funded from elsewhere in Government, for example, Department of Health, or privately) it is the most consistent population available to compare to the population used in the cost modelling.

5.4 Comparison of options

Table 2 presents a comparison of the net marginal benefits estimated for each option compared to the net benefits estimated for Option 1 (the do-nothing baseline).

Table 2: Net marginal benefits compared to baseline (net present value £m)

	2012/13	2013/14	2014/15
Option 1	0	0	0
Option 2	-22580	-18630	-13650
Option 3	-18740	-15020	-11780
Option 4a	-30	-290	-504
Option 4b	-190	-710	-1120

Option 1 is not a viable option given the Spending Review 2010 (SR2010) announcement on the reductions to public expenditure in HE, and therefore cannot be considered as a viable option. It is included here instead as a baseline comparison for the other options, which is set out in Table 3.

Table 3: Monetised costs and benefits of option 1 (Do-Nothing)

£m in net present value terms		2012/13	2013/14	2014/15
COSTS				
TO GOVERNMENT	Teaching and maintenance grants	5100	5070	5040
	Student support loans	1650	1630	1600
	Foregone taxation whilst students in HE	1120	1070	1030
	Administration costs*	90	80	80
TO GRADUATES	Tuition fee and maintenance loan repayments	4470	4420	4370
TOTAL COSTS		12430	12270	12120
BENEFITS				
TO GOVERNMENT	Exchequer Benefits (increased tax and NI payments)	20070	19390	18740
TO GRADUATES	Graduate Premium (additional lifetime earnings)	25090	24240	23420
TOTAL BENEFITS		45160	43630	42160
NET BENEFITS		32730	31360	30040

* Indicative BIS, SLC and HMRC estimates made before making any further efficiency savings, therefore subject to revision

Option 2 estimates the potential impact of reduced government funding under SR2010 if the system of funding and balance of contributions is not altered, for example, if the reductions to public funding are not replaced with an alternative income stream. In option 2, the cut in student entrants required each year of the SR period to meet the budget constraint is large at 58%. Option 3 estimates the potential impact of a return to the 2003/04 system (of fees around £1200 and lower levels of student support) which, so as to meet the SR2010 budget constraint, would necessitate a 49% reduction in student entrants each year of SR2010 period.

Given the levels of current demand for HE (for example, the number of UCAS applicants increased by 31% from 2004 to 2009, UCAS 2010) options 2 and 3 would only be achieved by stricter controls on student numbers. Artificially depressing the level of demand would produce a socially and economically inefficient outcome because of the foregone economic benefits. This is demonstrated by the results in Table 2 which show large negative net marginal benefits estimated under each option in net present value as detailed in Tables 4 and 5.

Table 4: Marginal costs and benefits from option 2 (to maintain current system given SR2010; equivalent to a 58% cut in student entrants)

£m in net present value terms		2012/13	2013/14	2014/15
MARGINAL COSTS				
TO GOVERNMENT	Exchequer benefits foregone due to fewer graduates	11640	11250	10870
TO GRADUATES	Foregone graduate premium due to fewer graduates	14550	14060	13580
TOTAL MARGINAL COSTS		26190	25310	24450
MARGINAL BENEFITS				
TO GOVERNMENT	Savings on teaching and maintenance grants	680	1570	2300
	Tax and NI payments from increased participation in labour force	230	350	610
	Savings on student support loans (RAB charge)	190	490	730
	Earnings from increased participation in labour force	1990	2950	5190
TO GRADUATES	Savings on tuition fee and maintenance loan repayments	520	1320	1970
TOTAL MARGINAL BENEFITS		3610	6680	10800
NET MARGINAL BENEFITS		-22580	-18630	-13650

* Assumes all displaced students are employed in the labour force, none are unemployed and no existing labour force participants are displaced as a result

Table 5: Marginal costs and benefits of option 3 (reduced government expenditure by reverting to 2003/04 system; equivalent to a 49% cut in student entrants)

£m in net present value terms		2012/13	2013/14	2014/15
MARGINAL COSTS				
TO GOVERNMENT	Exchequer benefits foregone due to fewer graduates	9830	9500	9180
TO GRADUATES	Foregone graduate premium due to fewer graduates	12290	11880	11480
TOTAL MARGINAL COSTS		22120	21380	20660
MARGINAL BENEFITS				
TO GOVERNMENT	Tax and NI payments from increased participation in labour force*	200	280	350
	Savings on teaching and maintenance grants	680	1560	2280
	Savings on student support loans (RAB charge)	270	690	990
TO GRADUATES	Earnings from increased participation in labour force*	1680	2350	2980
	Savings on tuition fee and maintenance loan repayments	550	1480	2280
TOTAL MARGINAL BENEFITS		3380	6360	8880
NET MARGINAL BENEFITS		-18740	-15020	-11780

* Assumes all displaced students are employed in the labour force, none are unemployed and no existing labour force participants are displaced as a result

Tables 4 and 5 show the opportunity costs (foregone benefits) and benefits estimated to arise with these cuts in student entrants.

There are greater economic costs due to lower numbers of students benefitting from HE; for potential graduates the opportunity costs are the foregone additional future earnings from not being able to undertake HE and for government, they are the foregone future taxation and NICs.

There are benefits for government through savings in teaching grant, maintenance grants and student support and also for graduates through lower graduate contributions. There are also additional benefits in the form of increased earnings for those in employment instead of undertaking HE (it is assumed that there is no unemployment) and thus greater taxation and national insurance contributions for government.

However, the estimates of these benefits do not offset the opportunity costs, resulting in large negative net marginal benefit.

Additionally, these estimates do not take into account other unquantified foregone benefits from a reduction in student entrants and therefore the net costs are overestimated. Examples of these are on businesses (foregone improved labour productivity from an upskilled labour force) and on the wider economy and society (from foregone positive externalities such as innovation, economic growth, health and social cohesion). Additionally, it is considered that the need for greater control over student numbers would reduce quality and efficiency in the HE sector.

Analysis of Options 4a and 4b:

Given the above, options 4a and 4b are the remaining viable options for consideration. These estimate the impact of the approach proposed in the Browne Review which is considered appropriate to address the need for reform of the HE funding system identified above. It is assumed that student numbers do not change from the baseline, although the sensitivity analysis below further investigates this.

The Browne approach is consistent with the policy objectives identified by the Coalition Government of ensuring a properly funded HE sector and a sustainable long-term HE sector. It also ensures that the features in the current system which address credit constraints and risk aversion, are maintained (by ensuring no students face up-front costs of undertaking HE and providing the necessary finance and support).

Browne made specific recommendations for the student finance package which are presented in Option 4a. Government also assessed alternative options within the overall approach Browne presented, based on the different options possible on graduate contribution caps, levels and tapering of student support and loan repayment conditions (threshold and interest rates). Option 4b presents an alternative package, based on the approach recommended by Browne. The rationale for the elements of the alternative package (option 4b) compared to Browne's recommendations (option 4a) are set out in Table 6. The main points are:

- Setting an upper limit (at £9000) on the graduate contributions HEIs can charge is necessary in an imperfectly competitive sector; it prevents a potentially unconstrained increase in graduate contributions and lessens any adverse impacts in barriers to access.
- The progressive repayment scheme retains the key features of existing scheme (for example, that students face no up-front costs and graduate contributions rise with incomes) and will improve protection for future lower earners. For example, the introduction of a real interest rate is argued as necessary to remove the problems of an interest rate subsidy (see for example, Barr & Johnston, 2009) and the proposed interest rate still enables graduates to benefit from a lower than commercial rate as well as benefits from progressivity (see more detail below).
- Students from lower income households will get more support for living costs than under option 4a and a new £150m National Scholarships Programme targeted at bright potential students from poor backgrounds will guarantee benefits such as a free first year or foundation year.

Progressivity of proposed repayment system:

BIS analysis indicates that despite the increase in expected graduate contributions the changes in the repayment conditions mean that up to around a quarter of graduates – those on the lowest incomes – will repay less in Net-Present-Value terms (assuming debt of £30k), than under the current repayment

system (assuming debt of £21k). This is predominantly because the earnings threshold at which repayments start will be raised from £15k to £21k. As a result, low earners (including many part-time workers) will never earn the threshold at which repayments start.

As an illustration, Chart 1 below shows how an average graduate would fare under the new proposed system compared to the present system. Total debt upon graduation is assumed to be £21k under the old system and to increase to £30k under the new system.

Chart 1: Progressivity of proposed repayment system

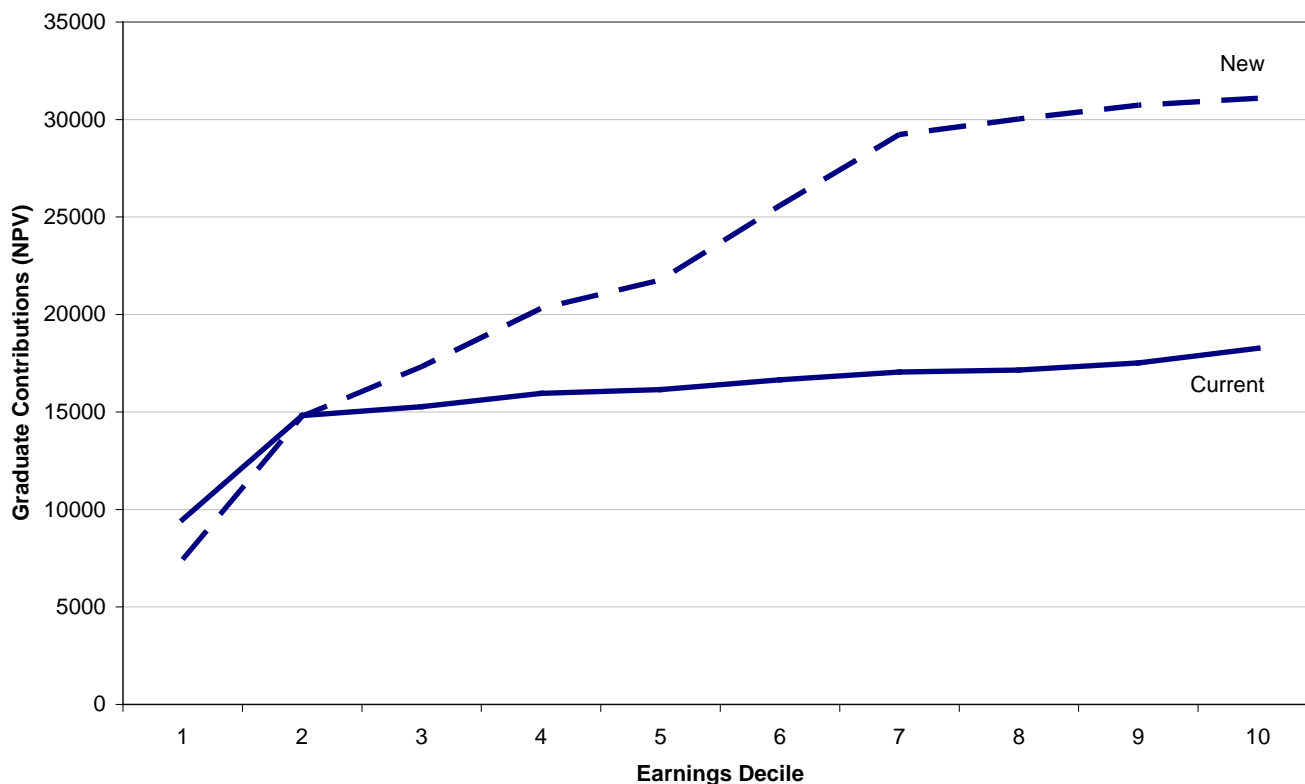


Table 2 shows that the estimated negative net marginal benefits associated with both options 4a and 4b are notably smaller than those associated with options 2 and 3. The net marginal benefits of options 4a and 4b are negative for two reasons:

- (i) Although transferring funding from the teaching grant into loans for students should be a zero-sum operation, the population of students eligible for teaching grant is smaller than the population eligible for loans³, therefore it might be expected for the overall cost to increase;
- (ii) There are significant non-quantifiable benefits to be reaped from options 4a and 4b compared to the baseline. These include placing power and influence into the hands of students which should lead to higher quality, greater choice and improved efficiency in the longer run. Although unquantifiable, these benefits are likely to mitigate the negative marginal effects suggested in Table 2.

Whilst the marginal costs associated with option 4b are greater than option 4a, tables 7 and 8 show these can be attributed to the more progressive repayment package (resulting in a larger marginal RAB charge to government estimated within option 4b). In addition, we believe that there are important unmeasurable benefits associated with option 4b, including the fact that students from lower income households will get more support for living costs and a new £150m National Scholarships Programme targeted at bright potential students from poor backgrounds. This is aimed to deliver equity through ensuring fair access for all who have the ability and aptitude to benefit from undertaking HE resulting in the outcomes of increased social mobility and proportion of students from disadvantaged backgrounds in HE. Further analysis on the potential impact of the proposed option will be available in the Equality Impact Assessment.

³ The HEFCE funded population will exclude students who drop out (and who may still have taken out student loans). Over-recruitment and unfunded additional places also add to the difference - these students will not be funded by HEFCE but will be eligible for fee support. HEFCE fundable and fee eligible have different criteria as well. For example some students are funded by the TDA, but will still be eligible for fee loans.

For these reasons, option 4b is preferred.

Assumptions:

Participation

In the proposed option it was assumed that student numbers and participation rates would not change from the baseline, even though graduates will face increased contributions compared to the baseline (option 1). There are many factors which affect student behaviour including how the change in price is interpreted, the price elasticity of demand and the current level of excess demand. If excess demand is high under the current system, then student numbers could increase under the new system. If, however, the current system operates near equilibrium, the increase in the cost of HE is likely to put off some students leading to a fall in student numbers.

There is evidence of price sensitivity among students from the previous set of HE reforms (that a £1000 increase in fees reduces participation by around 4.4 percentage points, IFS 2010) however it was also found that with comparable increases in student support, this price sensitivity was offset and resulted overall to no change in participation. Therefore, the assumption that student numbers do not change is not based on the assumption that students are not price sensitive but on the fact that the aspects of the proposed option (of continuing to ensure students do not face up-front costs, have the same access to the necessary finance and borrowing they need as under the current system and increasing availability of grants) is aimed to mitigate against any sensitivity to a price change.

Further assumptions:

- The estimated costs to government and graduates depend on the expected future earnings profile for graduates and therefore would be affected by any significant differences in the assumptions used to generate these earnings. Additionally, under options 4a and 4b it is not known what level of contribution the HEIs will charge graduates so average contributions of £6,700 and 7,200 respectively were assumed. The RAB charge assumed is 28% for indicative purposes only.
- It is assumed there will be no change in the distribution of subjects studied due to the reforms which could alter the benefits from HE (i.e. the value of the graduate premium). This is consistent with recent evidence (Walker & Zhu, 2010) that found “*A large rise in tuition fees across all subjects has only a modest impact on relative rates of return suggesting that little substitution across subjects would occur.*”
- It is assumed that the removal of the minimum bursary under options 4a and 4b will have no impact. In the current system (option 1) there is a minimum bursary requirement on HEIs equivalent to 10 per cent of the maximum tuition fee. It is assumed that the cashflow savings for HEIs is offset by the required investment in improving access and that the loss of benefits is negligible for students because there is little impact that bursaries have had an influential impact on students choices (OFFA, 2010).

Table 6: Comparison of Browne recommendations (Option 4a) and alternative package (Option 4b)

ISSUE AND CURRENT POSITION	Option 4a	Option 4b	Rationale
Level of graduate contribution (currently £3,290 in 2010/11)	No limit: institutions able to set graduate contributions at whatever level they judge, but subject to (i) paying a levy above £6,000 and (ii) meeting conditions on quality and participation above £7,000	Two tier approach - £6,000 lower threshold, and £9,000 hard cap, with tough conditions on improving participation and access for universities charging between £6,000 and £9,000. Sanctions for those that cannot demonstrate progress.	A limit is necessary due imperfect competition in HE sector. Without one there would be no incentives for HEIs to drive efficiency savings and could potentially lead to an unconstrained increase in graduate contributions (creating barriers to access particularly for low-income households).
Level of Government support to meet the cost of the graduate contributions (currently fee loan to £3,290 available for all students)	Loan available for all students to cover the full cost of fees.	Loan available for all students to cover the full cost of fees.	No difference : consistent with need for government intervention to ensure no students face up front costs of tuition to overcome credit constraints inherent in HE.
Level of maintenance grant and loan Currently, maintenance grant is paid of up to £2,906 pa for students with family income up to £25,000, reducing to £50 for students with family income above £50,020. Maintenance loan is paid of up to £4,950, reducing by 50p for every £1 of maintenance grant awarded.	Means-tested maintenance grants tapering from £3,250 for those with family income less than £25k through to £50 for those with family income over £60,000. Flat-rate loan for living costs of £3,750 per annum for all students. All students receive at least as much support for living costs as under the current system.	Means-tested maintenance grants tapering from £3,250, as in Browne. Full grant for those with family income less than £25k (as Browne) through to £0 for those with family income over £42,000. Means-tested loan for living costs of between £3,575 and £5,500 per annum.	The proposed means tested loan tops up the grant to ensure students from lower income households will get more support for living costs than under Browne.
Whether to apply a levy on fee income over a defined level and if so how. At present there are no levy arrangements	HEIs would pay levy on loans for cost of tuition above £6,000, which increases for every £1,000 above that amount.	No levy currently proposed.	Under the two cap system, HEIs charging above the lower cap will have strict conditions on widening participation and access (through access agreements with regulatory Office of Fair Access) and need to demonstrate progress. The higher cap will be the absolute maximum HEIs can charge.

<p>Minimum bursary of £329 (10% of fee limit), for students on maximum grant</p>	<p>No minimum bursary.</p> <p>HEIs charging more than £7k to demonstrate how they will do more to promote quality and fair access.</p>	<p>No minimum bursary.</p> <p>£150m funding for National Scholarship Programme.</p>	<p>Removal of minimum bursary is consistent with new evidence that it does not influence the choice of university for disadvantaged young people (OFFA, 2010). The details of the new scholarship scheme are being consulted on but expected to be targeted to students from lower-income households to ensure support is targeted to those in most need.</p>
<p>Provision for part-time students</p> <p>At present, students studying at 50% intensity or more and full time distance learners can get means-tested fee grants up to £1,230 and course grants up to £265, but no loans.</p>	<p>Remove all grants. Part-time students (studying at over 33% intensity) to get fee loans on the same basis as full time students.</p>	<p>Fully accept Browne: apply to new part-time students and full-time distance learners starting in 2012.</p>	<p>Entitles part-time students to the same fee support as full-time students, which simplifies the system and is fairer to all.</p>
<p>Repayment terms on graduate contributions</p> <p>At present there is a repayment threshold of £15,000 and a repayment rate of 9%. Interest is charged at the rate of inflation, but no real terms interest is charged.</p> <p>Loans written off after 25 years.</p>	<p>Threshold raised to £21,000, to be reviewed regularly and increased in line with earnings. Repayment rate stays at 9%.</p> <p>Interest rate of RPI+2.2% with protection for those below threshold or not earning enough to cover the interest.</p> <p>Loans written off after 30 years.</p> <p>All of this results in an indicative RAB charge estimated at 27%</p>	<p>As Browne, except that we would apply an interest rate of RPI+3% (keeping the same interest rate protection for low earners) and graduate it above the £21,000 threshold, reaching the full rate only at £41,000.</p>	<p>Retains key features of existing scheme (contributions rise with incomes, interest rate protection for low earners) but is more progressive to benefit those who earn less in future: analysis indicates up to around 25% of graduates (the lowest earners) will be repaying less in NPV terms (assuming debt of £30k), than under the current repayment system (assuming debt of £21k). The top earners will pay back more than the cost of their loan in NPV terms because of an interest rate exceeding the Government's own costs of borrowing, but still benefit from it being less than the market price of an unsecured loan.</p>

Table 7: Marginal Costs and Benefits of Option 4a (Browne Approach as per all recommendations)

£m in net present value terms		2012/1 3	2013/1 4	2014/1 5	Steady State
MARGINAL COSTS					2012/13 prices
TO GOVERNMENT	Teaching and maintenance grants	-600	-1380	-2010	-2370
	Student support loans (RAB charge)	140	350	520	690
	Administration costs *	60	60	60	70
TO GRADUATES	Tuition fee and maintenance loan repayments	430	1260	1930	2510
TO BUSINESSES	Administration costs (of revised student loan repayment threshold)**	0	0	4	4
TOTAL MARGINAL COSTS		30	290	504	904
MARGINAL BENEFITS***					0
TOTAL MARGINAL BENEFITS		0	0	0	0
NET MARGINAL BENEFITS		-30	-290	-504	-904

* Indicative BIS, SLC and HMRC estimates, before making any further efficiency savings therefore subject to revision

** Initial BIS estimates, subject to revision

*** No marginal benefits due to assumed no change in graduate numbers

Table 8: Marginal Costs and Benefits of Option 4b (Browne Approach as per alternative package)

£m in net present value terms		2012/1 3	2013/1 4	2014/1 5	Steady State
MARGINAL COSTS					(2012/13 prices)
TO GOVERNMENT	Teaching and maintenance grants	-640	-1490	-2170	-2740
	Student support loans (RAB charge)	200	560	840	1100
	Administration costs *	60	60	60	70
TO GRADUATES	Tuition fee and maintenance loan repayments	570	1580	2390	3120
TO BUSINESSES	Administration costs (of revised student loan repayment threshold)**	0	0	4	4
TOTAL MARGINAL COSTS		190	710	1120	1554
MARGINAL BENEFITS***					0
TOTAL MARGINAL BENEFITS		0	0	0	0
NET MARGINAL BENEFITS		-190	-710	-1120	-1554

* Indicative BIS, SLC and HMRC estimates, before making any further efficiency savings therefore subject to revision

** Initial BIS estimates, subject to revision

*** No marginal benefits due to assumed no change in graduate numbers

Part-time students

Table 6 highlights the specific element of the Browne Approach which is to extend fee loan support to all part-time students studying at above 33% intensity. The impact assessment presented so far focuses on HE funding and student finance for Full-Time students only. Through HEFCE, we currently fund around 817k Full-Time FTEs and 109k Part-Time FTEs from the core grant (UG courses). In terms of spend, this means £3.42bn on teaching grant for Full-Time students, compared to £0.41bn on teaching grant for Part-Time students. In terms of student support: we estimate that around 565k Full-Time students will receive a grant in 2010/11 for a total spend of £1.3bn, compared to 61.5k part-Time students getting £63m in fee and course grant support plus £13.5m in targeted support.

The changes proposed to the part-time funding and student finance arrangements would bring the system more closely in line with the system for full-time students, and the rationale behind the part-time reforms is in line with the objectives set out above for full-time students. In particular: the HEFCE teaching grant for part-time students would be reduced as for full-time students; and part-time students will be entitled to a loan for tuition on the same basis as full-timers (conditional upon studying at least a third of their time). However, part-time students would no longer be eligible for course and fee grants. Relatively few students receive these currently, and the amounts received are relatively small as well: we estimate that currently around 59k Part-Time students receive a course grant of an average value of £260 per year. Similarly, around 57k Part-Time students receive a fee grant of an average value of around £700 per year.

Grants to part-time students are being withdrawn (see table 9) as there is little evidence to suggest that participation costs are a major barrier to part-time study. The main cost of part-time study for most students is their foregone earnings. Indeed, the main reason most part-time students study part-time is because they cannot afford to give up their job (UUK policy briefing). Part-time students are also most likely to be in employment, so there is an assumption that income derived from this should cover their maintenance costs. According to SIES 2007/08 some 81% of part-time students work and most of these are in a continuous/permanent job. Note that SIES only covers part-time students on 50% or more of an FTE. Including students with lower study intensities would probably cause this proportion to rise.

Table 9: Estimated savings (costs) over the Spending Review period on Part-Time funding (£m):

£m	2012/13	2013/14	2014/15
Savings to PT Core Teaching Grant	-£115	-£245	-£325
Savings to PT Fee and Course Grants	£5	-£20	-£45
Cost of providing PT Fee Loans	£64	£145	£220
TOTAL INDICATED SAVINGS	-£46	-£120	-£150

The exact consequences of these policy changes and reductions in Government spending are difficult to assess, and will crucially depend on the reaction of part-time students and institutions to the proposed changes. As mentioned above, there is some evidence to suggest that the effect of withdrawing fee and course grants for part-time students will not have a massive impact on the demand for part-time study as the main cost of part-time study are the earnings foregone whilst studying. At the same time, there is evidence from Full-Time students to suggest that participation is not adversely affected by increases in tuition fees (which are likely to happen if teaching grant for institutions is reduced) as long as loans are provided to cover the tuition fees and no one has to pay up front. So, as far as students eligible for the fee loan are concerned, we would not expect a negative impact on the demand for part-time study.

However, we estimate that around two thirds of part-time students will not be eligible for fee loans. At the same time, the withdrawal of teaching grant might mean that fees are increased across the board (including for students not eligible for fee loans). This could have a negative impact on part-time participation overall.

In addition to the above uncertainties, we have no equivalent estimates of the graduate premium for part-time students (i.e. of the benefits of part-time study). This is because part-time students are much more diverse than full-time students, both in terms of age, length of study, prior attainment, etc... Although the overall premium for part-time students is likely to be lower than for full-time students (because of the shorter working life remaining over which the benefits might be reaped), the uncertainty around any central estimate of the graduate premium for part-time students is likely to be much wider than for full-time students. As a result, it is not only difficult to estimate what overall demand levels for part-time study would look like under the new system – it is also impossible to estimate the change in benefits, particularly if the composition of part-time students is going to change (and hence the average part-time graduate premium).

These uncertainties around quantifiable costs and benefits should be set against the unquantifiable benefits we are expecting to see from the new system, which include the removal of credit constraints for many students as well as rebalancing the power and influence into the hands of those who use higher education; e.g. students – which should improve quality and efficiency in the sector in the long run.

Administration Costs:

Under the Browne approach the proposed introduction of a new threshold for the repayment of student loans (from £15,000 to £21,000) will impose some additional administration costs for businesses.

Compliance costs to implement the changes would be incurred in financial year 2014/15 in preparation for the first graduate cohort under the proposed reforms, due to enter employment in 2016. These costs were calculated on the basis that all companies use commercial software packages and any necessary updates to that software would be possible through regular software updates, thereby presenting minimal additional cost to employers. If this is not the case, businesses are likely to incur additional software costs. The greater part of the compliance cost is expected therefore to fall on payroll administrators in terms of familiarisation with the changes and for those firms who insource their Pay As You Earn (PAYE) systems some time from IT technicians to ensure software implementation. BIS estimates of these compliance costs are considered to be in the range from £2-£4m in 2014. Table 10 presents the upper range of this estimate which was used in the cost benefit analysis and based on time required from payroll administrators and IT technicians. It is assumed that the time required increases with size of enterprise and those enterprises whose PAYE systems are outsourced requires less internal familiarisation time. To the extent that the compliance cost calculations do not take into account any external familiarisation time for agents which will be passed on to their clients nor the possible additional software costs, these are likely to be underestimates.

Table 10: One-off compliance costs to business from options 4a and 4b

Size of firm (by number of employees)	No of enterprises employing graduates in 2014*	Mean hourly cost of personnel officer in 2014**	Familiarisation Time	Mean hourly cost of IT technician**	Average Time	Estimated cost to business £
Micro: 1-9 employees - Insourced	62343	15.3	1	18.4	1	2100971
Micro: 1-9 employees - Outsourced	69356	15.3	0.5	18.4	0	530571
Small: 10-49 employees - Insourced	12576	15.3	2	18.4	2	847633
Small: 10-49 employees - Outsourced	6568	15.3	1	18.4	0	100487
Medium: 50-249 employees - Insourced	2316	15.3	3	18.4	3	234173
Medium: 50-249 employees - Outsourced	678	15.3	2	18.4	0	20735
Large: 250+ employees - Insourced	491	15.3	4	18.4	4	66137
Large: 250+ employees - Outsourced	135	15.3	2	18.4	0	4144
Total	154,463					£ 3904851
						£m 3.90

* Based on estimates from HMRC's "Standard Cost Model" for 2005, uprated by growth rates from BIS SME statistics, assuming a linear growth rate between 05-09 continues to 2014 (HMRC's 'Standard Cost Model' is an activity-based costing model which identifies what activities a business has to do to comply with tax obligations, and estimates the cost of these activities to businesses).

** Based on 2009 figures of £13.36 and £16.03 (ONS Annual Survey of Hours and Earnings, 2009) uprated for 2010 based on average weekly earnings growth rate (Jan-Aug 10, ONS, AWE, 2010) and for 2011, 2012, 2013 and 2014 based on Retail Price Index forecasts (average of independent forecasts, HMT, 2010)

Ongoing costs would commence from 2016, the first year which graduates from the first cohort of students under the new system (entering HE in 2012/13) would enter employment. Therefore whilst these are out of the time period for this impact assessment but are important to recognise, particularly for the steady state estimation. By the year of introduction (2016) it is estimated that around 165,000 enterprises may be impacted by the changes and the associated additional administrative burden to be between £2-4m. This is based on two obligations for employers in the current student loan repayment system; to make the necessary salary deductions each month and annually to submit returns to HMRC on the repayments deducted by the employer. The time taken to make the monthly deductions might incur some additional costs so that the payroll administrators determine the correct repayment threshold for each graduate. There is also the risk of increased errors which would necessitate some additional checking time and resource from payroll administrators and the graduates to resolve. There will be more borrowers in the repayment phase by 2016 and if the number of students borrowing finance to fund HE increases (for example given the introduction of fee loans for part-time study) this may also raise the amount of resource required in payroll administration. Any impacts would disproportionately affect small businesses who are less likely to benefit from economies of scale. The extent of these additional costs

is unclear because businesses do already have systems in place and an understanding of the regulations which are broadly unchanged and thus may be able to build upon those existing structures, reducing the potential for new administrative costs. There will also be additional complexity for graduates that repay their income contingent student loans through the self-assessment process.

5.5 Summary and rationale of proposed option

Option 4b is the proposed preferred option which is based on the approach recommended by Browne.

The net marginal benefits of both the options under the Browne Approach (4a and 4b) were estimated to be negative for two reasons:

- i) Although transferring funding from the teaching grant into loans for students should be a zero-sum operation, the population of students eligible for teaching grant is smaller than the population eligible for loans⁴, so the overall cost could be expected to increase;
- ii) there are significant non-quantifiable benefits to be reaped from options 4a and 4b compared to the baseline. These include placing power and influence into the hands of students which should lead to higher quality, greater choice and improved efficiency in the longer run. Although unquantifiable, these benefits are likely to mitigate the negative marginal effects suggested in Table 2.

Whilst the marginal costs associated with option 4b have been estimated to be greater than option 4a, the proposed option, it contains specific elements which are associated with benefits that were not possible to quantify. The rationale for these elements of the proposed option compared to Browne's recommendations (option 4a) were set out in Table 6. The unmeasurable benefits include:

- Setting an upper limit (at £9000) on the graduate contributions HEIs can charge is necessary in an imperfectly competitive sector; it prevents a potentially unconstrained increase in graduate contributions and lessens any adverse impacts in barriers to access.
- The potential for HEIs to raise their overall income compared to option 4a due to no levy requirement on any charge set above £6,000. For this reason, option 4b has a higher average graduate contribution assumption (£7,200 as opposed to £6,900 under option 4a).
- The generous maintenance support package with the proposed means tested loan to top up the grant will ensure most students get at least as much support for living costs as under the current system.
- The progressive repayment scheme which retains the key features of existing scheme (for example, no up-front costs, contributions that rise with incomes and interest rate protection for low earners) and will ensure future lower earners will benefit: BIS internal analysis indicates up to around a quarter of graduates – the lowest earners - will repay less in Net-Present-Value terms (assuming debt of £30k), than under the current repayment system (assuming debt of £21k). The highest earners will pay back more than the cost of their loan (in Net-Present-Value terms) but will still benefit from an interest rate at less than the market price of an unsecured loan.

⁴ The HEFCE funded population will exclude students who drop out (and who may still have taken out student loans). Over-recruitment and unfunded additional places also add to the difference - these students will not be funded by HEFCE but will be eligible for fee support. HEFCE fundable and fee eligible have different criteria as well. For example some students are funded by the TDA, but will still be eligible for fee loans.

5.6 Sensitivity Analysis and Assumptions

As per the discussion on page 15, a key assumption is that student numbers and participation rates would not change from the baseline even though graduates will face increased contributions.

Table 9 presents indicative results from the sensitivity analysis around option 4b to estimate the impact if there were changes to student numbers. If there was a fall in student entrants by 10% each year over the SR period assessed, this suggests there would be a large increase in the negative net benefits, but not as great as that estimated for options 2 and 3. The negative impact can be attributed to the foregone graduate premium and exchequer benefits from those individuals who are no longer able to benefit from HE. It is assumed that none of these students displaced from HE are unemployed and therefore any unemployment impacts (including the potential displacement of existing labour force) are not quantified.

If there was an increase in student entrants by 10% each year over the SR period assessed, there could be very large net benefits, due to the additional graduate premium and future exchequer benefits from those who obtain an HE qualification. It is assumed in these options however that the labour market is able to absorb these additional graduates (i.e. that there is demand for higher skilled jobs to meet the increased supply, and this is not at the cost of lower skilled jobs).

However this sensitivity analysis does not consider other aspects from a potential change in student numbers for example on affordability or changes to the value of the benefits from HE. The assumption that the value of the graduate premium does not change when there are changes to the number of graduates. This is based on evidence that despite the rise in supply of graduates the graduate premium has not lessened – because demand for graduates has also risen. (see UniversitiesUK, 2007).

Table 10: Comparison of net marginal benefits of option 4b and variations

£m compared to baseline	2012/13	2013/14	2014/15
Option 4b	-190	-710	-1130
Option 4b -10% students	-3520	-3200	-2890
Option 4b +10% students	4600	3500	2570

This sensitivity analysis has presented the risks around student entrants falling in the proposed option showing that potentially there could be foregone benefits from the graduate premium that negatively impact society. However, such reductions in student entrants, as discussed on page 15, depend on many factors such as whether any increase in contribution is offset by adequate provision of grants and loans and the level of existing excess demand.

5.7 Specific Impact Tests:

Equality Impact Assessment

Although behavioural changes among potential students are hard to estimate the reforms are likely to effect different sections of the student bodies in different ways. A separate impact assessment has been carried out to analyse the impact on protected groups.

Competition Impacts

There is evidence (in the Browne review) that the current HE system does not incentivise institutions enough to improve their performance. It is anticipated that the proposed package will place more power and influence into the hands of students and therefore drive quality and efficiency improvements. In a system where graduate contributions more closely reflect the actual level of costs they incurred during HE, they will have the incentive to pressure their HEI to drive improvements so as to maximise their net benefits. Additionally, a more sustainable funding system is expected to provide the right incentives to enable a greater number of private providers to enter the sector, generating benefits for businesses by removing barriers to entry in the sector.

One potential cost as a consequence of the change in incentives is that some institutions who are unable to attract students (if they are inefficient, provide low quality courses or so do not provide value for money) cannot survive. Risks to the financial viability of HEIs after the reforms depend on

- Individual institutions' ability to charge graduate contributions at different levels (which depend on the quality and type of courses on offer).
- The response from students to individual institutions;
- Broader impact of funding reductions (in other areas)

Environmental Impacts

There are few environmental impacts expected. In the proposed reform and context of reduced government funding, the incentives for HEIs to make efficiency savings is expected to drive energy efficiency so as to reduce their energy costs and utilise space and resource in a more effective way. Those HEIs who are able to raise their income in the proposed more sustainable funding system would have the incentive to invest in renewing their physical infrastructure (likely to be more energy efficient than existing infrastructure). For those which struggle to replace the loss of public funding through higher graduate contributions, there is a risk that the capital investment in energy efficiency buildings does not occur.

Social Impacts

The positive externalities of health improvements, reduced crime and social cohesion from HE were identified earlier (see Chevalier et al, 2002, for a literature review). To the extent quality of HE provision improves in the HE sector as a result of the reforms suggests these positive externalities will continue to be exploited. Continuing to widen participation in HE is also important so that all who have the potential to can benefit from HE through fair access to institutions and provision of adequate financial support.

Annexes

Annex 1 should be used to set out the Post Implementation Review Plan as detailed below. Further annexes may be added where the Specific Impact Tests yield information relevant to an overall understanding of policy options.

Annex 1: Post Implementation Review (PIR) Plan

A PIR should be undertaken, usually three to five years after implementation of the policy, but exceptionally a longer period may be more appropriate. A PIR should examine the extent to which the implemented regulations have achieved their objectives, assess their costs and benefits and identify whether they are having any unintended consequences. Please set out the PIR Plan as detailed below. If there is no plan to do a PIR please provide reasons below.

Basis of the review: [The basis of the review could be statutory (forming part of the legislation), it could be to review existing policy or there could be a political commitment to review];

Ongoing evaluation of the proposed reforms: the impacts will continue to be reviewed as part of the broader evaluation, inline with BIS best practice.

Review objective: [Is it intended as a proportionate check that regulation is operating as expected to tackle the problem of concern?; or as a wider exploration of the policy approach taken?; or as a link from policy objective to outcome?]

The objective of the review will be to assess whether the HE Reform is operating as expected and whether it has achieved its policy objectives.

Review approach and rationale: [e.g. describe here the review approach (in-depth evaluation, scope review of monitoring data, scan of stakeholder views, etc.) and the rationale that made choosing such an approach]

The scale of the reforms will necessitate a range of approaches from monitoring based on administrative data sources to specially designed and commissioned evaluation studies to understand the operation or impact of specific aspects.

Baseline: [The current (baseline) position against which the change introduced by the legislation can be measured]

Many aspects of the baseline position are readily available from administrative data sources - such as the overall levels of applications, participation and completion of different types of students in different types of institution, modes of study, subject areas, etc. Robust information is also available on overall costs and institutional finances. It will be necessary to establish appropriate measures of baselines in other areas such as student satisfaction, student finances, employer perspectives and private provision. In some cases measures do exist from surveys such as the National Students Survey and the Student Income and Expenditure Survey.; in others, such as private provision, specific studies will need to be commissioned. For some other areas, such as social mobility, it may not be possible to establish a baseline against which progress can be meaningfully measured within the timescale of any review. In these cases it will be necessary to agree proxies or leading indicators against which progress can be measured.

Success criteria: [Criteria showing achievement of the policy objectives as set out in the final impact assessment; criteria for modifying or replacing the policy if it does not achieve its objectives]

The Coalition agreement committed to the following objectives for HE reform:

- increasing social mobility;
- take into account the impact on student debt;
- ensure a properly funded university sector;
- improve the quality of teaching;
- advance scholarship; and
- attract a higher proportion of students from disadvantaged backgrounds.

It will be necessary to undertake further work to define and agree what detailed criteria underlie these policy objectives and also what might constitute performance which would require elements of the policy to be modified. However, these are likely to include:

- student demand and participation (including types of student and institutions, levels, subjects, modes);
- student finances (including borrowing, earnings from part-time work; spending; debt)
- student satisfaction and attainment
- institutional finances (including amount and sources of funding; levels of graduate contribution; spending; debt)

- international comparisons

It will also be necessary to explore whether other objectives and criteria should be used to judge the impact of the reforms. These might include graduate employment, employer engagement, research performance, and level of private provision.

Monitoring information arrangements: [Provide further details of the planned/existing arrangements in place that will allow a systematic collection of monitoring information for future policy review]

A number of administrative data sets already exist which will underpin monitoring arrangements, the key of which are:

- HESA Student Record - which contains information on all students studying in publicly funded HE. The HESA record is also linked to the National Pupil Database to allow detailed exploration of progression.)
- UCAS applications
- HESA (institutional) finance record

In addition to these administrative sources, consideration will be given to continuing or establishing other survey-based data collections to cover:

- student finances
- student destinations
- student satisfaction
- employer views

Reasons for not planning a PIR: [If there is no plan to do a PIR please provide reasons here]

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