Higher education funding and access

Jack Britton
Institute for Fiscal Studies
Overview

- Reasons for state intervention in the HE sector
- An overview of how HE is funded in England
- Overview of the 2012 reform to HE funding and implications for:
  - universities
  - students
  - graduates
  - public finances
- Access to HE from those from poor backgrounds
- What does the future hold?
Why might the market alone lead to inefficient outcomes?

1. Externalities
2. Credit market failure
3. Risk and uncertainty
4. Information problems

• If the government is going to intervene, what is the correct level of intervention?
1. Externalities

- Education may create benefits to society over and above those that accrue to the individual
  - Total return to education = private return + social return
  - Private returns:
    - Large “graduate premium” - 17% for men and 37% for women – Blundell et al 2000
    - Britton, Shephard & Vignoles (2015) show graduates earn more than twice that of non-graduates and are much more protected against recessions
  - Social return
    - Higher employment and earnings -> more tax revenues and less spending on benefits;
    - Improve productivity and wage of other workers (imperfect substitution and human capital spill-over, Moretti 2004)
    - Better health, lower crime, more open, well informed, engaged society.

- Social returns much more difficult to quantify
- Individuals won’t take social returns into account when making decisions implying inefficient overall level.
- So government should subsidise – but for some the return is so large they will acquire the efficient level of education anyway!
2. Credit market failure

- HE study by students requires cash for fees and living expenses

- With perfect credit markets, students borrow now and repay from future income

- But credit markets are *not* perfect:
  1. Lack of collateral to secure debt against
  2. Asymmetric information: borrower has more information than lender, exposing lender to adverse selection/moral hazard.

- These factors lead to:
  - Higher interest rates or credit rationing
  - Inefficiently small amount of borrowing and investment

- So government should provide state-backed loans. But how cheap should these be?
3. Risk and uncertainty

- Students are risk averse...
- ...and be reluctant to borrow if they have mortgage-style repayments
  - Uncertain returns to a degree: positive on average but high variance
  - Perceived risk of failing the degree (or getting a bad grade)
  - Might need high risk premium to make them invest (so high returns) or insurance that may not be efficient for the market to provide (such as income-contingent repayments).

- So government should insert insurance into these state backed loans. But how much?
4. Information problems

- To make rational decisions, individuals must be informed about
  - Nature of product (e.g. university and/or subject quality, HE experience)
  - Prices (e.g. fees, living costs, foregone earnings, debt repayments)
  - Future benefits (e.g. earnings, health, happiness....)
- Would the market be able to provide this information appropriately?
  - And would they want to? They might not want to encourage certain types of ‘high risk’ students from attending.
- There are also considerable concerns about debt aversion
- So government should intervene to improve information available to prospective students (this one is a bit easier).
How is HE funded in England?
HE funding in England – overview

• Since 1998, student contributions to the cost of their education have increased considerably
  – Upfront (but means-tested) fees of £1,000/year introduced in 1998
  – Fees rose to £3,000/year in 2006 and were subsequently increased in line with inflation; paid by all students but no longer upfront
  – Maximum fees rose to £9,000/year in 2012 and cap has stayed there since

• Meanwhile teaching grants paid directly from government to universities have fallen; only clinical and lab-based years funded now
HE funding in England – student support

• England is relatively unusual in offering students financial support to help cover living costs as well as tuition fees

• Grants
  – Those with family income of up to £25,000/year are entitled to the maximum grant which was expected to reach £3,489 in 2016-17
  – 41% of students receive this, with 16% receiving a partial grant

• Loans
  – All students are entitled to borrow some money from the government
  – Amount depends on where you live (higher for London, lower for those at home) and how much you get in grants
    • E.g. students with family income of around £43,000/year can borrow the most – up to £5,912 per year for a student living away outside London
Overview of 2012 reform
England’s HE funding system: 2011-12 vs. 2012-13

<table>
<thead>
<tr>
<th></th>
<th>2011-12</th>
<th>2012-13</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fees</strong></td>
<td>Max £3,375</td>
<td>Max £9,000</td>
</tr>
<tr>
<td></td>
<td>Deferred via fee loan</td>
<td>Deferred via fee loan</td>
</tr>
<tr>
<td></td>
<td>No exemptions</td>
<td>Partial fee waivers for poorest students</td>
</tr>
<tr>
<td><strong>Maintenance grants</strong></td>
<td>Up to £2,906, plus bursaries</td>
<td>Up to £3,250</td>
</tr>
<tr>
<td><strong>Maintenance loans</strong></td>
<td>Up to £4,950</td>
<td>Up to £5,500</td>
</tr>
<tr>
<td><strong>Loan repayment</strong></td>
<td>9% of earnings above £15,795 in 2012 (uprated with inflation)</td>
<td>9% of earnings above £21,000 (in 2016) (uprated with earnings)</td>
</tr>
<tr>
<td></td>
<td>Interest rate = RPI + 0%</td>
<td>Interest rate = RPI + 0% rising to RPI + 3% for income of £41,000+</td>
</tr>
<tr>
<td></td>
<td>Debt write off after 25 years</td>
<td>Debt write off after 30 years</td>
</tr>
</tbody>
</table>
IFS analysis of the reforms

- Simulate future graduate earnings using survey data and imposing structure on earnings dynamics
- From this we can estimate repayments through the lifecycle.
  - This is a difficult exercise and results are sensitive to our assumptions!

- Evaluate the financial impact of the 2012 reform for students, graduates, universities and for the taxpayer
  - A lot of political and media interest in the “RAB” charge – i.e. the % of student loans the government will have to write off.

- Investigate not only average changes but also distributional effects of policy changes
## Implications of the reforms: Sources of funding and spending per student

<table>
<thead>
<tr>
<th>Source</th>
<th>2011 system</th>
<th>2012 system</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxpayers contribution</td>
<td>£25,847</td>
<td>£24,592</td>
<td>–5%</td>
</tr>
<tr>
<td>HEFCE funding grants</td>
<td>£12,012</td>
<td>£2,010</td>
<td>–83%</td>
</tr>
<tr>
<td>National Scholarship Programme</td>
<td>£0</td>
<td>£198</td>
<td></td>
</tr>
<tr>
<td>Maintenance grants</td>
<td>£4,741</td>
<td>£4,941</td>
<td>4%</td>
</tr>
<tr>
<td>£ loan subsidy</td>
<td>£9,094</td>
<td>£17,443</td>
<td>92%</td>
</tr>
<tr>
<td>% loan subsidy</td>
<td>37.6%</td>
<td>43.3%</td>
<td></td>
</tr>
<tr>
<td>Graduates repayments</td>
<td>£15,075</td>
<td>£22,843</td>
<td>52%</td>
</tr>
<tr>
<td>Universities</td>
<td>£22,143</td>
<td>£28,250</td>
<td>28%</td>
</tr>
<tr>
<td>Students</td>
<td>£18,779</td>
<td>£19,185</td>
<td>2%</td>
</tr>
</tbody>
</table>
Implications for graduates: lower annual repayments, but made for longer . . .

Implications for graduates: NPV of total real repayments and as a share of real NPV lifetime earnings across distribution of graduate lifetime earnings.
Implications for graduates: percentage of graduates with real debt write-offs across distribution of graduate lifetime earnings.

- Old system
- New system

© Institute for Fiscal Studies
## Estimated costs of student loans and future earnings: sensitive to earnings growth assumptions

<table>
<thead>
<tr>
<th>Real earnings growth assumption</th>
<th>Average loan subsidy</th>
<th>Total loan subsidy for intake of 300,000 students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1% per year</td>
<td>51.6%</td>
<td>£20,806</td>
</tr>
<tr>
<td></td>
<td></td>
<td>£6,242m</td>
</tr>
<tr>
<td>0% per year</td>
<td>46.8%</td>
<td>£18,859</td>
</tr>
<tr>
<td></td>
<td></td>
<td>£5,658m</td>
</tr>
<tr>
<td>1% per year</td>
<td>43.7%</td>
<td>£17,596</td>
</tr>
<tr>
<td></td>
<td></td>
<td>£5,279m</td>
</tr>
<tr>
<td>Baseline (1.1% per year)</td>
<td>43.3%</td>
<td>£17,443</td>
</tr>
<tr>
<td></td>
<td></td>
<td>£5,233m</td>
</tr>
<tr>
<td>2% per year</td>
<td>40.0%</td>
<td>£16,121</td>
</tr>
<tr>
<td></td>
<td></td>
<td>£4,836m</td>
</tr>
<tr>
<td>3% per year</td>
<td>36.7%</td>
<td>£14,795</td>
</tr>
<tr>
<td></td>
<td></td>
<td>£4,439m</td>
</tr>
</tbody>
</table>

Note: Figures are for the total cost over the course of a student’s degree and are in 2014 prices discounted to 2012.
Source: IFS report “estimating the public cost of student loans”
# Estimated costs of student loans and the real discount rate

<table>
<thead>
<tr>
<th>Government cost of borrowing relative to RPI (discount rate)</th>
<th>Average loan subsidy</th>
<th>Total loan subsidy for intake of 300,000 students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline (2.2%)</td>
<td>43.3%</td>
<td>£17,443</td>
</tr>
<tr>
<td></td>
<td></td>
<td>£5,233m</td>
</tr>
<tr>
<td>1.1%</td>
<td>30.5%</td>
<td>£12,434</td>
</tr>
<tr>
<td></td>
<td></td>
<td>£3,730m</td>
</tr>
<tr>
<td>3.5%</td>
<td>55.0%</td>
<td>£21,839</td>
</tr>
<tr>
<td></td>
<td></td>
<td>£6,552m</td>
</tr>
</tbody>
</table>

Note: Figures are for the total cost over the course of a student’s degree and are in 2014 prices discounted to 2012. Source: IFS report “estimating the public cost of student loans”
### Implications of the reforms: Sources of funding and spending per student

<table>
<thead>
<tr>
<th>Source</th>
<th>2011 system</th>
<th>2012 system</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxpayers contribution</td>
<td>£25,847</td>
<td>£24,592</td>
<td>–5%</td>
</tr>
<tr>
<td>HEFCE funding grants</td>
<td>£12,012</td>
<td>£2,010</td>
<td>–83%</td>
</tr>
<tr>
<td>National Scholarship Programme</td>
<td>£0</td>
<td>£198</td>
<td></td>
</tr>
<tr>
<td>Maintenance grants</td>
<td>£4,741</td>
<td>£4,941</td>
<td>4%</td>
</tr>
<tr>
<td>£ loan subsidy</td>
<td>£9,094</td>
<td>£17,443</td>
<td>92%</td>
</tr>
<tr>
<td>% loan subsidy</td>
<td>37.6%</td>
<td>43.3%</td>
<td></td>
</tr>
<tr>
<td>Graduates repayments</td>
<td>£15,075</td>
<td>£22,843</td>
<td>52%</td>
</tr>
<tr>
<td>Universities</td>
<td>£22,143</td>
<td>£28,250</td>
<td>28%</td>
</tr>
<tr>
<td>Students</td>
<td>£18,779</td>
<td>£19,185</td>
<td>2%</td>
</tr>
</tbody>
</table>

Note: Figures are for the total cost over the course of a student’s degree and are in 2014 prices discounted to 2012. 
Source: IFS report “estimating the public cost of student loans”
Implications for access
HE participation overall and at high status institutions for all pupils first eligible to go in 2010-11, by SES

% pupils going to university at age 18/19: highest SES quintile group including state and private school pupils

Source: authors’ calculations based on linked schools and universities administrative data for the cohort first eligible to start university in 2010-11 (who sat their GCSEs in 2007-08)
The SES gap in university applications

% of 18 year olds in England applying

Percentage point difference (Q5-Q1)

© Institute for Fiscal Studies
BUT: SES gap in terms of % getting 5 A*-C grades in GCSEs and equivalents has fallen substantially

% pupils getting 5 A*-C grades in GCSEs and equivalents

2010-2012 figures based on SFR 04/2013: GCSE and Equivalent Attainment by Pupil Characteristics in England.
2004-2005 figures based on authors’ calculations using Key Stage 4 and PLASC data.

© Institute for Fiscal Studies
AND: the socio-economic gaps in participation are smaller for non white-British ethnic groups...
Summary on access

• So the gap in participation is large
• But doesn’t seem to have increased as a result of the reform
  – Many take this as positive evidence for the 2012 reforms
• However, attainment amongst poor students has improved considerably, so maybe the gap would have declined further in absence of the reform
• There have been important changes when looking by different ethnic groups … maybe the overall change is driven by a more complex immigration story.

• In any case this has focussed on full time 18/19 year old undergraduates…
Part-time participation has fallen substantially

Source: Higher Education Student Enrolments and Qualifications Obtained at Higher Education Providers in the United Kingdom 2013/14, HESA SFR 210
Especially for courses other than first degrees

Figure 10: Trend in UK- and EU-domiciled mature undergraduate entrants to higher education institutions in England by mode of study and qualification type, 2007–08 to 2012–13

Note: OUG refers to other undergraduate courses, those other than first degrees
Source: HESA
What does the future hold?
More students at university?

- Until 2015-16, universities faced limits on the no. of undergraduate students they could recruit . . . but now the cap has been lifted
- Government predicted up to 60,000 more students would enter
- How much this increases the cost of HE depends on how likely the new students are to repay their loans

<table>
<thead>
<tr>
<th>If the extra students are similar to ...</th>
<th>Average loan subsidy per extra student</th>
<th>Total loan subsidy for extra 60,000 students</th>
<th>Total taxpayer contribution for extra 60,000 students</th>
</tr>
</thead>
<tbody>
<tr>
<td>... the current graduate population</td>
<td>£17,443</td>
<td>£1,047m</td>
<td>£1,476m</td>
</tr>
<tr>
<td>... the bottom 25% of graduate lifetime earners</td>
<td>£33,514</td>
<td>£2,011m</td>
<td>£2,455m</td>
</tr>
<tr>
<td>... the bottom 50% of graduate lifetime earners</td>
<td>£28,275</td>
<td>£1,697m</td>
<td>£2,126m</td>
</tr>
<tr>
<td>... the bottom 75% of graduate lifetime earners</td>
<td>£22,564</td>
<td>£1,354m</td>
<td>£1,780m</td>
</tr>
</tbody>
</table>

More changes to the HE funding system

- Government made several announcements in the July budget
- From 2016-17, maintenance grants for the poorest students will be scrapped and replaced with slightly higher maintenance loans
  - Poorest students will now graduate with the largest debts
  - And pay back more than they would have done under the old system
  - But they will have slightly more “cash in pocket” whilst at university
- Upfront support rises by around £340m per cohort
- Whether or not the government saves money in the long-run depends on how much of the new (larger) loans are repaid
  - We estimate they will receive around £600m more in loan repayments, hence saving around £270m (3%) in the long-run
What else might be down the road?

• The government is also consulting on three other proposals:
  – Freezing the threshold above which loan repayments start to be made for five years from 2016
    • Extracts higher repayments from low to middle income graduates
    • Graduate contribution estimated to increase to 62% if implemented
  – Allowing universities with high teaching quality to increase fees in line with inflation from 2017 onwards
    • Higher fees likely to mean higher write-offs (though more resources for universities)
  – Reducing the discount rate attached to student loan repayments in government accounts from RPI+2.2% to RPI+1.1%
    • No change in actual repayments, but means future repayments valued more highly today
    • Affects perception of the value for money of the system only
How similar is the system to a graduate tax?

• With many graduates likely to have some debt being written off, system is similar in many respects to a (hypothecated) graduate tax

• If moved to a system with a minimum repayment period instead, then would extract very high repayments from highest earners
  – Potentially problematic if these individuals can opt out of system

Summary

• The significant reforms of 2012 resulted in:
  – More money for universities
  – Higher average cost for graduates, but lower for lowest earning 30%.
  – No big average change for taxpayers
    • But shift toward more progressive distribution of repayments
    • Also big increase in uncertainty: uncertain loan costs replacing certain Tgrant costs

• Gap in participation between rich and poor is large
  – Evidence on 2012 impact on this is weak, but government frequently cites figure showing participation gap has declined since 2012.
  – However, this could plausibly be the impact of improving qualifications or an immigration story.
  – But to the extent that tuition costs affect prior attainment, there might be a lagged effect.
  – Removal of NSP may also have an effect from 2015.
Summary/discussion

• Further tweaks to the system announced in the Summer will reduce the long-run cost to government

• Yet current system has desirable features
  – Loan with reasonable interest rates and protection against low income.
  – Fees paid up front and living-expense loans available to help the liquidity-constrained to access university.
  – Progressive repayment system whereby highest earners repay the most, resulting in subsidy targeted at those who benefit the least from HE

• And its flaws:
  – Subsidy not observed until many years down the line, perhaps reducing its efficacy.
  – Reforms created perverse incentives for universities to set high fees.
  – The T.E.F. proposals could potentially be a significant change.
Questions?
What explains differences in HE participation between pupils from most and least deprived backgrounds?

Source: authors’ calculations based on linked schools and universities administrative data for the cohort first eligible to start university in 2010-11 (who sat their GCSEs in 2007-08)
Implications for students while at university

• No big changes to available finance on average...
• But large changes to support for disadvantaged students through the National Scholarship Programme (NSP)
  – bursaries/fee-waivers for low income individuals.
  – had its flaws (unclear, illogical payment rules – students paid after starting, and money often used to pay fees rather than living costs).
  – Money tended to be focussed on high achieving (AAB/ABB) students and was much more generous at higher-ranking institutions.

• Funding cut again for this in 2014/15 and the program was abolished completely for 2015/16.