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Higher education funding and access

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Overview

- Reasons for state intervention in the HE sector
- Overview of the 2012 reform to HE funding
- Implications of 2012 reform to HE funding
  - For universities
  - For public finances
  - For graduates
  - For students
- Access to HE from low SES individuals

- Various policy options and ongoing policy changes

Why might the market alone lead to inefficient outcomes?

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

1. 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 which means:
     - Lender exposed to adverse selection / moral hazard
     - Higher interest rates or credit rationing
     - Inefficiently small amount of borrowing and investment

2. Externalities

- Education may create benefits to society over and above those that accrue to the individual
  - Total return to education = private return + social return
  - College premiums in wages are substantial (on average 17% for men and 37% for women Blundell et al 2000)
  - 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
- Do individuals incorporate *social* return to education in weighing up costs and benefits?

3. Risk and uncertainty

- Student may be reluctant to borrow if they have mortgage-style repayments
  - Perceived risk of failing the degree (or getting a bad grade)
  - Uncertain returns to a degree: positive on average but high variance
  - Might need high risk premium to make the investment worthwhile (so high returns) or insurance that may not be efficient for the market to provide.

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.
- Debt aversion
- Expectations affect not only whether a 18-year-old goes to university, but also the aspirations of younger teenagers which could impact earlier school outcomes

What does this mean for policy making?

- All of these arguments can justify state interventions and subsidies on **efficiency** grounds. However they still come with associated questions.
  - Externalities → the financial burden of HE should be shared between the government and individuals; but how much?
    - Graduate premium is so large for some that they would acquire efficient level of education anyway, resulting in large deadweight loss to government.
  - Other market failures → student loans, insurance, information campaign.
    - Same loans available to all? How much insurance?
- There also exist **equity** arguments for government intervention
  - Improve social mobility through widening participation.
    - E.g. Should the government subsidize some students more than the other? Should admission policies favour those from certain socio-economic background?
  - How much competition is desirable? Does it harm access?

Overview of 2012 reform

The student finance regime pre and post 2012

	2011/12	2012/13
Fees	£3,375 (in 2011/12)	Maximum of £9,000
	Deferred (via fee loan)	Deferred (via fee loan)
	Variable up to £3,375	Variable between £6,000 and £9,000
	No exemptions	Fee waivers for poorest students via NSP (abolished from 2015)
Grants	Up to £2,906 in grants, plus bursaries	Up to £3,250 in grants, plus bursaries
Maintenance loans	Up to £6,928 (in 2011/12)	Up to £7,675
Repayment	9% of earnings above £15,000 (not uprated)	9% of earnings above £21,000 (in 2016) uprated with earnings
	Interest rate = RPI + 0%	Interest rate = RPI + 0% for £21,000, RPI + 3% for £41,000+ (linear increase in between)
	25-year debt write-off	30-year debt write-off

IFS analysis of the reforms

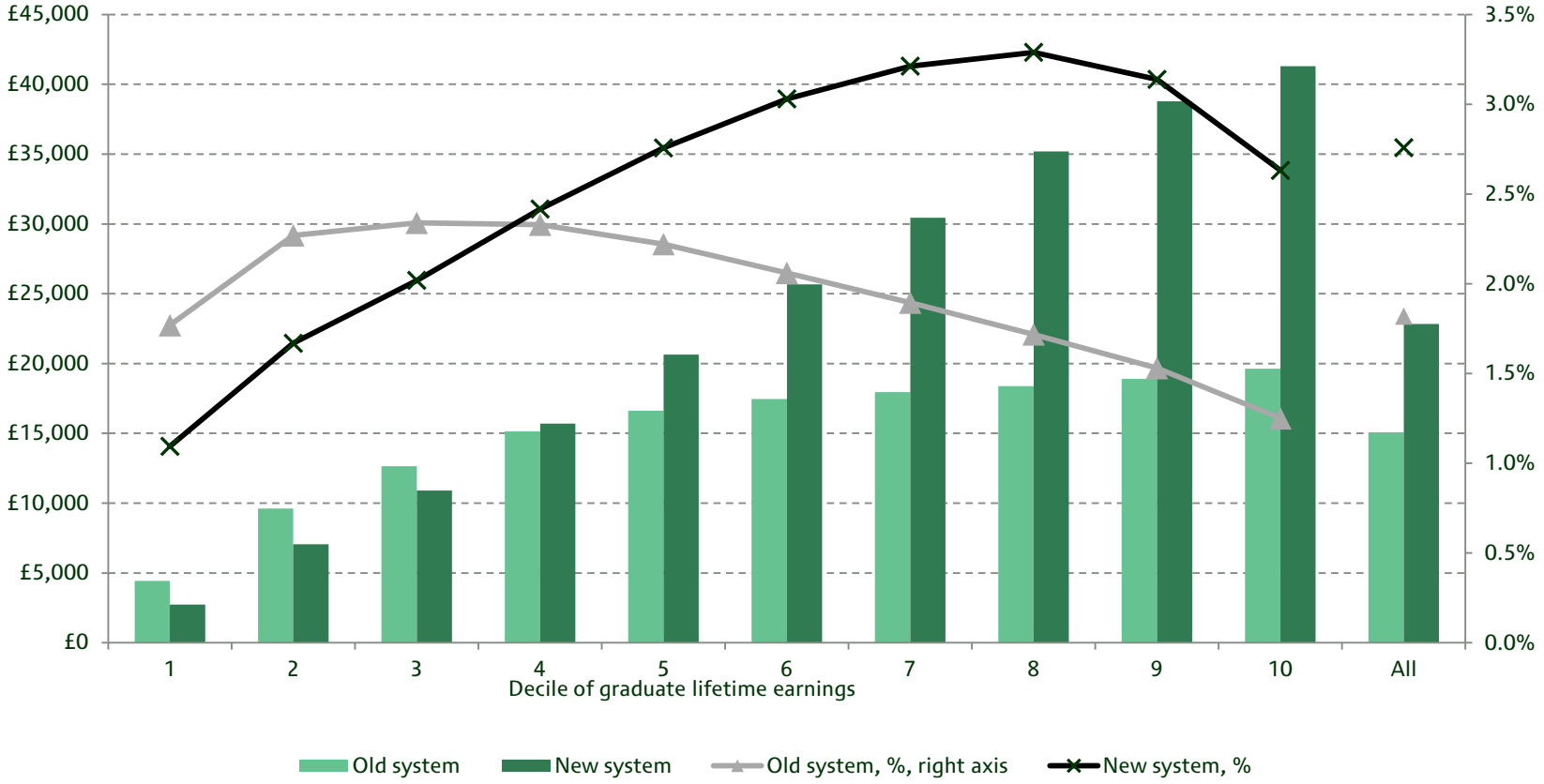
- Simulate future graduate earnings and repayments through the lifecycle.
  - This is a difficult exercise and results are sensitive to our assumptions!
- Evaluate the financial impact of the 2012 reform for students, graduates, universities and for the taxpayer
  - A lot of political and media interest in the "RAB" charge – i.e. the % of student loans the government will have to write off.
    - Though in practice the estimated loan subsidy and taxpayer contributions are more important.
  - Investigate not only average changes but also distributional effects of policy changes

Implications of the reforms: Sources of funding and spending per student

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

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 graduates: NPV of total real repayments and as a share of real NPV lifetime earnings across distribution of graduate lifetime earnings



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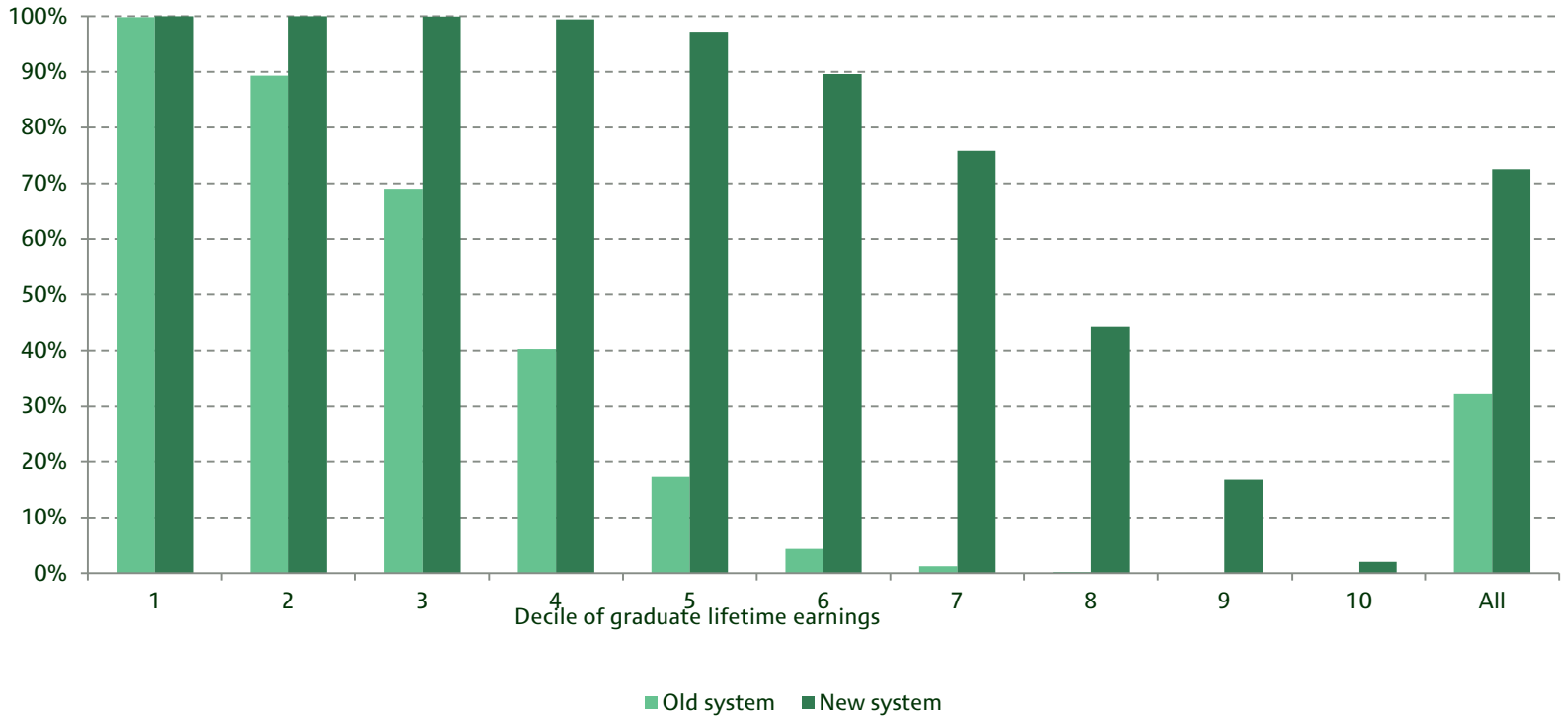
Implications for graduates: percentage of graduates with real debt write-offs across distribution of graduate lifetime earnings



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Estimated costs of student loans and future earnings: sensitive to earnings growth assumptions

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

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

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

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"

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Implications for students while at university

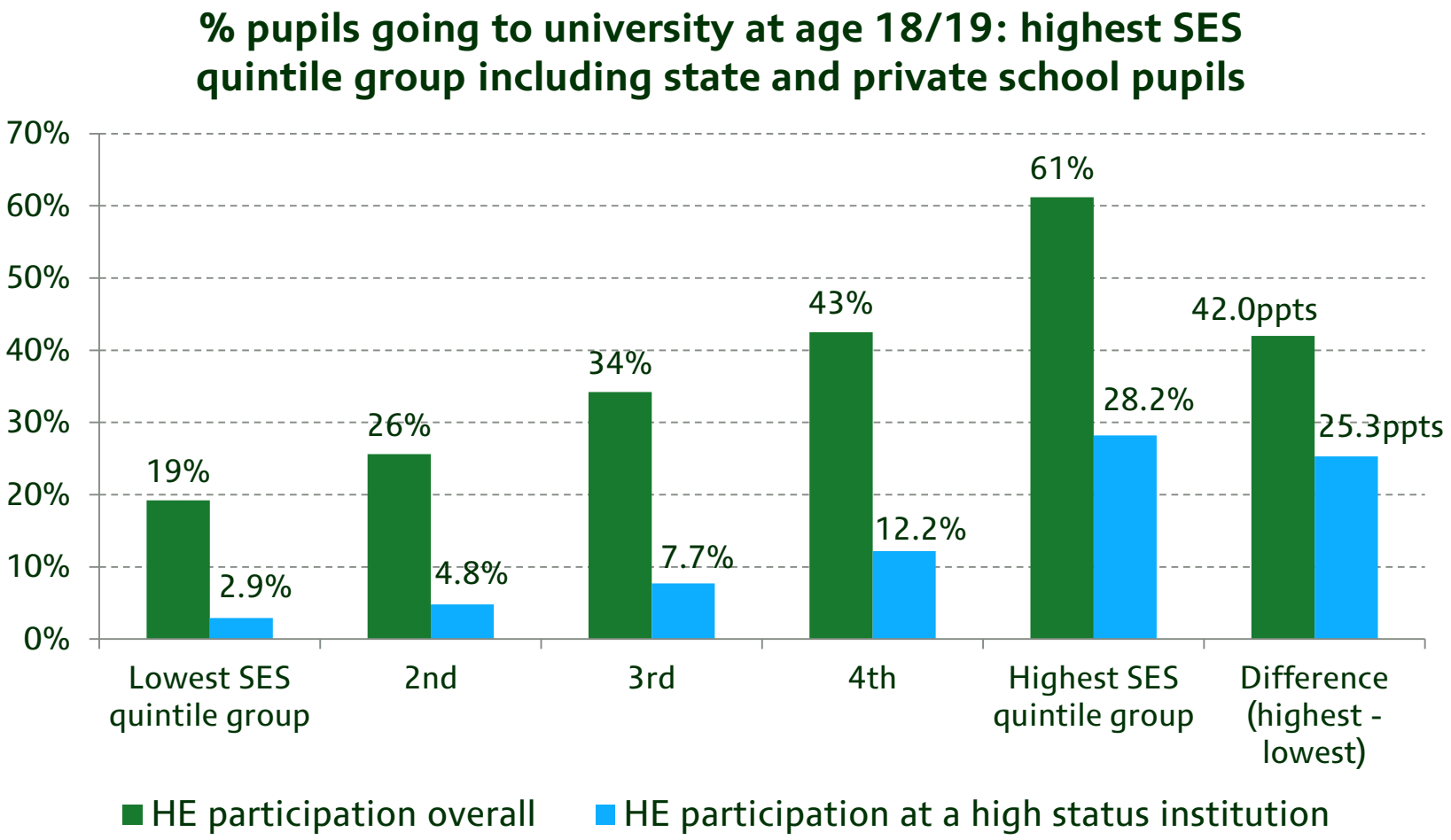
- No big changes to available finance on average…
- But major changes to support for disadvantaged students:
  - Institutions now required to publish information about where they focus their money.
  - National Scholarship Programme (NSP) introduced consisting of bursaries/fee-waivers for low income individuals.
    - Pre-2012, universities had to offer 10% of fees as a bursary to all students with family income below £25,000.
    - Post-2012, NSP introduced, worth £50million in 2012, £100million in 2013, £150million in 2014. Universities had to match funding in order to receive it.
- Higher-ranking institutions much more generous in their support.

Implications for students while at university

- NSP had problems:
  - Unclear, slightly illogical eligibility rules, and often allocated after term started, meaning student would attended anyway.
  - Lots of money spent on fee waivers rather than direct cash support – mostly wasted since fees are often not paid off in full anyway. Potentially more effective ways of increasing participation.
  - With the removal of the cap on AAB students (subsequently ABB), a lot of the support was focussed on those students.
- But in late 2013, NSP cut for 2014 (though universities had to stick to their 2014 commitments), and abolished entirely in 2015.
  - Level and distribution of financial support available to change again.
  - Lower-ranked universities NSP funding from government much higher proportion of income than top universities. Suggests support will become even more concentrated at the high-achieving end.
  - Top level uni's may move towards these more effective mechanisms.

Implications for access

HE participation overall and at high status institutions for all pupils first eligible to go in 2010-11, by SES



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)

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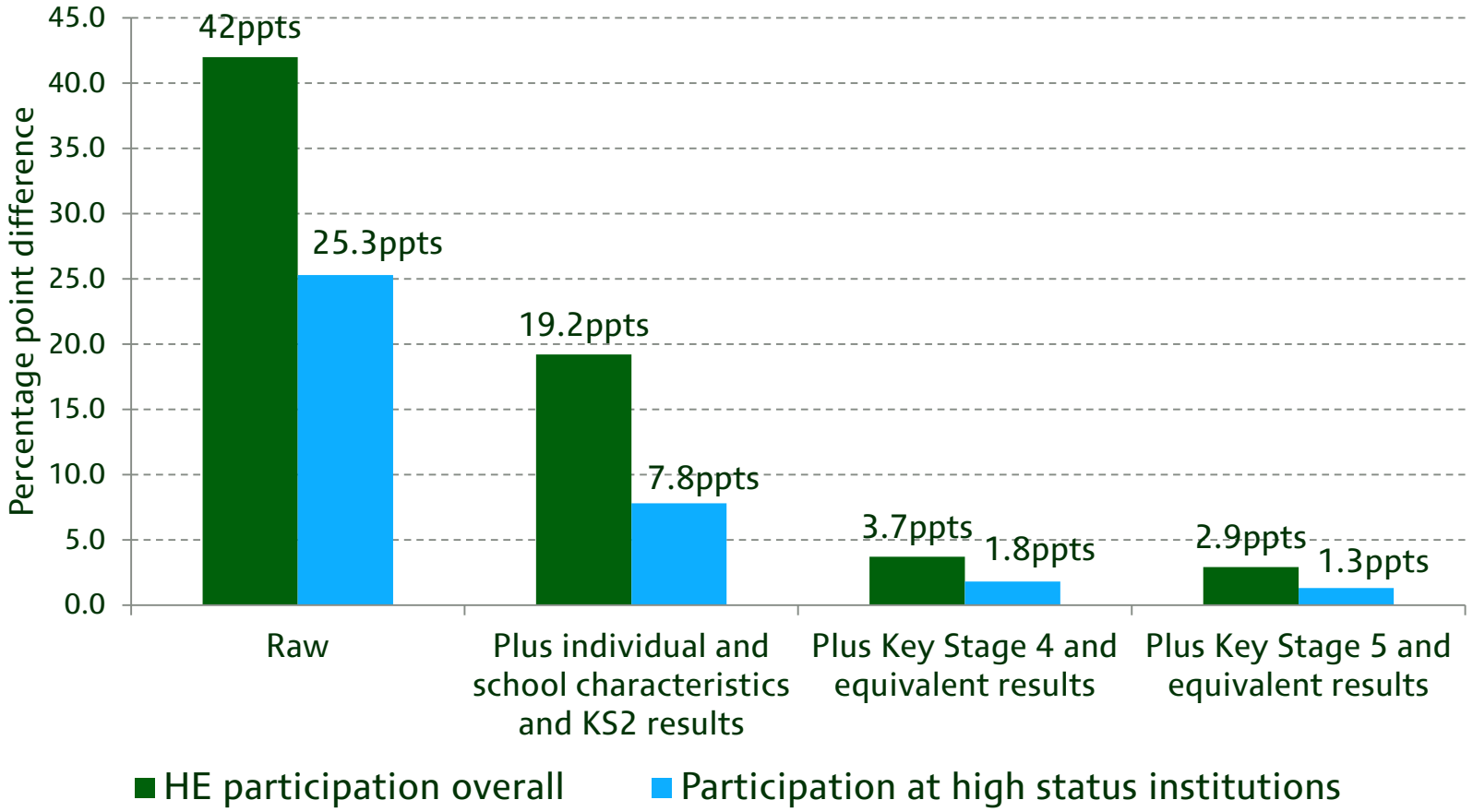
What explains differences in HE participation between pupils from most and least deprived backgrounds?



Source: authors' calculations based on linked schools and universities administrative data for the cohort first eligible to start university in2010-11 (who sat their GCSEs in 2007-08)

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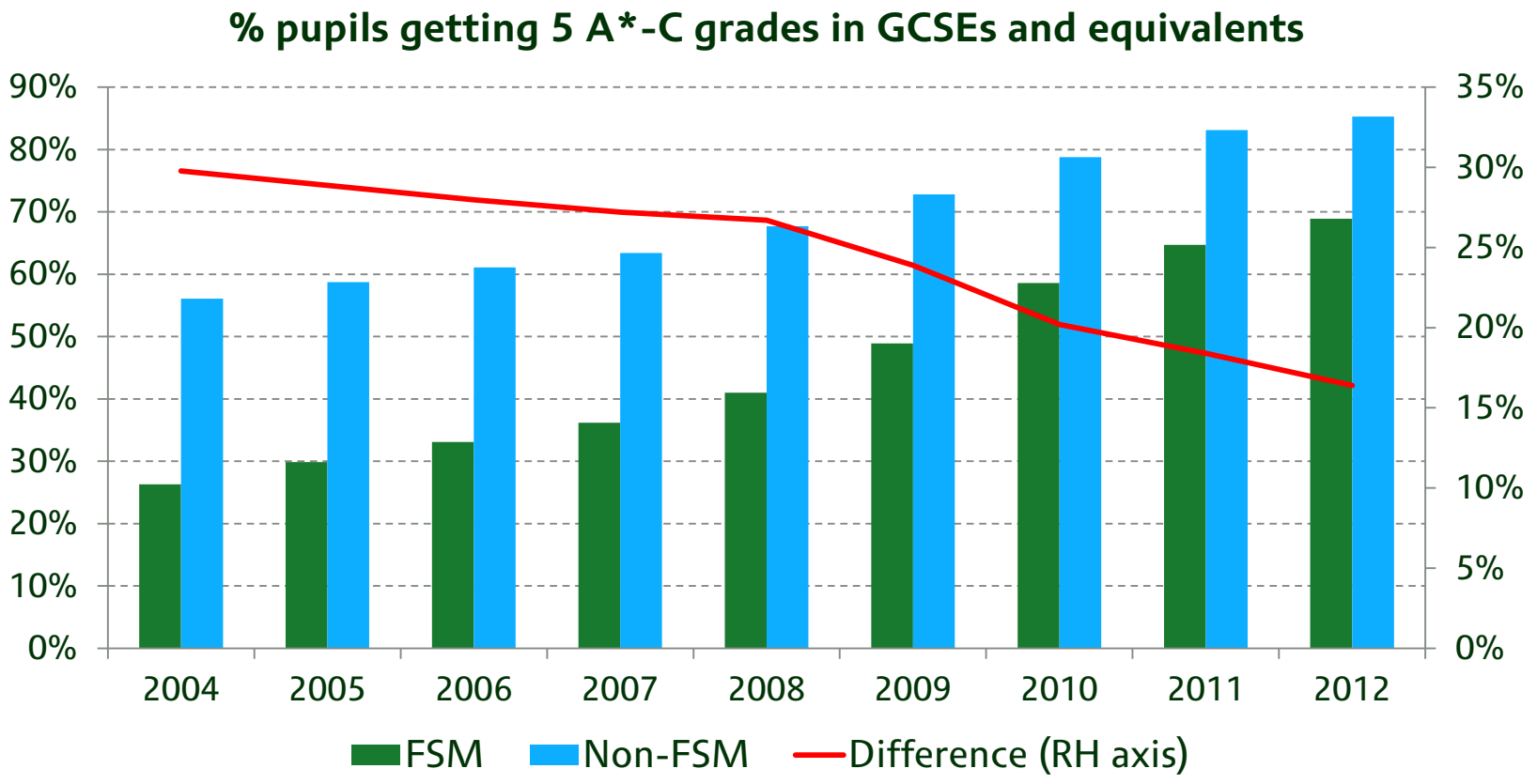
SES gap in terms of % getting 5 A*-C grades in GCSEs and equivalents has fallen substantially



2010-2012 figures based on SFR 04/2013: GCSE and Equivalent Attainment by Pupil Characteristics in England.
2006-2009 figures based on SFR 37/2010: GCSE and Equivalent Attainment by Pupil Characteristics in England.
2004-2005 figures based on authors' calculations using Key Stage 4 and PLASC data.

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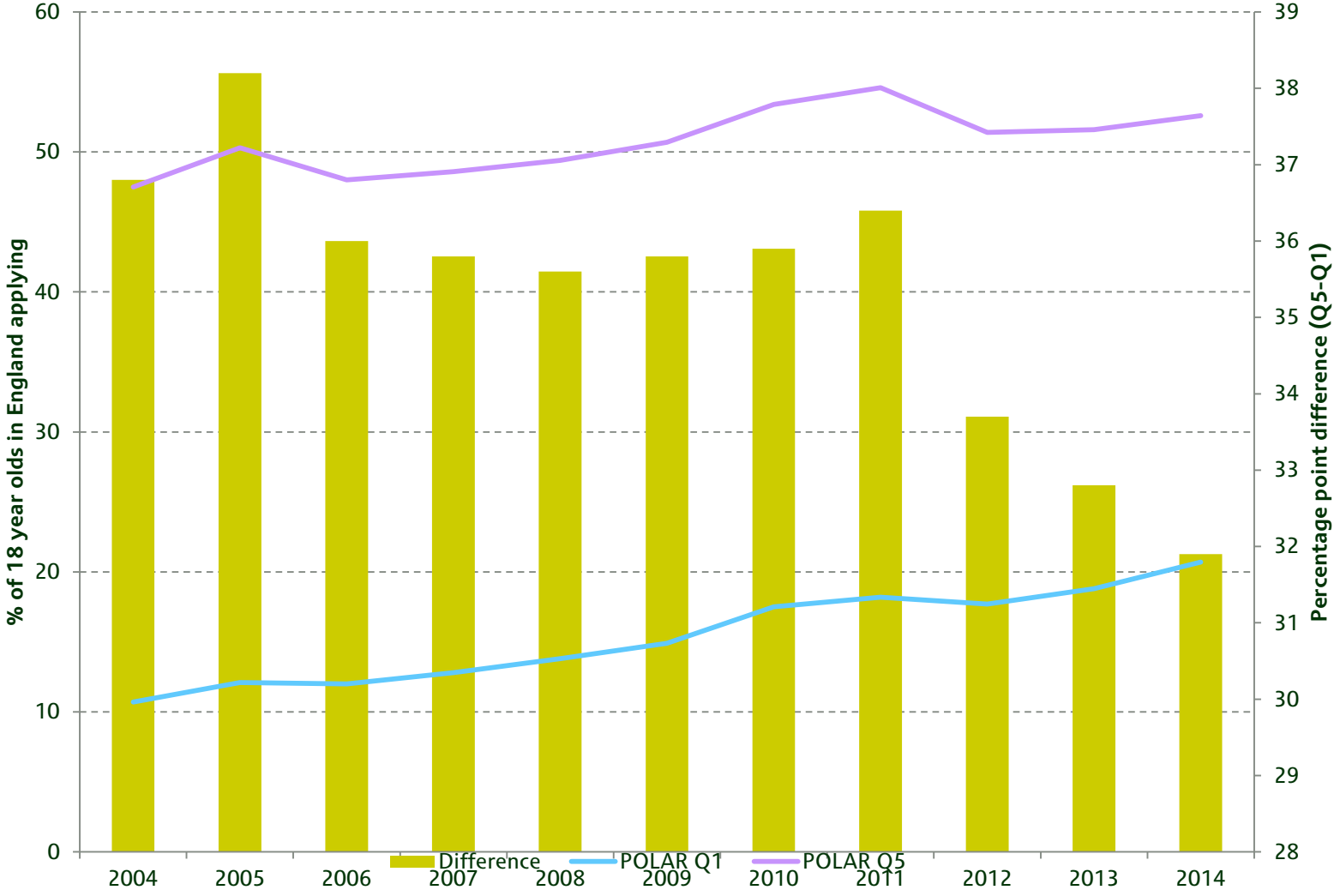
So what does this mean for SES gaps in HE participation and outcomes?

- The participation gap is large, but appears to be mostly explained by prior attainment.
- The attainment gap has decreased so without the reform you might have expected the participation gap to **decrease** as well.
- However, changes to student finance might increase the gap:
  - In theory rational students should not have been deterred by higher fees (in fact they pay back less if their earnings are low)
  - Concerns that prospect of high fees/debt levels would create a barrier to participation for poorer students and hence **increase** SES gaps
- So what have we observed?
  - Evidence at this stage is incomplete.
  - However, the application gap has declined.

The SES gap in university applications



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Summary so far

- Big tuition fee increases have resulted in:
  - More money for universities
  - Higher average cost for graduates, but lower for lowest earning 30%.
  - No big change for taxpayers … but big increase in uncertainty as the certain costs of teaching grants replaced by uncertain costs of loans.
- Large differences in HE participation overall and at high status institutions on the basis of socio-economic status
  - But these gaps can largely be explained by differences in prior attainment between pupils from different backgrounds
  - Suggests that secondary school is a potentially vital period for interventions to "widen" participation in HE
- Little evidence access been affected so far.
  - 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.

Alternative funding options

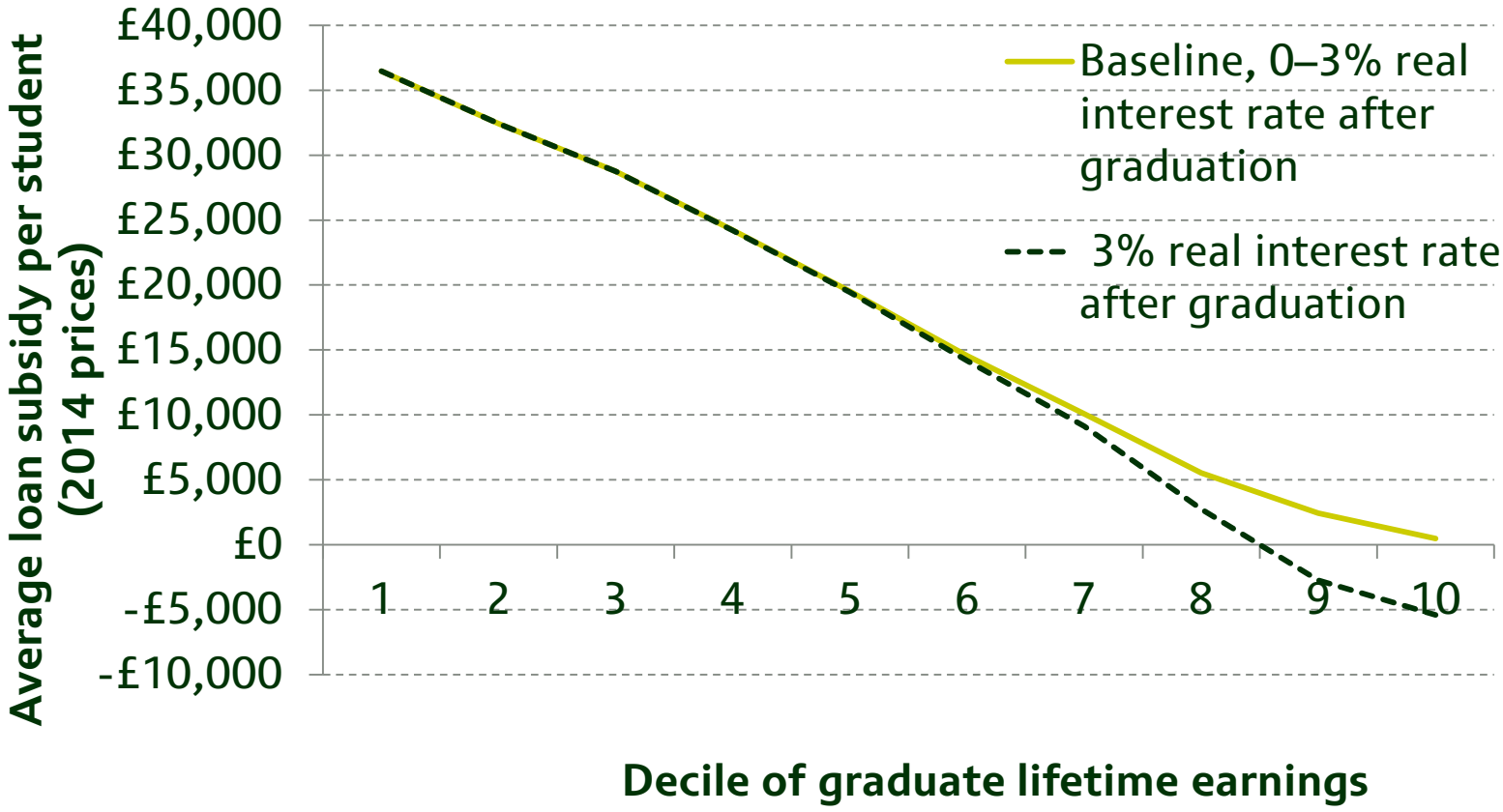
What options are there?

- Graduate Tax
  - Infinite interest rate: unfair?
  - Could have time limited graduate tax (20 years, say)
- Imposing repayment rate on ALL earnings above threshold instead of marginal earnings above threshold
  - Huge cliff edge and very bad incentive wise.
- Extending write off period
  - Only get additional funding from those who haven't paid off loan by 30 years i.e. Those not doing so well in labour market
- Increase interest rates on debt.
- Uprate repayment threshold more slowly.

What options are there?

- We find that each of these options would save money for the government.
  - Subtle changes in the policy parameters have small effect.
  - Graduate tax would save a lot.
- However there are other behavioural factors that become important (potentially crucially important!).
  - Labour supply in later life as you increase the repayment period (retirement is expensive!)
  - Graduate tax may encourage people to go elsewhere or not take out loans.
    - Or universities to privatise.
  - We are already charging the top earners the full cost of their degrees. Should they be charged even more?

Loan subsidy already near zero for high-earners



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Latest policies and issues for thought

- The student number control will be abolished by 2015-16
  - the government estimates this will increase enrolment by 60,000 a year at a cost of £1.4bn a year.
- How much cross-subsidisation do we want across institutions and across subjects?
- If fees stay as they are (£9,000) universities will soon be short of money again!
- Should fees universities receive depend on the earnings of their graduates?
- Interesting caveat: student loans do not count towards public spending as they are loans. But teaching grants do. So policy simultaneously increased funding and lowered the deficit!
  - A graduate tax would mean spending does count…

Questions?

Additional materials 1

	Average loan subsidy per student		Average cost of grants per student	Total taxpayer contribution per student
Baseline	43.3%	£17,443	£7,149	£24,592
Loan take-up				
Random 13% of students do not take out loans	43.3%	£15,175	£7,149	£22,324
Top-earning 10% do not take out loans	48.2%	£17,396	£7,149	£24,545
Loan repayment				
Random 10% repay faster than necessary	42.4%	£17,081	£7,149	£24,229
Top-earning 10% repay faster than necessary	43.5%	£17,512	£7,149	£24,661
5% of graduates cannot be traced after graduation	46.1%	£18,584	£7,149	£25,733

Additional materials 2

	Average loan subsidy per student		Average cost of grants per student	Total taxpayer contribution per student
Baseline	43.3%	£17,443	£7,149	£24,592
Fee levels				
All fees at £9,000[a]	44.2%	£18,320	£7,149	£25,469
All fees at £7,500[a]	40.6%	£14,851	£7,149	£22,000
Fees increase in line with RPI over course	44.1%	£18,215	£7,149	£25,364
Fees £3,000 higher but constant over course	50.1%	£25,070	£7,149	£32,219
Fees increase by £1,000 per year over course	46.0%	£20,161	£7,149	£27,310
Fees £500 higher but constant over course	44.5%	£18,642	£7,149	£25,791

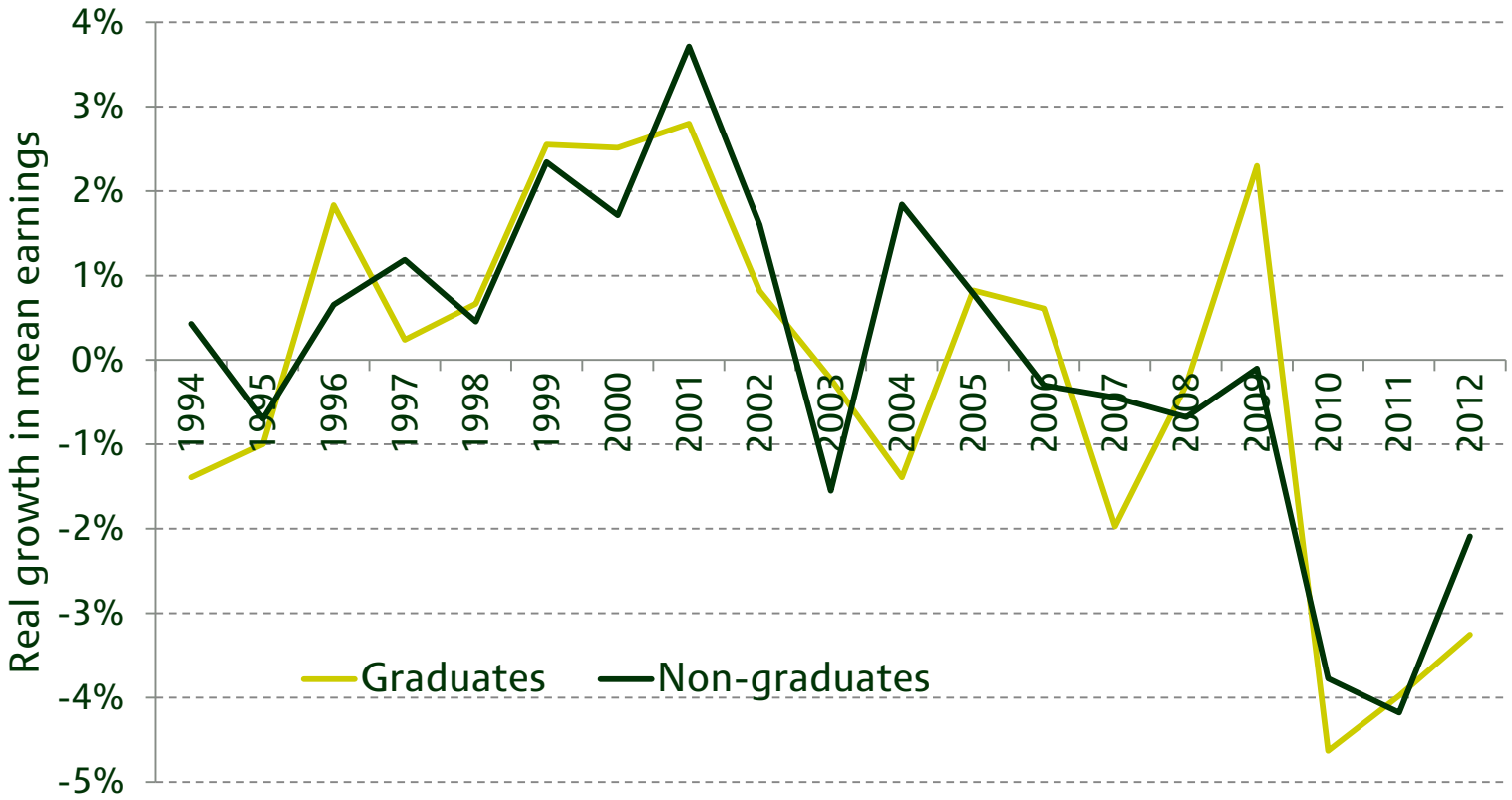
Additional materials 3

	Average loan subsidy per student		Average cost of grants per student	Total taxpayer contribution per student
Baseline	43.3%	£17,443	£7,149	£24,592
Repayment rate				
12%	35.6%	£14,342	£7,149	£21,490
15%	30.9%	£12,454	£7,149	£19,603
Repayment threshold				
Threshold £18,000 in 2016 and uprated by average earnings	36.9%	£14,850	£7,149	£21,999
Threshold £21,000 in 2016 and uprated by RPI	37.5%	£15,126	£7,149	£22,275
Threshold £21,000 in 2016 and uprated by 2% a year	31.1%	£12,511	£7,149	£19,660

Additional materials 4

	Average loan subsidy per student		Average cost of grants per student	Total taxpayer contribution per student
Baseline	43.3%	£17,443	£7,149	£24,592
Interest rates				
Zero real interest rate while studying	45.1%	£18,151	£7,149	£25,300
Zero real interest rate after graduation	50.5%	£20,331	£7,149	£27,480
Real interest rate 0–5% after graduation	38.6%	£15,557	£7,149	£22,706
Real interest rate 3% after graduation	39.5%	£15,918	£7,149	£23,067
Same interest rates as in baseline, but top 10% of earners do not take out loans	48.2%	£17,396	£7,149	£24,545
Real interest rate 0–5% after graduation and top 10% of earners do not take out loans	45.3%	£16,367	£7,149	£23,516
Real interest rate 3% after graduation and top 10% of earners do not take out loans	45.6%	£16,458	£7,149	£23,607

Real growth in average annual earnings of graduates and non-graduates



Note: Average earnings are calculated across individuals aged between 25 and 59 with positive earnings and non-missing highest qualification. Nominal earnings are deflated by the RPI. Source: Labour Force Survey