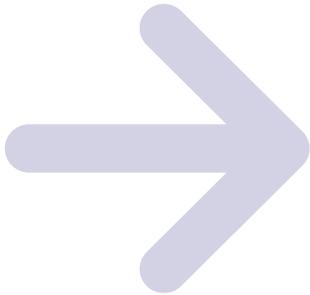


FAIR FUNDING FOR ALL

AN ANALYSIS OF THE RELATIONSHIP BETWEEN STUDENT SUPPORT, GRADUATE CONTRIBUTION AND THE FUNDING OF UNIVERSITIES IN ENGLAND: SCENARIOS FOR THE FUTURE



About million+

million+ is a university think-tank established in 2007. We use rigorous research and evidence-based policy to solve complex problems in higher education. Our research reports, policy papers and evidence are submitted to and considered by parliamentarians, government and other agencies.

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About London Economics

London Economics is one of Europe's leading specialist economics and policy consultancies and has its head office in London. We also have offices in Brussels, Dublin, Cardiff and Budapest, and associated offices in Paris and Valletta.

We advise clients in both the public and private sectors on economic and financial analysis, policy development and evaluation, business strategy, and regulatory and competition policy. Our consultants are highly-qualified economists with experience in applying a wide variety of analytical techniques to assist our work, including cost-benefit analysis, multi-criteria analysis, policy simulation, scenario building, statistical analysis and mathematical modelling. We are also experienced in using a wide range of data collection techniques including literature reviews, survey questionnaires, interviews and focus groups.

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million+ commissioned London Economics to develop the modelling tool which forms the basis of this report in its role as a university think-tank and on behalf of the 27 universities which affiliate to million+. The conclusions are based on the alternative scenarios which have been modelled and are exclusively those of million+ rather than these 27 universities or London Economics.

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Contents

Executive Summary	04
1 Terms of Reference	12
2 Methodology and Baseline Assumptions	13
2.1 A summary of current tuition fees and student support arrangements	13
2.2 <i>Full-time</i> and <i>Mixed Mode</i> institutions	18
2.3 Summary of institutional funding	18
2.4 Student Grants	20
3 Model results	24
3.1 Baseline resource flows	24
3.2 Impact of key drivers on resource flows	24
3.3 Bursaries	30
4 Alternative scenarios	34
4.1 Scenario 1: No fees, no grant and no loan	34
4.2 Scenario 2: Market based top up fee and loan	36
4.3 Scenario 3: Extending part-time student support	43
5 Equity Effects	46
5.1 Impact of alternative repayment options on graduate outcomes	46
5.2 'Real Life' graduate profiles	58
6 Conclusions – Fair Funding for All	62
Annex 1 Categories of institutions	64

Tables, Figures & Boxes

Table 1: Summary of 2009/10 fees and student finance package – United Kingdom Full-time undergraduates studying in England	15	Figure 15: Increasing tuition fees – funded by Full-time institutions with no Mixed Mode student caps	37
Table 2: Summary of 2009/10 fees and student finance package – United Kingdom Part-time undergraduates studying in England	17	Figure 16: Increasing tuition fees – funded by Full-time institutions with student number caps in Mixed Mode institutions	39
Table 3: Students by Hefce subject banding	19	Figure 17: Increasing tuition fees – funded by all institutions	39
Table 4: Hefce mainstream teaching allocation	19	Figure 18: Increase in fees to £7,000 – option 1	40
Table 5: Part-time students by intensity and associated fee	20	Figure 19: Increase in fees to £7,000 – option 2	41
Table 6: Tuition fee income and bursary expenditure	20	Figure 20: Increase in fees to £7,000 – option 3	41
Table 7: Distribution of students by length of course	23	Figure 21: Increase in fees to £7,000 – option 4	42
Table 8: Exchequer Costs by higher education item	25	Figure 22: Providing part-time students with similar support to full-time students	45
Table 9: Assumptions behind consistent treatment of part-time students	42	Figure 23: Part-time amendments, positive real interest rates and tighter repayment terms	45
Table 10: Graduate contribution outcomes under current student support arrangements	58	Figure 24: Graduate repayment profile – baseline case	47
Table 11: Graduate contribution outcomes with extension of write off period	58	Figure 25: Graduate outstanding contribution on write-off – baseline case	47
Table 12: Graduate contribution outcomes with 2% real interest rate	60	Figure 26: Age of graduate contribution – baseline case	48
Table 13: Graduate contribution outcomes with 2% real interest rate and extension of write off period	60	Figure 27: Removing the option to defer	49
Table 14: Graduate contribution outcomes under ‘holistic approach’	61	Figure 28: Extending the period of repayment	49
Table 15: Graduate contribution outcomes under ‘holistic approach’ and stricter contribution options	61	Figure 29: Graduate contribution profile – extension of period of repayment	50
Figure 1: Baseline resource flows	25	Figure 30: Graduate outstanding contribution on write-off – extended contribution period	50
Figure 2: Raising tuition fees by £4,000 per annum	25	Figure 31: Introducing a positive real rate of interest	51
Figure 3: Raising tuition fees by £4,000 per annum and imposing a 2% real interest rate	27	Figure 32: Graduate repayment profile – 2% real rate of interest	52
Figure 4: Maintaining tuition fees and imposing a 1% real interest rate	27	Figure 33: Graduate outstanding contribution on write-off – 2% real rate of interest	52
Figure 5: Extending write off period to 40 years and removing option to defer	29	Figure 34: Age of graduate contribution – 2% real rate of interest	54
Figure 6: Differential tuition fee increase	29	Figure 35: Combining all three options	54
Figure 7: Increase in fees and loans by £4,000, imposition of 2% real rate of interest, extension of write off period to 40 years, removal of option to defer and increase repayment rate to 10%	30	Figure 36: Graduate repayment profile – three options combined	55
Figure 8: Impact of the abolition of statutory bursaries	31	Figure 37: Age of graduate contributions – three options combined	57
Figure 9: Impact of the abolition of statutory bursaries – replaced by grants	31	Figure 38: Additional contributions repaid – three options combined	57
Figure 10: Impact of the abolition of statutory bursaries – reduced fees	33	Box 1: ‘Real Life’ graduate profiles	59
Figure 11: Impact of the abolition of statutory bursaries – reduced fees and increases in teaching grants	33		
Figure 12: No tuition fee, no grant, and no loan for students living at home	35		
Figure 13: No tuition fee, no grant, and no loan for students living at home and increased fee for students living away from home	35		
Figure 14: Net impact of raising tuition fees and operating no grant, no fee and no loan system	37		

Key principles

Bearing in mind the impact on students, graduates, universities and the Exchequer and the need for any system to be sustainable, affordable and accessible to students, million+ has identified the following key principles as being fundamental to a fair funding system for students, universities and government:

- > Universities should be free at the point of study to all undergraduate students (full-time and part-time)
- > A unified system of support and funding is required to create a level playing field and remove barriers and disincentives to part-time and flexible patterns of study
- > There should be a right to study at university – meaning that governments need to commit to sufficient funding so that all those who are qualified and can benefit from higher education, have the right to study at universities which are well-resourced whichever course they choose to study, at which ever university they study
- > Fees and funding policies need to continue to encourage people of all ages to aim for the highest level of education possible and should support participation and flexible options to study
- > Graduates should contribute, through a graduate contribution scheme, to the costs of their higher education and repay maintenance and fee loans made available by government to help support them while they are students
- > Non-repayable maintenance grants related to residual household income should be retained and available to students

These principles are likely to deliver the aspirations identified by the Conservative and Liberal Democrat parties in the higher education section of the coalition agreement which underwrote their decision to form a Government in May 2010. This explicitly states that a future fees and funding system should increase social mobility, take account of 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. Many of these goals – including those relating to social mobility – reflect those of the previous Labour Government.

The introduction to our submission provides further analysis of the relationship between these principles, access, student opportunity, the need for innovation and the link between institutional student profiles, modes of study, funding regimes and outcomes in terms of institutional resources and quality. The detailed investigation and the evidence-base prepared by London Economics has provided baseline assumptions against which alternative scenarios and funding regimes have been assessed for their impact on:

- > students / graduates (full-time and part-time)
- > universities according to the proportions of their students who study full-time and part-time
- > the Exchequer

Conclusions

These alternative scenarios are reported in full in the submission and their limitations and merits have been assessed against the key principles outlined above. The modelling confirms that:

- > For the majority of full-time students, the student support made available through the Exchequer to help them with their living and maintenance costs while they are studying at university, is an important component for successful participation in education; current levels of student support for full-time students should be maintained and the Exchequer should remain the provider of student loans.
- > A unified system of student support can be created for all first-time undergraduates based on intensity of study of 30% or higher for part-time students. Such a unified system of student support would bring England into line with countries with well-developed systems of student support. It would remove student and institutional disadvantage and genuinely deliver university free at the point of study for first-time undergraduate full-time and part-time students.
- > The graduate contribution scheme should be amended in order to support government investment in universities and expand funded places, while ensuring that student participation is not substantially affected. In particular, the graduate contribution period of 25 years is relatively short compared to that already adopted in other countries and should be extended.

> To avoid students and graduates being faced with the commercial rates that are likely to be charged by other providers, the Exchequer should remain the provider of student loans and state funded loans should be available to cover maintenance and the maximum fees that can be charged by institutions. However, there is a case to consider the introduction of a maximum 2% real interest rate on the loans provided by the state. This should be incorporated into the graduate contribution scheme.

> A unified system of student support when linked with, for example, a graduate contribution period extended from 25 to 35 years and a small real rate of interest (1-2%) would give all first-time undergraduate, full-time and part-time students the right to study at university free of upfront fees. It would incentivise innovation and produce a fairer outcome for the Exchequer by delivering savings of up to £1 billion per annum. This should be used to defray the £600 million additional savings required in higher education by the 2009 Pre-budget Report, provide funding for additional students numbers and additional resources for teaching.

> The current statutory bursary system available for full-time students is economically inefficient. It would be possible to remove the statutory bursary, reduce fees and the associated requirement for fee loans, compensate universities through the Higher Education Funding Council for England (Hefce) teaching grant and use the savings to fund an additional 842 full-time students to participate in higher education.

> Fee-free options risk increasing the Exchequer contribution; this is especially the case if the level of the variable fee is allowed to increase.

> Without a unified fees and funding system, which creates a level playing field for full-time and part-time provision and support, market-based systems will switch resources to institutions with wealthier students who study full-time and will continue to incentivise full-time provision.

> Market-based systems which remove the link between the maximum fee which can be charged and the government fee loan and which allow institutions to charge additional fees based on an HEI-provided fee loan and / or bursaries will create inequity in the unit of resource for teaching available

in institutions. Access to HEI-provided additional fee loans is unlikely to be uniformly available to institutions. In addition, these scenarios rely on public funding with taxpayers providing the core funding for teaching grant, fee loans to an agreed level and student support, but which would nonetheless lead to additional resources being available in universities with more socially exclusive full-time student profiles.

> There is no robust evidence or data on which to extend student support to postgraduate taught students at the present time.

> The resource envelope available for universities after 2010 is not yet agreed by government. There is a continued risk that the public funding of universities will be reduced further in 2010. In these circumstances, the Government should adopt a transparent approach. The impact on social mobility and participation must be properly assessed against any expectation that students and graduates will meet a shortfall in investment in higher education. Responsibility for the future of fees and funding in universities in England cannot simply be transferred from government to Lord Browne's Review.

Modelling the future:

a million+ / London Economics toolkit

The outcomes and recommendations of Lord Browne's Review will not simply be a matter for Government Ministers or a report to Parliament requiring primary legislation. These recommendations will be of interest to the wider public as well as to universities and students.

There is much at stake. Decisions on fees, funding and student support will be made by Members of Parliament and members of the House of Lords who will need to be well-versed in the reality of how students study and how the universities of today operate. They will need to understand the complexities but also the consequences of their decisions on access and the resource flows likely to arise from any changes. We propose to make the interactive modelling, which we have developed with the international consultancy firm, London Economics, available to MPs and policymakers to enable them to:

> understand the baseline assumptions which apply to the present funding system in England

> model the consequences of alternative scenarios.

Introduction

The funding of universities in England is a matter of strategic importance for the Exchequer, the UK economy (including its foreign exchange earnings), wider civic society and, in particular, for the many thousands of individuals from all backgrounds who can benefit from a university degree and who will be the students and graduates of the future.

There are many other stakeholders interested in the funding of learning and teaching in universities:

- > Business, trade and professional bodies interested in what graduate qualifications deliver to their workforces
- > the NHS, schools and other education providers who rely on graduate workforces and the potential for progression and professional development to improve how they innovate and deliver improved health and educational services
- > governments (national and local) and the not-for-profit sectors which need highly qualified and professionally focused graduates
- > SMEs and the enterprises of the future where the capacity of universities and students to identify new and developing subject areas and markets adds real value and opportunities to the economy (the digital and newer creative industries being recent examples¹)
- > the National Union of Students, other trade unions and education groups which have frequently viewed access to education as the cornerstone of a wider social contract with the state

Government itself has a wider stake in the funding of students and universities which goes beyond a cost-benefit analysis of the immediate and long-term funding and borrowing required to expand student numbers and sustain the unit of resource for teaching. Higher lifetime returns received from graduates deliver tax gains and economic returns for the Treasury.

¹ See 'Creative Futures: Building the Creative Economy through Universities' million+ (July 2008).

² 'Universities and International Higher Education Partnerships: making a difference' million+ report prepared by Kingston University (Jan 2009).

The international reputation of the UK's universities and the UK's national system of quality assurance mean that universities in England are net contributors to foreign exchange earnings as a result of the robust international agendas and transnational partnerships in teaching, research and knowledge exchange which universities have developed.

This international agenda stretches well beyond the five UK universities which are global players in world-leading research. Modern universities have led the field in international partnerships in countries throughout the world, including those of strategic importance to the UK. This has been achieved because of their reputation for quality and excellence in teaching, research and knowledge exchange although there is also evidence that their experience in widening participation in the UK adds value to their international operations.²

However, the value of a graduate qualification cannot simply be calculated in terms of a resource envelope.

There is the obvious sense of personal achievement for individuals and their families – particularly for the many individuals who are first generation students. It is also well-known that a graduate qualification is likely to produce less quantifiable outcomes which benefit society and promote inter-generational benefits which have the effect, for example, of improving school achievement among the children of graduates³.

Access, opportunity and student demand

Governments can also now expect to be judged on the extent to which they promote access to university. It is no accident that the previous Labour Government allocated funding for 20,000 additional student places in the 2010 Budget or that the Conservative and Liberal Democrat Parties in England recognised the need for additional student numbers in their April 2010 general election manifestos. Politicians who have benefitted from a university education can no longer argue for a system which restricts opportunities to a few. Increasingly access to university is seen as a matter of social justice in recognition of the wider economic and social benefits to individuals of a graduate qualification.

³ See the Centre for Research on the Wider Benefits of Learning: <http://www.learningbenefits.net> and Bynner J and Egerton M (2001) 'The wider benefits of higher education Report by the Institute of Education, sponsored by Hefce and the Smith Institute Report 01/46 http://www.hefce.ac.uk/pubs/hefce/2001/01_46.htm.

The debate about access has often focused on the level of the tuition fee for full-time students. There has been much less attention on:

- > the resource flows which currently apply to the funding and support of students and universities in England
- > the terms and complexity of the student support system (itself the subject of a number of amendments since its introduction in 2006)
- > the role of the Exchequer in providing teaching funding (distributed to universities by Hefce)
- > the consequences of the failure to introduce a unified system of student support and funding which applies in other countries which have well-developed student support systems.

Current differentials in fees and funding

Since the 2006-07 academic year (the date when the 2004 Higher Education Act was applied in England) full-time first degree students have been provided by the state with a fee loan which has enabled them to defer payment of their annual tuition fee and repay it (together with any maintenance loans) over a period of years once they graduated. Tuition fees in England for full-time students were capped by the HE Act at £3000 per annum plus inflation⁴. In spite of a long history of UK universities offering part-time study opportunities, part-time students were excluded from the 2004 HE Act. As a result part-time undergraduate students still have to pay their tuition fees upfront and they do not get access to means-tested maintenance grants and maintenance loans⁵.

This has had consequences for part-time enrolments which, unlike the significant increase in full-time enrolments since 2007, initially declined and are only now beginning to increase. The differentials between full-time and part-time support are also very likely to contribute to the poorer non-completion rates among part-time students⁶ – and they disadvantage universities which are mixed mode i.e. universities which offer

⁴ The maximum full-time fee in 2010-11 will be £3290.

⁵ Part-time students are also treated differentially in Scotland and Wales.

⁶ There is a direct correlation between non-completion and residual household income.

opportunities for students to study on a full-time and a part-time basis. Many of these universities have felt unable to uplift part-time fees to a pro-rata proportion of the full-time fee because of the risk of deterring part-time students who still have to pay fees upfront.

Part-time and flexible provision

It has often been wrongly assumed that part-time and flexible provision is restricted to two institutions – the Open University and Birkbeck College, both of which only teach part-time. In fact, forty two universities in England (excluding university colleges) have at least 20% of their students studying on a part-time basis and can accurately be described as mixed mode universities offering more flexible patterns of learning which are both attractive to and needed by students e.g. those with care commitments and those who want to improve their qualifications but are not funded by employers or are in a series of employments unrelated to their course of study.

The scale of the provision offered by these universities has frequently been under-estimated. For example, Anglia Ruskin University has more part-time students than Birkbeck. One in eight graduates from 28 modern universities, whose contribution to social mobility was assessed using the Labour Force Surveys and HESA, were found to have studied part-time⁷. These same universities had much more inclusive social profiles on every count. Around a quarter of the students graduating from these universities were from ethnic minorities compared to an average of just over 16% for other UK institutions and just 8% of their graduates came from professional family backgrounds.

⁷ 'Social Mobility Universities Changing Lives' million+ research report (March 2009).

Demand and student numbers

Access to universities matters to the economy and society. There would be no merit in England or the UK seeking to return to a model which sought to restrict access or in which a smaller percentage of the population was encouraged to study at university. International comparisons confirm that investment in teaching and learning as well as research is running at higher levels in other competitor countries and they show the importance of continuing to expand provision. A number of other comparator countries have higher participation rates and are spending more per student than the UK⁸. Improving attainment in schools in England and the welcome recognition that employers in the private and the public sectors will need to innovate and up skill their current and future workforces will require continued government investment in university places.

The future shape of the sector

The Leitch Report⁹ highlighted the scale of the challenge facing Britain in improving the numbers of people with graduate level qualifications and attributes. Out of 30 OECD countries, the UK was ranked as 17 on low skills, 20 on intermediate skills and 11 on high skills. The report suggested that even if current targets were met, by 2020 the UK's skills base would be inferior to that of many other developed nations. The report recommended that the UK Government commit to a compelling new vision and called for more than 40% of adults to be skilled to graduate level and above – up from 29% in 2005. It also pointed out that in 2005, the UK was only just above the OECD average for participation in higher education with approximately a quarter of adults qualified to degree level. In comparison, America and Canada had 40% qualified to degree level by 2005. Lord Leitch also concluded that if the UK wanted to be a world leader in skills by 2020, universities needed to cater for older people. The potential for enhanced adult participation in university including by those already in the workplace, was confirmed in research undertaken for the former Department for Innovation, Universities and Skills¹⁰.

The myth of the 'standard' student

It would therefore be wrong to repeat the mistakes of the 2004 HE Act and assume that any future system should be based on a 'standard' student – a stereotype which has dominated thinking and funding models and relies (typically) on the assumption that there is a seamless transition from A-level study at school to a three or four year period of full-time study at university commencing at 18 and finishing at 21 or 22 years old. Even in 2004, this model was out of date. According to HESA statistics, the average age of graduates from mixed mode universities is 26 – eighteen months older than the age of students graduating from full-time institutions – and for example, at London South Bank University, only 4% of students enter university as 18 year olds¹¹.

While qualifications obtained at school are highly significant in determining access to higher education, they are by no means the only determinant of entry to university. Many university admission policies accommodate pre-entry vocational qualifications, entry via access courses and progression from FE or previous occupations and through advanced apprenticeships. Once vocational qualifications are taken into account, currently 43% of student who progress to university do so from FE Colleges. This more varied pattern of access pertains now but also holds out real prospects for the future. The students of tomorrow as well as the students of today are likely to blend a range of activities – learning and earning to support their studies and contributing to their own and their family incomes even where they study full-time.

At present students face major challenges in terms of support if they wish or need to study less than full-time. The disadvantages for these students (and as a consequence, for institutions which offer greater flexibility in learning paths to a graduate qualification) have been highlighted since 2005¹². As a result the Government introduced a limited support system for part-time students. However, this has produced minimal amounts of support and this approach does not equate with the coherent and more unified systems

adopted in other countries. It would therefore be unfortunate if Exchequer and taxpayer funding continued to incentivise full-time provision.

It is over-simplistic and inaccurate to pose this as a question of full-time vs. part-time students or full-time vs. mixed mode and part-time institutions. The students of today and the future need a more flexible approach to funding. While full-time demand has been incentivised by the recession, long-term demographic change also suggests that at least for the next decade, the number of younger students may decline. Australia, the Netherlands and the German Lander (whether or not they charge fees) are some of the countries which have a more unified approach and which do not distinguish between students on the basis of mode of study. The UK's differentiation between full-time and part-time students is simply not reflected in other countries to the same degree where unified systems of student support and funding are both well-developed and commonplace.

In advocating that a unified system should be adopted in England, caution needs to be exercised about suggestions that part-time study routes are inevitably less costly. A flexible offer to students and universities requires investment. However, it is likely to be a fairer funding system and one which supports completions and achievement and does not create perverse incentives for universities to 'stick with' a full-time stereotypical student model. Full-time demand will continue and many students, including widening participation students, need to study over a longer period. However, unless there is a fairer playing field then the possibilities of expanding more flexible and innovative provision is likely to be restricted. Students and universities which wish to support and develop this provision will continue to be disadvantaged and will be much less likely to develop the more innovative approaches that both students and employers are likely to require in the future.

The limitations of models based on the 'standard' institution

The failure to base proposals for the future on a unified system has other consequences. For example, proposals to increase full-time fees which fail to take account of the impact upon institutional income in respect of part-time and flexible study routes provide a hugely distorted

picture of the outcomes for institutional and student resource flows. Assumptions that there will be no impact on the participation of part-time students if they are required to pay the up-front pro-rata costs of higher fees are likely to prove ill-founded. If part-time becomes even more of an economic risk, universities will be even less-inclined to offer this provision while universities which could not increase upfront fees would yet again see their institutional income decline compared to full-time institutions. Similarly, students who wanted to change or mix study modes would face even greater difficulties.

Moreover, universities with more inclusive student profiles are also the universities which, in general terms, are mixed mode i.e. they have significantly higher proportions of part-time students. The failure to introduce a unified system will inevitably result in universities which contribute most to social mobility, being in receipt of less funding. Unless policymakers and politicians wish to abandon policies which promote social mobility, this should not be an acceptable outcome of the review of fees and funding.

Quality

The introduction of variable fees has raised the question as to whether quality in England's universities has improved as a result of the additional income universities receive from the Exchequer in respect of deferred fees. The deployment of this additional fee income has to be set against the previous historic underfunding in the unit of resource, requirements for universities to address issues of staff remuneration and pensions as well as facilities for students, expanded student numbers, the strategic developments which the government has required Hefce and universities to deliver through the teaching grant and amendments in teaching funding since 2006. Compared to research, the teaching grant has been treated less favourably in both revenue and capital allocations in the government's annual grant to Hefce with teaching receiving lower overall percentage annual uplifts. The differential treatment of teaching and research has implications for institutional income from Hefce: universities which receive more research funding (but have less undergraduate students) have enjoyed greater annual uplifts in resources. These institutions also have access to much higher levels of annual endowment income.

⁸ 'Education at a Glance' OECD (2008).

⁹ 'Final Report into UK Skills: Prosperity for all in the global economy – world-class skills' Lord Sandy Leitch (2006).

¹⁰ 'University is not just for Young People: Working Adults perceptions of and orientation to HE' Pollard, Bates, Hunt & Bellis: Institute of Employment Studies DIUS Report 08 06 (2008).

¹¹ Ibid ref 7.

¹² For example the former Campaign for Mainstream Universities gave evidence of the unintended consequences of the 2004 HE Act in respect of the exclusion of part-time students to a special inquiry convened by the then DfES Select Committee of MPs in Feb 2005. The Committee was unable to report before the proroguing of Parliament prior to the 2005 general election.

There is no good or reliable proxy to assess the extent to which 'quality' has been improved through additional fee income and it is highly unlikely that one can be developed. Similarly, there is no link between quality and the university league tables published by newspapers and other commercial organisations. These league tables have been shown to lack transparency and the factors on which they are based do not capture criteria applicable to institutions with more inclusive student profiles and flexible modes of study¹³.

The courses available in universities are wide-ranging and complex: there is no national curriculum; some courses are directly linked with entry into certain professions where professional bodies identify criteria in terms of staff ratios and course content and apply their own inspection regimes; others include work experience, clinical or other placements which are assessed as part of the degree qualification or are based in the workplace – and some courses include significant elements of distance and e-learning. However, the National Student Survey consistently shows high levels of satisfaction and universities take its findings extremely seriously.

All students deserve a quality education wherever they study, however they study and on whatever course they choose to study – and wherever they study, students deserve to have an education where standards are assured. All UK universities are quality assured by the Quality Assurance Agency. Improvements to the current regime are being developed but the system operated in the UK is highly regarded internationally and includes students.

The greatest threat to quality is likely to arise from funding regimes which undermine the principle of equivalence in the unit of teaching resource available from public and private contributions i.e. from Hefce and student and graduate contributions. This principle of equivalence is highly valued and informs current funding regimes i.e. teaching grant (based on subject studied) plus the additional maximum fee backed for full-time students by a state-provided fee loan equivalent to this

maximum fee, ensures that students and institutions are provided through public funding and graduate contribution with the same unit of resource.

Social Inclusion

It is impossible to divorce the debate about fees from the debate about social inclusion and social mobility. Universities in England have achieved widely varying degrees of success in the admission of students from less advantaged backgrounds. In the context of higher education, social mobility has been defined as delivering opportunities to progress in terms of graduate employment to higher status occupations in comparison to the occupational and family background of the same students when they enter university, as well as an ability to increase earnings compared to those with similar qualifications who did not progress to university. Universities in England which have been granted university title since 1992, continue to be overwhelmingly more successful in promoting social mobility than older institutions.

It would undermine any concept of fairness if the outcome of the Fees Review saw Parliament voting to reduce participation or resulted in the universities which teach the majority of the higher education students in England and which are most successful in terms of all equality indicators, having access to much lower levels of teaching funding and a lower per capita unit of student resource. Any future funding system will have to be assessed in terms of its anticipated impact upon social inclusion, other standard equality indicators and its likely impact on the majority of students and the universities that teach them.

The market

Since 2004, the debate about fees and funding has also been a debate about the extent to which a highly differentiated market in fees would resolve the problems of under-investment. The proponents of a market solution look to a US-style model of higher education. However, there are more egalitarian (and successful) models offered in Europe – for example, in Sweden (one of the most successful countries in terms of innovation) and the Netherlands (where participation

has increased in spite of a declining number of 18 year-olds). It is likely that a highly differentiated market would reinforce current patterns of participation and admission and this would need to be considered against the goals of social inclusion to which all mainstream political parties in the UK currently subscribe. There is also a risk that graduate employment prospects would be damaged if employers used price as a proxy for degree or graduate quality, bearing in mind that the recruitment practices of some employers already serve to undermine fair access to the professions.

In reality, some proponents of a market in higher education are not advocating a free market but a quasi-market in which taxpayers fund Hefce teaching grant and student support up to a maximum fee for full-time students with institutions then able to charge additional fees based on institutional capacity to provide bursaries and additional fee loans (or in the alternative, students having sufficient resources to pay additional fees upfront). Once the social profiles and modes of study of the student cohort of universities in England are taken into account, the inevitable outcome of this quasi-market would be the deployment of taxpayers' money to underwrite the ability of institutions with more socially exclusive student profiles and more full-time students to gain additional resources from additional fee income. The outcome would undermine the principle of equivalence of the teaching unit of resource and would almost certainly be regressive and result in universities with the most socially inclusive student profiles being in receipt of less funding.

Similarly, proposals to create a market in student numbers based on institutional completion rates for full-time students would transfer public funding associated with teaching grant and student numbers to institutions with more socially exclusive student cohorts since there is a well-known and unsurprising link between completion, residual household income and full-time study. This would also have the added disadvantage of continuing to incentivise full-time provision at the expense of more flexible patterns of study and again this quasi-market would be based on differential state funding.

All universities in England trade internationally on the quality of the education that they offer and the excellence and relevance of their research. Any market which transferred public funding based on league table brand would not only affect UK-domiciled students but also the capacity of all universities to compete internationally, including through trans-national higher education partnerships in teaching, research and knowledge transfer. This would damage the strategic role and contribution of UK universities to the UK economy and to foreign exchange earnings.

The scenarios which have been modelled by London Economics include a number of options for the future based on a differentiated market and also a market based on state-funding and subsidy of core fees with universities left to raise the borrowing and bear the Resource Accounting and Budgeting (RAB) charges which would then be required to offer student fee loans for additional fees. Policy-makers and parliamentarians can therefore assess for themselves the consequences of promoting a market in fees based on these different proposals.

Postgraduate provision

Lord Browne's Fees and Funding Review invited submissions on the need for support for postgraduate taught students. The scale and scope of postgraduate provision is extensive and funding sources are complex¹⁴. More students of all ages are studying on postgraduate taught courses than ever before, many of whom study on a part-time basis. While it is recognised that student support systems are weak, publicly available data and a robust evidence base about the composition and needs of the postgraduate taught student cohort are not currently available. Much more research is required to understand the postgraduate cohort, the factors influencing the decision to enter postgraduate study, the scale and scope of employer contribution in both the private and public sector and the merits or otherwise of providing further access to student support as well as how this might be directed to ensure any system was affordable for the Exchequer, appropriately targeted and economically efficient.

¹³ 'Counting what is measured or measuring what counts? League tables and their impact on higher education institutions in England' Centre for Higher Education Research and Information, Open University and Hobsons Research Hefce Issues Paper (April 2008/14).

¹⁴ 'A Postgraduate Strategy for Britain: expanding excellence, innovation and opportunity' million+ (2010).

The achievement of a first degree remains the most significant factor in terms of impact upon life-time earnings. This is particularly the case for students from non-traditional backgrounds and more generally for women who earn much less than men if they enter employment with the equivalent of A-levels / level 3 qualifications or less. At the present time, there is a potential mismatch between funded student places and demand at undergraduate level and a real risk that UK-domiciled first-degree applicants will not get places at university. The need to promote innovation and participation through a unified system of student support at undergraduate level to bring England in line with other countries has previously been outlined.

For these reasons, no case is made in this report for the extension of student support to postgraduate provision and it is not included in the modelling.

Evidence Base

The research undertaken by London Economics provides a robust evidence base and in particular, identifies the contributions made by the Exchequer, universities, students and graduates. Uniquely, London Economics also tracked the variation in the resource flows arising from the differential treatment of part-time students, providing an assessment of the impact on universities as well as on students. The aim was to provide a clear picture of the costs of the current system. Thereafter an interactive model has been created which allows the impact on all stakeholders of variables to the current funding system to be modelled with assessment of alternative scenarios included in the report.

The final conclusions outline the extent or otherwise to which the different models deliver the key principles which have been identified by million+ as the ones which should inform fee, funding and student support systems in England in the future.

London Economics were commissioned by million+ to undertake a detailed investigation of current tuition fee and student support arrangements and the resource flows between the Exchequer, Higher Education Institutions, students and graduates ahead of the Higher Education Review taking place in 2010.

The analysis illustrates the various characteristics associated with current student support arrangements in the form of grants, bursaries and loans for full-time and part-time students but also assesses the resource flow between the various key stakeholder groups. The modelling exercise is such that any number of variables underpinning student support and graduate contribution can be manipulated to illustrate the relative impact of those changes to student finance arrangements on key stakeholders compared to the current resource flows.

This analysis is set out as follows. In section 2, we present the detailed resource flows of current student support arrangements for full-time and part-time students, and the various associated assumptions underpinning the model. In section 3, we illustrate some of the key drivers of the model by illustrating the resource impact associated with various possible changes to student support and graduate contribution arrangements. In section 4, we provide some additional analysis on a number of scenarios that have been developed in conjunction with million+. In section 5, we illustrate the distributional effects of alternative repayment options on graduate contribution profiles. Section 6 provides a conclusion from million+.

In this section, we provide a summary of the tuition fee and student support arrangements available to full-time and part-time students. Student support arrangements are particularly complicated and there are significant differences in the treatment of full-time and part-time students. All the information presented in this section is based on students entering higher education in 2009/2010 unless otherwise noted.

2.1 A summary of current tuition fees and student support arrangements

2.1.1 Full-time student fees

Students studying in England are charged a maximum fee of £3,225 per annum (2009/10), which is effectively deferred. The fees charged are set by the university and can vary between zero and the maximum amount; however institutions charging more than the maximum maintenance grant (currently £2,906) must provide a minimum student bursary to any students receiving the full maintenance grant. Currently, institutions are obliged to provide a bursary to make up the difference between the maintenance grant and the tuition fee charged (so if the full fee of £3,225 is charged, the minimum bursary is £319). From 2010/11 the requirements for the minimum bursary will change with the new requirements as follows:¹⁵

- > institutions charging the maximum fee (£3,290 from 2010/11) will be required to provide a bursary of 10% of the maximum fee (i.e. £329);
- > institutions charging a fee of over £2,961 but less than £3,290 must provide a minimum bursary which makes up the difference between £2,961 and the fee charged; and
- > institutions charging a tuition fee of £2,961 or less, will not need to provide a minimum bursary.

Any university charging a fee greater than the previous up-front fee (£1,225) must ensure that certain access targets are met (determined in conjunction with the Office for Fair Access – OFFA).

2.1.2 Full-time student grants

The maximum maintenance grant available to students stands at £2,906 (2009/10). It is means tested and is unavailable to students with a household income in excess of £50,020. Students from households with an income of less than £25,000 receive the full grant, while households with an income between these amounts receive a partial grant. For every £1,000 increase in household incomes between £25,000 and £34,000, the maintenance grant reduces by £200, while for every increase of £1,000 in household income between £34,000 and £50,020, the grant falls by £70. The structure of the grant is such that, although technically for maintenance purposes, if combined with the statutory university funded bursary, it is equal to the maximum tuition fee that may be levied by the higher education institution.

2.1.3 Full-time student fee loans

A fee loan is available to students to cover university tuition fees, ensuring that full-time students do not have to pay any tuition fees during the course of their study. The amount available to each student is equal to the amount of the tuition fee charged for the academic year (a maximum of £3,225 per annum). The loans are in essence 'interest free', though the amount repayable does increase in line with inflation (a zero real rate of interest). The repayment terms are identical to the maintenance loans also available to students.

2.1.4 Full-time student maintenance loans

Loans are also available to help full-time students to cover living costs. The amount varies on a student's circumstances (living alone, with parents, in London/elsewhere), but can be up to £6,928 per annum. The amount is reduced in the final year, as they do not provide any support during the summer vacation period. As with loans for fees, these loans attract a zero real rate of interest.

¹⁵ For further details of the changes to the bursary system, see the OFFA guidance note "Changes to the minimum bursary, inflationary increases and updating access agreements for 2010-11 (HEIs and FECs)", July 2009. Available at <http://www.offa.org.uk/guidance-notes/changes-to-the-minimum-bursary-inflationary-increases-and-updating-access-agreements-for-2010-11-heis-and-fecs/>.

Section 2 Methodology and Baseline Assumptions continued

Approximately 75% of the maximum loan is available to all full-time students irrespective of their household income, while 25% is means tested. All students with residual household income¹⁶ of less than £50,778 are eligible for the full maintenance loan. Irrespective of the location of study and whether the student is living at home or away from home, loan eligibility is withdrawn by £200 per £1,000 increase in household income beyond £50,778 to the minimum non-means tested level. This occurs at £57,708 per annum for students living away from home outside London, £60,478 for students living away from home in London, and £56,153 for students living at home.

Students who receive a maintenance grant are able to receive a reduced maintenance loan. For every £1,000 of grant received, the maximum loan eligibility is reduced by £500. As a result, students receiving the full maintenance grant are in fact eligible for less than the 'minimum' 75% loan.

2.1.5 Loan repayment terms

Repayment of either the fee or maintenance loans discussed above commences at the start of the tax year following a graduate completing or a student leaving the course. Repayment is income-contingent, and only occurs where a graduate's income is more than £15,000 per annum. Contributions are paid at the level of 9% of the graduate's earnings in excess of £15,000 and are automatically deducted at source from gross salary. Any part of a student loan left unpaid 25 years after the graduate contribution start date (i.e. the April after course completion) will be written off; this is also the case if the graduate becomes disabled and unable to work, or in the event of death.

¹⁶ For dependent students, residual income is comprised of the student's parents' gross income and allowances for: Pension scheme payments that qualify for certain specified tax relief, £1,130 for any other child that is mainly financially dependent on them and £1,130 if the parent is also a student. For independent students, residual income takes into account the income of the student's husband, wife or civil partner.

Although the option to defer repayment has been removed from 2010/11, in the model presented graduates had the option to defer the repayment of their student loan for a period of up to two years (which could have been exercised in one two year period or a combination of two single year periods). The loan repayable would have increased during the deferment period by inflation. The period for which the loan would have been 'live' would increase by the number of years for which the loan deferment might have been exercised. For instance, if loan repayments had been deferred for 1 year, then the period of time until debt forgiveness is triggered would have increased from the standard 25 years to 26 years.

A summary of this information is presented in Table 1.

Table 1: Summary of 2009/10 fees and student finance package – United Kingdom Full-time undergraduates studying in England

Fees	Grants/ Bursaries	Loans
Tuition fee charged: Yes	Grants Available: Maintenance only Maximum Grant: £2,906 Eligibility criteria: Income	Loans Available: Maintenance and Fees
Fixed/Differential: Differential	Means Tested: Yes	Min/Max Loan (Main): £3,497 (non means tested)/ £4,950 total (LAFHOL)
Maximum/Cap: £3,225		£5,475 (non means tested)/ £6,928 total (LAFHIL)
Up front/deferred: Deferred		£2,385 (non means tested)/ £3,838 total (LAH)
		Maximum Loan (Fee): £3,225 Means Tested: Maintenance loans – partially; fee loans – no
	Details: Household residual income (for dependent students): £0 - £25,000 Maximum grant (£2,906)	Details: Household residual income* (for dependent students): £0 - £25,000 Maximum loan - £1,453
	£25,000 - £34,000 £0.20 reduction per £1 in income	£25,000 - £50,778 £0.50 increase per £1 fall in grant
	£34,000 - £50,020 £0.07 reduction per £1 in income	£50,778 - £57,708 £0.20 fall per £1 increase in income (LAFHOL)**
	£50,020+ £0	£50,778 - £60,478 £0.20 fall per £1 increase in income (LAFHIL)**
		£50,778 - £56,153 £0.20 fall per £1 increase in income (LAH)**
	Bursaries Available: Yes Minimum Bursary: 10% of tuition fee for students receiving full maintenance grant in HEIs charging maximum fee	Repayment Criteria: Repayment mechanism: Income contingent loan
		Real Interest Rate: 0% Income threshold: £15,000 Repayment Rate: 9% of income above threshold Write off period: 25 years post graduation, permanent disability/death
		Option to defer: Yes, 2 years (removed form 2010/11)
	*residual income is defined as gross income (before tax and NI) and taking off allowances for the following: Pension scheme payments that qualify for certain specified tax relief; £1,130 for any other financially dependent child; and £1,130 if the parent is also a student	LAFHOL = Living away from home outside of London; LAFHOL = Living away from home in London; LAH Living at Home ** In a final year, these thresholds are £57,193, £59,608 and £55,653 respectively

Section 2 Methodology and Baseline Assumptions continued

2.1.6 Part-time student fees

For part-time students studying in England, tuition fees for part-time courses must be paid up front and are set by the university/college. There is no minimum or maximum amount – though some institutions may allow payment by instalments. Little information is available regarding the current level of part-time fees. As such, for modelling purposes, we estimated the average fee charged to part-time students as £816, based on information collected during a survey of 2005/2006 students, inflated at 2% a year.¹⁷

2.1.7 Part-time student tuition fee grants

A fee grant is available to help part-time students with tuition fees. The maximum value of the grant depends on the intensity of the course as follows:

Less than 50% of a full-time course:	£0
Between 50% and 59% of a full-time course:	£805
Between 60% and 74% of a full-time course:	£970
More than 75% of a full-time course:	£1,210

This grant is means tested. The basic household income cap for a full fee grant stands at £16,509 if the student is single and £18,509 if they are in a couple. The household income caps increase depending on the number of children in the household: by £2,000 for the first child and by £1,000 for each child thereafter (for both single and couple students). As household income increases by £1,000 beyond the income cap, grants are withdrawn at the rate of £80 per £1,000, £100 per £1,000 and £130 per £1,000 for students engaged on part-time courses between 50-59%, between 60-74% and above 75% of a full-time course respectively. There is no age limit for eligibility for part-time tuition fee grants.

2.1.8 Part-time student course grants

A course grant is also available designed to help with study costs such as books, materials and travel. For 2009/2010, the maximum course grant is £260 and is not dependent on the intensity of the course. The basic household income cap for a full course grant stands at £25,510 if the student is single and £27,510 if they are in a couple. The household income caps increase depending on the number of children in the household: by £2,000 for the first child and by £1,000 for each child thereafter (for both single and couple students). As household income increases by £1,000 beyond the income cap, grants are withdrawn at the rate of £110 per £1,000. As with the tuition fee grant, there is no age limit.

2.1.9 Part-time student maintenance loans

There are no maintenance or fee loans available to part-time students. A summary of this information is presented in Table 2.

Table 2: Summary of 2009/10 fees and student finance package – United Kingdom Part-time undergraduates studying in England

Fees	Grants/ Bursaries	Loans
Tuition fee charged: Yes	Grants Available: Maximum Grant (Course): Eligibility criteria: Length of eligibility	Course and Fees £260 (09/10) Income 8 years
Fixed/Differential: Differential	Income cap for full course grant: Increase in income cap	£25,510 (sing)/£27,510 (couple) £2,000 first child £1,000 per additional child £0.11 reduction per £1 in income
Maximum/Cap: Determined by HEI	Taper:	
Up front/deferred: Up front	Maximum Grant (Fee): Eligibility criteria: Intensity – < 50% FTE: 50 - 59% FTE: 60 - 74% FTE: >74% FTE:	£1,210 Income/course intensity £0 £805 £970 £1,210
	Income cap for full fee grant: Increase in income cap	£16,509 (sing)/£18,509 (couple) £2,000 first child £1,000 additional child
	Taper 50 - 59% FTE: Taper 60 - 74% FTE: Taper >75% FTE:	£0.08 reduction per £1 in income £0.10 reduction per £1 in income £0.13 reduction per £1 in income
		Loans Available: None

¹⁷ See Callender, C., Wilkinson, D., and Mackinon, K., (2006) "Part-time students and part-time study in higher education in the UK: Strand 3: a survey of students' attitudes and experiences of part-time study and its costs 2005/06", A report for Universities UK and Guild HE. The average fee was estimated using the average fee reported for varying course intensities, weighted for the proportion of students studying at each level of intensity.

Section 2

Methodology and Baseline Assumptions

continued

2.2 Full-time and Mixed Mode institutions

To reflect the diversity of the higher education sector, we have attempted to illustrate the potential effect of changes in student finance arrangements on different types of institution. As such, in consultation with million+ we have split the group of higher education institutions into two separate groups reflecting the profile of students undertaking undergraduate degrees attending those institutions. In very general terms, *Mixed Mode* institutions rely to a greater extent on part-time students compared to *Full-time* institutions, with approximately 17% of *Mixed Mode* students being enrolled on a part-time basis compared to 13% for *Full-time* institutions. We provide full details of the allocation of institutions to groups in Annex 1¹⁸.

Based on this assumption and information from HESA, we have estimated that there are 296,835 undergraduate students entering higher education in 2009/10 of whom 177,305 are full-time undergraduates entering Full-time institutions and 119,530 are full-time students entering Mixed Mode institutions.¹⁹ In addition, there are 56,390 part-time students²⁰ split between Full-time institutions (7,204) and Mixed Mode institutions (49,186).

2.3 Summary of institutional funding

2.3.1 Hefce mainstream teaching grant

The Higher Education Funding Council for England (Hefce) provides teaching funding to universities based on the subjects that students study. Subjects are classified into Bands, where Band D represents the classroom based subjects and attract the standard unit of resource (£3,964 per full-time equivalent FTE). Band C subjects have some element of laboratory based activity (such as some foreign language degrees) and attract a higher level of resource (1.3 multiple of the standard Band D level of resource). Band B subjects are those subjects with a significant laboratory based component and receive a 1.7 multiple of the standard resource level, while Band A subjects represent

degree subjects such as clinical medicine and dentistry and receive a resource weighting factor of 4.0 times the standard Band D resource per full-time equivalent student.

Based on publicly available Hefce information, we have modelled the distribution of students by subject banding as displayed in Table 3.

The average funding per FTE student is the net of the Hefce assumed fee, which currently stands at £1,255. The assumed fee is essentially equivalent to the up-front fee that was paid by students prior to the introduction of differential fees in 2006 and was designed to ensure that higher education institutions received the top up element of the fee, while the withholding of the initial £1,255 was intended to reduce the contribution made by the Exchequer towards higher education.

As presented in Table 4, combining the information on the distribution of students across mode of attendance and Hefce funding allocations by subject banding, it is possible to estimate the Hefce mainstream teaching funding made available to institutions. Specifically, Full-time institutions are expected to receive approximately £2.186 billion from Hefce for teaching full-time undergraduates along with an additional £26 million associated with part-time students. Mixed Mode institutions are expected to receive £1.456 billion per annum for the provision of teaching and learning to full-time undergraduates and an additional £207 million for part-time undergraduate students.

In terms of accuracy, the modelling approach that we have adopted mirrors the actual resource flows published by Hefce. Using equivalent FTE numbers, our analysis is within 0.062% of the 2008/09 estimated Hefce standard resource (minus assumed tuition fee income) of £3.659 billion. As such, we have a high degree of confidence in the estimates presented.

¹⁸ It is important to note that the findings of the model are not particularly sensitive to assumptions in relation to the allocation of institutions at the margin. In other words, there may be a small number of institutions that are designated as Full-time institutions but might be considered Mixed Mode institutions and vice versa. The re-allocation of a small number of these institutions does not change the overall conclusions of the analysis.

¹⁹ Student numbers were estimated by inflating information from HESA for the 2007/08 academic year by growth rates for 2008/09 estimated from Hefce data. Student numbers are assumed to remain flat between 2008/09 and 2009/10. The number of students in each group is estimated using the relevant proportion of first-degree undergraduate students reported by HESA for 2007/08.

²⁰ The base model includes students undertaking a part-time first undergraduate degree, with the assumption that all these students are undertaking study at a rate above 30% FTE. This includes a total of 56,390 part-time students (around 20% of all part-time students).

Table 3: Students by Hefce subject banding

	Full-time	Part-time
Band A (weighting 4.0)	2.9%	0.0%
Band B (weighting 1.7)	19.8%	15.6%
Band C (weighting 1.3)	41.9%	42.4%
Band D (weighting 1.0)	35.4%	42.0%
Average funding (per student)	£4,174	£1,479
Average funding (per FTE)	£4,174	£3,697

Source: London Economics' analysis of Hefce data

Table 4: Hefce mainstream teaching allocation

	Full-time	Mixed Mode	Total
Full-time	£2,160m	£1,456m	£3,616m
Part-time	£26m	£181m	£207m
Total	£2,186m	£1,637m	£3,823m

Source: London Economics' analysis of Hefce and HESA data

Our estimate of the Hefce mainstream teaching funding that will be provided for the cohort of students entering higher education in 2009/10 (using the number of students estimated above) is 4.5% higher than the actual 2008/09 figure. This slight difference is explained by the fact that (based on HESA information) the cohort entering higher education in 2007/08 (which forms the basis of our analysis) is larger than the Hefce assumed number of FTEs in 2008/09.

In addition to the mainstream teaching funding, Hefce also provides funding to institutions through targeted allocations. These provide additional funding for areas of higher education that Hefce feels are

particularly important or affect vulnerable students. We have not included these in the model, as in general, this funding will not vary according to the model parameters.²¹

2.3.2 Tuition fee income and bursaries

We have assumed that all students pay the maximum permissible fee (£3,225 in 2009/10 for full-time students and approximately £816 for part-time students). Although this assumption is marginally higher than in practice, we have selected the maximum tuition fee to illustrate the potential exposure to students associated with fees, as well as to the Exchequer if loans are provided to pay for these fees.

²¹ There is a targeted allocation available for part-time undergraduates. However, this is not directly related to the number of students at each institution but instead reflects a split of the total budget between institutions dependent on the number of part-time students. Further, the budget for this is relatively small (£43 million in 2008/09).

Section 2 Methodology and Baseline Assumptions continued

Table 5: Part-time students by intensity and associated fee

Intensity	Proportion (Single)	Proportion (Couple)	Average Fee
<50%	11.7%	17.6%	£617
50%-59%	15.2%	22.8%	£749
60%-74%	5.5%	8.3%	£1,002
>75%	7.6%	11.4%	£1,122
Total	40.0%	60.0%	£816

Note: Split between single and couple students based on analysis of part-time students surveyed through the Labour Force Survey. Proportion of students undertaking different course intensities and fee information based on results reported in Callendar, Wilkinson and McKinnon (2006), Table 1.3 and Table 3.2 respectively. (Reported fees are adjusted by annual inflation of 2%). Source: London Economics calculations based on sources noted above

Table 6: Tuition fee income and bursary expenditure

	Full-time	Mixed Mode	Total
Full-time	£1,668m	£1,125m	£2,793m
Part-time	£15m	£100m	£114m
Total (gross)	£1,783m	£1,225m	£2,907m
Bursaries	(£63m)	(£42m)	(£105m)
Total (net)	£1,720m	£1,187m	£2,802m

Source: London Economics' student finance model

For part-time students, the fee assumption of £816 is based on the distribution of students and associated fees as presented in Table 5.

As presented in Table 6, based on these fee assumptions and the distribution of students by mode of attendance and institution, Full-time institutions are expected to receive approximately £1.668 billion in tuition fee income from full-time undergraduates along with an additional £15 million from part-time students. Mixed Mode institutions are expected to receive £1.125 billion in tuition fee income from full-time undergraduates and an additional £100 million from part-time undergraduate students.

Against this fee income, we have assumed that all institutions must provide a bursary to those students in receipt of the maximum maintenance grant

equivalent to 10% of the tuition fee – equivalent to £323 per student. As will be described in the section relating to eligibility for maintenance grants, recent information from the ONS indicates that approximately 40% of students are eligible for the full maintenance grant. This implies that Full-time institutions pay students approximately £63 million in statutory bursaries compared to £42 million for Mixed Mode institutions.²²

2.4 Student Grants

Full-time students

As presented in Section 2.1.2 and Table 1, full-time undergraduate students are eligible to receive a maintenance grant of £2,906 per annum if residual household income is less than £25,000 per annum. The maintenance grant is reduced by £1 for every £5 increase in household income up to £34,000 after

²² In practice, institutions pay substantially more than the mandatory bursary. However, it is not possible to model this, as any additional bursaries are determined at the discretion of each institution.

which the maintenance grant is reduced by £1 for every £7 increase in household income up to £50,020. Information from a 2008 Office for National Statistics Statistical First Release (SFR 05/2008) indicates that 40% of 2008 Entry Cohort students received the full maintenance grant, a further 29% received a partial grant, and 31% of full-time students receive no maintenance grant²³. Given this information, we have estimated the residual income deciles, based on the assumption that the shape of the household residual income distribution is similar to that for UK gross annual earnings; and that 10% of full-time students have residual household incomes of over £100,000 per annum. Within each decile, incomes are assumed to be distributed uniformly.

Based on this information and the associated assumptions relating to the distribution of household income, we have estimated that the average maintenance grant across the entire full-time student population stands at £1,405 per annum. Excluding European Union students, we estimate that there are 166,434 full-time undergraduate students attending Full-time higher education institutions at a total cost (across the years that cohort remains in higher education) of £682 million to the Exchequer. There are 119,530 full-time undergraduate students attending Mixed Mode institutions at a cost of £460 million to the Exchequer. The total cost of full-time undergraduate maintenance grants to the Exchequer stands at £1.142 billion per annum.

Part-time students

In relation to part-time students, there are some small maintenance and course grants available. For students undertaking part-time undergraduate degrees, the maintenance grant ranges between £805 and £1,210 depending on the intensity of study. The basic income cap for receipt of the full maintenance grant stands at £16,509 for an individual and £18,509 for a couple with allowances made depending on the number of dependent children. This grant is withdrawn at between £1 per £8 and £12 of household income (depending on the intensity of study).

In addition to this source of funding, part-time students also receive a course grant of £260 per annum. The basic income cap for receipt of the full course grant stands at £25,510 for an individual and £27,510 for a couple with allowances made depending on the number of dependent children. This course grant is withdrawn at a rate of £1 per £9 increase in household income.

Part-time students are able to receive course and fee grants depending on their own income (if they are single) or their household income (if they are in a couple). We have estimated an income distribution for these two groups of part-time students based on the income distribution of part-time students surveyed as part of the Labour Force Survey between January 2007 and March 2009. We have estimated that there are approximately 31% of single part-time students with a household income of less than £17,000 (14.5% of part-time students in couples), with a further 34% having a household income of less than £26,000 (an additional 13.4% of part-time students in a couple). Combining this information on income distributions and the rate of withdrawal associated with the various types of grant, we have estimated that the average grant for a single person studying at 50-59% intensity stands at £383 (£211 for a couple household); the average grant for a single person studying at 60-74% intensity stands at £455 (£252 for a couple household); the average grant for a single person studying at more than 74% intensity stands at £563 (£312 for a couple household). In addition, the average course grant for a single person stands at £210 (£91 for a couple household). Across all part-time students, the average fee grant stands at £230 and the average course grant stands at £130.²⁴

Given the 7,204 part-time students attending Full-time institutions and 49,186 part-time students attending Mixed Mode institutions, we have estimated that the total resource allocation associated with fee and course grants for part-time undergraduates stands at £2.586 million for students attending Full-time institutions and £17.65 million for students attending Mixed Mode institutions.

this latest information would have the impact of changing the level of resource flows under the baseline and alternative scenarios, however, the differences between the various options would remain relatively unchanged.

²⁴ The average grants for part-time students are estimated based on estimates of the average number of dependent children for single and couple part-time students obtained through analysis of the LFS.

Section 2 Methodology and Baseline Assumptions continued

2.4.1 Student loans

We have provided a detailed description of the student loans available to full-time undergraduates and associated eligibility criteria in Section 2.1.4 and Table 1. We have assumed that the same household income distribution applies to students as that adopted in relation to full-time maintenance grants. Based on information from the 2007/08 Student Income and Expenditure Survey and Hefce, we have assumed that 24% of full-time students live at home, 62% of full-time students are living away from home outside of London; and 14% of full-time students are living away from home in London. We have assumed that all students take up the offer of a loan and do so to the maximum extent.

For the purposes of modelling, combining the information on loan eligibility and household income, we have estimated that the average annual maintenance loan for students living away from home outside of London is £3,755 compared to £5,555 for students living away from home living in London and £2,748 per annum for students living at home. Combining the information on the distribution of household income of students and the location of study of students, we have estimated that the average student maintenance loan stands at £3,758 per annum.

RAB Charge

The extent of the Exchequer loan subsidy is measured by the Resource Accounting and Budgeting charge (RAB), which calculates the proportion of the nominal loan value that would not be expected to be repaid (in present value terms²⁵) – due to the zero real rate of interest subsidy and debt forgiveness after 25 years or in the case of permanent disability or death. The Department for Business, Innovation and Skills (BIS) have responsibility for calculating the RAB charge.

Based on graduate earnings profiles (from the Labour Force Surveys) and the administrative information relating to the criteria for repayment of loans, we have estimated that the RAB charge stands at 26.9% (excluding the two year option to defer repayment since removed), which implies that for every £1,000 in loans that are provided by the government, approximately £731 would be expected to be repaid (in present value terms) with the

remaining £269 being 'lost' to the Exchequer as a result of write offs and interest rate subsidies.

In addition to the standard assumptions relating to the RAB charge, estimates published by the Higher Education Policy Institute (HEPI) suggest that the RAB cost would be significantly increased by the imposition of the repayment holiday.²⁶ In particular, it is suggested that a five-year repayment holiday (which was originally announced) might increase the RAB charge from 21% to 26% on maintenance loans and from 33% to 36% on fee loans. Based on this, for modelling purposes, we assume that the option for a 2-year repayment holiday adds approximately 2.0% to the RAB charge, which is equivalent to £20 per £1,000 of loan provided by the Exchequer.

To place this in context, the latest estimates available from the former Department for Innovation, Universities and Skills in relation to the RAB charge indicate that the RAB charge associated with maintenance loans is approximately 21% while the RAB charge associated with the fee loan stands at 33% (as it is assumed that the maintenance loan is always repaid ahead of the fee loan). Averaging the official estimates of the RAB charge over the expected size of the loan provides an official estimate of the RAB charge of 26.5%.

The total Exchequer cost associated with the provision of loans stands at £1.008 billion per annum for those students attending Full-time institutions and £680 million for students attending Mixed Mode institutions (totalling £1.688 billion per annum).

2.4.2 Other assumptions Elasticity of demand

We have assumed that students respond to changes in the tuition fee charged by institutions. Specifically, we have assumed that if all institutions raise the price of tuition by 20%, then there will be a reduction in the quantity of higher education demanded by 1%. This is equivalent to an elasticity of demand of -0.05. We have also assumed that there is a degree of interdependence between institutions. Specifically, if one group of higher education institutions raise the price of tuition by 10% relative to the other set of institutions, we assume that 1% of those students that

²⁵ The present value is defined as the discounted value of a payment or stream of payments to be made or received in the future, taking into consideration a specific interest or discount rate. The present value represents a series of future cash flows expressed in today's money terms.

²⁶ Chester, J. and Bekhradnia, B. (2008) "Funding Higher Fees: Some Implications of a Rise in the Fee Cap", Higher Education Policy Institute (April 2008).

Table 7: Distribution of students by length of course

Length of course (years)	Full-time	Part-time
1 year	2.3%	13.0%
2 years	0.7%	11.0%
3 years	66.6%	13.0%
4 years	26.5%	30.0%
5 years	3.5%	19.0%
6 years	0.6%	12.0%
7 years	0.0%	2.0%

Note: Information for full-time students based on HESA Students in Higher Education Institutions 2007/08. Information for part-time students based on Callendar, Wilkinson and McKinnon (2006). Source: London Economics based on sources noted above

would have attended the institution raising fees by 10% switch and attend the other type of institution. In the model that we present, this switching behaviour has the effect of transferring both the tuition fee and the Hefce funding between institutions. However, it is important to note that these assumptions only hold good if student numbers are made available to institutions charging lower fees following increases in tuition fee by other institutions.

Behavioural changes between full-time and part-time study

We have assumed that a change in the student finance package does not lead to any change in the mode of study that students undertake. A relative increase in the full-time tuition fee does not, for example, lead to students switching to part-time study. Although, in practice, there may be the potential for some small degree of switching, we believe that this assumption is justified by the different characteristics of full-time and part-time students, particularly in relation to age. In addition to this, depending on the amendments to student support, it may also be possible for those that are not currently studying to decide to commence a course of higher education if student support arrangements are made sufficiently attractive. However, for the purpose of this modelling we have assumed that the current institutional cap on student numbers prevents the number of students increasing beyond current levels.

Completion rates and length of study

We have estimated the distribution of students according to the length of study using information from HESA (for full-time students) and Universities UK (for part-time students). This information is presented in Table 7.

We have assumed that there is some degree of non-completion amongst students. Specifically, we have assumed that the annual progression rate amongst full-time students stands at 90% while the part-time undergraduate progression rate stands at 75% per annum, based on figures published by the National Audit Office (NAO)²⁷, showing that in 2004/05 91.2% of full-time and 76.9% of part-time first degree students continued to a second year.

This implies that the completion rate across the cohort is 78.7% for full-time students and 50.4% for part-time students. In comparison, the NAO indicated that, after four years 81.7% of full-time students had either completed their first degree or were still studying (at either the original institution or elsewhere); and after six years 47.8% of part-time students had either completed a first degree or were still studying elsewhere.

Discount rates

In calculating the RAB charge, we use the most recent assumption adopted by DIUS, that repayments should be discounted at 2.2%.²⁸

²⁷ National Audit Office (2007) "Staying the course: The retention of students in higher education", Report by the Comptroller and Auditor General.

²⁸ Department for Innovation, Universities and Skills (2009) Departmental Report 2009, Annex 1.

Section 3 Model results

3.1 Baseline resource flows

Based on the assumptions detailed in Section 2 of the report, we have modelled the baseline resource flows of the current student support model for a cohort of students entering higher education in 2009/10.

The current cost to the Exchequer associated with the funding of higher education stands at £6.704 billion, of which £3.616 billion is associated with the Hefce Teaching Grant for full-time students; £207 million relates to the Hefce grant associated with part-time students; £1.142 billion relates to the costs of providing grants to full-time students; £1.688 billion relates to the costs of subsidising loans for fees and maintenance. The remaining £50 million in Exchequer costs is accounted for by the part-time student fee grant and course grant. This information is presented in Table 8 and Figure 1.

The baseline model assumes that there are 296,835 full-time students entering higher education in 2009/10 of whom 177,305 attend Full-time institutions and 119,530 attend Mixed Mode institutions. In addition, the baseline scenario assumes that there are 56,390 part-time undergraduates, of whom 7,204 attend Full-time institutions and 49,186 attend Mixed Mode institutions. The average funding per full-time student from the Exchequer is estimated to amount to £21,715 over the duration of their undergraduate studies compared to £4,571 funding for a part-time student.

Based on this distribution of students by type of institution, the baseline scenario suggests that Full-time institutions are in receipt of £3.807 billion annually, of which £2.186 billion is from the Exchequer in the form of the Hefce Teaching Grant and the remaining £1.620 billion is the net fee income from students (i.e. the tuition fee minus any statutory bursary provided). Mixed Mode institutions are in receipt of £2.819 billion annually, of which £1.637 billion is from the Exchequer in the form of the Hefce Teaching Grant and the remaining £1.182 billion is the net fee income from students.

Finally, somewhat surprisingly, students and graduates have a relatively small exposure under the current student support arrangements. Although they contribute £2.8 billion in fees annually to higher education institutions, the impact of the grants, subsidised loans and relatively generous repayment and write off criteria associated with Exchequer loans entirely covers the fee contribution of students and graduates to the extent that they are net recipients to the order of £78 million.

3.2 Impact of key drivers on resource flows

3.2.1 Raising tuition fees and tuition fee loans

The key value of this model is the ability to estimate the changes in resource flows associated with changes in the key parameters of the higher education funding system. For instance, suppose it is suggested that the maximum fee charged by institutions is increased by £4,000 per annum to £7,225 and the fee loan for full-time students is also increased by £4,000 with the same eligibility criteria and repayment conditions as are currently the case.

The net impact of the increase in the tuition fee cap and associated loans is that the Exchequer is significantly worse off – to the order of £1.121 billion per annum. The primary driver of this outcome is the increased level of subsidised loans made available to students. However, the total negative effect associated with subsidising student loans is somewhat reduced by the fact that the increasing costs associated with entering higher education will dissuade approximately 17,000 students from entering – although this reduction in student numbers may have additional longer term impacts on economic growth and hence tax revenues.

Clearly, Full-time institutions are significantly better off as a result of the change in policy as they are in receipt of higher tuition fees from students – and although there will be a reduction in student numbers, the relatively large increase in per capita fees, combined with the relatively low elasticity of demand, will see their annual resource increase from £6.626 billion to £9.400 billion. Students and graduates will be significantly worse off. In particular, graduates will pay an additional £3.10 billion to institutions in deferred tuition fees; but will be subsidised by approximately £1.40 billion through the loans system, leaving a net deterioration in their financial position of approximately £1.65 billion.

Table 8: Exchequer Costs by higher education item

Item	Exchequer cost
Hefce Teaching Grant (FT)	£3.616 billion (54%)
Hefce Teaching Grant (PT)	£0.207 billion (3%)
Grants to full-time students	£1.142 billion (17%)
Loans to full-time students	£1.688 billion (25%)
Grants to part-time students	£0.050 billion (1%)
Total	£6.704 billion (100%)

Source: London Economics' student finance model

Figure 1: Baseline resource flows

		To				
		Students/ Graduates	FT Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£1,620m	£1,182m	(£2,880m)	(£78m)
	FT Institutions	(£1,620m)	NA	NA	(£2,186m)	(£3,807m)
	MM Institutions	(£1,182m)	NA	NA	(£1,637m)	(£2,819m)
	Exchequer	£2,880m	£2,186m	£1,637m	NA	£6,704m
	Total	£78m	£3,807m	£2,819m	(£6,704m)	£0m

Source: London Economics' student finance model.

Figure 2: Raising tuition fees by £4,000 per annum

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£3,399m	£2,389m	(£4,212m)	£1,575m
	FT Institutions	(£3,399m)	NA	NA	(£2,058m)	(£5,456m)
	MM Institutions	(£2,389m)	NA	NA	(£1,555m)	(£3,944m)
	Exchequer	£4,212m	£2,058m	£1,555m	NA	£7,825m
	Total	(£1,575m)	£5,456m	£3,944m	(£7,825m)	£0m
	Difference from 2009/10	(£1,653m)	£1,650m	£1,124m	(£1,121m)	

Note: Assumption – Tuition fees and associated fee loans increased to a maximum of £7,225 per annum.
Source: London Economics' Student Finance Model.

Section 3 Model results continued

3.2.2 Raising tuition fees and real interest rates

Currently the real interest rate charged on student loans is zero. In other words, the outstanding loan value only increases annually in line with inflation (the RPI) and as such their value is held constant in real terms. This is one of the most costly elements of the current student support package for the Exchequer (£1.688 billion annually). If we assume that the maximum tuition fee and associated loan for tuition fees are increased to £7,225 (as in the previous section) but also that a real interest rate of 2.0% is imposed on all loans²⁹, the net impact compared to the current system of student support is to increase the annual cost to the Exchequer by just £28 million. Compared to the previous scenario, institutions are no better or worse off, but students and graduates are significantly worse off, having seen their interest rate subsidy reduced. Compared to the current student support arrangements, graduates are £2.75 billion worse off.

It should be noted that there is a difference between a real rate of interest and a commercial rate of interest. A real rate of interest is simply a rate that exceeds the appropriate inflation rate (and may still involve a subsidy from the state to the individual). A commercial interest rate reflects full cost recovery and an appropriate level of profit in relation to the opportunity costs associated with the funds. A number of jurisdictions charge a positive real interest rate on the loans provided to students though relatively few charge a commercial rate of interest.

For instance, Denmark and Spain charge a real interest of 1%; Germany up to 2% on some loans; the Netherlands between 1% and 2%; Norway a real rate of 1% on a variable loan or 3.5% on fixed rate loan; Sweden approximately 1%. In addition, the nominal loan rates in a number of countries are as follows and in these cases more closely reflect commercial (or full cost recovery) rates of interest: Hungary 10.5%; New Zealand 6.8% if living abroad; United States between 5% and 7%; and Canada either a real interest rate of 2.5% on a variable loan or 5% on a fixed rate loan.

3.2.3 Maintaining the current tuition fee level and raising the real rate of interest

It is possible to isolate the impact on the various groups of a simple increase in the real rate of interest holding all other factors constant. In particular, maintaining current fees and loans levels whilst introducing a small positive real interest rate (1%) would result in an additional £366 million per annum to the Exchequer entirely paid for by increased loan repayments from graduates.

3.2.4 Tightening write off criteria and options to defer

The income contingent nature of the loans offered by the Exchequer ensures that if incomes of graduates fall below £15,000 per annum, then no repayments need to be made against their loan obligation. Current graduate contribution arrangements also offer graduates the ability to write off any outstanding debt 25 years after graduation. In addition, graduates previously also had the right to defer repayments for a period of two years when their income was above the repayment threshold. As far as we are aware, this option to defer repayments was unlike any other student support arrangements amongst industrialised nations and the time limit on repayments is generally more lenient than many other countries, where (in some cases) mortgage style loans operate and repayment occurs irrespective of income until the entire value of the loan is repaid (and is passed on after death).

²⁹ Note that the imposition of a real interest rate will increase both the average time required to repay the loan (by up to two years) as well as the amount repaid in real terms. Currently, the average debt upon graduation is £20,949 and students on average repay £20,949 in real terms. Following the imposition of a 2% real rate of interest, the average male graduate would repay £26,211 in real terms while the average female graduate would repay £27,466.

Figure 3: Raising tuition fees by £4,000 per annum and imposing a 2% real interest rate

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£3,399m	£2,389m	(£3,118m)	£2,669m
	FT Institutions	(£3,399m)	NA	NA	(£2,058m)	(£5,456m)
	MM Institutions	(£2,389m)	NA	NA	(£1,555m)	(£3,944m)
	Exchequer	£3,118m	£2,058m	£1,555m	NA	£6,731m
	Total	(£2,669m)	£5,456m	£3,944m	(£6,731m)	£0m
	Difference from 2009/10	(£2,746m)	£1,650m	£1,124m	(£28m)	

Note: Assumption – Tuition fees and associated fee loans increased to a maximum of £7,225 per annum. Real interest rates increased from 0.0% to 2.0%.
Source: London Economics' Student Finance Model.

Figure 4: Maintaining tuition fees and imposing a 1% real interest rate

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£1,620m	£1,182m	(£2,514m)	£289m
	FT Institutions	(£1,620m)	NA	NA	(£2,186m)	(£3,807m)
	MM Institutions	(£1,182m)	NA	NA	(£1,637m)	(£2,819m)
	Exchequer	£2,514m	£2,186m	£1,637m	NA	£6,337m
	Total	(£289m)	£3,807m	£2,819m	(£6,337m)	£0m
	Difference from 2009/10	(£366m)	£0m	£0m	£366m	

Note: Assumption – Tuition fees and associated fee loans maintained at a maximum of £3,225 per annum. Real interest rates increased from 0.0% to 1.0%.
Source: London Economics' Student Finance Model.

Section 3 Model results continued

Altering the write off criteria, such that any outstanding loans are only written off 40 years after graduation, as well as eliminating the option to defer, would result in a £221 million per annum cost saving to the Exchequer. The impact on institutions would be unchanged with graduates paying the additional loan costs. This is presented in Figure 5.

3.2.5 Differential fee increase

In this scenario, we have assumed that the maximum fee for full-time students can increase to £7,225 per annum, although only Full-time institutions raise the fee to this level. Mixed Mode institutions increase fees to £5,225. We also assume that the Exchequer continues to fund tuition fee loans to the full extent. Clearly, following the increase in fees, all higher education institutions are better off; however, there is some degree of student movement between institutions. In particular, we have assumed that the cross price elasticity of demand between institutions stands at -0.10, so following the relatively large increase in student fees by Full-time institutions, there is a movement of students from Full-time to Mixed Mode institutions (assuming that a transfer of student numbers allows this to occur). In addition, although the Mixed Mode institutions receive students following the differential price increases, we have assumed that their own price elasticity of demand stands at -0.05 implying that some students decide no longer to enter higher education following these price increases. We have assumed that there are no student number caps in place for individual groups of institutions.

Full-time institutions would see a 25,000 fall in student numbers (alongside the Hefce funding associated with those students) while Mixed Mode institutions would see an increase in numbers by 8,000 (along with the increase Hefce funding). In aggregate, Full-time institutions would be £1.172 billion better off, while Mixed Mode institutions would be £886 million better off. However, these assumptions would again only hold good if Mixed Mode institutions were able to recruit additional students. Assuming that they still had to pay fees up-front, part-time students would be disadvantaged unless institutions were able to hold fees at previous levels.

Following this change in fees and fee loans, the Exchequer would be £360 million worse off. The cost impact of the interest rate subsidy stands at an extra £642 million; however, this is reduced as a result of the fall in student numbers, such that the costs associated with full-time maintenance grants would fall by £71 million, while the allocation of funding through Hefce would be expected to fall by £210 million per annum.

Figure 5: Extending write off period to 40 years and removing option to defer

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£1,620m	£1,182m	(£2,659m)	£144m
	FT Institutions	(£1,620m)	NA	NA	(£2,186m)	(£3,807m)
	MM Institutions	(£1,182m)	NA	NA	(£1,637m)	(£2,819m)
	Exchequer	£2,659m	£2,186m	£1,637m	NA	£6,482m
	Total	(£144m)	£3,807m	£2,819m	(£6,482m)	£0m
	Difference from 2009/10	(£221m)	£0m	£0m	£221m	

Note: Assumption – Tuition fees and associated fee loans maintained at a maximum of £3,225 per annum. 2 year option to defer eliminated. Write off after 40 years only.
Source: London Economics' Student Finance Model.

Figure 6: Differential tuition fee increase

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£3,100m	£1,971m	(£3,451m)	£1,620m
	FT Institutions	(£3,100m)	NA	NA	(£1,879m)	(£4,979m)
	MM Institutions	(£1,971m)	NA	NA	(£1,734m)	(£3,705m)
	Exchequer	£3,451m	£1,879m	£1,734m	NA	£7,064m
	Total	(£1,620m)	£4,979m	£3,705m	(£7,064m)	£0m
	Difference from 2009/10	(£1,698m)	£1,172m	£886m	(£360m)	

Note: Assumption - Full-time institutions charge the full fee while Mixed Mode institutions charge £5,225. 2 year option to defer eliminated. Write off after 40 years only.
Source: London Economics' Student Finance Model.

Section 3 Model results continued

Figure 7: Increase in fees and loans by £4,000, imposition of 2% real rate of interest, extension of write off period to 40 years, removal of option to defer and increase repayment rate to 10%

From	To				
	Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
Students/Graduates	NA	£3,399m	£2,389m	(£2,141m)	£3,646m
FT Institutions	(£3,399m)	NA	NA	(£2,058m)	(£5,456m)
MM Institutions	(£2,389m)	NA	NA	(£1,555m)	(£3,944m)
Exchequer	£2,141m	£2,058m	£1,555m	NA	£5,754m
Total	(£3,646m)	£5,456m	£3,944m	(£5,754m)	£0m
Difference from 2009/10	(£3,724m)	£1,650m	£1,124m	£950m	

Source: London Economics' student finance model.

3.2.6 Revenue raising

Finally in this section, we consider a range of options that might improve the financial position of the Exchequer. Specifically, we have assumed that the Exchequer charges a 2% real interest rate on loans; increases the current cap on tuition fees to £7,225 per annum; increases loan sizes to account for higher fees; removes the option to defer; extends the period until loan write off and increases the rate of repayment (above the income threshold) by 1%.

In total, these policy amendments lead to a benefit of £960 million for the Exchequer, and £2.774 billion for higher education institutions. Students and graduates are affected by the higher fees charged and the reduction in the preferential loan terms and are £3.72 billion per annum worse off.

3.3 Bursaries

We have also considered the resource impact associated with the abolition of statutory bursaries. It is not possible to accurately assess the impact of the discretionary bursaries system, as there is no centrally held information linking students (and their characteristics) with these additional bursaries.

In Figure 8, we have illustrated the scenario whereby if the statutory bursary requirement were removed such that any student in receipt of the maximum grant would no longer receive the top-up bursary, students would be approximately £105 million worse off

compared to the current system, while institutions would be £105 million better off. In practice, the proportion of students eligible to receive bursaries will vary between universities, depending on the characteristics of the student cohort. If it is assumed that students attending Mixed Mode institutions are more likely to be in receipt of a statutory bursary (as a result of their household income), then the modelling would under-estimate the impact of the removal of bursaries on Mixed Mode institutions and over-estimate the impact on Full-time institutions. However, for modelling purposes, we assume that the characteristics of the entering cohort are identical across all universities (including both Full-time and Mixed Mode institutions).

A number of alternative approaches are available to ensure that higher education remains free at the point of entry. The Exchequer could increase the size of the maintenance grant to cover the entire maximum tuition fee; however, this would end up costing the Exchequer more than the original £105 million indirectly paid to institutions to cover the bursary. The cost of this option to the Exchequer would be £136 million per cohort. This is a result of the fact that students eligible for a partial grant would now be eligible for a larger (partial) grant, whereas under the current system, being ineligible for the maximum grant (i.e. having a household income of less than £25,000) excludes an individual from receiving any statutory bursary whatsoever. These resource flows between stakeholders is presented in Figure 9.

Figure 8: Impact of the abolition of statutory bursaries

From	To				
	Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
Students/Graduates	NA	£1,683m	£1,225m	(£2,880m)	£27m
FT Institutions	(£1,683m)	NA	NA	(£2,186m)	(£3,869m)
MM Institutions	(£1,225m)	NA	NA	(£1,637m)	(£2,862m)
Exchequer	£2,880m	£2,186m	£1,637m	NA	£6,704m
Total	(£27m)	£3,869m	£2,862m	(£6,704m)	£0m
Difference from 2009/10	(£105m)	£63m	£42m	£0m	

Source: London Economics

Figure 9: Impact of the abolition of statutory bursaries – replaced by grants

From	To				
	Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
Students/Graduates	NA	£1,683m	£1,225m	(£3,017m)	(£109m)
FT Institutions	(£1,683m)	NA	NA	(£2,186m)	(£3,869m)
MM Institutions	(£1,225m)	NA	NA	(£1,637m)	(£2,862m)
Exchequer	£3,017m	£2,186m	£1,637m	NA	£6,840m
Total	£109m	£3,869m	£2,862m	(£6,840m)	£0m
Difference from 2009/10	£32m	£63m	£42m	(£136m)	

Source: London Economics

Section 3 Model results continued

We have also considered an alternative option that incorporates the elimination of statutory bursaries but ensures that students are no worse off than under the baseline scenario. In Figure 10, we assume that statutory bursaries are removed; however, we have estimated that tuition fees could be reduced to approximately £3,030 per annum with an equivalent reduction in the fee loan. Under this scenario, the Exchequer would be approximately £46 million better off, of which a £60 million saving is achieved compared to the current system as a result of the reduced RAB charge on student loans, while an additional 842 students entering the system (as a result in the reduction in the fee charged) would increase Hefce costs by approximately £10 million and maintenance grants by approximately £3 million.

Institutions are approximately £46 million worse off under this scenario as a result of receiving £161 million less in fees; however, £105 million would be saved as a result of not paying the statutory bursary and an additional £10 million would be received in Hefce funding to accommodate the increase in the number of students.

To rectify the fact that institutions are marginally worse off as a result of the removal of the statutory bursary and the reduction in the fees charged to students, we have modelled a scenario that involves the elimination of the statutory bursary that leaves all parties essentially no worse off than under the baseline scenario. This is presented in Figure 11.

We have assumed that the statutory bursary is removed, the maximum fee is reduced to £3,030 per annum (with a reduction in the fee loan to match). However, in this scenario, we have assumed that Hefce teaching grant is *increased* by 1.0% to counteract the shortfall in tuition fee income. The most interesting point to note is that although the resource flows are identical to the baseline scenario, there are an extra 842 students progressing through the system than would be otherwise the case.

The analysis presented above illustrates in real terms the impact of the some of the idiosyncrasies and complexities associated with the current system. Specifically, the elimination of statutory bursaries, a reduction in the fees charges and a compensating variation in Hefce teaching funding could generate enough true efficiency savings to fund an additional 842 full-time students through their higher education careers, which according to recent estimates would generate an economic benefit of approximately £78 million³⁰ to the economy incorporating the generation of an additional £27 million in enhanced taxation receipts.

³⁰ London Economics (2008), "An economic impact assessment of the CCPMO", a report produced for the Consultative Committee for Professional Management Organisations. The lifetime benefit of an undergraduate degree to a representative degree holder is assessed to be £93,203 in present value terms.

Figure 10: Impact of the abolition of statutory bursaries – reduced fees

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£1,587m	£1,159m	(£2,824m)	(£78m)
	FT Institutions	(£1,587m)	NA	NA	(£2,193m)	(£3,779m)
	MM Institutions	(£1,159m)	NA	NA	(£1,641m)	(£2,800m)
	Exchequer	£2,824m	£2,193m	£1,641m	NA	£6,658m
	Total	£78m	£3,779m	£2,800m	(£6,658m)	£0m
Difference from 2009/10		£0m	(£27m)	(£19m)	£46m	

Source: London Economics

Figure 11: Impact of the abolition of statutory bursaries – reduced fees and increases in teaching grants

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£1,587m	£1,159m	(£2,824m)	(£78m)
	FT Institutions	(£1,587m)	NA	NA	(£2,220m)	(£3,806m)
	MM Institutions	(£1,159m)	NA	NA	(£1,661m)	(£2,821m)
	Exchequer	£2,824m	£2,220m	£1,661m	NA	£6,705m
	Total	£78m	£3,806m	£2,821m	(£6,705m)	£0m
Difference from 2009/10		£0m	(£0m)	£1m	(£1m)	

Source: London Economics

Section 4 Alternative scenarios

In this section, we consider a number of alternative options relating to the funding of higher education.

4.1 Scenario 1: No fees, no grant and no loan

In this illustration of the model, we have assumed that students who study at university whilst living at home pay no tuition fees. However, they also become ineligible for maintenance grants and maintenance loans. We assume that all students living at home take up the option not to pay tuition fees and we also assume that there is no behavioural change amongst students in the sense that no students who would have studied away from home, decide to study whilst living at home to avail of this fee-free option. We have assumed that institutions who accept these students receive 90% of the tuition fee charged to those students not living at home (in 2009/10, £3,225) from the Exchequer. We assume in this example that the fees charged to students not living at home remain unchanged and all other elements of the student support package are unaltered. The difference in resource flows is presented in Figure 12.

The analysis indicates that the overall change in resource flows is relatively neutral, with the Exchequer £44 million per annum better off; students £19 million better off and higher education institutions £63 million worse off as a result of the shortfall in funding. However, looking at the disaggregated components of the changes in funding is interesting. Specifically, although institutions receive £629 million less in tuition fee income from students, approximately £566 million of this is compensated for by the Exchequer.

For the Exchequer, although it is compensating universities by £566 million for the reduction in fee income, the fact that no grants are paid saves £274 million per annum and the elimination of the RAB cost associated with student loans generates a further £336 million per annum in cost savings.

However, the relative cost neutrality associated with this option only holds if all other elements of the current student support arrangements are maintained at current levels. Specifically, if there is an increase in the tuition fee for those students that are not living at home, the policy becomes highly advantageous for higher education institutions and cost negative for the Exchequer and students.

Figure 13 illustrates that the Exchequer is £1.410 billion worse off if there is a £4,000 increase in fees and associated loans for students living away from home. The reason for the increased cost associated with this option is as a result of the increased RAB charge associated with the increased loan volumes, and the increased 'shortfall' payments made by the Exchequer to institutions to account for the reduction in tuition fees paid by students living at home. Students are worse off overall, as those students living away from home are now liable for increased tuition fees (approximately 75% of the cohort), while the position of those students living at home is unchanged following the increase in tuition fees more generally.

Figure 12: No tuition fee, no grant, and no loan for students living at home

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£1,245m	£929m	(£2,270m)	(£96m)
	FT Institutions	(£1,245m)	NA	NA	(£2,525m)	(£3,769m)
	MM Institutions	(£929m)	NA	NA	(£1,865m)	(£2,794m)
	Exchequer	£2,270m	£2,525m	£1,865m	NA	£6,659m
	Total	£96m	£3,769m	£2,794m	(£6,659m)	£0m
	Difference	£19m	(£38m)	(£25m)	£44m	

Source: London Economics' student finance model

Figure 13: No tuition fee, no grant, and no loan for students living at home and increased fee for students living away from home

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£2,609m	£1,856m	(£3,311m)	£1,154m
	FT Institutions	(£2,609m)	NA	NA	(£2,769m)	(£5,377m)
	MM Institutions	(£1,856m)	NA	NA	(£2,034m)	(£3,890m)
	Exchequer	£3,311m	£2,769m	£2,034m	NA	£8,114m
	Total	(£1,154m)	£5,377m	£3,890m	(£8,114m)	£0m
	Difference from 2009/10	(£1,232m)	£1,571m	£1,071m	(£1,410m)	

Source: London Economics' student finance model

Section 4 Alternative scenarios continued

However, the analysis presented in Figure 13 is partially driven by the fact that there has been an increase in tuition fees and associated loans by £4,000. To compare like with like, it is necessary to consider the situation where fees and associated loans have been increased by £4,000 across the board and the situation where fees have been increased by £4,000 for those students living away from home, with no fees, grants or loans available to those students living at home. This is a comparison of the final row in Figure 2 and Figure 13 and is presented in Figure 14.

The analysis illustrates that the net impact associated with the adoption of the no tuition fee, no loan, and no grant option is to increase the cost of funding higher education by approximately £136 million associated with a £2,000 increase in tuition fees (not presented here) and £289 million for a £4,000 increase in tuition fees. Figure 14 also illustrates that the net impact of the no grant, no fee and no loan option also makes institutions worse off as a result of the assumption that the Exchequer does not make up the entire shortfall in funding following the removal of tuition fees for those students electing to live at home.

This scenario also assumes that the removal of maintenance grants would not damage participation.

4.2 Scenario 2: Market based top up fee and loan

In this section we consider an alternative approach to student support that incorporates a greater degree of market forces. Specifically, we assume that higher education institutions have the right to increase tuition fees by £4,000 per annum but only Full-time Institutions actually do so. In addition, to ensure access that is free at the point of entry, those higher education institutions that increase their tuition fee must also provide the additional fee loans to students.

To incorporate this assumption into the modelling, we have assumed that the Exchequer makes the additional funds available to Full-time institutions in the first instance and collects repayments through the taxation system (as currently the case) at no cost to institutions. However, we assume that the Full-time institutions pay the RAB charge associated with the increased fee loan. As before, we have modelled the expected loan repayments of graduates.

Based on the current system of student support – we have estimated that the RAB charge (including option to defer) stands at 28.9% for the average full-time undergraduate maintenance and fee loan of £20,900. If the size of the loan is increased following an increase in tuition fees for those undergraduates attending Full-time institutions (by £4,000 per annum), we have estimated that the RAB charge increases to 35.3% associated with an average loan size of £27,178³¹.

We have assumed that the cross price elasticity of demand between the two types of institution stands at -0.10 implying that for every 10% increase in tuition fees charged by Full-time institutions, 1% of students will elect to attend a Mixed Mode institution if student numbers are switched. The suggested increase in fees presented here (approximately 124%) implies that just over 12.4% of students will move between the different types of institution, but in aggregate there will be no change in the overall number of full-time undergraduate students.

The analysis presented in Figure 15 indicates that this option is completely cost neutral to the government (as there has been no change in the number of students, no change in the Hefce Teaching Grant, nor any change in the level of loans provided by government). Students and graduates are significantly worse off following the increased fee contributions (by £908 million per annum), while *both* Full-time and Mixed Mode institutions see an increase in funding.

In particular, Full-time institutions see an increase in fee income of £1.606 billion per annum from those students continuing to attend Full-time institutions. However, this impact is somewhat negated by the fact that mandatory bursaries would be expected to increase from £63 million to £123 million per annum, while the cost to the institutions associated with the fee loan would be expected to be approximately £836 million per annum. As such, the net effect of the increase in fees to Full-time institutions would be approximately £709 million per annum.

³¹ This estimate links closely the assumption used by the Higher Education Policy Institute (HEPI) based on assumptions provided by DIUS. In particular, they estimate that the RAB charge on additional borrowing would be 41% under a £5,000 fee cap and 42.5% under a £7,000 fee cap (Chester and Bekhradnia, 2008).

Figure 14: Net impact of raising tuition fees and operating no grant, no fee and no loan system

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	(£790m)	(£532m)	£901m	(£421m)
	FT Institutions	£790m	NA	NA	(£711m)	£79m
	MM Institutions	£532m	NA	NA	(£479m)	£53m
	Exchequer	(£901m)	£711m	£479m	NA	£289m
	Total	£421m	(£79m)	(£53m)	(£289m)	
Difference from 2009/10		£421m	(£79m)	(£53m)	(£289m)	

Source: London Economics' student finance model

Figure 15: Increasing tuition fees – funded by Full-time institutions with no Mixed Mode student caps

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£2,330m	£1,382m	(£2,880m)	£831m
	FT Institutions	(£2,330m)	NA	NA	(£1,918m)	(£4,248m)
	MM Institutions	(£1,382m)	NA	NA	(£1,905m)	(£3,286m)
	Exchequer	£2,880m	£1,918m	£1,905m	NA	£6,704m
	Total	(£831m)	£4,248m	£3,286m	(£6,704m)	£0m
Difference from 2009/10		(£908m)	£441m	£467m	£0m	

Source: London Economics' student finance model

Section 4 Alternative scenarios continued

However, given the cross price elasticity of demand, we would expect that almost 22,000 students that would otherwise have studied in Full-time institutions would now study in Mixed Mode institutions. This leads to Full-time institutions losing a further £268 million. Consequently, the overall impact of the increase in tuition fees funded through loans provided by institutions stands at £441 million per annum.

Mixed Mode institutions would be beneficiaries under this type of policy. The increased student numbers associated with 22,000 additional undergraduate students would result in an increase in fee income of £207 million per annum, as well as increased Hefce Teaching Grant income of £268 million. The net effect would be to see an increase in Mixed Mode institution funding of approximately £467 million per annum.

Clearly, this analysis is dependent on a number of assumptions – particularly in relation to the elasticity of demand and whether students transfer between institution groups. In Figure 16 below, we have assumed that there is limited movement between the two types of institution. In particular, we have assumed that if Full-time institutions increase fees by £4,000, then rather than transferring to higher education programmes offered by Mixed Mode institutions, these students are removed from the system as Mixed Mode institutions are constrained from taking additional numbers as a result of caps on numbers. This implies that following the £4,000 increase in the tuition fee charged by Full-time institutions, there is a reduction in the number of students attending Full-time institutions (by approximately 11,000 students) with no change in numbers attending Mixed Mode institutions.

Under this assumption, the impact of the policy is revenue positive to the Exchequer (as there are reduced student numbers), and students are worse off than previously the case (as a greater proportion pay the increased tuition fee). Given that there is no movement of students between the two types of institution, the model indicates that the change in tuition fees has no impact on Mixed Mode institutions but despite the fall in numbers, Full-time institutions are approximately £739 million better off.

To further develop this option, we revert to the original assumption relating to the elasticity of demand (as presented in Figure 15) but assume that *all* institutions increase tuition fees by £4,000 per annum and that both Full-time and Mixed Mode institutions bear the RAB charge associated with the increased element of the tuition fee loan. The results are presented in Figure 17.

The analysis illustrates that the impact of the policy is revenue positive to the Exchequer, and both Full-time and Mixed Mode institutions but makes students and graduates worse off compared to current student support arrangements.

The reason why the Exchequer is better off as a result of the policy is due to the fact that both Full-time and Mixed Mode institutions have raised fees – resulting in a reduction in the number of students entering higher education in the first instance (and availing of grants and subsidised loans). Specifically, following an increase in tuition fees, we would expect to see student numbers in Full-time institutions fall by approximately 10,500; 6,700 in Mixed Mode institutions; and 17,300 overall. This decline in student numbers would result in savings to the Exchequer of £71 million in maintenance grants; £102 million in maintenance and fee loan subsidies, as well as £210 million in Hefce teaching funding. In total, these savings amount to £383 million per annum.

Despite the fall in student numbers in both Full-time and Mixed Mode institutions (and the reduction in Hefce Teaching Grant of £128 million and £82 million respectively), we have estimated that these institutions would see an increase in tuition fee income of £1.847 billion and £1.253 billion respectively. Against this, the model predicts that universities would need to fund an increase in mandatory bursaries of £69 million and £47 million respectively and increased RAB charges of £898 million and £607 million respectively. The net impact of all these student and resource flows is that Full-time universities might be £752 million better off under the proposal, while Mixed Mode institutions might be £518 million better off. However, this assumes that all universities could equally fund the associated RAB charge.

Figure 16: Increasing tuition fees – funded by Full-time institutions with student number caps in Mixed Mode institutions

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£2,494m	£1,182m	(£2,775m)	£900m
	FT Institutions	(£2,494m)	NA	NA	(£2,052m)	(£4,546m)
	MM Institutions	(£1,182m)	NA	NA	(£1,637m)	(£2,819m)
	Exchequer	£2,775m	£2,052m	£1,637m	NA	£6,465m
	Total	(£900m)	£4,546m	£2,819m	(£6,465m)	£0m
	Difference from 2009/10	(£978m)	£739m	£0m	£239m	

Source: London Economics' student finance model

Figure 17: Increasing tuition fees – funded by all institutions

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£2,620m	£1,282m	(£2,698m)	£1,204m
	FT Institutions	(£2,620m)	NA	NA	(£2,052m)	(£4,672m)
	MM Institutions	(£1,282m)	NA	NA	(£1,771m)	(£3,053m)
	Exchequer	£2,698m	£2,052m	£1,771m	NA	£6,521m
	Total	(£1,204m)	£4,672m	£3,053m	(£6,521m)	£0m
	Difference from 2009/10	(£1,281m)	£865m	£234m	£183m	

Source: London Economics' student finance model

Section 4 Alternative scenarios continued

4.2.1 Further examples of resource flows under the market scenario

In the four tables below we present the summary findings associated with a 'market' based system with an increase in fees to £7,000 where the institution is responsible for the additional fee loan linked to the increased tuition fee. We have assumed that student numbers within individual groups of institutions are capped (i.e. cross price elasticity equals 0) but that the general elasticity of demand for higher education remains at -0.05. We have modelled four alternatives as follows:

Option 1: Full-time institutions only raise additional fees and are responsible for the RAB charge for student loans associated with additional fees above a standard fee with state-funded fee loans available for the standard fee only with no change to graduate repayment conditions

Option 2: Full-time institutions only raise additional fees as in Option 1 with a 2.2% real rate of interest applied to loans

Option 3: All institutions raise additional fees as in Option 1 with no change to student support

Option 4: All institutions increase additional fees as in Option 1 with a 2.2% real rate of interest applied to loans

However, a number of factors are likely to intervene in respect of Options 3 and 4, not least the impact of different institutional social profiles upon the capacity and willingness of institutions to accommodate the risk of raising additional fee loans and being responsible for what are likely to be different RAB charges according to their student profiles. Unless all institutions were equally able to enter into this institutional borrowing requirement, to a greater or lesser degree, the scenarios outlined in Figures 18 and 19 would be likely to apply with students and graduates worse off and significant differences arising in respect of the total resource per student available.

Figure 18: Increase in fees to £7,000 – option 1

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£2,606m	£1,182m	(£2,880m)	£908m
	FT Institutions	(£2,606m)	NA	NA	(£2,186m)	(£4,792m)
	MM Institutions	(£1,182m)	NA	NA	(£1,637m)	(£2,819m)
	Exchequer	£2,880m	£2,186m	£1,637m	NA	£6,704m
	Total	(£908m)	£4,792m	£2,819m	(£6,704m)	£0m
	Difference from 2009/10	(£985m)	£985m	£0m	£0m	

Source: London Economics' student finance model

Note:

1. Full-time Institutions increase fees to £7,000 per annum and provide fee loan beyond the current fee cap
2. Mixed mode Institutions maintain fees at £3,225 per annum
3. No change to student loan repayment terms
4. Cross price elasticity between Full-time and Mixed Mode institutions =0.
5. Mixed Mode institution student numbers capped at current rates
6. Full-time institutions maintain student numbers increase in tuition fee
7. Note: Total resource per student
Full-time: FT £26,795 PT £5,707
Mixed Mode: FT £21,238 PT £5,707

Figure 19: Increase in fees to £7,000 – option 2

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£2,843m	£1,182m	(£2,003m)	£2,023m
	FT Institutions	(£2,843m)	NA	NA	(£2,186m)	(£5,029m)
	MM Institutions	(£1,182m)	NA	NA	(£1,637m)	(£2,819m)
	Exchequer	£2,003m	£2,186m	£1,637m	NA	£5,826m
	Total	(£2,023m)	£5,029m	£2,819m	(£5,826m)	£0m
	Difference from 2009/10	(£2,100m)	£1,223m	£0m	£878m	

Source: London Economics' student finance model

Note:

1. Full-time Institutions increase fees to £7,000 per annum and provide fee loan beyond the current fee cap
2. Mixed mode Institutions maintain fees at £3,225 per annum
3. Student loan repayments attract real rate of interest of 2.2%
4. Cross price elasticity between Full-time and Mixed Mode institutions =0.
5. Mixed Mode institution student numbers capped at current rates
6. Full-time institutions maintain student numbers increase in tuition fee
7. Note: Total resource per student
Full-time: FT £28,134 PT £5,707
Mixed Mode: FT £21,238 PT £5,707

Figure 20: Increase in fees to £7,000 – option 3

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£2,461m	£1,755m	(£2,718m)	£1,498m
	FT Institutions	(£2,461m)	NA	NA	(£2,065m)	(£4,526m)
	MM Institutions	(£1,755m)	NA	NA	(£1,559m)	(£3,314m)
	Exchequer	£2,718m	£2,065m	£1,559m	NA	£6,342m
	Total	(£1,498m)	£4,526m	£3,314m	(£6,342m)	£0m
	Difference from 2009/10	(£1,575m)	£719m	£495m	£361m	

Source: London Economics' student finance model

Note:

1. Full-time Institutions increase fees to £7,000 per annum and provide fee loan beyond the current fee cap
2. Mixed mode Institutions increase fees to £7,000 per annum and provide fee loan beyond the current fee cap
3. No change to student loan repayment terms
4. Cross price elasticity between Full-time and Mixed Mode institutions =0.
5. Elasticity of demand for Mixed Mode institution places = -0.05
6. Full-time institutions maintain student numbers following increase in tuition fee
7. Note: Total resource per student
Full-time: FT £26,795 PT £5,707
Mixed Mode: FT £26,795 PT £5,707

Section 4 Alternative scenarios continued

Figure 21: Increase in fees to £7,000 – option 4

	To				
	Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
Students/Graduates	NA	£2,685m	£1,906m	(£1,890m)	£2,701m
FT Institutions	(£2,685m)	NA	NA	(£2,065m)	(£4,750m)
MM Institutions	(£1,906m)	NA	NA	(£1,559m)	(£3,466m)
Exchequer	£1,890m	£2,065m	£1,559m	NA	£5,514m
Total	(£2,701m)	£4,750m	£3,466m	(£5,514m)	£0m
Difference from 2009/10	(£2,779m)	£943m	£646m	£1,189m	

Source: London Economics' student finance model

Note:

1. Full-time Institutions increase fees to £7,000 per annum and provide fee loan beyond the current fee cap
2. Mixed mode Institutions increase fees to £7,000 per annum and provide fee loan beyond the current fee cap
3. Student loan repayments attract real rate of interest of 2.2%
4. Cross price elasticity between Full-time and Mixed Mode institutions =0.
5. Elasticity of demand for Mixed Mode institution places = -0.05
6. Full-time institutions maintain student numbers following increase in tuition fee
7. Note: Total resource per student

Full-time:	FT £28,134	PT £5,707
Mixed Mode:	FT £28,134	PT £5,707

Table 9: Assumptions behind consistent treatment of part-time students

	Full-time (LAFHOL)	Part-time (current)	Part-time (suggested)
Tuition fee	£3,225 (max)	£816 (average)	£1,613 (average)
Grant	£2,906 (max)	<30% FTE: zero <30 - 49% FTE: zero 50 - 59%: £805 60 - 74%: £970 >75%: £1,210	<30% FTE: zero <30 - 49% FTE: £1,000 50 - 59%: £1,600 60 - 74%: £2,000 >75%: £2,400
Course Grant	–	£260	Zero
Loan	£4,950 (max)	Zero	<30% FTE: zero <30 - 49% FTE: £1,000 50 - 59%: £2,000 60 - 74%: £2,800 >75%: £3,200

Source: London Economics' student finance model.

4.3 Scenario 3: Extending part-time student support

In this section, we provide some information on the resource flows associated with an option whereby the student support available to part-time students is more closely aligned to that currently provided to full-time undergraduate students. Given the complexity of the system, it is not possible to ensure that the treatment of part-time undergraduates is identical to full-time students; however, we attempt to make the difference as small as possible given existing limitations.

In Table 9, we have presented some simplified information on the levels of grants and loans available to full-time students (living away from home outside London) and to part-time students, as well as tuition fees. Under this scenario, we have assumed that part-time students are charged a tuition fee equivalent to 50% of the maximum full-time fee. To make the support systems more comparable, we have suggested that grants are made available to all part-time students studying on courses more than 30% FTE to assist with the funding of either fees or maintenance rather than the current situation when funding is unavailable to students studying at less than 50% FTE. We have modelled the provision of loans such that the level of grant available increases alongside as the intensity of study increases. To ensure that the system is simplified, we have modelled an elimination of the part-time course grant.

Finally, this option introduces fee loans on the same terms as full-time students (in relation to repayment terms). The maximum loan available to an individual studying between 30% and 49% FTE would be £1,000 per annum, increasing to £3,200 per annum for a student studying more than 75% FTE.

The aggregate impact of this policy is clearly to make students better off (by £67 million) based on current student numbers. We have assumed that the number of part-time students remains unchanged, although clearly the increased support associated with part-time study is likely to result in more people studying who would not previously have considered the higher education option as a result of the lack of student support.

However, there are also efficiency gains associated with this option that have not been monetised. Specifically, the impact of this policy would be to provide an alternative option to those students thinking about quitting full-time higher education. Currently, full-time undergraduates are faced with the choice of quitting university or considering a part-time degree where fees must be paid up-front with minimal grants and no subsidised loans. Making part-time study relatively more attractive may result in some individuals continuing in higher education that would otherwise not have been the case.

Assuming that there is no change to the current system of student loan repayments, the aggregate impact on the Exchequer of this option is to increase the costs of funding higher education by £158 million. This increase in costs is as a result of the increased cost associated with enhanced grants (£64 million), and the interest rate subsidies on maintenance loans (£122 million) minus a small adjustment associated with the elimination of the course grant.

Institutions are better off as a result of receiving additional tuition fee income. Given the relatively high proportion of part-time students attending Mixed Mode institutions, the model predicts that Mixed Mode institutions will be £79 million better off, while Full-time institutions will be £12 million better off.

Section 4 Alternative scenarios continued

Supporting Exchequer revenues

We also consider amending a number of factors associated with current student support arrangements with the aim of reducing the aggregate costs of funding the higher education system to the Exchequer, while ensuring that student numbers are not substantially affected and that graduates contribute to a greater extent than is currently the case.

Specifically, from the baseline scenario, the Exchequer is estimated to contribute £6.704 billion for the funding of higher education while students and graduates are estimated to be net recipients by £78 million annually. This may appear strange; however, although students and graduates contribute £2.803 billion in the form of tuition fees, they are in receipt of £2.880 billion annually as a result of the relative generosity of the student support system.

4.3.1 A unified system of support, positive real interest rates and amended repayment terms

Under this scenario, we have assumed that full-time undergraduate fees remain unchanged. As in the previous section, we have assumed that part-time students are on average charged tuition fees that are 50% of the maximum tuition fee charged to full-time students. We have assumed that part-time students are provided with enhanced student support as presented in Table 9. We have also assumed that the option to defer repayment of loans is removed and the loan write off period is extended to 35 years as in Scotland (from the current 25 years). We have also assumed that the real interest rate charged on loans is increased to 2%.

The findings presented in Figure 23 illustrate that these amendments will result in the Exchequer being approximately £1.090 billion better off compared to the current system of student support.

The introduction of a positive real interest rate, as well as the tightening of the repayment terms on the student loan impacts on *both* full-time and part-time students and graduates. Specifically, if the three options in relation to student loan repayments are introduced – with no attempt to change the circumstances of part-time students – the Exchequer would expect to be £1.164 billion better off. If the student support system for part-time students is enhanced to mimic the current baseline full-time student support system (with an average RAB charge of 28.9%), the cost to the Exchequer is approximately £158 million. However, combining the two options (and achieving a reduced RAB charge of 9% for both full-time and part-time students and graduates), the model estimates that the Exchequer is approximately £1.090 billion better off. This implies that the actual cost of putting part-time students on the same page as full-time students is just *£74 million* if introduced at the same time as tighter loan repayment terms.

Figure 22: Providing part-time students with similar support to full-time students

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£1,633m	£1,270m	(£3,048m)	(£145m)
	FT Institutions	(£1,633m)	NA	NA	(£2,185m)	(£3,819m)
	MM Institutions	(£1,270m)	NA	NA	(£1,628m)	(£2,898m)
	Exchequer	£3,048m	£2,185m	£1,628m	NA	£6,862m
	Total	£145m	£3,819m	£2,898m	(£6,862m)	£0m
	Difference from 2009/10	£67m	£12m	£79m	(£158m)	

Source: London Economics' student finance model

Figure 23: Part-time amendments, positive real interest rates and tighter repayment terms

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£1,633m	£1,270m	(£1,800m)	£1,103m
	FT Institutions	(£1,633m)	NA	NA	(£2,185m)	(£3,819m)
	MM Institutions	(£1,270m)	NA	NA	(£1,628m)	(£2,898m)
	Exchequer	£1,800m	£2,185m	£1,628m	NA	£5,614m
	Total	(£1,103m)	£3,819m	£2,898m	(£5,614m)	£0m
	Difference from 2009/10	(£1,181m)	£12m	£79m	£1,090m	

Source: London Economics' student finance model

Section 5 Equity Effects

5.1 Impact of alternative repayment options on graduate outcomes

In this section, we consider some of the various outcomes associated with alternative graduate contribution options. In particular, we consider the impact on the resource flows between students/graduates and the Exchequer associated with the current contribution mechanism. We have modelled the current graduate contribution mechanism and illustrated the time taken to repay the contribution, the real value of the loan outstanding at the time of write off (and the associated RAB charge) for men and women separately and by income decile³². An analysis based on income deciles allows us to consider the graduate contributions that might be associated with a range of graduate earnings profiles. For instance, a graduate with earnings profile on the 1st decile (or 10th percentile of the earnings distribution) represents the average earnings achieved by a graduate with relatively low earnings (i.e. only 9% of graduates earn less than this graduate).

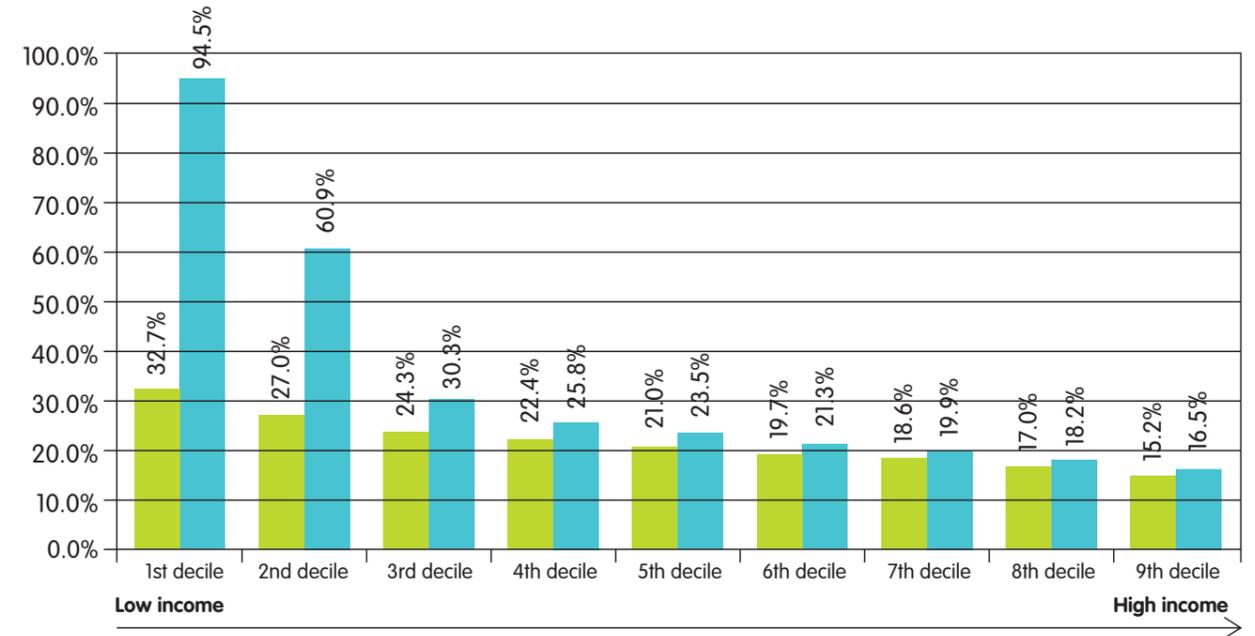
We have modelled these outcomes for a range of alternative graduate contribution options including the extension of the repayment period from 25 years to 35 years, the removal of the repayment holiday, and the introduction of a 2% real rate of interest. This has been done for each of the three alternatives separately and in aggregate.

5.1.1 Baseline

In Figure 24, we present the RAB charge associated with the current graduate contribution mechanism by gender and income decile. Unsurprisingly, the analysis illustrates that there is a significant difference in the proportion of the maintenance and fee loans that is repaid depending on a person's gender and income.

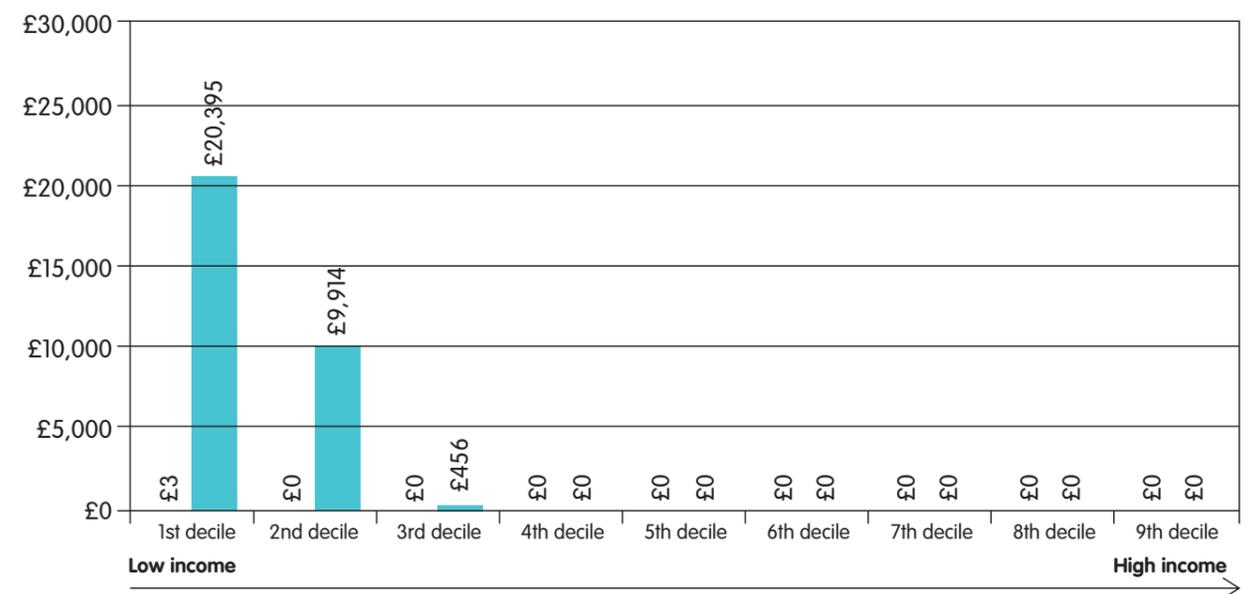
In particular, although the average RAB charge for men stands at approximately 22%, this ranges between 32.7% for those men earning in the bottom decile compared to approximately 15.2% for those men earning in the top decile. The implication of this finding is that even for men who are top earners (and repay their loan in full by the age of 32), the pure interest rate subsidy associated with the current graduate contribution mechanism (as a result of the zero real interest rate on the loan) stands at 15.2% of nominal loan value. For women, the outcome is more varied. The average RAB charge for women stands at approximately 34.5%; however, although high earners achieve outcomes that are relatively similar to those achieved by men, women in the bottom income decile have a RAB charge in excess of 94%. This implies that if the average loan of almost £21,000 is taken out in the first instance, for the women with this low earnings profile, approximately £20,400 remains unpaid 25 years post graduation. This is presented in Figure 25.

Figure 24: Graduate repayment profile – baseline case



Source: London Economics

Figure 25: Graduate outstanding contribution on write-off – baseline case



Source: London Economics

³² In descriptive statistics, a decile is the value of a variable below which a certain percent of observations fall. So the 1st decile is the value (or score) below which 10 percent of the observations may be found (i.e. the 10th percentile). The 5th decile is the value (or score) below which 50 percent of the observations may be found (i.e. the 50th percentile, 2nd quartile or median).

Section 5 Equity Effects continued

In Figure 26, we provide an indication of the age at which contributions are repaid assuming that graduation takes place at the age of 21 and that every individual taking out a student loan takes the option of the 2 year repayment holiday. Unsurprisingly, those individuals that achieve the highest earnings post graduation pay off their contributions most rapidly. Men in the top earnings decile pay off their entire graduate contribution by the age of 32, while women in the top decile pay off their contribution at the age of 34 on average. The average male earner repays their contribution by the age of 37 – or approximately 16 years post graduation, while the average woman graduate requires 20 years to complete their graduate contribution. Men in the bottom income decile are just about to repay their graduate contribution by

the time it is written off, while women in the bottom 20% of the income distribution never pay off their graduate contribution and a woman on the 30th income percentile just pays off their contribution by the age of 48 i.e. just before it is written off.

5.1.2 Removal of the option to defer

It is not possible to explicitly model the removal of the option to defer repayments as this requires some information or knowledge in relation to when individuals may decide to take the repayment holiday. However, from other research in the area (and as presented in section 2.4.1), it has been estimated that the option to defer has the effect of increasing the RAB charge by approximately 2 percentage points. In other words, with the removal of the option to

defer, the Exchequer would be expected to recoup approximately £20 more per £1,000 of nominal loans issued. The recent decision to remove the option to defer will be expected to have a significant impact on Exchequer and graduate outcomes. The Exchequer will be approximately £117 million better off per cohort of students while graduates are £117 million per cohort worse off. The RAB charge across the entire graduate population will fall from 28.9% to 26.9%. This is presented in Figure 27.

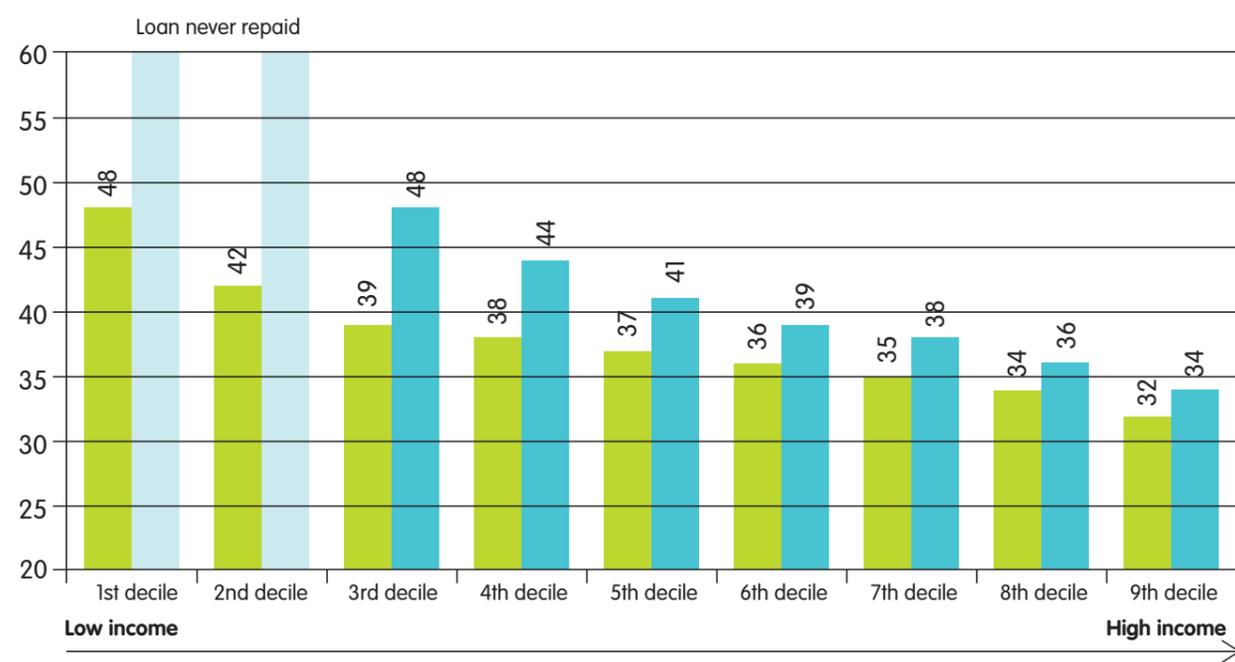
In simple terms, the real value of the loans outstanding at the time of write off, in the absence of the repayment holiday, will be approximately £400 higher than currently the case. Clearly the time taken to repay the outstanding contribution would

have been marginally more than 2 years greater than the current baseline case (as there will be an additional nominal loan amount added to the principal loan amount while the repayment holiday takes place that would require some additional time to repay once the loan is back in repayment mode).

5.1.3 Extending the contribution period

Extending the period of graduate contribution from 25 years to 35 years would be expected to net the Exchequer approximately £104 million per cohort of students, with an equal and opposite effect on graduates. There is no impact on institutions. This is presented in Figure 28.

Figure 26: Age of graduate contribution – baseline case



Source: London Economics

Figure 27: Removing the option to defer

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£1,620m	£1,182m	(£2,763m)	£39m
	FT Institutions	(£1,620m)	NA	NA	(£2,186m)	(£3,807m)
	MM Institutions	(£1,182m)	NA	NA	(£1,637m)	(£2,819m)
	Exchequer	£2,763m	£2,186m	£1,637m	NA	£6,587m
	Total	(£39m)	£3,807m	£2,819m	(£6,587m)	£0m
Difference from 2009/10		(£117m)	£0m	£0m	£117m	

Source: London Economics

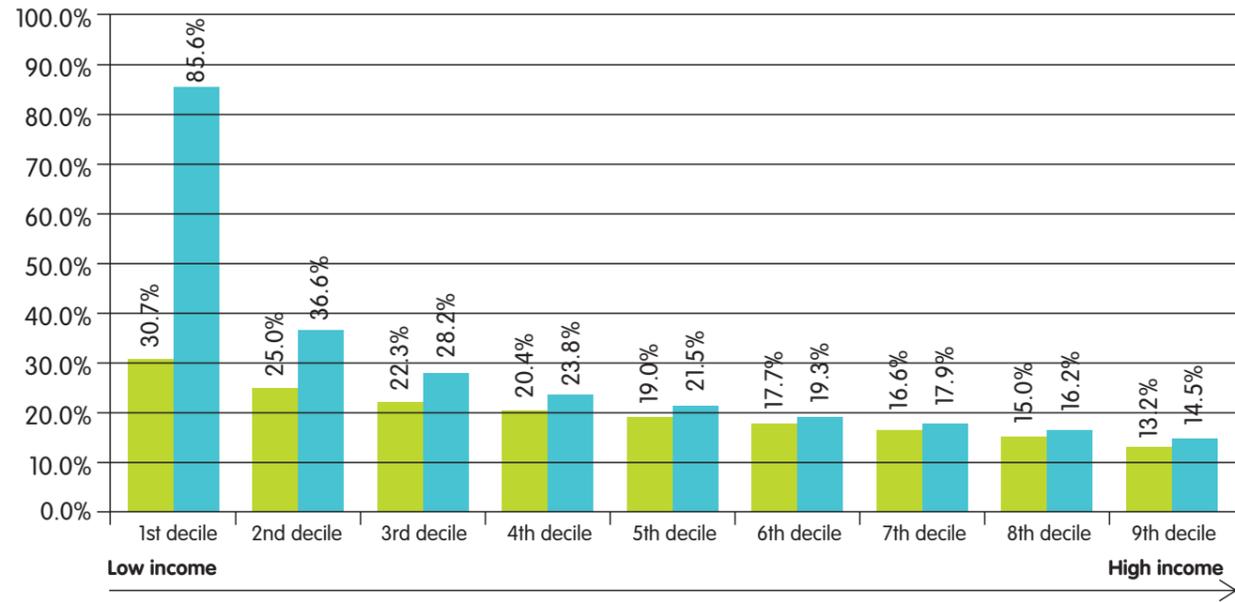
Figure 28: Extending the period of repayment

		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£1,620m	£1,182m	(£2,776m)	£27m
	FT Institutions	(£1,620m)	NA	NA	(£2,186m)	(£3,807m)
	MM Institutions	(£1,182m)	NA	NA	(£1,637m)	(£2,819m)
	Exchequer	£2,776m	£2,186m	£1,637m	NA	£6,600m
	Total	(£27m)	£3,807m	£2,819m	(£6,600m)	£0m
Difference from 2009/10		(£104m)	£0m	£0m	£104m	

Source: London Economics

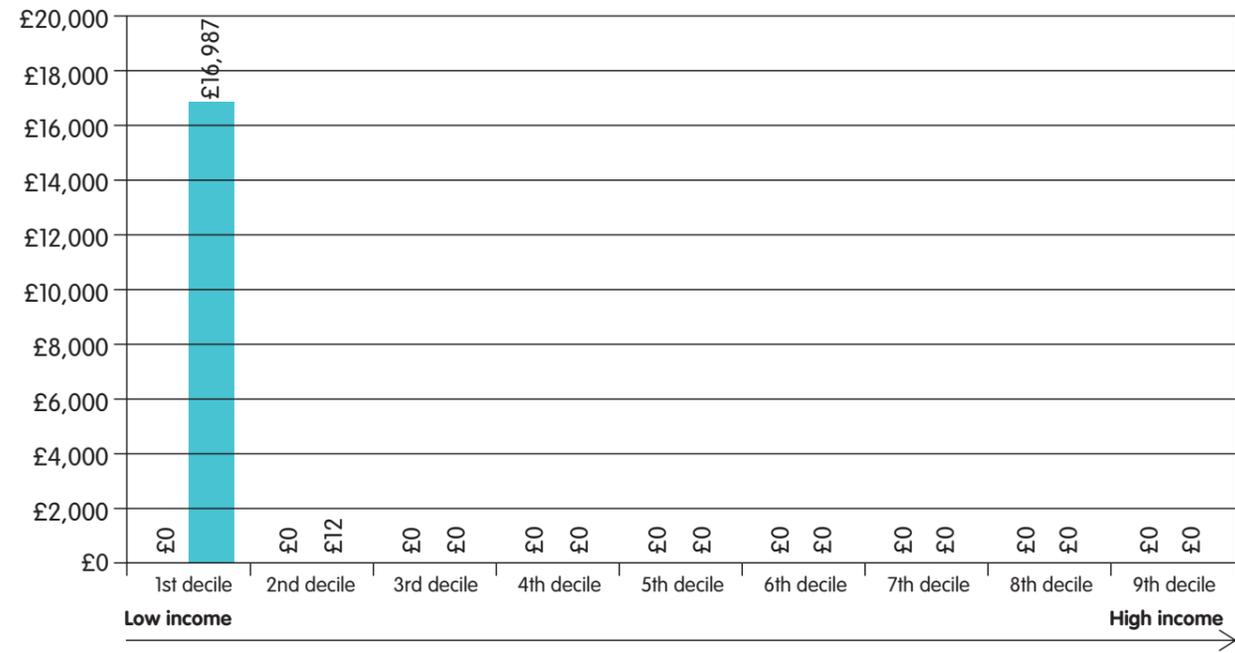
Section 5 Equity Effects continued

Figure 29: Graduate contribution profile – extension of period of repayment



Source: London Economics

Figure 30: Graduate outstanding contribution on write-off – extended contribution period



Source: London Economics

The extension of the period of graduate contribution has a relatively limited impact on graduates as a whole. This is a result of the fact that under the 25 year contribution period, practically all men and almost 70% of women repay their contribution before it is written off. The RAB charge will decrease from 28.9% on average (with no option to defer) to 25.1%.

The analysis presented in Figure 29 and Figure 30 indicates that the RAB charge for women in the lowest income decile falls from 94.5% to 85.6% (with an outstanding contribution amount of just under £17,000 written off after 35 years) while the RAB charge for women in the second decile falls from an original estimate of 60.9% in the baseline case to approximately 36.6% under the extended repayment option. Women in this decile just repay the full graduate contribution within the extended 35 year period for repayment³³. It is clear that there are significant distributional effects associated with this option. In particular, for those individuals who complete their graduate contribution before it is written off after 25 years, the extension of the contribution period will have no effect. However, for those individuals at the margin of repayment or who do not repay their full contribution, the extension of the contribution period will result in these relatively low earners repaying a greater proportion of their outstanding balance.

Compared to the baseline case, women in the lowest earnings decile pay almost £3,000 more while women in the second decile pay more than £9,000 more.

5.1.4 Positive real rate of interest

Under the baseline scenario, the interest rate charged on the loan moves in line with a pre-determined measure of inflation. If no contributions are made, the size of the loan increases in *cash* terms but remains fixed in *real* terms. The value of the money borrowed by students has the same value as the money repaid. In other words, although the cash value of the loan increases by the rate of inflation and the cash repayments made by graduates are greater, the true (“real”) value of those repayments is constant in real terms because the money being repaid is less valuable than the money borrowed (by the rate of inflation). Under a positive real interest rate, the size of the loan increases over and above the rate of inflation. Under this scenario, the size of the loan will increase annually in *real* terms if no contributions are made implying that graduates will eventually contribute a greater amount than they originally borrowed in real terms.

In Figure 31, we have presented the aggregate impact associated with the introduction of a 2% real rate of interest. The analysis indicates that if a 2% real rate of interest is imposed on student loans, the Exchequer will be approximately £783 million better off per student cohort while graduates will be £783 million worse off.

Figure 31: Introducing a positive real rate of interest

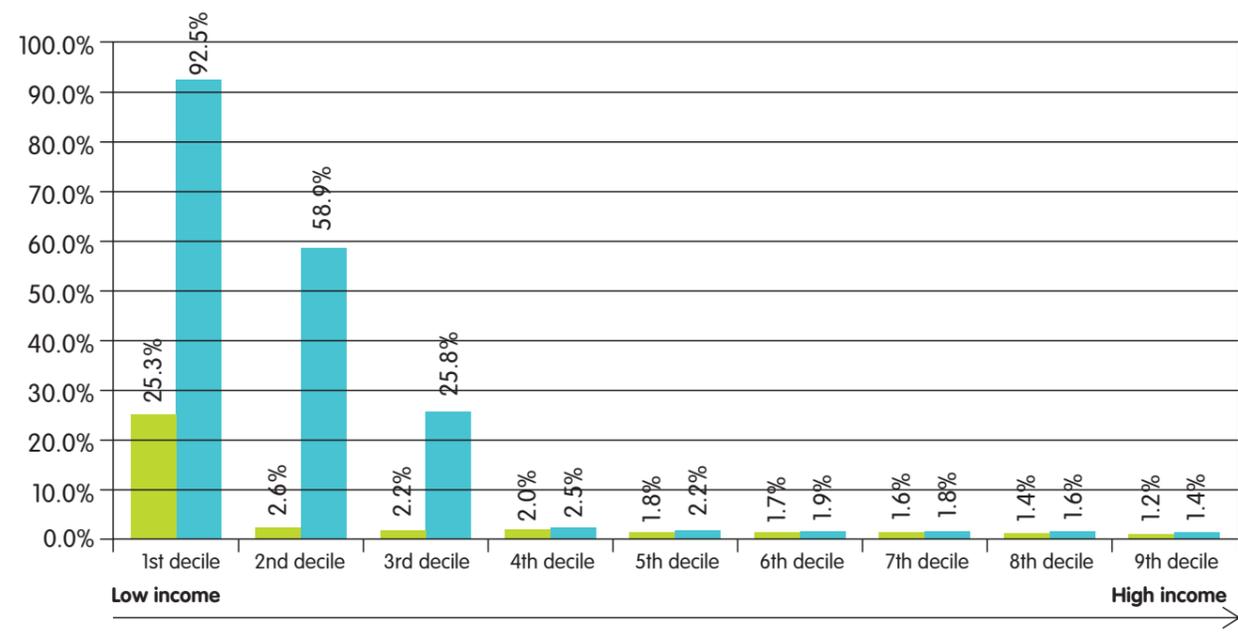
		To				
		Students/ Graduates	Full time Inst.	MM Inst.	Exchequer	Total
From	Students/Graduates	NA	£1,620m	£1,182m	(£2,097m)	£705m
	FT Institutions	(£1,620m)	NA	NA	(£2,186m)	(£3,807m)
	MM Institutions	(£1,182m)	NA	NA	(£1,637m)	(£2,819m)
	Exchequer	£2,097m	£2,186m	£1,637m	NA	£5,921m
	Total	(£705m)	£3,807m	£2,819m	(£5,921m)	(£0m)
	Difference from 2009/10	(£783m)	£0m	£0m	£783m	

Source: London Economics

³³ Note that although there is a relatively large RAB charge posted by women in this decile, this is not inconsistent with the fact that they repay their entire loan by the age of 55. The reason why the RAB charge stands at 36.6% is the fact that individuals in this income decile receive almost 30 years of interest rate subsidy before the nominal loan is repaid.

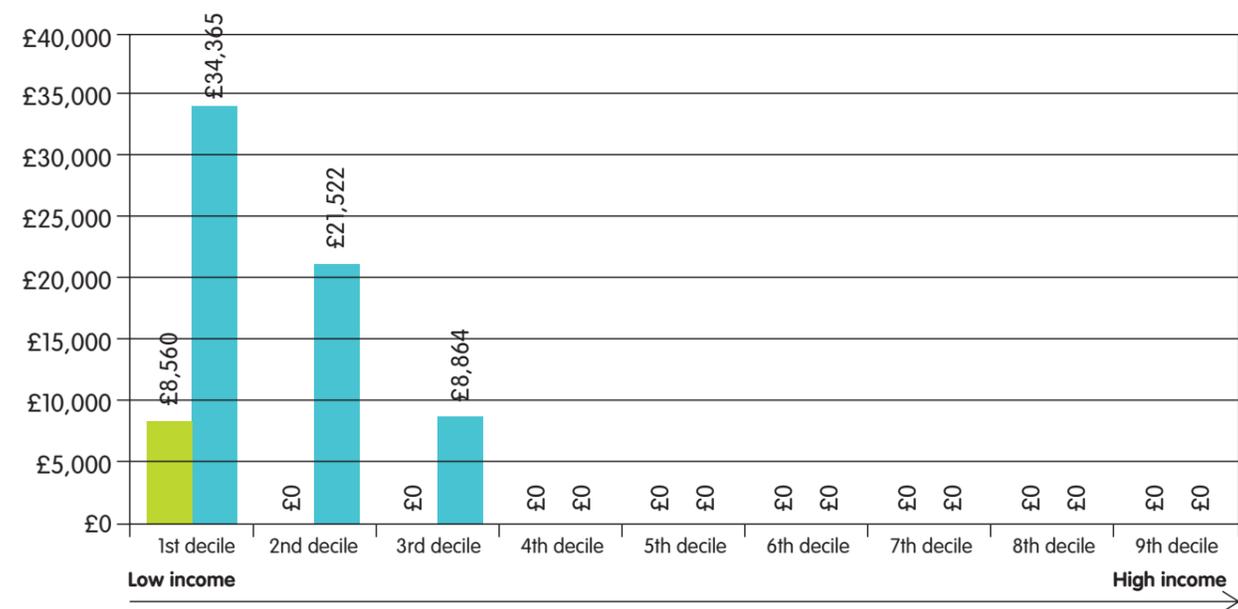
Section 5 Equity Effects continued

Figure 32: Graduate repayment profile – 2% real rate of interest



Source: London Economics

Figure 33: Graduate outstanding contribution on write-off – 2% real rate of interest



Source: London Economics

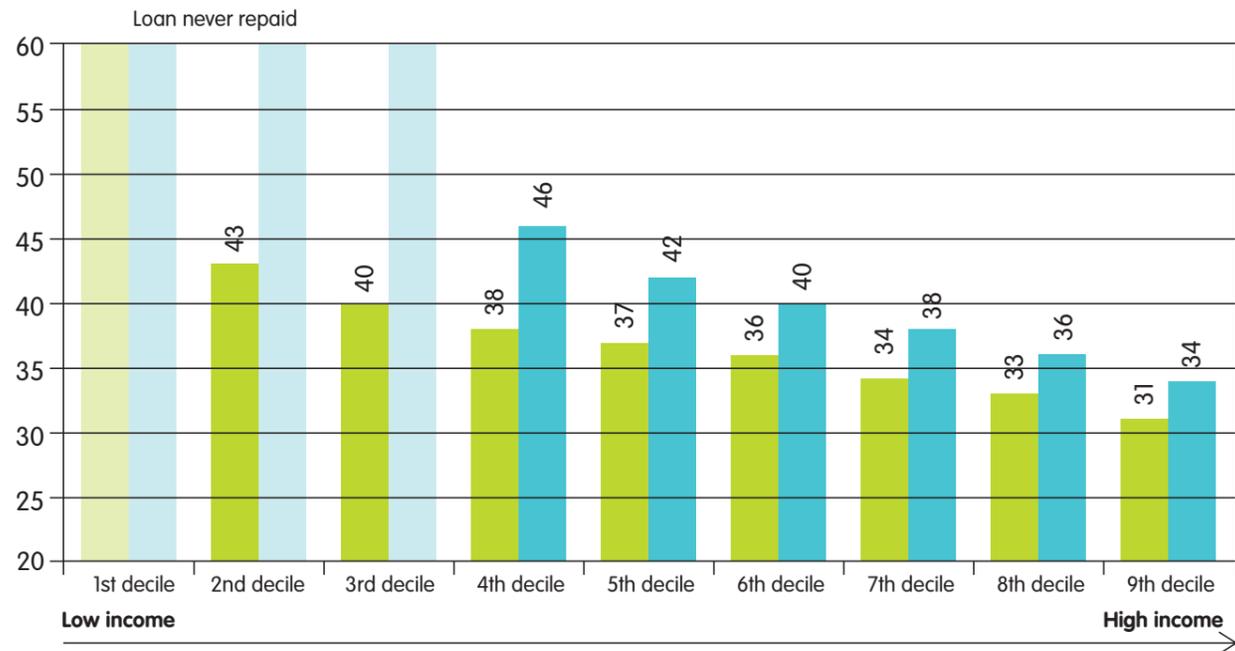
Again, there are significant variations depending on the gender and income of the graduate. The first point to note is that the average RAB charge under the baseline system of graduate contributions is halved from 28.9% to approximately 13.5%, with the average RAB charge incurred by men standing at 4.4% with the average RAB charge posted by women standing at 21.0%. For the graduate with a representative (average) earnings profile post graduation (i.e. on the 5th decile), the RAB charge stands at just 1.8% and 2.2% for men and women respectively (compared to 21.0% and 23.9% respectively). In other words, the introduction of a small positive real interest rate eliminates the substantial interest rate subsidy available under the current student loan system (which particularly benefits graduates in the upper half of the earnings distribution).

For graduates at the bottom end of the income distribution, the RAB charge is essentially unchanged. For women in the bottom two deciles, the RAB charge remains essentially unchanged at 92.5% and 58.9% respectively. In other words, these women's low earnings are still insufficient to repay the original loan amount and the fact that there is real interest being added to the loan amount makes no difference to their ability to repay.

However, the introduction of a positive real rate of interest does have some effect on female graduates in the third decile of earnings and males in the bottom decile of earnings. In the baseline case, these graduates just repaid their student loan within 25 years of graduation; however under the positive real rate of interest scenario, these graduates reach the write off point owing approximately £8,500. This is presented in Figure 33. Similarly, the outstanding contribution at the point of write off 25 years after graduation has actually increased for a number of graduates over and above the original loan size at the point of graduation. However, the fact that these graduate contributions are written off implies that graduates at the bottom end of the earnings distribution are no worse off than under the baseline scenario and it is middle and high income graduates that end up contributing more to their studies than was previously the case.

Section 5 Equity Effects continued

Figure 34: Age of graduate contribution – 2% real rate of interest



Source: London Economics

Figure 35: Combining all three options

	To				Total
	Students/Graduates	Full time Inst.	MM Inst.	Exchequer	
Students/Graduates	NA	£1,620m	£1,182m	(£1,716m)	£1,086m
FT Institutions	(£1,620m)	NA	NA	(£2,186m)	(£3,807m)
MM Institutions	(£1,182m)	NA	NA	(£1,637m)	(£2,819m)
Exchequer	£1,716m	£2,186m	£1,637m	NA	£5,540m
Total	(£1,086m)	£3,807m	£2,819m	(£5,540m)	£0m
Difference from 2009/10	(£1,164m)	£0m	£0m	£1,164m	

Source: London Economics

Under this scenario of positive real interest rates, graduates pay more in contributions (by £783 million per cohort). In Figure 34, we illustrate the average age at which the graduate contribution is repaid. For the average graduate, the imposition of a positive real interest rate results in both men and women repaying their contribution for an additional 2 years. For graduates in the top decile, the period of contribution is extended by approximately 1 year for men and 2 years for women.

5.1.5 Combining all three options

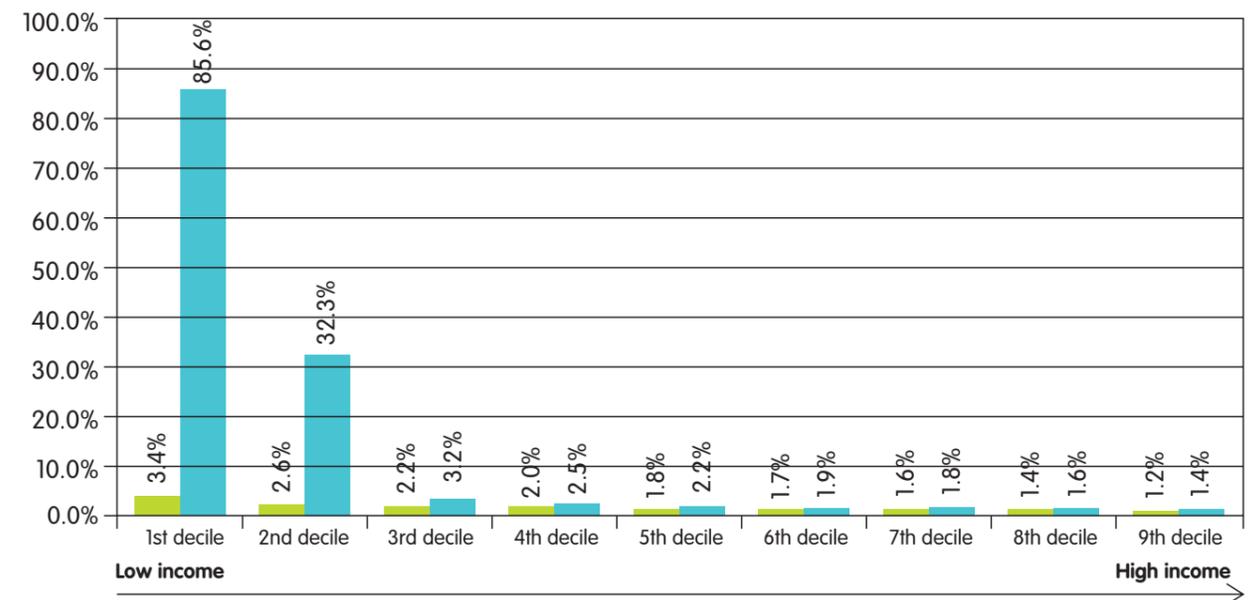
Combining the removal of the option to defer graduate contributions, extending the period of contributions by 10 years to 35 years post graduation and the introduction of a 2% positive real rate of interest, has the effect of saving the Exchequer approximately £1.164 billion per cohort of students. As before, the alternative contribution options have no direct impact on institutions. This is presented in Figure 35.

Looking at the graduate repayment profile, the combination of the three contribution options reduces the RAB charge to approximately 9.0% overall – and

just 2.0% for men and 14.7% for women. It is interesting to note that women in particular at the bottom end of the earnings distribution continue to post high RAB charges; however these are predominantly associated with the write off of the debts accumulated rather than the interest rate subsidies that are enjoyed by the majority of graduates completing their contributions.

Graduates with the lowest earnings and those least able to repay their contributions never do so within the contributions period. This is reflective of the income-contingent nature of the graduate contribution mechanism, and the inability to complete contributions is essentially unrelated to the other contribution conditions. When all three graduate contribution alternatives are introduced, women in the bottom income decile reach the write off age with an outstanding contribution of approximately £38,600 – almost double the contribution they graduated with. Women in the second earnings decile reach the write off period with an outstanding contribution of £13,500. All other graduates are expected to complete their contributions in full.

Figure 36: Graduate repayment profile – three options combined



Source: London Economics

Section 5 Equity Effects continued

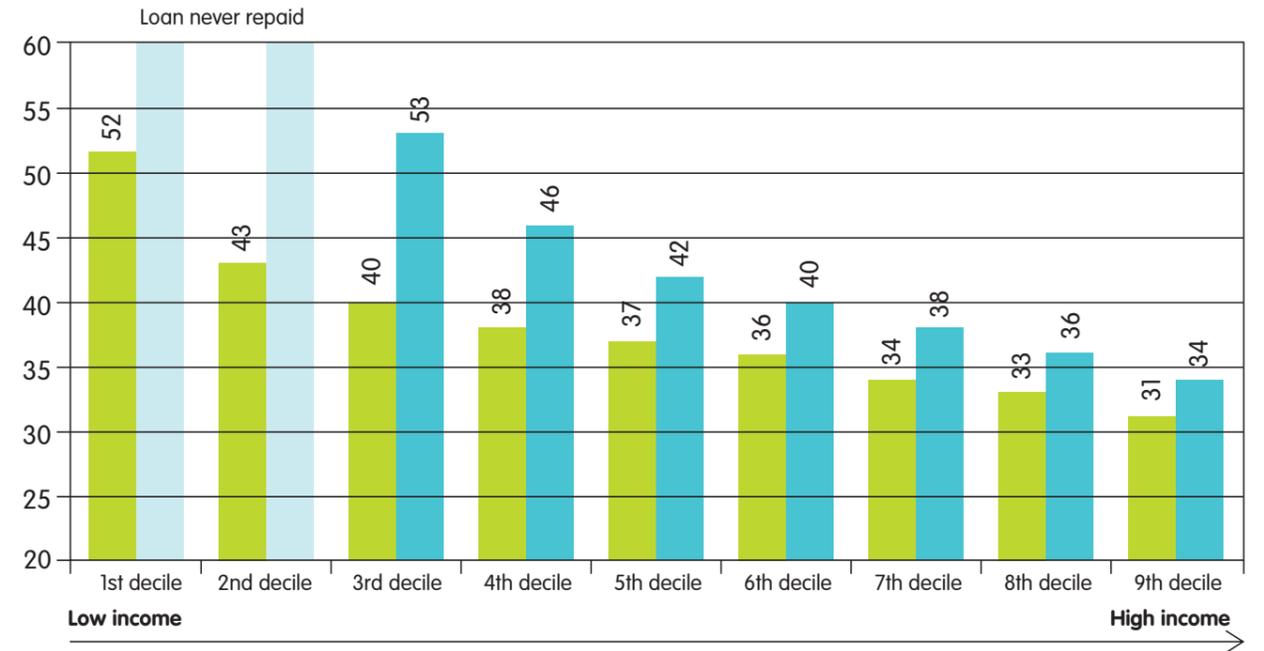
Those graduates who complete their graduate contributions under the current contribution mechanism continue to do so under the three alternatives. However, the introduction of a small positive real interest rate eliminates the current interest rate subsidy that is provided by the Exchequer and dramatically reduces the cost to the Exchequer of providing these loans. The RAB charge for men varies between 1.2% for men in the top decile to just 3.4% for men in the bottom decile. The average male earner has a RAB charge of just 1.8%. The average female earner posts a RAB charge of just 2.2%.

Part of the reduction in the RAB charge modelled is a result of the reduced interest rate subsidy from the Exchequer; however, the extension of the graduate contribution period also has the effect of allowing the outstanding contributions to be clawed back over a longer period significantly offsetting the positive real interest rate. For example, men in the bottom income decile currently repay the entire graduate contribution 27 years post graduation (25 years plus the 2 year option to defer). Under the combined option, these same graduates would not complete their contributions until the age of 52 implying that the positive real interest rate adds approximately 4 years worth of contributions to graduates in the bottom earnings decile.

In terms of the additional contributions that would be repaid by graduates under this alternative mechanism, the analysis indicates that men on average would contribute an additional £5,862 while women would contribute an additional £6,394 compared to their current contributions. Men and women at the bottom end of the income distribution would end up paying the greatest additional contributions under this approach, with men in the bottom decile paying an additional £11,083 compared to the current system, with women in the bottom three deciles repaying an additional £2,989, £11,514 and £10,279 respectively. This is presented in Figure 38.

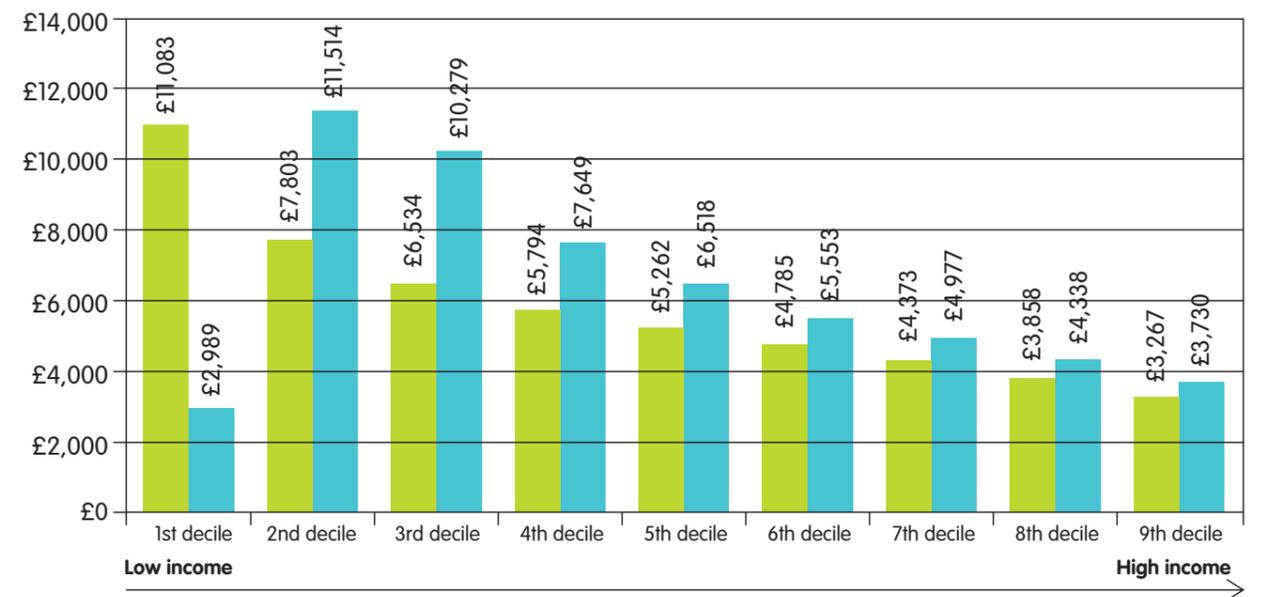
It is important to remember that the impact of these alternative contribution options apply only to individuals in receipt of student loans. In other words, the estimates only relate to full-time students. As such, if policies are adopted to extend student loans to part-time students, then the total Exchequer benefit associated with these alternative contribution options would be greater than those presented above. In other words, any policy ensuring student support arrangements for part-time students mimic full-time student support arrangements, would mean the actual cost of these policies may be lower than this assessment.

Figure 37: Age of graduate contributions – three options combined



Source: London Economics

Figure 38: Additional contributions repaid – three options combined



Source: London Economics

Section 5 Equity Effects continued

5.2 'Real Life' graduate profiles

To extend the analysis and make it more real-life, we have generated a number of graduate profiles that might better reflect real world economic and personal circumstances rather than a position on a particular income decile. We have generated five different graduate profiles called *Public Sector Professional*, *Working Parent*, *Late Earner*, *Lifelong Learner*, and *High Flyer*. A summary of their graduate careers is presented overleaf.

In Table 10, we present the contribution outcomes achieved by the different types of graduates in terms of the volume of the outstanding contribution at the point of write off, the age at which the graduate repays their entire contribution and the RAB charge associated with the interest rate subsidy and write off. Throughout, we have assumed that students graduate with the average loan associated with maintenance and tuition fees of £20,949. The analysis illustrates that under the current student finance regime, the Public Sector Professional would be expected to repay their entire graduate contribution loan by the age of 34 with an associated RAB charge of 18.6%. This compares to the High Flyer

and Late Earner who would be expected to repay their contribution by the age of 29 and 38 respectively incurring a cost to the Exchequer of 12.5% and 23.2% respectively. In contrast, the Working Parent would never be expected to repay their graduate contribution, reaching the age of write off with more than £3,000 outstanding. The RAB charge associated with these loans is approximately 30.0%.

In Table 10, we present information on the graduate contribution profiles under the assumption that the graduate contribution period is extended by 10 years to 35 years. This action has no impact whatsoever on three of the graduate profiles – the Public Sector Professional, the Late Earner and the High Flyer – as these graduates paid off their entire graduate contribution within the original write off period. For the Working Parent, the extension of the write off period allows all of the outstanding contribution (£3,380 presented in Table 10) to be paid back by the time the Working Parent reaches the age of 50. The associated RAB charge incurred by the Working Parent has dropped to 21.7% and is now lower than the RAB charge incurred by the Late Earner.

Table 10: Graduate contribution outcomes under current student support arrangements

Baseline Scenario	Public Sector Professional	Working Parent	Late Earner	Lifelong Learning	High Flyer
Outstanding contribution at point of write-off	0	£3,380	0	NA	0
Age when/if contribution is paid off	34	Never	38	NA	29
RAB charge	(18.6%)	(30.0%)	(23.2%)	NA	(12.5%)

Table 11: Graduate contribution outcomes with extension of write off period to 35 years

Extension of write off period to 35 years	Public Sector Professional	Working Parent	Late Earner	Lifelong Learning	High Flyer
Outstanding contribution at point of write-off	0	0	0	NA	0
Age when/if contribution is paid off	34	50	38	NA	29
RAB charge	(18.6%)	(21.7%)	(23.2%)	NA	(12.5%)

Box 1: 'Real Life' graduate profiles

Public Sector Professional

Gender: Male
 Mode of attendance: Full-time Student
 Age of graduation: 21
 Career:
 1. Part-time occasional employment while undertaking postgraduate qualification
 2. Starts full-time employment on £20,000 as teacher (5th decile) aged 23
 3. Works continuously in public sector till the age of 64 (moving to 6th decile between ages 36 and 45 and slipping down 1 decile every 10 years thereafter)
 4. Takes retirement at 64

Working Parent

Gender: Female
 Mode of attendance: Full-time Student
 Age of graduation: 21
 Career:
 1. Starts employment on 6th decile (and works between 21 and 33)
 2. Economically inactive between 34 and 39 (childcare responsibilities)
 3. Part-time employee between age of 40 and 48 (1st decile)
 4. Full-time employee between age of 49 and 59 (3rd decile)
 5. Part-time employee between age of 60 and 64 (2nd decile)

Late Earner

Gender: Male
 Mode of attendance: Full-time Student
 Age of graduation: 21
 Career:
 1. In and out of low wage employment/travel until 26 (1st and 2nd deciles)
 2. Starts continuous employment on 4th decile aged 27
 3. 1 year spell of unemployment aged 34
 4. Returns to labour market age 35 (3rd decile)
 5. 1 year spell of unemployment aged 39
 6. Returns to labour market age 40 (5th decile)
 7. 1 year spell of unemployment aged 47
 8. Returns to labour market age 48 (5th decile)
 9. Retires at 65

Lifelong Learner

Gender: Female
 Mode of attendance: Part-time Student
 Age of graduation: 37
 Career:
 1. Employed full-time pre degree up to age 31 earning £23,000 per annum
 2. Employed part-time, 6 year degree earning £23,500 pa pro rata (3rd decile)
 3. Returns to work full-time on £27,000 (6th decile)
 4. Works continuously till the age of 64 (moving up to 8th decile)
 5. Retires age 64

High Flyer

Gender: Male
 Mode of attendance: Full-time Student
 Age of graduation: 21
 Career:
 1. Employed full-time in financial services on 9th decile
 2. Retires aged 50

Section 5 Equity Effects continued

In Table 12, we present the impact of the imposition of a 2% real rate of interest on the loans provided by the Exchequer. As illustrated in the previous section, this has significant effects on all graduates. As in the baseline scenario, the Public Sector Professional, Late Earner and High Flyer all still repay their entire graduate contribution within the designated 25 year write off period; however, for the Public Sector Professional, this outcome is not achieved until the age of 36 (compared to 34). The total amount that is repaid stands at just over £26,000 implying that this graduate contributes approximately £5,000 in real interest over and above the contribution amount. The RAB charge incurred by the Exchequer associated with this loan stands at just 1.8%.

For the High Flyer, the outcome is similar. The entire graduate contribution is repaid by the age of 30 (compared to 29 in the baseline scenario). The total contributions stand at just over £24,000 implying that approximately £3,000 is repaid in real interest over and above the original loan amount. The RAB charge associated with this loan is 1.1%. The Late Earner requires an additional three years to repay the contribution and repays approximately £27,900

to the Exchequer (approximately £7,000 over the original loan amount). The RAB charge associated with this loan stands at 2.4%.

Finally, for the Working Parent, the imposition of a real interest rate has little real impact. The RAB charge associated with the contribution remains the same as does the amount of the contribution that is repaid by the graduate (£17,567). However, the amount of the contribution outstanding at the point of write off has increased significantly as a result of the imposition of a real interest rate – although as mentioned before, this does not affect the Working Parent as the contribution is written off 25 years after graduation irrespective of the amount outstanding.

In Table 13, we have combined the option of extending the write off period and imposing a positive real rate of interest. Again, it is the extension of the write off period that negatively affects the Working Parent. Although she repays the entire graduate contribution, it requires until the age of 53 to achieve this and she ends up contributing approximately £29,239, of which almost £9,000 is the real interest on the loan.

Table 12: Graduate contribution outcomes with 2% real interest rate

2% real rate of interest	Public Sector Professional	Working Parent	Late Earner	Lifelong Learning	High Flyer
Outstanding contribution at point of write-off	0	£15,406	0	NA	0
Age when/if contribution paid off	36	Never	41	NA	30
RAB charge	(1.8%)	(30.0%)	(2.4%)	NA	(1.1%)

Table 13: Graduate contribution outcomes with 2% real interest rate and extension of write off period

2% real rate of interest and extension of write off period to 35 years	Public Sector Professional	Working Parent	Late Earner	Lifelong Learning	High Flyer
Outstanding contribution at point of write-off	0	£0	0	NA	0
Age when/if contribution paid off	36	53	41	NA	30
RAB charge	(1.8%)	(2.6%)	(2.4%)	NA	(1.1%)

In Table 14, we have presented the approach where part-time students are provided with the equivalent loans and grants compared to full-time students. Under current contribution scenarios, the Lifelong Learner repays their entire graduate contribution by the age of 55, which is approximately 18 years post graduation. The total value of the loan taken out – and repaid – stands at £19,110. Interestingly, the RAB charge associated with the loan (16.7%) is lower than the RAB charge incurred by the other graduates with the exception of the High Flyer.

Finally, in Table 15, we consider the holistic approach where part-time students are treated equivalently to full-time students; however, we also assume that the period of contribution is extended to 35 years and a positive real rate of interest is levied. As before, the fact that the Lifelong Learner repaid their contribution under the original repayment criterion, the extension of the contribution period makes no difference; however the imposition of a real rate of interest adds an additional 2 years to the period of contribution. The total contribution repaid stands at £23,460 implying that the Lifelong Learner contributes approximately

£4,350 in real interest repayments. The RAB charge associated with the loan is just 1.6%.

What does this mean in real terms? The analysis indicates that under the contribution extension and positive real interest rate scenario, the Public Sector Professional will contribute £145 per month on average for 15 years compared to £134 per month for 13 years under the baseline scenario. The Working Parent will contribute £75 per month on average for 32 years compared to £58 per month for 25 years currently. The Late Earner will contribute £116 per month on average for 20 years compared to £103 per month for 17 years as is currently the case, while the High Flyer will contribute £212 per month on average for 9 years compared to £207 per month for 9 years under the current contribution mechanism.

Table 14: Graduate contribution outcomes under 'holistic approach'

Holistic approach	Public Sector Professional	Working Parent	Late Earner	Lifelong Learning	High Flyer
Outstanding contribution at point of write-off	0	£3,380	0	0	0
Age when/if contribution paid off	34	Never	38	55	29
RAB charge	(18.6%)	(30.0%)	(23.2%)	(16.7%)	(12.5%)

Table 15: Graduate contribution outcomes under 'holistic approach' and stricter contribution options

Holistic approach and 2% real rate of interest and extension of write off period to 35 years	Public Sector Professional	Working Parent	Late Earner	Lifelong Learning	High Flyer
Outstanding contribution at point of write-off	0	0	0	0	0
Age when/if contribution paid off	36	53	41	57	30
RAB charge	(1.8%)	(2.6%)	(2.4%)	(1.6%)	(1.1%)

Section 6

Conclusions – Fair Funding for All

The modelling tool developed by million+ and London Economics provides a number of scenarios for the future of fees and funding of universities in England. The equity effects of amendments to the graduate contribution scheme have also been assessed against 'real-life' graduate profiles.

This economic modelling confirms the following:

Fee-free options

- > Any future system which seeks to introduce free-fee options in part or whole, while benefitting students and graduates risks in the long-term increasing the Exchequer contribution. This is especially the case if the level of the variable fee is allowed to increase.
- > Any system which seeks to incentivise study of home-based students by providing a free-fee option but removing maintenance grant may prejudice participation according to the dependence of students on the latter. It will also shift the burden of graduate contributions to full-time students studying away from home and is likely to impact on student behaviour.

Market-based systems

- > Without a unified fees and funding system which creates a level playing field for full-time and part-time provision and support, market-based systems will switch resources to institutions with wealthier students who study full-time and will continue to incentivise full-time provision.
- > Market-based systems which remove the link between the maximum fee which can be charged and the government fee loan and which allow institutions to charge additional fees based on an HEI-provided fee loan and / or bursaries will create inequity in the unit of resource for teaching available in institutions. Access to HEI-provided additional fee loans is unlikely to be uniformly available to institutions. In addition, these scenarios rely on public funding with taxpayers providing the core funding for teaching grant, fee loans to an agreed level and student support and would lead to additional resources being available in universities with more socially exclusive full-time student profiles.

A unified system of fees and funding

- > A unified fees and student support system can be created based on part-time intensity of study of 30% or higher with an additional resource requirement of £158m from the Exchequer. Such a unified system of student support would bring England into line with countries with well-developed systems of student support. It would remove student and institutional disadvantage and genuinely deliver university free at the point of study for first-time undergraduate full-time and part-time students.
- > Using the current baseline assumptions in respect of student support, teaching grant and current student cohort size, the introduction of a unified system would be cost neutral to the Exchequer if a real rate of interest of 0.5% was charged on graduate contributions.
- > Combining an extended graduate contribution period and a real rate of interest of a maximum 2% (and achieving a reduced RAB charge of 9% for both full time and part time students and graduates), the Exchequer would be approximately £1.090 billion better off. This implies that the actual cost of putting part time students on the same page as full time students is just £74 million if introduced at the same time as amendments to the graduate contribution scheme.

Student support

- > For the majority of students, the student support made available through the Exchequer to help with their living and maintenance costs while they are studying is an important component of successful participation in higher education. There is a rationale to the current system and the relationship between household income and maintenance loans available for full-time students.
- > Other than making full-time and part-time support comparable, it is desirable for the current level of student support available to students while they are studying to be maintained.

Statutory bursaries

- > The current statutory bursary system available for full-time students is economically inefficient. It would be possible to remove the statutory bursary, reduce fees and the associated requirement for fee loans, compensate universities through Hefce teaching grant and use the savings to fund an additional 842 full-time students to participate in higher education.

Graduate contributions

- > There are a number of features of the current graduate contribution which should be amended in order to support government investment in universities and expand funded places, while ensuring that student participation is not substantially affected.
 - > The graduate contribution period of 25 years is relatively short compared to that already adopted in other countries and in some national schemes, write off only occurs on death.
 - > To avoid students and graduates being faced with the commercial rates that are likely to be charged by other providers, the Exchequer should remain the provider of student loans and state funded loans should be available to cover maintenance and the maximum fees that can be charged by institutions.
 - > There is a case to consider the introduction of a maximum 2% real interest rate on the loans provided by the state. This should be incorporated into the graduate contribution scheme.
 - > Students (full-time and part-time) who want to pay their contribution for their higher education up-front should continue to be able to do so. Similarly if a graduate wishes to pay off their contribution early, they would be entitled to do so without having to pay any long-term interest such as that levied by banks on personal loans.
 - > Variations to the current system of graduate contributions should be assessed in respect of their equity effects and impact on real-life graduate profiles. The measures least likely to damage participation are likely to combine an extension of the graduate contribution period and the introduction of a low (1-2% maximum) real rate of interest.

Exchequer 'Gains'

- > A unified system of student support when linked with, for example, a graduate contribution period extended from 25 to 35 years and a small real rate of interest (1-2%) would give all first-time undergraduate, full-time and part-time students the right to study at university for free. It would incentivise innovation and produce a fairer outcome for the Exchequer by delivering savings of up to £1 billion per annum. This should be used to defray the £600 million additional savings required in higher education by the 2009 Pre-budget Report, provide funding for additional students numbers and additional resources for teaching.

This submission seeks to outline the economics behind a fairer and more flexible system of funding for students, universities and the Exchequer and considers the issues arising from other proposed scenarios. However, key issues of principle surrounding future government investment in England's universities should be resolved before any decision is made about increasing fees.

The resource envelope available for universities after 2010 is not yet agreed by government. There is a continued risk that the public funding of universities will be reduced further. In these circumstances, the Government should adopt a transparent approach. The impact on social mobility and participation must be properly assessed against any expectation that students and graduates will meet a shortfall in investment in higher education. Responsibility for the future of fees and funding in universities in England cannot simply be transferred from government to Lord Browne's Review.

Students, graduates and universities will need to know to what extent government sees investment in students, universities and higher education as an investment in the UK's future and whether a future fees and funding system is to be based on a highly differentiated market, likely to create inequity, or be informed by fairness and principles likely to support participation, social mobility and the international agendas promoted by all UK universities.

Annex 1

Institutional Groupings

For the purposes of modelling the higher education institutions (as identified by HESA) in England were split into two groups: 'Full-time' institutions and 'Mixed Mode' institutions. The institutions included in each group are listed below.

Full-time institutions	Mixed mode institutions
Aston University	Anglia Ruskin University
Bath Spa University	University of Bedfordshire
The University of Bath	Birkbeck College
The University of Birmingham	Birmingham City University
Bishop Grosseteste University College Lincoln	University College Birmingham
The Arts Institute at Bournemouth	The University of Bolton
The University of Bradford	Bournemouth University
The University of Bristol	The University of Brighton
Brunel University	Buckinghamshire New University
The University of Buckingham	Canterbury Christ Church University
The University of Cambridge	The University of Central Lancashire
The Institute of Cancer Research	University of Chester
Central School of Speech and Drama	The City University
The University of Chichester	Coventry University
Conservatoire for Dance and Drama	University of Cumbria
Courtauld Institute of Art	De Montfort University
Cranfield University	University of Derby
University for the Creative Arts	The University of East London
Dartington College of Arts	Edge Hill University
University of Durham	University of Gloucestershire
The University of East Anglia	The University of Greenwich
The University of Essex	Harper Adams University College
The University of Exeter	The University of Huddersfield
University College Falmouth	The University of Hull
Goldsmiths College	Leeds Metropolitan University
Guildhall School of Music and Drama	The University of Lincoln
University of Hertfordshire	Liverpool Hope University
Heythrop College	Liverpool John Moores University
Imperial College of Science, Technology and Medicine	London Metropolitan University
Institute of Education	London South Bank University
The University of Keele	Middlesex University
The University of Kent	The University of Northampton
King's College London	The University of Northumbria at Newcastle
Kingston University	The Open University
The University of Lancaster	The University of Plymouth
Leeds College of Music	The University of Salford
The University of Leeds	Southampton Solent University
Leeds Trinity and All Saints	Staffordshire University
The University of Leicester	University Campus Suffolk
The Liverpool Institute for Performing Arts	The University of Sunderland
The University of Liverpool	The University of Teesside
University of the Arts, London	Thames Valley University
London Business School	University of the West of England, Bristol
University of London (Institutes and activities)	The University of Westminster
London School of Economics and Political Science	The University of Wolverhampton
London School of Hygiene and Tropical Medicine	The University of Worcester
	York St John University



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