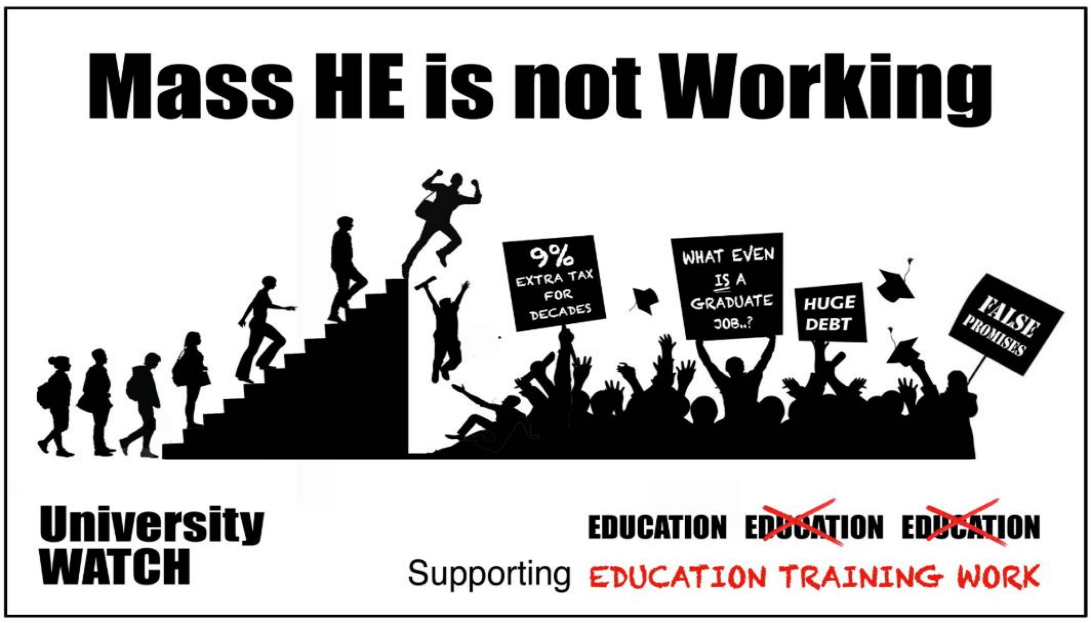


Contents

1 - Why is the average Graduate Premium falling?

"Data provides evidence with which we can make decisions. Without sufficient data, it is hard to fully understand the potential benefits and opportunity costs of participating in higher education. Paul Wiltshire's report demonstrates why we need better insight into the costs and benefits of higher education given that there is evidence of a negative correlation between the percentage of young adults completing higher education and the Graduate Premium. In an independent analysis it was found that a 1% increase in the rate of participation was associated with a 2% drop in the median real Graduate Premium.

"As the average Graduate Premium decreases it is likely that the proportion of graduates achieving very low, or negative, Graduate Premiums will increase. Given the lack of publicly available data, it is not possible to quantify this directly with certainty. The scenario-based analysis in Paul Wiltshire's report reasonably illustrates how the decline in marginal Graduate Premiums might look given the assumptions that he makes.

"This is important work given that there is a significant cost to both the individual for attending university and to the taxpayer for student loan write-offs and course subsidies. Improved reporting and availability of graduate pay premium data would provide better clarity for prospective students and be less prone to misinterpretation and misrepresentation. In particular, there would be benefit to government higher education policy makers ensuring that the data available on the Graduate pay premium can in future be broken down by prior academic attainment as well as the overall average so that the marginal rates of return can be better understood."

Harry Snart, Royal Statistical Society Ambassador & Senior Data Scientist at Oracle

Index

Introduction:

Society has undergone a process of the Massification of Higher Education (Mass HE) since the 1950's where the %HE participation rate has risen from 3% to today's figure of approx. 50%. There is a widely held view that participating in HE will improve career pay earnings yet the overall average Graduate Premium (as defined by the LFS data -see Section 2i) has been falling significantly i.e. From 2007 to 2023, for 21-30-year-olds it has dropped from 35.3% to 21.2% and for 16-64-year-olds it has dropped from 50% to 35.6%.

Despite this drop in overall average graduate premium, the HE sector, as represented by their 'trade body' Universities UK (UUK) continue to advocate for high %HE participation rates and imply in their recently released Spending Review submission that increasing %HE participation further still would be beneficial (1). Their President, Sally Mapstone, was recently quoted re-iterating the view that attending HE was a route to higher earnings (2) and she wrote an article on Wonkhe clearly advocating that entering HE remains worth it (3)

A recent report called 'Are Universities Worth it?' by David Willetts from the Resolution Foundation does recognise that the overall average Graduate premium is falling; and identifies that this is due to marginal candidates gaining a lower premium, but states that this as only a small effect (without quantifying this) and the report effectively concludes that Mass HE should continue unabated (4).

Yet this contrasts with growing concerns & evidence that Graduates are increasingly struggling in the jobs market and that their participation in HE is not proving a financial success. A recent survey by the Office for Students found that 30% of students didn't anticipate a higher salary (5), and four recent Guardian, Telegraph & Financial Times articles are representative of a growing picture emerging across the media highlighting dysfunctional issues with the graduate job market (6).

It is critical to understand the overall financial implications of increasing %HE participation, and to establish an idea of the optimal HE% rate, particularly given that the students themselves are expected to bear the cost of course fees and maintenance costs (and the general taxpayer bears the costs through course subsidies and student loan write-offs). This report sets out to investigate whether it is possible from the existing data available to substantiate the actual extent to which the marginal graduate premium is falling.

There is a general acceptance (as stated in the Willetts report) that as the HE sector draws in candidates with lower prior academic attainment then the career pay returns for those extra graduates compared to non-graduates will be less than that currently being achieved by the existing graduates (the concept of diminishing marginal returns); and thus the overall average graduate premium will reduce over time as %HE participation increases.

In **Section 2**, the report investigates the existing publicly available data in an attempt to investigate the correlation between the graduate premium and prior academic attainment (as measured by A-level & B-tec results / UCAS points) and it discovers that whilst data for

Graduate pay is available in this format, graduate premium data is not available broken down by prior academic attainment.

Section 3 provides an overview of the range of existing reporting about graduate pay and premium and issues with its limitations and misinterpretation.

Section 4 sets out a Scenario-based analysis to quantify the marginal graduate premium (given the absence of an analysis available within the existing reporting as identified in Section 2)

Section 5 lays out the main summary, results & conclusions of the report which demonstrate that the marginal graduate premium has fallen significantly as HE% participation has risen, and that it is estimated that 30% HE participation rate is the likely point where the graduate premium for marginal graduates has on average reduced to zero, hence explaining why the overall average has reduced. It also summarises other identified general problems with the current reporting of graduate pay and premium.

(1) - UUK Spending Review submission extract
https://www.universitiesuk.ac.uk/sites/default/files/uploads/UUK%20Comprehensive%20Spending%20Review%20submission%20Feb%202025.pdf

"All eight growth-driving sectors in the industrial strategy report a higher proportion of graduates than the UK workforce as a whole (50%), and for five of the eight sectors, more than 60% of the workforce are graduates, suggesting higher-level skills are needed for those sectors to further enhance their productivity. To further increase productivity, we propose a target of 70% of the population in England achieving tertiary attainment at level 4 or above by the age of 25 by 2040."

(2) - President of UUK. Sally Mapstone quotation

https://www.theguardian.com/education/2024/sep/17/uk-universities-call-for-higher-fees-and-more-funding-in-face-of-budget-deficits

"Mapstone, the vice-chancellor of the University of St Andrews, said: "It undoubtedly is the case that if you learn more, you earn more, and you have to look at the benefit of university education across a lifetime.

"There is very good evidence that if you go to university in your 20s and in your 30s, you will be earning more than if you didn't"

(3) = President of UUK Sally Mapstone - WONKHE article
https://wonkhe.com/blogs/ignore-the-noise-university-is-overwhelmingly-worth-it-for-most/

"Ignore the noise – University is overwhelmingly worth if for most - Responding to the latest UCAS application data, Universities UK President Sally Mapstone reviews the case for continued growth in HE participation"

(4) 'Are Universities Worth It?' David Willetts, Resolution Foundation
https://www.resolutionfoundation.org/publications/are-universities-worth-it/

"The increase in students is also bringing in people who have a more modest gain from higher education, and so finally bringing down the average return after a long wait when this expected effect did not appear. But that is how expansion works – bringing in people who can gain from higher education even if their gains are smaller than for those already going"

"It pays to go to university. It is striking how well graduate incomes have held up despite such rapid increases in their numbers"

(5) Students Expectations and Experiences of Higher Education - Office for Students

"Whilst most students felt confident about their future prospects, one in three (30 per cent) were not confident their degree would lead to a job with a higher salary compared to if they had not finished a university course"

(6) Recent press articles expressing concerns for Graduates in jobs market
https://www.theguardian.com/money/article/2024/aug/29/uk-graduates-struggle-job-market

Like throwing myself at a wall': UK graduates struggle in 'insane' job market

"Graduates described "soul-destroying" job hunts in many apparently saturated fields spanning months or even years, companies that had "ghosted" applicants who had completed online assessments or taken months to respond, and being unable to land jobs they felt they were overqualified for."

https://www.telegraph.co.uk/news/2024/04/08/time-to-admit-we-need-fewer-students/

Time to admit we need fewer students

"Job opportunities for graduates are now falling faster than other roles. The great university con has been exposed"

https://www.theguardian.com/money/2025/feb/10/britons-hunting-for-a-job-uk-jobseekers-pay

'It's nightmarish': why 1.5m Britons are still hunting for a job

"Despite hopes that gaining a degree would lead to well-paid work, many graduates said they had been forced to take low-paying or part-time positions."

https://www.ft.com/content/c3abb769-f281-4c36-92f5-6f01b868031d

Graduates face an uphill battle to employment

"Recruiters also report that students and employers are contending with a mismatch between the skills they acquire at university and what employers want."

2 - Main existing Graduate Pay & Graduate Premium reports and data sources

There are various attempts made to analyse Graduate Pay by bodies such as HESA, JISC, DfS & IFS. The LFS data is the only one to quantify a Graduate Premium (difference between Graduate pay and non-graduate pay)

2 i - LFS Data - Graduate Labour Market Statistics – (Annual from 2007 in current format, LFS survey from 1973)

https://explore-education-statistics.service.gov.uk/find-statistics/graduate-labour-markets#dataBlock-f546eb7c-c77c-4adb-bb61-567958a1e42a-tables

Data is used from the Office for National Statistics' Labour Force Survey to produce these statistics. However, the ONS have faced challenges around the falling number of responses to the LFS, which has led to increased sampling variability.

This report has both Graduate pay data and Non-graduate pay data, and it uses the phrase **Graduate premium** to describe the average overall graduate pay less the average overall non-graduate pay. However, unlike the LEO report graduate pay data (see 2ii) it is not possible to analyse the data by prior academic attainment.

Nominal salaries; working age and young population

Chart | Table

Median nominal salaries by graduate type: working age and young populations; 2023

	16-64	21-30
Postgraduate	£45,000	£35,000
Graduate	£40,000	£31,500
Non-Graduate	£29,500	£26,000

Footnotes

1. Labour Force Survey data are routinely reweighted in line with population estimates, further details are in the methodology.
2. This release is classified as 'official statistics in development' due to sampling variability from low response rates, impacting the data quality as some figures are calculated using small sample sizes, for more information refer to the methodology.

Long Term Trend Data : Annual nominal median salaries £'K - 2007 - 2023																		
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Increase 2007 to 2023
Working age population (16 - 64 year olds)																		
Graduate	30.0	31.0	31.0	32.0	32.0	32.0	32.5	32.0	32.0	32.0	33.0	34.0	34.0	34.5	36.0	38.5	40.0	33%
Non-Grad	20.0	20.0	21.0	21.0	21.0	21.0	21.5	21.5	22.0	22.0	23.0	24.0	24.5	25.0	25.5	27.0	29.5	48%
Premium	10.0	11.0	10.0	11.0	11.0	11.0	11.0	10.5	10.0	10.0	10.0	10.0	9.5	9.5	10.5	11.5	10.5	
	50%	55%	48%	52%	52%	52%	51%	49%	45%	45%	43%	42%	39%	38%	41%	43%	36%	
Young population (21 - 30 years old)																		
Graduate	23.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.5	25.0	26.0	27.0	27.5	27.5	30.0	31.5	37%
Non-Grad	17.0	18.0	17.5	18.0	18.0	18.0	18.0	18.0	18.0	19.0	19.5	21.0	21.0	21.5	22.5	24.0	26.0	53%
Premium	6.0	6.0	6.5	6.0	6.0	6.0	6.0	6.0	6.0	5.5	5.5	5.0	6.0	6.0	5.0	6.0	5.5	
	35%	33%	37%	33%	33%	33%	33%	33%	33%	29%	28%	24%	29%	28%	22%	25%	21%	

The Long-Term Trend data shows that as Graduate numbers have increased since 2007 then the %Graduate premium is in decline and has fallen from 50% to 36% (16-64year olds) and 35% to 21% (21-30year-olds). This fall is to such an extent that the Median Graduate premium for recent graduates in the 21-30 age bracket is now relatively modest at only £5.5K (£31.5k graduate less £26k non-graduate).

2 ii - LEO Graduate and Postgraduate Outcomes - Annual from 2016

https://explore-education-statistics.service.gov.uk/find-statistics/leo-graduate-and-postgraduate-outcomes#explore-data-and-files

The LEO dataset links information about students, including;

- personal characteristics such as sex, ethnic group and age
- education, including schools, colleges and higher education institution attended, courses taken, and qualifications achieved

"It is created by combining data from numerous sources including data held by DfE, HESA , HMRC & DWP. By combining these sources, we can look it can analyse the progress of higher education leavers into the labour market. "

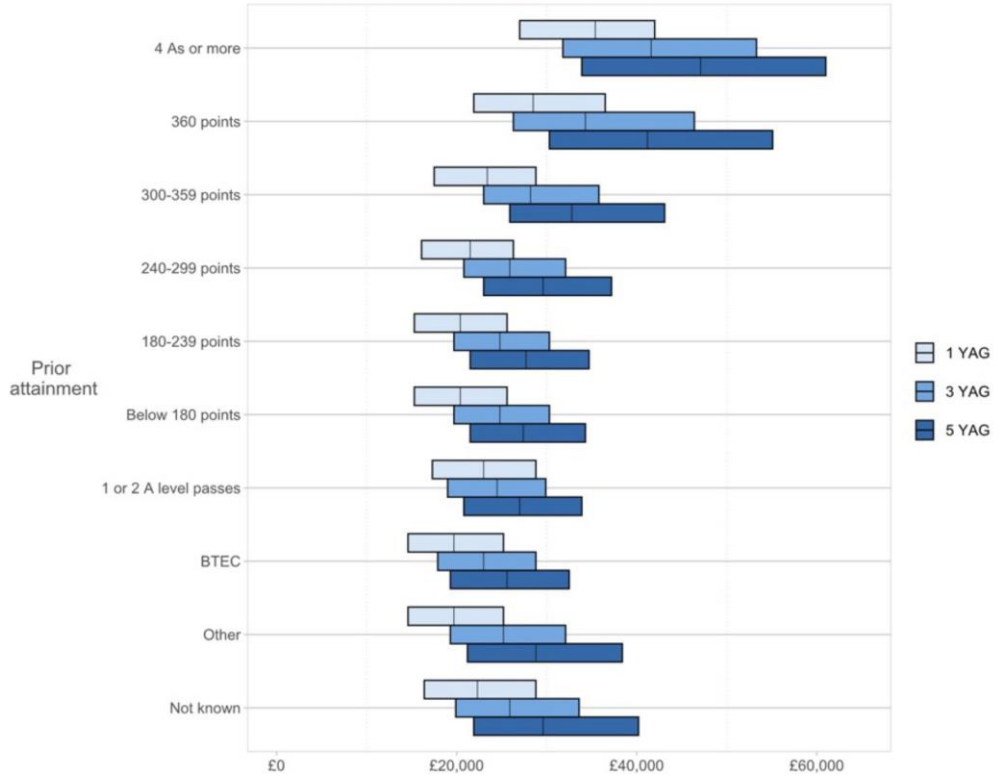
The LEO deserves credit for the way in which the data can be analysed over many different variables and crucially this includes prior academic attainment information so that Graduate pay data can be broken down by this pre-existing attribute. However, the dataset is only for Graduates, so it can't be used to demonstrate Graduate premium (i.e. Graduate pay compared to non-Graduate pay).

The median average earnings of Graduates are shown after 1 year, 3 years and 5 years from Graduation, and this can be broken down by groupings of prior academic attainment based on UCAS points. The below two charts demonstrate the strong correlation between prior academic attainment and pay outcomes. e.g. Five years after graduation, graduates with 4 A's at A-level have a median average salary of £47,100 which is almost double that of graduates with less than 300 points (equivalent of 3 B's) which ranges from £25,600 to £29,600.

Conversion between A level grades and point scores

A level grade	Point Score
A or A*	120
B	100
C	80
D	60
E	40

Earnings of young (under 21 at start of course) first degree graduates by prior attainment, one, three and five years after graduation, UK domiciled graduates from English HE providers, 2021/22 tax year



5-year data broken down by Prior Academic Attainment

https://explore-education-statistics.service.gov.uk/data-tables/fast-track/89d98e63-43cf-472a-179d-08dc860d77b3

'Underlying data' for 1 or 2 A level passes, 180-239 points, 240-299 points, 300-359 points, 360 points and 10 other filters in United Kingdom for 2021-22

	2021-22			
	Graduates included in earnings figures	Lower quartile of earnings of graduates	Median earnings of graduates	Upper quartile of earnings of graduates
Total	159,675	£23,000	£30,300	£40,200
4 As or more	6,100	£33,900	£47,100	£61,000
360 points	14,545	£30,300	£41,200	£55,100
300-359 points	38,150	£25,900	£32,800	£43,100
240-299 points	33,155	£23,000	£29,600	£37,200
180-239 points	14,755	£21,500	£27,700	£34,700
Below 180 points	1,840	£21,500	£27,400	£34,300
1 or 2 A level passes	12,170	£20,800	£27,000	£33,900
BTEC	22,100	£19,300	£25,600	£32,500
Other	7,575	£21,200	£28,800	£38,400

2 iii - HESA Graduate Data Outcomes & Statistics - Annual from 2018

Graduate Outcomes is a national survey, now in its fifth year of publication, of students completing courses of higher education (HE). It seeks to survey the entire graduate population of the UK 15 months after graduation. It is the largest annual social survey in the country with a response rate of approximately 40% and is run by the Higher Education Statistics Agency (HESA), now a part of Jisc. As per the LEO report, this dataset only relates to Graduate pay and not Non-graduates pay, so it is not possible to assess Graduate premium. It collects data that is broken down as follows: -

Graduate outcomes by activity, sex, age group, disability status, ethnicity, country of provider, domicile, provider type, level of qualification obtained and mode of former study, interim study and academic year.

https://www.hesa.ac.uk/data-and-analysis/graduates/release.

A key figure for the 21/22 report released in June 24 was: -

"The median salary of UK domiciled graduates from full-time first degree courses in full-time paid employment was £27,500 compared to £26,000 the year before".

But because data is not collected about the pre-existing attribute of prior academic attainment, it is not possible to further analyse how the median salary may correlate with prior academic attainment. i.e. Whether and by how much median pay might be higher for those with higher prior academic attainment compared to those with lower.

2 iv - The Impact of Undergraduate Degrees on Lifetime Earnings – Institute for Fiscal Studies (IFS). Feb 2020

This was a one-off report commissioned by the Department for Education and was carried out by the IFS to "*improve information on the value of higher education (HE) degrees".* The report was published five years ago, and it is based on English domiciled graduates from the mid 2000's, i.e. 20 years ago which was from an era when the %HE participation was around 30% - 35% and a lot lower than today's approx. 50%. However, it is still regularly quoted today as if it has lost no relevance for today's potential students deciding whether to enter HE, nor has it lost any influence in deciding policy on the success or otherwise of HE and the optimum % for HE participation.

The model attempts to compare the lifetime career earnings of individuals with similar pre-existing attributes for those who attend HE and those whose don't by drawing upon many data sources. However, they recognise that as with any statistical model, it will not be possible to allow for all factors. The authors of the report accept that attempting to build a model that measures lifetime earnings is complicated as can be seen by the example below of a typical complex calculation in the report and a selection of direct quotes from the report: -

Example of formula demonstrating the complicated nature of report

$$\hat{P}(E_{i,a} = 1 | E_{i,a-1} = 0, E_{i,a-2} = 0) = \frac{1}{N^{II}} \sum_{i=1}^{N^{II}} E_{i,a} 1(E_{i,a-1} = 0) 1(E_{i,a-2} = 0)$$

Examples of direct quotes from report

"This is a difficult and somewhat imprecise exercise"

"*The resulting estimates are subject to several sources of uncertainty"*

*"the LEO data set provides very rich background information on students, and therefore allows us to control for the influence of a large array of confounding factors**, it is possible that there are remaining unobservable factors** that influence both degree choice and earnings. This would skew 6 our estimates to some extent."*

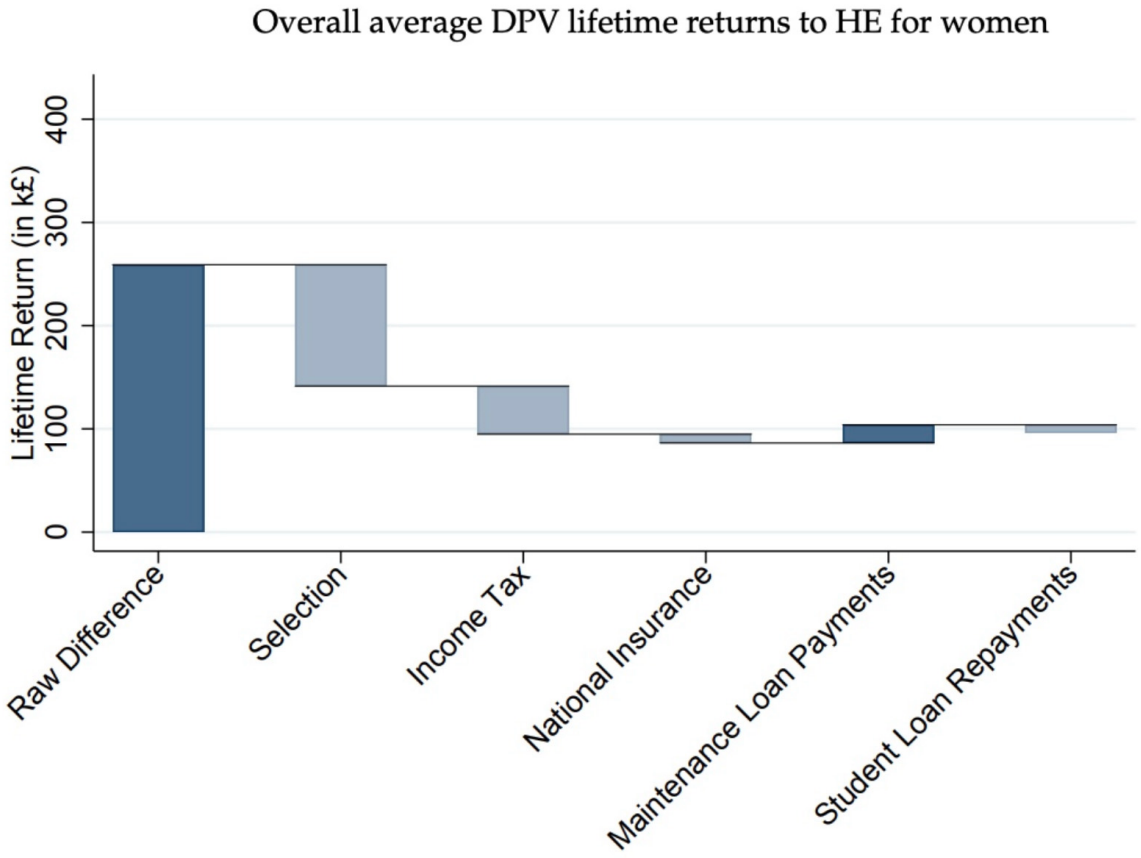
So any model of this nature is inevitably based on many, sometimes sweeping, assumptions. However, the over-arching impression of the report to the layman reader (which includes the media and politicians) is that the report is a 'definitive' exercise in demonstrating the career lifetime earnings of graduates compared to non-graduates and can be unquestionably relied upon.

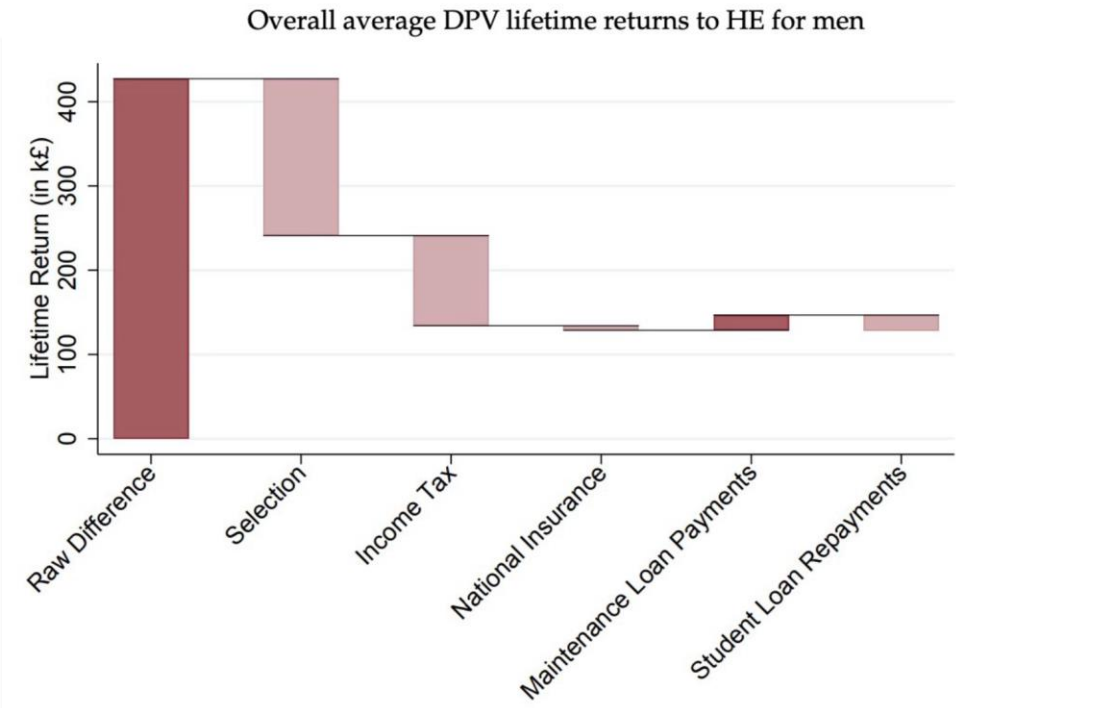
The main findings of the report are that the average lifetime extra earnings for a Male graduate are £130k and Female £100k. These figures are still regularly quoted today as if it is a statement of absolute fact for existing students despite the caveats in the report (see below quote and those above) that clearly state that the findings are 'speculative': -

*"In general, it should be noted that this and the following two sections are the most speculative parts of the report…… **6.1 Overall lifetime returns.** With this caveat in mind, we estimate that the overall average*

discounted present value (DPV) of enrolling in an undergraduate degree is around £100k for women and £130k for men."

Below are two graphs from the report summarising the breakdown of the overall average Male & Female lifetime returns (note this is the Mean average and not the Median which is far lower at £70k)





Note: All figures are shown in 2018 prices and are discounted using Green Book discounting. The first bar shows the difference in raw earnings between those who did not attend HE, but have a KS5 record and at least five A*–C GCSEs, and those who started an undergraduate degree. The second bar shows how much of this difference in earnings is accounted for by differences in prior attainment and background characteristics. We then account for the extra income tax and National Insurance payments from graduates. The penultimate bar adds on the net present value of the maintenance loans payments received by students, and finally the last bar takes into account the net present value of student loan repayments over the life cycle. Dark red bars indicate additions and light red bars reductions.

Any layman reading the IFS report in detail will simply have no way of reviewing how the model has been built and how the various data sources have been analysed as it requires an expertise in Statistics. However, there are four issues that could fundamentally change the results and as such alter the conclusions drawn by the report: -

Issue 1 - The report is out of date with regards to recent increases in %HE participation

The report is based on graduates from the mid 2000's when %HE participation was around 30-35%, and even then, it found that 20% achieved negative lifetime earnings. Now that %HE participation is around 50%, given that the extra graduates will be those from lower prior academic attainment, then the increase in those suffering negative lifetime earnings for the current graduates is likely to be far higher than 20%.

Issue 2 - Maintenance Loan payments and Student Loan repayments.

i/ The model treats the Maintenance Loan payments that Students receive as income. But they have not taken into account that all of this will be spent on the extra cost of supporting yourself whilst being a student, particularly as the majority will be living away from home with extra rent, utility bills, transport costs, food etc. to pay for, that most people not attending HE will not have to pay as they will be living at home. So surely the model also needs to include the corresponding living costs that students have to bear i.e. At least £10k

per year which would reduce both these overall lifetime earnings figures by £30k which is a material amount. Or alternatively it shouldn't include maintenance payments as income at all; but to include one without the other would arguably appear to be a significant modelling issue.

ii/ The student loan fee repayment element in these graphs is shown at approximately £10k for women and £20k for men. This is quite low given that the average loan is now about £45k and must assume a very high level of non-repayment.

The net effect in this model of these two factors on the lifetime cost of becoming a student is that instead of a cost, Women actually show positive lifetime earnings from Maintenance income less Loan repayment, and Men show a zero cost as they cancel out. However, the true overall cost of a three-year degree is about £60k (cost of living away from home & tuition fees). Some of this is borne by the student directly by enduring 9% extra tax on earnings over £30/£25K for 30 or 40 years and some borne by the general taxpayer in loan write-offs. So for this model to show that there is no cost at all to the individual average graduate associated with attending university (or even a positive income for Women) is questionable.

Issue 3 - Mean Vs Median Average

Quote from Report *"However, these averages hide substantial heterogeneity. We expect the 10% of women with the highest returns to gain more than £350k on average, but around 15% of women not to get a positive return from their degree at all. For men the differences are even larger: we estimate that the 10% of men with the highest returns will gain more than £700k on average, but around a quarter of men will have negative returns. As shown in Figure 43 in Appendix C, median net lifetime returns to undergraduate degrees are around £70k for both women and men."*

Unlike the other three reports above (LEO, HESA & LFS) the IFS report chooses to prioritise reporting the Mean average rather than the Median Average. The quote above clearly admits that the typical problem with the Mean average (i.e. That the average can be skewed by a relatively small number of extreme values, high or low) is relevant with this dataset. It states that 10% of the highest earners have very large extra lifetime earnings which has had the effect of driving up the mean value to £130 / £100K compared to the median average of only £70k. So it is a questionable decision for this report to decide to major on publishing the higher Mean average rather than the lower Median average

Issue 4 – Breakdowns of Lifetime earnings dependent of Degree course and provider are shown, but there is no breakdown by prior academic attainment

The report breaks down the average dependent on degree subject and also HE provider type, but does not provide a breakdown dependent on pre-existing attributes of prior academic attainment. It is not totally clear whether the data sets used make this possible, but considering that the report findings are that 25% or men and 15% of women are actually worse-off, then it would be a very useful exercise to analyse the data by prior academic attainment to check for a correlation which is critical data to understand the optimal %HE attendance.

If the above four issues were taken into account this would then mean that the data could be interpreted in a different way – i.e. With the Median shown rather than the Mean, with a different deduction for the cost of Maintenance costs and Tuition fees & a breakdown by prior academic attainment rather than just the overall average. The average extra lifetime earnings will be showing as far less than the current £130 / £100K and will be around £50k or less. And there would be far more graduates who would show a negative effect on lifetime earnings. And if the study was based on today's %HE attendance at 50% (rather than the mid 2000's at 30-35%), then the numbers achieving a negative effect would likely be far higher again as the extra candidates would be drawn from those with lower prior academic attainment.

3 - Existing Graduate Pay & Graduate Premium Reports - Various Issues

3 i - The mere existence of an overall average Graduate Premium is misleading

The existence of an overall average Graduate premium as defined by the LFS data is inevitable no matter what the level of %HE participation and means nothing more than the below: -

"Given that we have set up society so that the vast majority of the most academically able & ambitious young adults go to University & that it has been made virtually essential to gain a degree for most high paid jobs; then when you calculate the overall average pay of graduates compared to overall average pay of non-graduates, then it will inevitably show a graduate premium no matter what the rate of %HE participation"

However, the format of the existing reporting is leaving the data wide open to mis-interpretation. The mere existence of an overall average Graduate premium (even when it continues to fall) is often mis-read incorrectly in a number of ways: -

-As an indicator that HE is a financially good thing for all and that all school leavers should aspire to enter HE.
-That the current high %HE participation rate is wholly beneficial and in fact should continue to rise.
-That spending three years in HE before entering the work force is the best form of education / training for 18-year-olds to unlock their potential in their future careers (as opposed to on-the-job education / training)
-That the actual process of studying for a degree in a particular subject, is the main causational factor for all future career earnings.

3 ii - Lack of Breakdown analysis by prior academic attainment

In order for Graduate premium reporting to be have any useful meaning, then it needs to compare like for like - i.e. What Is the pay of a graduate who achieved 3 C's at A-level compared to a Non-graduate who achieved 3 C's at A-level.

It is misleading to just report the overall average Graduate premium as described in **3 i**, as the figure obtained by using this method is a function of the inevitable consequence of the fact that those with higher prior academic attainment, and thus likely to earn more due to this pre-existing attribute, disproportionately attend HE. So a breakdown by prior academic attainment is essential to be able to properly understand and interpret the graduate premium.

Without a breakdown by prior academic attainment, the existing reports do not directly answer one particular critical question i.e. As the %HE participation rate is increased, then what are the marginal graduates (drawn increasingly from those with lower prior academic

attainment) achieving in terms of Graduate premium. To best way to achieve this would be to analyse Graduate premium data by prior academic attainment*, not just by overall average. This breakdown would enable a judgment to be made about what is the societal optimal % attending HE.

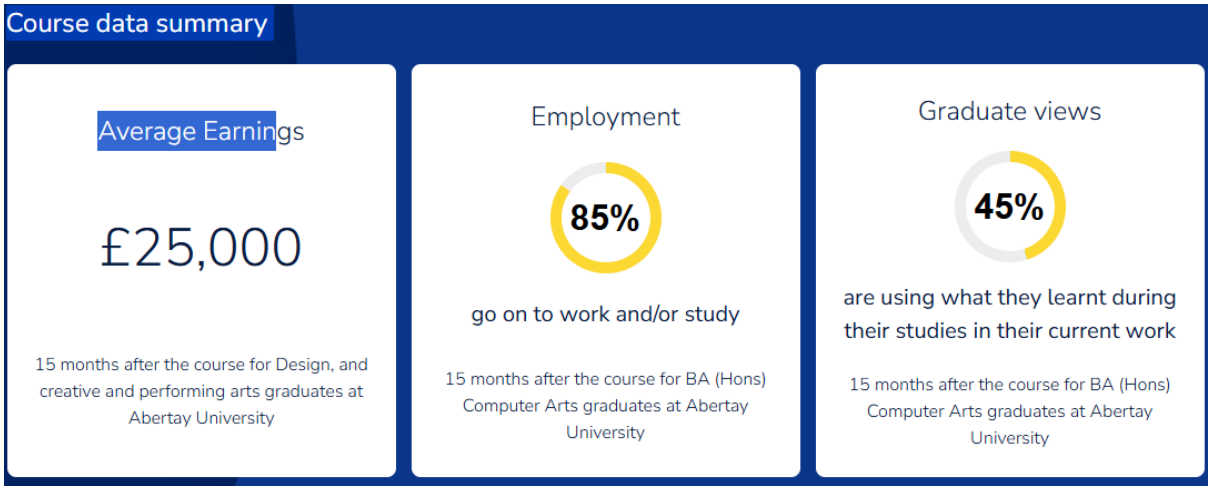
*- This is because it is a secure assumption that there will be a very high correlation between HE% participation and prior academic attainment i.e. As the HE% participation rate rises, then the marginal graduates are likely to be mostly drawn from those with the increasingly lower prior academic attainment.

But the existing reports are currently deficient in that none of them breakdown the Graduate Premium by prior academic attainment (though the LEO data does break down Graduate pay by prior academic attainment).

3 iii - Causation vs Correlation

The reports give the impression that the Degree subject or HE provider is the main causation reason for career earnings for that graduate years after graduating or even their whole career. Whereas it is also the case that those graduates who choose a certain course at a certain university are likely to have quite a significant level of correlation to certain pre-existing attributes such as level of prior academic attainment. E.g. It can be more the case that the Graduate premium for those who have completed say a History degree at Nottingham Spa university isn't so much to do with the fact that they have completed this particular course, but more to do with correlation of the pre-existing attributes of those who are likely to choose this particular course in the first place.

This is particularly the case with regards to the layout of the information provided on the Government's Discover Uni website which uses both the HESA Graduate outcomes survey and the LEO data in an attempt to show for each course the pay outcomes. See below extract example from the Discover Uni website: -



Whereas the causation effects on any individuals career earnings will also be attributed to their pre-existing attributes of: -

Innate Academic ability
Ambition
Conformity
Work ethic
Personality & Character suitability for engaging in joint enterprise within the workplace
Innate Aptitude for any given career

The name 'Graduate Premium' (as used in the LFS data - graduate labour market statistics reporting) contributes to giving the impression that being a Graduate is the main causation effect and it would be arguably be better called 'Academic ability premium'. The reports on Graduate Pay and Graduate premium should also provide a break down in accordance with the main consequential pre-existing attributes. The best measure currently available is prior academic attainment (as measured by A-level results / overall UCAS points). This will determine how much of higher career pay is simply down to a correlation to these pre-existing attributes compared to the causation effect of spending three years extra in academic study as opposed to entering the work force as an 18-year-old school leaver.

3 iv - Existing reports as indicator of whether enrolling in HE is best way to unlock a young adult's career pay potential.

In general terms, any 18-year-old school leaver's career pay outcomes are a combination of their pre-existing factors (as listed above) and the opportunities open to them for ways of entering the work force and developing their career potential; be that entering HE or other work-based opportunities

The existing reports do not measure whether entering HE is the best method to unlock the pay potential of a school leavers career as opposed to the alternatives of in-work education and training & whether this would be more or less effective at un-locking career pay prospects.

E.g. Career opportunities whereby employers were encouraged to employ more 18-years-olds (as opposed to waiting to employ 21-year-old graduates instead) so they could then gain an extra 3 year's work experience and continue their educational development by various forms of on-the-job learning & training, informal and formal apprenticeships & generally learning from experienced colleagues.

Increasing however, as HE% participation has risen, then entering HE is being seen as the default option, and 18-year-olds are simply applying to HE as the 'only' viable option: -

https://www.telegraph.co.uk/politics/2023/08/19/university-gillian-keegan-education-secretary/

'People go to university because they don't know what else to do', says Education Secretary
Gillian Keegan is concerned that higher education is simply a default position for parents, teachers and students"

Evaluating data on how on-the-job training/education compares to 3 years in HE as differing methods of providing opportunity for young adults will be challenging and likely have to rely initially on survey data gauging employers and employees actual experiences till we have a reliable evaluation of the effectiveness of degrees compared to alternatives.

3 v - Lack of robust data about the actual Practical use of the Degree subjects studied in Graduates future careers

None of the existing reports explore fully the specific extent to which the degree subject matter is related to the actual specific jobs that graduates end up performing. The HESA Graduate Outcomes survey report does make an attempt at this by asking the graduates how much they are using their course in their careers. This data is then used in Discover Uni for each course – see extract above – Graduate views.

This is a 'weak' form of evidence -i.e. a Middle manager in the retail sector may well state that their degree in Economics was useful in the HESA survey, but in reality, we have no measures of how much of what they have studied genuinely educated them in performing their role. The existing reports do not inform about whether they would have done just as well as a retail sector middle manager if they had become a trainee manager as an 18-year-old school leaver instead of doing an Economics degree first (and avoided the significant cost of enrolling In HE for 3 years).

There is already strong evidence anecdotally and from the Jobs market that the subject of the degree course is more often than not, not of interest to the employer. i.e. The Institute of Student Employers' 2023 Student Recruitment Survey found that only 19 per cent of adverts for graduate jobs stipulate a specific degree subject as a requirement. So it may be that the degree is more being used as a filter to indicate prior academic attainment, rather than as having any intrinsic value relating to the actual subject matter. And this is despite the apparent increase in degrees aimed at specific careers (Media studies, Drama, Archaeology, Forensic Science, Gaming, Photography, Agriculture, Animation, Animal behaviour, Sports science etc)

More robust information about the actual practical use of courses would be essential should the Govt decide to put a limit on numbers on each course subject. When the cost of HE is so significant, then it should be seen as essential to have data that demonstrates the extent to which Graduates are specifically utilising what they have learned in HE in their later careers. If only 19% of employers who advertise a 'graduate' role care what type degree you have got, then a high number of Graduates are likely to end up working in roles that have little or nothing to do the content of what they studied as a student.

4 - Scenario Based Analysis of the Graduate Premium of the extra participants as %HE participation rises based on LFS data

The Willett's report states that the premium for the extra candidates naturally diminishes as %HE participation rises (the concept of diminishing marginal returns), but it doesn't attempt to quantify and prove by how much.

Given that existing reports do not show graduate premium data based on prior academic attainment (as established in Section 2 and discussed in Section 3), it is necessary to create a Scenario based analysis that predicts the graduate premium for the extra candidates. This can be based on scenario analysis of the actual findings from the LFS data from 2007 to 2023.

The LFS data shows that during the period 2007-2023 the % graduate premium has fallen from 50% to 35.6% (16-64year olds) and 35.3% to 21.2% (21-30year-old) – see section **2 i** above. During this period the %HE participation rate has risen significantly and the scenario analysis below (ignoring inflation) is an analysis of what the premium of the marginal graduates would have to be to produce this magnitude of drop in Graduate premium.

The analysis works on the basis that you start out with two populations in 2007 and as HE% participation rates rises, in 2023 you create a third population. i.e.

2007 - Population 1 **- Graduates**
Population 2 - **Non-graduates**

2023 - Population 1 **- Existing Graduates** who would have been graduates when HE% rates were lower
Population 2 - **Marginal Graduates** who would have previously been non-graduates when %HE was lower but have now become graduates
Population 3 - The **Remaining non-graduates** who would have also have been non-graduates when %HE was lower.

And then you apply a % fall or increase in the pay of these three 2023 populations in order to produce various % fall/increase scenarios that are necessary to achieve the actual observed % drop in overall average graduate premiums

There are unlimited scenarios that can be tested, but the below two spreadsheet tables show examples of two such scenarios for each of the age ranges. Scenario's 2 & 4 are deemed the most likely reasonable scenarios for the changes in pay for these three populations to fit the required drop in observed actual overall average premium given the average %HE participation rise.

Scenario Analysis calculating the Graduate Premium % of Marginal graduates as HE% participation increases

16-64 year olds

Actual Outcomes in 2007 & 2023 based on LFS	**2007**	**2023**
Graduate	£30.0	£40.0
Non Grad	£20.0	£29.5
Premium	£10.0	£10.5
% Premium	**50.0%**	**35.6%**
Average %HE Participation rate for age range at ave time they graduated in 2004 (ie. Based on the average 40 year old within range 16-64)	15%	30%

	2007 Actual		**Existing Graduates & Remaining Non-Graduates**			**Marginal Graduates**			**Hypothetical Overall 2023 ignoring inflation**	
				Increase / Decrease % in average pay - Variable	Ave		Increase / Decrease % compared to Existing Graduates - Variable	Ave	%HE Average	Ave
	% HE Average	Ave pay								
Scenario 1 - Keeping Existing pay the same and only changing Marginal graduates pay										
Graduates	15%	£30.0	15%	0.0%	£30.0	15%	-19.2%	£24.2	30%	£27.1
Non graduates	85%	£20.0	70%	0.0%	£20.0				70%	£20.0
Premium		£10.0								£7.1
% Premium		**50.0%**								**35.6%**
Average Pay - Whole Population		£21.5								£22.1
Check figure - to ensure variance isn't too high										
Scenario 2 - Most Likely Scenario - Decreasing pay for Existing graduates slightly to allow for competition from Marginal graduates & decreased pay for remaining non grads slightly to allow for loss of higher earning non-grads who have become graduates										
Graduates	15%	£30.0	15%	-3.7%	£28.9	15%	-17.0%	£24.0	30%	£26.4
Non graduates	85%	£20.0	70%	-2.5%	£19.5				70%	£19.5
Premium		£10.0								£6.9
% Premium		**50.0%**								**35.6%**
Average Pay - Whole Population		£21.5								£21.6
Check figure - to ensure variance isn't too high										

Scenario Analysis calculating the Graduate Premium % of Marginal graduates as HE% participation increases

21-30 year olds

Actual Outcomes in 2007 & 2023 based on LFS	**2007**	**2023**
Graduate	£23.0	£31.5
Non Grad	£17.0	£26.0
Premium	£6.0	£5.5
% Premium	**35.3%**	**21.2%**
Average %HE Participation rate for age range at ave time they graduated in 2018 (ie. Based on the average 26 year old within range 21-30)	30%	45%

	2007 Actual		**Existing Graduates & Remaining Non-Graduates**			**Marginal Graduates**			**Hypothetical Overall 2023 ignoring inflation**	
				Increase / Decrease % in average pay - Variable	Ave		Increase / Decrease % compared to Existing Graduates - Variable	Ave	%HE Average	Ave
	% HE Average	Ave pay								
Scenario 3 - Keeping Existing pay the same and only changing Marginal graduates pay										
Graduates	30%	£23.0	30%	0.0%	£23.0	15%	-31.3%	£15.8	45%	£20.6
Non graduates	70%	£17.0	55%	0.0%	£17.0				55%	£17.0
Premium		£6.0								£3.6
% Premium		**35.3%**								**21.2%**
Average Pay - Whole Population		£18.8								£18.6
Check figure - to ensure variance isn't too high										
Scenario 4 - Most Likely Scenario - Decreasing pay for Existing graduates slightly to allow for competition from Marginal graduates & decreasing pay for Marginal graduates										
Graduates	30%	£23.0	30%	-2.6%	£22.4	15%	-24.1%	£17.0	45%	£20.6
Non graduates	70%	£17.0	55%	0.0%	£17.0				55%	£17.0
Premium		£6.0								£3.6
% Premium		**35.3%**								**21.2%**
Average Pay - Whole Population		£18.8								£18.6

Analysis of 16–64-year-old scenarios

Scenario 1 indicates that when you increase the %HE participation from 15% to 30% (see Assumptions below) then the fall in overall graduate premium (50% down to 35.6%) is consistent with the Marginal 15% of graduates getting an average graduate pay reduced from £30k to £24.2K assuming that pay for existing graduates & remaining non graduates remains the same.

Scenario 2- Most Likely - The existing 15% of graduates will achieve slightly less pay as they will have to compete with the extra reasonably high academic marginal graduates being added. So this shows a difference in resulting pay for marginal graduates of £28.9 to £24.0 to achieve the observed drop of overall average premium to 35.6%.
The average pay for the remaining non graduates will drop from £20k to £19.5k on the basis that the 15% marginal graduates who have switched from non-grads who switch to graduates will largely be from non-grads with higher prior academic attainment and will be likely higher than average earners from within the existing non-grad population.

Analysis of 21–30-year-old scenarios

Scenario 3 shows that when you increase the %HE participation from 30% to 45% (see Assumptions below), then you need to reduce the pay of marginal graduates to £15.8 which is actually less than the pay of the non-grads to be consistent with the overall average premium coming down to 21.2%. This model assumes that the pay for the existing graduates and remaining non grads remains the same.

Scenario 4- Most Likely The existing 30% graduates will achieve slightly less pay as they will have to compete with the extra reasonably high academic marginal graduates being added. This shows that the pay of the marginal graduates will be the same as non-graduates to achieve the observed drop of overall average premium to 21.2%. i.e. No graduate premium for marginal graduates.
Unlike scenario 2 from the 16-64-year-old models, both of these models assume that the remaining non-graduates average pay remains the same. This is because the non-grads who convert to graduates as %HE participation rises will be more drawn from more average earners from within the non-grad population.

Using these most likely scenarios from the modelling, it is now possible to breakdown the overall 2023 LFS average Graduate premium data (average of premiums of £5.5k & £10.5 for the two age ranges), into bands of graduates according to the %HE participation levels in the below table: -

Breakdown of overall 2023 average graduate pay based on most likely scenario analysis 2 & 4					
LFS Data 2023	Actual overall average		Estimated Breakdown by graduates into bands of incremental %HE participation		
21-30 Year olds	Based on %HE participation at average age 26 and graduation year 2018 for age range = 45%				
			0-15%	15-30%	30%-45%
Graduate	£31.5		£37.4	£31.1	£26.0
Non Grad	£26.0				
Premium	£5.5				
% Premium	**21.2%**				
16 - 64 Year olds	Based on %HE participation at average age of 40 and graduation year 2004 for age range = 30%				
			0-15%	15-30%	
Graduate	£40.0		£43.7	£36.3	
Non Grad	£29.5				
Premium	£10.5				
% Premium	**35.6%**				
Example of banding definitions					
0-15% Range defined as graduates who would					
still have been graduates if the HE% range was 15%					

The tables above demonstrate that just publishing the overall average (as is currently the case with the LFS data) masks the phenomenon of diminishing pay for the extra marginal graduates added as %HE participation rises: -

21–30-year-olds - The first 15% participants (drawn from those with higher prior academic attainment) will achieve an average pay of £37.4k, the next 15% will achieve less at £31.1, and the remaining 15% (drawn from those with lower prior academic attainment) will achieve an average of £26k, i.e. the same as non-graduates.

16–64-year-olds - The first 15% participants (drawn from those with higher prior academic attainment) will achieve an average pay of £43.7k, the next 15% will achieve less at £36.3k.

Despite the inevitable assumptions and limitations of this analysis (see **4 i** below) it is undoubtably clear that the falls in graduate premium from 2007 to 2023 are unlikely to be explained by just a 'small' drop in premium for the extra marginal graduates (as stated in the Willetts report) but can only be described as substantial drops for the marginal candidates.

4 i - Main assumptions and limitations of this scenario-based analysis and consequent relatively wide margins of error

Given the dual limitations of i/ the lack of data available and ii/ the necessarily broad-brush nature of the assumptions of this analysis (some of which are listed below) , then it would be reasonable to accept a relatively wide margin of error that the %HE participation convergence point where the average premium for marginal gradautes is within + / - 5% of 30% i.e. 25% to 35%.

A - The calculations within the scenario analysis have treated the median average of the graduates and non-graduates as if they will 'act' like the mean average when the pay changes for the constituent parts of the populations as HE% participation rates change. It is assumed that this will not make a material difference.

B - An estimate has been made of the %HE participation rate within the age ranges based of the average participation levels when the graduates left HE
e.g. A graduate aged 45 in 2007 is likely to have left HE aged 21 in 1983

		Average age	2007 Data - Average year left HE	2023 Data - Average year left HE
21-30 year olds		26	2002	2018
16-64 year olds		40	1988	2004

There are various conflicting data sources for %HE participation over the last 40 years.
A nominal linear 15% increase has been assumed over both the 16-year periods (i.e. 1988 to 2004 & 2002 to 2018, 15% to 30% & 30% to 45% respectively) which is a reasonable broad-brush assumption based on the generally accepted view that HE% participation increased from approx. 15% in 1988 to 45% by 2018.

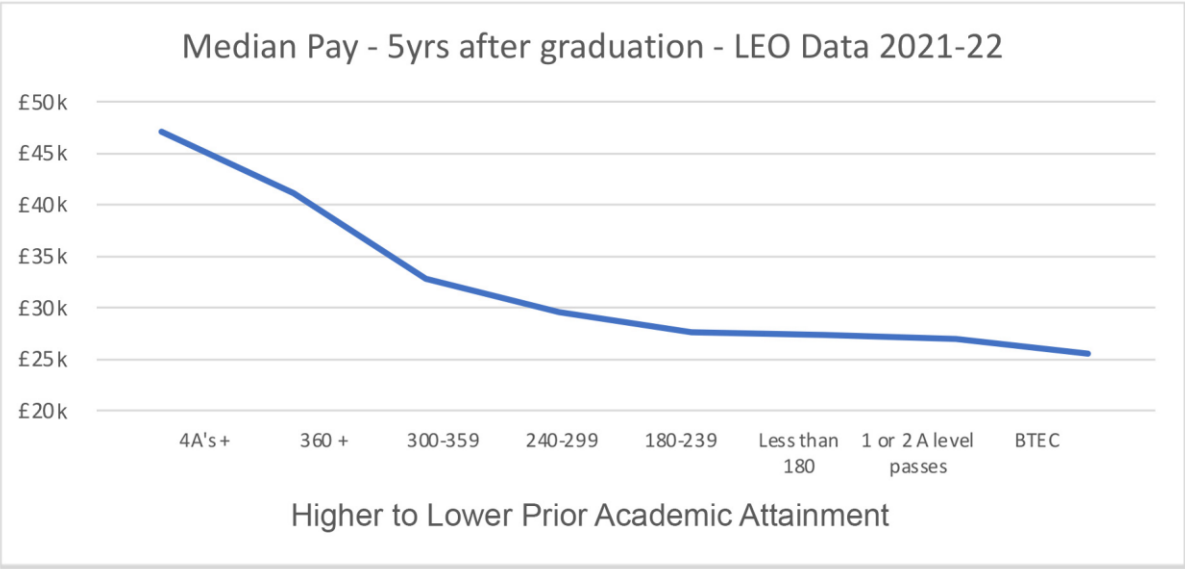
C – When %HE participation rises and 15% of the working population change from non-graduates to Graduates (i.e. The marginal graduates) in the above hypothetical models, then this will inevitably have some effect on the pay of the other two population that make up the other 85% (Existing graduates & remaining non graduates as defined in **4** above). There are several multiple conflicting factors (some listed below) that could affect the existing pay of the other 85% and the most likely scenario models 2 & 4 have attempted to deal with this is a reasonable way.

i/ **The pay of the existing graduates with higher prior academic attainment may be diluted** slightly when the extra marginal graduates with relatively lower prior academic attainment are added due to extra competition for a limited number of high paying roles. However, all graduates produced will not be 'equally' competitive in the jobs market (The LEO data clearly shows pay for graduates is highly correlated to prior academic ability) so it will only have a limited effect.
ii / **The 15% increments of marginal graduates will likely be drawn from Non-graduates with relatively higher prior academic attainment compared to the remaining pool of Non-graduates**, so they will likely be made up of the existing non graduates who are paid on average more compared to other non-graduates. Removing these could have the effect of reducing the remaining non-graduate's average pay. But conversely it may make non graduates scarce, thus providing a slight opposite increase in the pay of the reduced number of non-graduates.
iii / The economy is only able to support a certain level of overall employee pay for the population as a whole. So when any given model scenario assumes that it is possible for the extra 15% of marginal graduates who change from non-graduate to graduate to achieve an average uplift without diminishing pay for the other 85%, then this assumes that the overall pay for the whole population can be increased. There is an economic argument that this is possible to achieve to a certain extent as if you have a more educated and thus potentially productive population then this will provide an economic boost to lift overall wages. However, it is more likely that any increase in pay for the extra 15% marginal graduates will at least partially be off-set by reductions for the other 85% for both Graduates and Non-graduates.

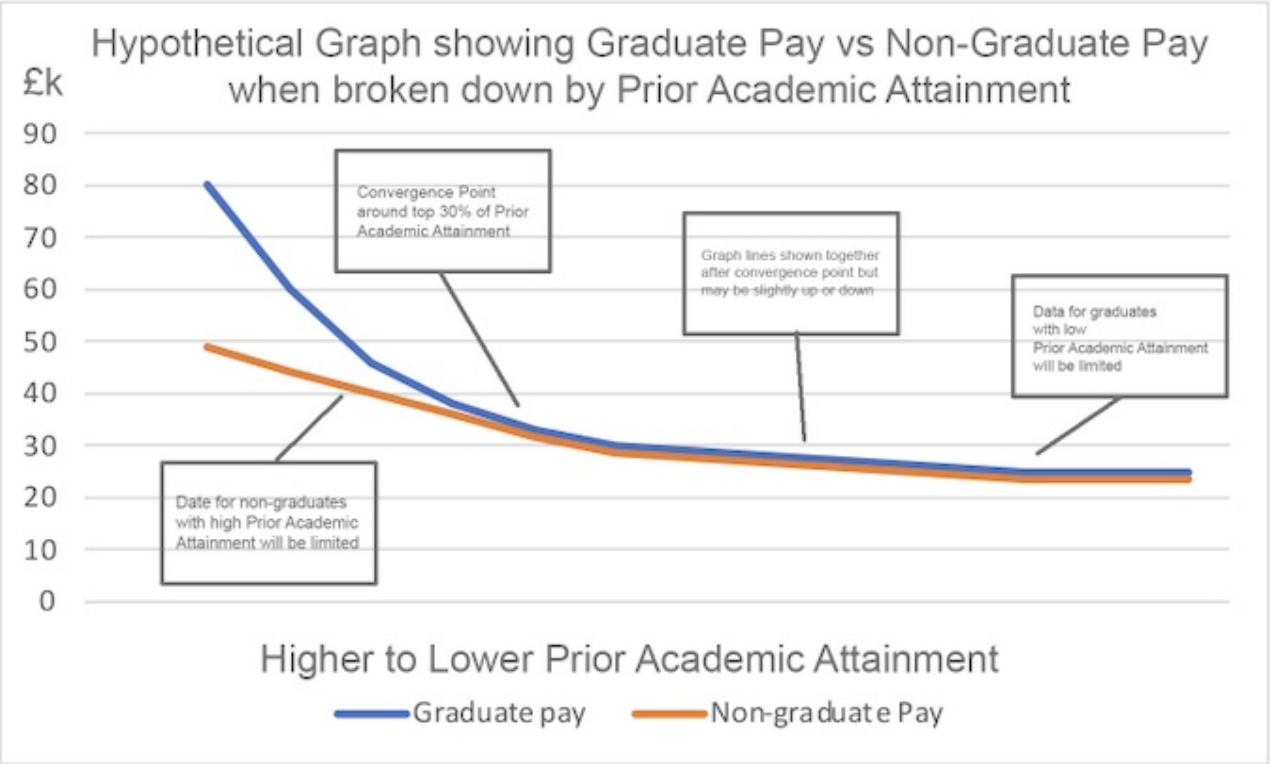
D / Increases in minimum wage are ignored as the graduate jobs market should adjust and continue to pay a graduate premium based on the value that it places on graduates compared to largely unskilled non-graduates earning the minimum wage. If the jobs market is only willing to pay graduates marginally above minimum wage (at least Initially) then this is a real indicator of graduates no longer being so highly valued so it is assumed that this effect should remain in the model and doesn't need to be adjusted for.

4 ii - Corroborating Evidence from other Data Sources to support that average marginal graduate premium reduces to zero when %HE participation rises

The LEO Graduate and Postgraduate Outcomes report does breakdown graduate pay (as opposed to Graduate premium) by prior academic attainment (see above section **2 ii** on LEO report). The graph below shows very clearly that that there is a strong association between graduate career pay and prior academic attainment e.g. Five years after graduation, graduates with 4 A's at A-level have a median average salary of £47,100 which is almost double that of graduates outside the top 30% of Prior Academic Attainment with less than 300 points (equivalent of 3 B's) which ranges from £25,600 to £29,600.



Below is a hypothetical graph demonstrating how the data would present itself if we were able to add Non-graduate pay that was also based on prior academic attainment to the above graph.
This hypothetical graph also shows a convergence point around 30% as after this point, both Graduate and Non-graduate pay data will tend to flatten out as it gets close to the minimum wage (e.g. Whilst the median graduate pay for those with below 300 points = 3 B's starts to dip below £30k, when you look at the lower quartile graduate pay for those with below 300 points is already down to below £23k which is only just above minimum wage.

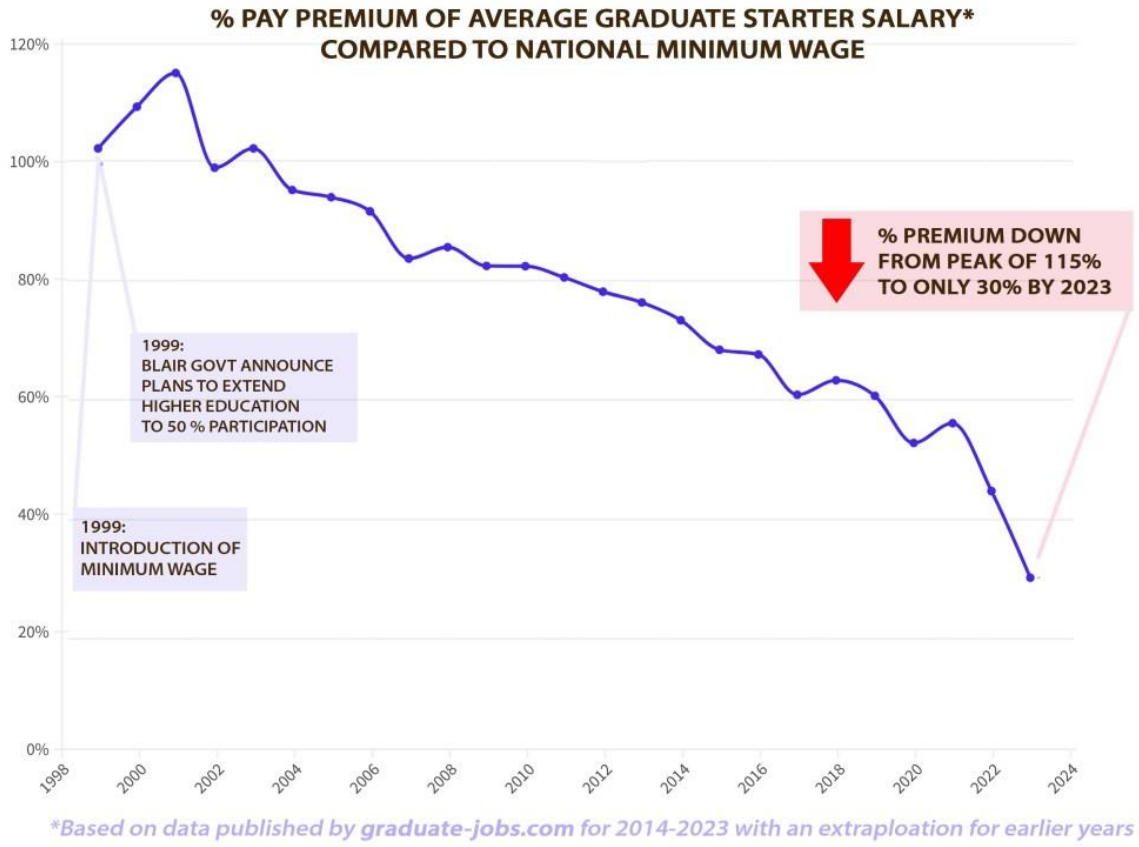


NB. As HE% participation rises, then it will get more difficult to measure Graduate premium by prior academic attainment as there will be increasingly less data available about non-graduate pay from the higher end of prior academic attainment, as virtually all will likely be graduates. Conversely, there will always be very few who do attend HE from the lower end of prior academic attainment, so comparison is difficult at the extremes of the data. The key data will be in the middle 'Goldilocks' range of say 20-60% of prior academic attainment where there should be sufficient pay data for both Graduates & Non-graduates.

Analysis of Average Graduate Starter Salary compared to Minimum Wage

https://www.hepi.ac.uk/2024/10/25/the-fall-in-graduate-salaries-shows-the-argument-for-mass-entry-to-higher-education-has-failed/

A recent report (by the author) showed that the graduate premium of the Average Graduate starter salary over the National Minimum wage fell from a peak of 115% in 2001 to only 30% in 2023. If the average starter salary had remained at 115% above, then it would now be £43k rather than £26k. Though some of this almost free-falling decrease will be down to the quite rapid rise of the National minimum wage, particularly in the last few years, this alone can't account for the overall drop over a sustained period. Such a significant drop is a clear indicator that whilst the graduates with high prior academic attainment are likely to still be getting a decent initial graduate premium, the extra graduates being added with lower prior academic attainment are getting only minimum wage or not much more and are significantly bringing down the overall average.



<u>The Impact of Undergraduate Degrees on Lifetime Earnings report - IFS</u> (see above section **2 iv**)

Extract from report *"This means that around one in five undergraduates* (20%) *would have been better off financially had they not gone to university. At the other end of the spectrum, the 10% of graduates with the highest returns will on average gain more than half a million pounds in discounted present value terms."*

So this demonstrates that there is indeed a wide disparity between highest returns and the lowest, of whom 20% achieved negative lifetime career outcomes. Though lifetime earnings is a different measure to graduate premium, they will be closely linked, so there Is a clear implication that many will not be achieving a premium. Furthermore, the report is based on graduates from the mid 2000's when participation was around 30-35%, which indicates that even at much lower %HE participation rates than today, a significant number of graduates were already achieving negative premium outcomes. So as HE% participation has risen from this base point, and drawn in those with lower prior academic attainment, then those achieving negative lifetime earnings will be far higher than 20% and more likely close to 30-35%.

4 iii - Estimate of numbers attending HE who will achieve negative or very modest premium

The number of young adults who entered HE in Sept 2024 is around 495,000 (as per 2024 UCAS accepted UK applicants).
https://researchbriefings.files.parliament.uk/documents/CBP-7857/CBP-7857.pdf) ,
The most likely scenarios from the analysis above can also be used to estimate the proportion of this intake who will achieve, either negative, none or very little graduate premium (defined as £1.0k or less). See table below.

Analysis estimating number of students from 2024 intake who will achieve negative, none or minimal graduate premium (less than £1k)						
21-30 Year Olds - 2023						
%HE Participation at ave time of graduation in 2018	Average Graduate pay for band	Estimated Average non grad pay for equivalent prior academic attainment *	Average graduate premium in bands *	Estimated premium range boundaries of middle 80 % *		Approx % less than £1k premium *
				Bottom	Top	
0-15%	£37.4	£30.0	£7.4	£2.0	£13.0	5.0%
15-30%	£31.1	£27.5	£3.6	-£1.0	£7.0	16.0%
30-45%	£26.0	£26.0	£0.0	-£3.0	£3.0	65.0%
45-50%	£25.5	£25.5	£0.0	-£3.0	£3.0	65.0%
Total	£30.9			-£0.9	£7.2	32.3%
Total No of students in 2024 intake - K's						495.0
No of students likely to achieve negative, nil or less than £1k premium - K's						160.0
* NB - This data is speculative as there is limited data about non graduate pay and the likely spread around the average and the extent to which non grads is weighted towards those with lower prior academic attainment						

The table shows that around 32.3% of the intake = approx. 160k (see i, ii below), mostly drawn from those extra marginal candidates as %HE rises, will achieve less than £1K graduate premium. And even for those who do achieve a premium, for many more it will be relatively modest. Yet they will still have their personal finances blighted by having to pay

9% extra 'tax' on earnings over £25k for decades; even perhaps their whole working lives. And the general tax payer will be liable for a significant proportion of their student loans in write-offs.

i/ Below are three examples of corroborative evidence to broadly support the results of this analysis:
1- The Office for Students survey (see (4) from Section 1 – Introduction above) shows 30% of students reported that they do not expect that completing their degree will increase their pay.
2- Even when %HE participation was around 30-35% in the mid 2000's, the IFS report found that 20% of graduates had negative lifetime earnings (this is albeit a different measure to graduate premium, but it will have similar results), so given the increase in %HE participation and the falls in average graduate premium since then, then the figure of 32.3% is consistent.
3 – A recent report from the Institute of Economic Affairs - "Shares in Students: A New Model for University Funding" quotes the following (page 17): -

"Between 30% and 50% of graduates are in 'non-graduate' employment – jobs that are not sufficiently complex to require a degree level of education"

https://iea.org.uk/wp-content/uploads/2024/11/IEA_Peter-Ainsworth-Higher-Education_v3_Digital_-2.pdf

This would indicate that a high proportion of graduates are not achieving a graduate premium as they end up working in the same jobs as non-graduates

ii/ This table is necessarily speculative as it relies heavily on assumptions, particularly for non-graduate spread of pay as HE% changes, so it would be reasonable to put a relatively wide margin of error of say +/- 20k i.e. Likely outcome range of 140k to 180k of the 495k intake. Notwithstanding the speculative nature of the model, it is clear that the numbers will be significant, and an entirely predictable outcome if %HE rates remain the same (or continue to rise) as they will predominantly be drawn from those marginal candidates with lower prior academic attainment.

5 - Main Findings - Summary, Results and Conclusions

A - The overall average Graduate Premium, as defined and presented in the Graduate labour market statistics data (based on LFS), is a problematic blunt form of measurement and potentially misleading statistic.

The average Graduate Premium has been falling significantly. From 2007 to 2023, for 21-30-year-olds it has dropped from 35.3% to 21.2% and for 16-64-year-olds it has dropped from 50% to 35.6%. However, the overall average is just a measure showing that inevitably a higher proportion of academically able & ambitious young adults enrol in HE and will have higher average earnings than the pool of less academically able non-graduates. For the graduate premium to have far better use as a statistic, it needs to compare the outcomes of equally academically able young adults i.e. What is the average pay of graduates who achieved 3 C's at A-level, compared to the average pay of non-graduates who achieved 3 C's at A-level. But even then, it is incorrect for the reporting to assume and give the impression that studying for a degree is the main causation factor in career pay outcome.

A i - LEO data shows that Graduate pay is strongly associated with prior academic attainment, but there is no equivalent breakdown of the overall Graduate premium within the LFS data. The Govt should ensure that in future this breakdown of the data is made available as it is critical in forming HE policy, particularly in establishing the graduate premium for marginal candidates being added, that will be made up of those with increasingly lower prior academic attainment, as %HE participation rises. The fact that there will be a higher proportion of those with higher prior academic attainment (and as such likely to be higher earners) who will become Graduates results in an inevitable overall average graduate premium, so without a breakdown by prior academic attainment it is not possible to properly understand and interpret the graduate premium.

A ii - Graduate premium reporting can give the false impression that gaining an HE degree is always the most significant causation factor in determining future career earnings.

The existing reports, particularly the way in which they prominently break down Graduate pay by specific course and HE institution, can lead you to assume that this is always the main causation factor. Yet the Graduate's future career pay could be just as much to do with pre-existing attributes and nothing at all to do with whatever degree the graduate took. Even the name 'Graduate Premium' is misleading and would be arguably better called ‘Academic ability premium'. It should be made clearer that the pre-existing attributes of the Graduates i.e. innate academic ability, ambition, conformity, work ethic etc. (as best measured by prior academic attainment) will be just as significant and perhaps more so with regards to career and pay outcomes.

A iii- The reporting does not provide any analysis of whether HE Is the best method to fulfil a young adult’s career potential. Better data needs to be developed to compare entering HE to the alternative of just entering the job market aged 18 and instead gaining

more targeted specific on-the-job based formal and informal training, education & experience for particular careers.

A iv -The reporting does not sufficiently analyse whether material learnt on the graduates HE course has proven specifically useful in that graduate's future chosen career. There isn't sufficient data currently available to quantify the extent to which the knowledge gained studying for any given course was genuinely specifically useful in their future career. This is important because there is evidence to suggest that a majority of graduates are studying for courses that will likely have little real specific use for the career they end up embarking upon.

B - Scenario based analysis suggests that once the HE% participation rate reaches around 30%, that it is likely that any marginal extra graduates will achieve on average no graduate premium. Given the lack of data, it is necessary to rely on Scenario based analysis to show the extent of diminishing marginal graduate premiums. By necessity, this type of analysis relies on assumptions that can be speculative and represent the 'best' estimates given the limitations of the data available. The analysis shows that as HE% rises (and prior academic attainment reduces for marginal candidates), the marginal Graduate premium diminishes to 0% once %HE participation goes above around 30%; i.e. For the last 20-25 years, the marginal graduates added have been achieving an average £0k premium, and this is without taking into account the negative effect on their finances of student loan repayments. i.e. marginal graduates added since %HE hit 30% will have the debt but without improved pay on average.

C - The IFS Lifetime earnings report from 2020 remains influential in policy making, despite various issues that should limit its relevance. The IFS report's findings are highly speculative by their own admission, is from 5 years ago, is based on graduates from the mid 2000's when %HE participation was far lower at 30-35% rather than 50%, quotes the mean average of £130/£100k extra lifetime earnings rather than the much lower Median of £70k & questionably treats Student Maintenance payments as income which, if altered, would further reduce the Median extra lifetime earnings to a much more modest £50k or less. And if the extra 15% or so of extra graduates now participating in HE were included to make the report relevant for today's intake, then the number of graduates achieving negative lifetime premiums would likely be far higher than 20% as they are being drawn from those of lower prior academic attainment. On this basis, the HE Sector, Govt policy makers, media etc. should refrain from interpreting the headline findings of this report as such a definitive statement of absolute fact that is relevant for today's young adults deciding whether to enter HE and for government decisions on expansion of the HE sector.

D - The Government needs to consider reducing HE% participation rather than increasing. At the current rates of approx. 50% HE participation, significant numbers of graduates are now likely to receive no career pay benefit, and even for those that do achieve a Graduate Premium, it may be little to do with having studied for a degree and more to do with their pre-existing attributes.
Analysis estimates that around 160,000 of the 2024 University in-take, mostly drawn from those extra marginal candidates with lower prior academic attainment, will achieve either

negative or very little graduate premium (less than £1k). And many more will only achieve a modest premium. Yet they will still have their personal finances blighted by having to pay 9% extra 'tax' on earnings over £25k for decades; even perhaps their whole working lives. And the general tax payer will be liable for a significant proportion of their student loans in write-offs.

The 'market-system' for HE that the Government has created shows no signs of having an in-built effective mechanism to naturally put a brake on student participation rates in line with the observed diminishing marginal returns as participation rates appear to keep rising regardless. The mantra that prevails in society that 'if you learn more you earn more' is mostly, but clearly not always, true, and 'learning' isn't exclusive to the HE sector, as learning on-the-job can be just as useful and arguably even more so. The Govt needs to consider intervention to reduce the numbers entering HE and they certainly should be very wary of aligning to the HE Sector's aim to continue to increase HE% participation as this will only be adding more and more candidates who will be very unlikely to achieve any graduate premium, so will 'Learn more but earn the same'.

E - The Office for Statistics Regulation needs to have a wider remit. The current reports taken as a whole could mislead the public & Govt (inadvertently or deliberately) into arguing for an ever increasing HE% participation level which isn't in the interests of individuals or wider society. The Office for Statistics Regulation needs to ensure that all the bodies involved in the production of Graduate Pay & Premium data improve the reporting available so that they more useful in reporting both the positive & potential negative financial aspects of HE participation, compared to the alternatives involving entering the jobs market as an 18-year-old rather than a 21-year-old. It needs to develop the reporting so that it more rigorously analyses whether spending an extra three years in HE is always the best choice as opposed to alternatives, particularly given the cost of HE. They need to ensure that the reporting performs the extremely important service of gauging the optimal %HE participation level for society as a whole. The reports should give particular focus to the young adults in the middle 'goldilocks' range of say 20-60% of prior academic ability to attempt to work out what is the best way to unlock their potential career wise, rather than allow them all to be herded off into HE at great expense to the young adults themselves and the tax payer.

---

2 -Further Appraisal of Graduate Statistics & Recommendations

Discussion Paper - Feedback on relevance and use of Graduate Statistics Data with regards to Graduate Pay & Careers

Date : 31st March 25

Author : Paul Wiltshire

1 – Purpose of Discussion Paper

Report 1 'Why is the Average Graduate Premium Falling' was sent to the Department for Education, JISC, HESA & the IFS. It appears to have been received with interest on the whole, and in particular a request was made from the DfE for my further feedback. This Discussion Paper is a response to that request and this has also now been sent to DfE, JISC, HESA & the IFS.

This Discussion Paper assumes prior knowledge of the Graduate statistics environment, and is in addition to my recently published Report 1 above 'Why is the average graduate premium falling' and should be considered together.

%HE participation has grown from 3% to 50% within the last 60-70 years, and probably will still keep growing as school leavers continue to choose HE in ever higher numbers. So are the current Graduate Statistics fuelling this growth? Are they playing any role at all or are they being ignored? Should Graduate Statistics be altered to be more usefully informative about the implications of this %HE participation growth?

Caveats & Disclaimers - This paper is general and opinion-based. It does not claim to be a detailed research-based report and is designed to spark debate rather than as a definitive exercise.

2 - To what extent do the range of existing Graduate Statistics that are being produced currently inform Govt HE Policy and the decisions of school leavers?

Main Statistical Information

IFS Lifetime Earnings, HESA Graduate Outcomes Data, LEO Graduate Outcomes, LFS-Graduate Labour Market Statistics, Discover Uni.

Govt Policy

Current Govt policy appears to allow complete market freedom for Universities to offer as many courses in whatever subject that they see fit. And for Govt to offer a seemingly unlimited number of student loans to as many school leavers who meet the Universities selection criteria and want to apply for them. There is no evidence that any of the existing Graduate Statistics reports are having much effect on this policy. From time to time the Govt issues statements about 'cracking down' on 'worthless' courses, but this is largely just posturing rather than actual policy.

School Leavers - What information do young adults use to decide on whether to enter HE, and to choose a particular course & HE institution

Likewise, there is not much evidence to suggest that the current Graduate Statistics are being used by young adults (and their parents) to inform their detailed choices (Discover Uni hasn't been a success and has not entered the public psyche). In general terms though, the Graduate Statistics do feed an underlying overall 'positive' narrative about entering HE.

A typical school leaver will make their decision whether to enter HE based on the following: -

i – Societal messaging that entering HE is a good thing (Teachers, Parents, Politicians, Media - most of which is currently hugely HE positive) which leads to a channelling of school leavers down the University route. There is a general ease of the process of choosing University, getting accepted onto courses, and getting Student Loan funding compared to other options aged 18.

ii – Advertising from the HE sector themselves (in the form of course prospectuses, numerous reports released by industry experts who are often also HE industry insiders and/or HE advocates, comments in press articles from UUK & supportive think-tanks etc.) claiming that University is a route to a well-paid career, often based on misinterpretations of the Graduate Statistics that are currently produced.

iii – Student Life is largely seen as good fun. The freedom of 3 years away from home and not having to yet commit to a full-time permanent job is understandably attractive to 18-year-olds.

iv – A general impression (informed by Graduate Statistics in a general sense – particularly the misleading 'overall averages' data of LFS & IFS) that financially it will likely work out OK, and that this is the route to a successful career. The consequences of taking on a student loan with an extra 9% 'tax' to contend with for decades, is unlikely to be properly understood or contemplated, particularly if general adult societal signalling is that they shouldn't worry about this too much as University is likely to be good for their career pay and that employers will be biased against you if you are not a graduate.

v – The course subject is chosen because it is something they are good at, and/or seems interesting.

vi – The HE institution is chosen on the basis of what is the highest level that will accept them based on their results compared to the academic entry requirements. On the assumption that the higher the entry level requirements, the better the institution. UCAS is used above anything else to select courses.

3 - How should Graduate Statistics inform both Govt policy and school leavers decision making – in particular with regard to financial implications?

A – To inform the Govt of the likely career pay of graduates particularly when compared to non-graduates and the likely cost to the tax payer of writing off student loans. To make sure that what is being taught in University is actually making a sufficient difference to young adults' ability to perform well in the work place or whether they would have been able to perform just as well in the same career by simply entering the work place aged 18 combined with some work place training – i.e. Earned the same career pay, but avoided having the debt (and student loan write-off). To be able to make decisions about optimal %HE participation rates, in particular whether to cap numbers and

restrict the availability of Student Loans in certain course subjects and HE institutions (or whether to continue to be leave it unlimited which I believe is more or less currently the case).

B – To inform prospective students on the likely financial costs and benefits of choosing to enter HE compared to alternatives i.e. Enter the workforce aged 18 instead. And give an idea of the likely 'career' value of particular courses and HE institutions.

4 - In general terms what are the features and shortcomings of the current Graduate Statistics regarding pay & career?

On the whole the current data available does not meet the above two aims outlined in Sect 3 above, and fails for the main reasons listed below. There is an underlying feel to the data that it has been designed, produced & analysed by people with an unconscious bias that HE is positive and are largely Mass HE advocates. As such, they are not discharging their duty to conduct the production of the statistics with the necessary curious open impartial mind-set that attending HE may or may not be good for all (NB. Suggestions for specific improvements are listed in Section 5).: -

1 – Overall Averages for LFS Graduate Premium and IFS Lifetime Earnings rather than broken down by Prior Academic Attainment. Whilst the IFS & LFS data does attempt to show the career pay differential between graduates and non-graduates, they both only report it as an overall average. This is highly misleading given that prior academic attainment is a main causation factor in future career earnings (as proved by LEO data). Marginal candidates, who will be increasingly drawn from young adults with lower prior academic attainment as %HE participation rises, will not achieve this overall average. And the overall average will stay positive long after the marginal average Grad Prem /lifetime earnings has reduced to zero or even become negative. So it is essential to show the Grad prem & Lifetime earnings broken down by prior academic attainment and not just as an overall average to avoid this misleading interpretation.

2 - There is no meaningful attempt to establish the extent to which the information being taught in the degrees has specific use in future careers. i.e. There is no successful attempt to answer the concern that so many young adults appear to be studying 3 years at great cost to themselves and the tax payer, and often don't/hardly actually use this knowledge in your future career. The HESA Graduate Outcomes does attempt this but in a very weak manner when it asks student if their degree has been useful in their careers, but it is a wasted opportunity.

3– A lot of the data relates to Graduates only so you can't compare to non-graduates. The LEO & HESA Graduate Outcomes data does not contain any data for non-graduates so makes no attempt to compare graduates pay with non-graduates pay. Whilst the graduate specific data can be useful, there is a danger that they perpetuate the assumption that entering HE is essentially a good thing for all, and that the main purpose of this graduate only data then is to analyse the exact extent of the supposed undoubted benefits, as opposed to the data being designed to be useful to inform decisions about whether HE is a good choice for so many young adults in the first place.

4 **– Graduate Statistics give the impression that they work on the assumption that attending HE is the main causation factor of future career pay**. The LEO, HESA & IFS reports all breakdown the data by course and/or institution and can lead to the impression that the choice of degree is always a main causation factor for the whole of the graduate's future career. This can't be assumed given that the majority of graduates end up in jobs where the actual course subject is not relevant, so they

could perhaps easily have performed the same job starting as an 18-year-old trainee with some formal and/or informal training. So did they really need to go to University at all to have a successful career? And if employers were willing to hire them as 18-year-old school leavers instead of 21-year-old graduates, would they have ended up earning exactly the same and it had nothing to do with the degree? The current Graduate Statistics don't even seem to contemplate this as a possibility.

5 - The **IFS report is highly speculative** (their own admission) and makes some challengeable assumptions (as claimed in my report). It is also out of date as it is based on Graduates from the mid 2000's. Yet because of the IFS's reputation, it is taken as a definitive statement of fact, which is problematic as it is so regularly illegitimately used as an argument that University will be financially beneficial 'to all', no matter what their prior academic attainment, and is a major factor serving to continue to drive up %HE participation. (I am aware that the IFS report doesn't makes these claims, but it does start with a very positive statement "*Going to university is a very good investment for most students . . . ".* which will have the effect of being highly persuasive given that the vast majority of people will only consider the report by way of a handful of sound bites.)

5 - Specific Recommendations for improvement of existing data for each report

I - LFS – Graduate Labour Market Statistics

The email from Lucy Cottingham implies that the LFS data may be discontinued. I think at this stage, in the absence of better data, it should be developed rather than discontinued as the overall downward trend should not be hidden.

The LFS data is currently useful for long-term trends to be analysed. It also has an advantage over the IFS data as it is 'factual' rather than 'speculative'. But it is essential to find a way to publish not only the overall average Graduate premium, as ideally it needs to be broken down into bands of prior academic attainment, otherwise it can be highly misleading.

My report 'Why is average Graduate Pay falling' attempts to develop the LFS data by using trends in the graduate & non-graduate pay over time to quantify the graduate premium of marginal candidates using scenario-based analysis. If it isn't easily possible to break down the data into bands of prior academic attainment, then an alternative would be for the DfE to task a statistical body to develop my work into full scale more robust mathematical modelling to work out marginal returns. Though it would inevitably be speculative, the 'pay-off' is worth it as it is highly important to attempt to work out the extent of diminishing marginal returns. And furthermore the level of speculation required to develop the LFS data for this purpose, may be no more than the level of speculation necessary to produce the IFS Lifetime Earnings report.

II - LEO Graduate Outcomes – No specific recommendations for improvement.

III – IFS Lifetime earnings

In general terms, the report does suffer from being necessarily highly complicated and speculative. I am not completely comfortable with such speculative results being published in the name of the well-respected IFS, as inevitably the results then become viewed as hard and fast definitive facts. But if the report is going to be repeated then I would suggest the following changes: -

a/ It is essential to find a way to publish not only the overall average Lifetime Earnings, but it needs to be broken down into bands of prior academic attainment.

b/ The report is out of date in that it calculates the outcomes of graduates from the mid 2000's. If next time the report is based on graduates from say 2010, then further analysis should be carried out to update what the likely results will be for 2028 graduates. i.e. If the 2010 result shows that say 23% of Grads will be worse off financially (previously 20% from first report) then the report should go further and estimate what % of graduates in 2028 will likely have negative earnings may. And this is likely to be far higher (perhaps as high as 30-35%) than 2010 as the marginal graduates added since then will be made up of those with lower prior academic attainment who will earn less. Though this would be speculative to extrapolate the results to 2028, the 2010 results are already highly speculative (in the IFS's own words). So there is really no extra harm in doing so; and the benefits of producing results based on the expectations for 2028 graduates (rather than out of date 2010) will out-weigh the risks of adding another level of speculation.

c/ The income from maintenance loans should be ignored as it will be off-set by the extra cost of living away from home that most non-grads won't have to pay. Or if the maintenance loan income is to be included, then the extra cost of living away from home compared to living at home should be included.

d/ The costs of repaying the student loan should be re-looked at as it seemed quite low in the first report. And also there should be some acknowledgement in the figures that though they may only show a cost to graduates of say an average repayment of £25-30k, that whenever a student doesn't bear the full cost of the Student Loan, then there will also be a corresponding student loan write-off that the general tax payer to bear.

e/ It is not clear why the average was given as the mean and not the far lower median. All other graduate statistics reports tend to use the median.

f/ The section on overall cost to tax payer taking into account tax revenues for HMRC for graduates is less relevant and I do not believe should be repeated. I do not pretend to understand all of the assumptions made, but it seems wrong to assume that extra tax revenues of graduates are down to the fact they have completed a degree, rather than just that they are innately academically able and ambitious, so the tax revenue would have been paid anyway if they had gone to work aged 18 as a trainee. It can be argued that the jobs that society needs doing would still have been done anyway, by the same set of people, it's just that they wouldn't have gone to University first, so the tax take can't be solely attributed to being achieved by virtue of the HE sector. In any event, attempting to calculate this is highly complicated and necessarily speculative, and I question whether the results are ever going to have much value nor ever influence Govt HE policy one way or the other.

IV - HESA Graduate Outcomes Data – With some altered and extra questions, this survey could become a reasonable attempt to satisfy one of the aims as outlined in Sect 3 A above – i.e. How much of what is learnt in a degree is genuinely useful in the job? However, with its current questions it represents a missed opportunity and risks over-stating the genuine use of the degree in the jobs graduates end up doing.

There are a two particular questions (B16 & G3 – see below) that are liable to be answered in a way that the respondents 'want to be true' and the current results being produced (i.e. that most employers specifically wanted them to have their particular degree, and that their degree is proving useful in their job) are exaggerated. Respondents want this to be true because they are reluctant to admit to themselves and others that they have invested a great deal of time, money and effort doing

what most of society told them to do by gaining a degree, only for it not to be genuinely relevant or particularly useful in the job they end up doing.

B16 Did you need the qualification that you completed 15 months ago to get the job?

(SELECT ONE OPTION ONLY)

01 - Yes: both the level and subject of qualification was a formal requirement

02 - Yes: the level of qualification was a formal requirement

03 - Yes: the subject of the qualification was a formal requirement

04 - Yes: while the qualification was not a formal requirement it did give me an advantage

05 - No: the qualification was not required

06 - Don't know

Below are ideas for alternative questions that may produce more genuine results: -

i - How important was your degree & course subject to your employer when you got your current job?

Answer Structure in two parts: -

Degree level qualification – Three answers - Formal Requirement, Desirable, Not required

Specific related Course Subject – Three answers - Formal Requirement, Desirable, Not relevant

ii- Do you think that you would be capable of performing your current role just as reasonably well if you had a degree of a different unrelated subject.

iii- Do you think that you would be capable of performing your current role just as reasonably well if you didn't have a degree.

Answer Structure ii & iii

Five answers – Very Strongly agree down to Don't agree (if not, why not)

iv – Do you think that applications for your job should have been equally welcome from both graduates and non-graduates (who have the same academic ability) so that it was possible to get the job without having to first gain a degree and a corresponding student debt?

Answer structure

Yes

Yes - But Job would require some technical training to make up for not having a degree – If so. how many weeks training would you estimate to be required for non-graduates to then be suitable for the job?

No – Job requires a full three-year degree in order to possess necessary technical knowledge and experience required.

No – Other -please specify

G3 To what extent do you agree or disagree with this statement: I am utilising what I learnt during my studies in my current work? You can think about this in terms of both the subject matter and other skills gained, namely everything you learnt on the degree.

A problem is that a respondent may correctly respond as 'strongly agree', even though they have only used what they learnt on a handful of occasions, so the results could be giving a falsely high impression. Also, I think that the sentence '*You can think about this in terms of both the subject matter and other skills gained, namely everything you learnt on the degree'* is a very general definition and is also a leading question and will influence respondents to respond more positively about any link and give a falsely high result. A better idea for a question could be: -

To what extent do you use what you specifically learnt during your studies in your current job during a typical working day?

Answer Structure

0-10% of the day, 10-20% of the day, 20-30% of the day, 30-40% of the day, 40-50% of the day, 50-60% of the day, 60-70% of the day, 70-80% of the day, 80-90% of the day, 90-100% of the day.

And this could be augmented with a similar question but asked in reverse so that the first answer could be checked for consistency: -

To what extent do you spend your time performing work tasks and/or being trained in new work tasks, that weren't covered by your studies during a typical working day?

0-10% of the day, 10-20% of the day, 20-30% of the day, 30-40% of the day, 40-50% of the day, 50-60% of the day, 60-70% of the day, 70-80% of the day, 80-90% of the day, 90-100% of the day.

Checking for bias and inconsistencies about genuine utility value of the degree compared to actual value by contrasting answers to B16 & G3 to answers B3 & B4.

The answers to B16 & G3 should also be separately analysed to see if they appear to be consistent with the answers to B3 & B4: -

B3 What was your job title?

B4 What did you mainly do in your job?

This is important to iron out the extent to which respondents might be claiming a high level of utilisation of their degree, yet this is completely inconsistent with the declared job title and duties. e.g. If the job title was Admin Assistant in B3, yet the respondent answered in B16 (in the altered questions suggested) they strongly agree that they needed a degree to perform the role, or even a degree in a specific subject.

It would also be useful to attempt to use the HESA survey to gauge the increasing phenomenon that employers are being unnecessarily prejudice against non-grads simply because it is easier for them to employ more mature 21-year-olds rather than 18-year-olds (which is increasingly possible if the market rate pay for 21-year-olds is the same as 18-year-olds for junior positions). e.g. If the job title

was Admin Assistant in B3, yet the respondent answered in B16 (in the altered questions suggested) that if was a formal requirement to have a degree, or even a degree in a specific subject.

6 - Consideration of Alternative Graduate Statistics pay and career data

Thinking radically, it may be that it would be better concentrating all efforts on only one graduate statistics data source with regards to pay and career to satisfy the main two aims as detailed in Section 3/ above. A detailed annual survey through sampling of the whole population (grads and non-grads) of 28–30-year-olds, asking questions under 4 main headings (with a number of sub questions within the main headings): -

i/ A level results (as a measure of their Prior Academic Attainment)

ii / Degree taken (course and institution) if any.

iii / Current job and the extent to which it is linked to the subject matter of degree and was it genuinely necessary to be able to perform the job.

iv/ Current pay.

The justification to not survey adults beyond aged 30 is that after this point any future career success can't be seen as a 'graduate' premium, it is more a 'going to work' premium. Outside of certain professions such as medicine and engineering, what employer really cares anymore what your degree is? They will be far more interested in your now proven work track record in your first or second job. And also how often do Graduates themselves ever genuinely use anything they've specifically learned in their degree in the workplace once they've gone beyond their first (or maybe 2nd) job, as by then it is all about work experience.

I appreciate that data survey sampling is expensive and problematic information to gather, but I if all others were ceased i.e., the LEO, HESA Graduate outcomes, LFS, Discover Uni & IFS lifetime earnings, then it could be justified in terms of time and effort involved to produce the data.

NB. I wouldn't at all advocate any immediate discontinuing of any existing data. If my idea for one data source only was considered, then there would be a gradual phasing out of existing data.

---

3 -Statistical Anomaly with overall average Graduate Premium

Date: 21st March 25

Subject Matter: Scenario based analysis highlighting a significant problem with the current method of calculating and reporting the overall average graduate premium within the LFS - Graduate Labour Market Statistics

Statistical Anomaly

The phrase 'Graduate Premium' is used quite extensively, and I am sure has a different definition for different people, but I would argue that is should mean what is the extra pay for a graduate or non-graduate with the same prior academic attainment (i.e. A grad with 3 C's compared to a non-grad with 3 C's). The only Govt stat that coins the phrase is the Graduate Labour Market Stats based on the LFS data. And it defines it as the difference between the Median average pay of Graduates less the Median average pay of Non-grads. This is a flawed method of defining the graduate premium, and by publishing it this way it is leaving it open to wilful misrepresentation.

The below shows three hypothetical scenario-based examples of how misleading this method of defining the Graduate premium can be if you only report the overall average. This is highlighted when you breakdown the Graduate Premium into 10 bands of prior academic attainment. All scenarios are based on HE% participation rates of 50% *

* NB - For calculation purposes, this is based on the Mean average and not the median, but there will be a similar phenomenon if the median was used.

Scenario A - Grad Pay & Non-grad pay the same for all bands of equal prior academic attainment							
10 equal sized bands of Prior Academic Attainment	% of attainment band who enter HE	Mean average Graduate Pay for Band	Weighted Amount for calculating overall Mean	% of attainment band who don't enter HE	Mean average Non-Graduate Pay for Band	Weighted Amount for calculating overall Mean
Highest - 1	97%	£60.0	£58.2	3%	£60.0	£1.8
2	92%	£45.0	£41.4	8%	£45.0	£3.6
3	85%	£37.0	£31.5	15%	£37.0	£5.6
4	80%	£33.0	£26.4	20%	£33.0	£6.6
5	75%	£31.0	£23.3	25%	£31.0	£7.8
6	45%	£30.0	£13.5	55%	£30.0	£16.5
7	15%	£29.0	£4.4	85%	£29.0	£24.7
8	4%	£28.5	£1.1	96%	£28.5	£27.4
9	2%	£28.2	£0.6	98%	£28.2	£27.6
Lowest - 10	1%	£28.0	£0.3	99%	£28.0	£27.7
Total	50%		**£40.4**	50%		**£29.6**
				Overall Ave Grad Premiur		**£10.8**

Scenario A - This shows the outcome if you have a population where the graduate pay is the same as non-graduate pay within ALL of the bands of prior academic attainment. i.e. A graduate with 3 A's earns the same as a Non grad with 3 A's, a graduate with 3 C's earns the same as a Non-graduate with 3 C's etc. etc. So even though there is ZERO graduate premium for every single one of the prior academic attainment bands, then you still get a 'healthy' looking overall average Graduate Premium - in this case £10.8k .

Scenario B - Grad Pay 10% less than Non-grad pay for all bands of equal prior academic attainment							
10 equal sized bands of Prior Academic Attainment	% of attainment band who enter HE	Mean average Graduate Pay for Band	Weighted Amount for calculating overall Mean	% of attainment band who don't enter HE	Mean average Non-Graduate Pay for	Weighted Amount for calculating overall Mean
Highest - 1	97%	£54.0	£52.4	3%	£60.0	£1.8
2	92%	£40.5	£37.3	8%	£45.0	£3.6
3	85%	£33.3	£28.3	15%	£37.0	£5.6
4	80%	£29.7	£23.8	20%	£33.0	£6.6
5	75%	£27.9	£20.9	25%	£31.0	£7.8
6	45%	£27.0	£12.2	55%	£30.0	£16.5
7	15%	£26.1	£3.9	85%	£29.0	£24.7
8	4%	£25.7	£1.0	96%	£28.5	£27.4
9	2%	£25.4	£0.5	98%	£28.2	£27.6
Lowest - 10	1%	£25.2	£0.3	99%	£28.0	£27.7
Total	50%		**£36.4**	50%		**£29.6**
				Overall Ave Grad Premiur		**£6.8**

Scenario B - This shows the ridiculous situation that even if you have a population where the graduate pay is 10% LESS than non-graduate pay within ALL of the bands of prior academic attainment, then you still get a positive overall average Graduate Premium - in this case £6.8k .

Scenario C - Non-grad pay lower than Grad pay for higher prior academic attainment and converges down to same pay as prior academic attainment falls							
10 equal sized bands of Prior Academic Attainment	% of attainment band who enter HE	Mean average Graduate Pay for Band	Weighted Amount for calculating overall Mean	% of attainment band who don't enter HE	Mean average Non-Graduate Pay for Band	Weighted Amount for calculating overall Mean
Highest - 1	97%	£60.0	£58.2	3%	£37.0	£1.1
2	92%	£45.0	£41.4	8%	£35.0	£2.8
3	85%	£37.0	£31.5	15%	£34.0	£5.1
4	80%	£33.0	£26.4	20%	£33.0	£6.6
5	75%	£31.0	£23.3	25%	£31.0	£7.8
6	45%	£30.0	£13.5	55%	£30.0	£16.5
7	15%	£29.0	£4.4	85%	£29.0	£24.7
8	4%	£28.5	£1.1	96%	£28.5	£27.4
9	2%	£28.2	£0.6	98%	£28.2	£27.6
Lowest - 10	1%	£28.0	£0.3	99%	£28.0	£27.7
Total	50%		**£40.4**	50%		**£29.2**
				Overall Ave Grad Premiur		**£11.2**

Scenario C- This shows a more realistic hypothetical scenario where grad pay is higher than non-grad pay in the higher prior academic attainment bands, but then Grads & Non grads pay converges as you drop down the academic bands and after around 30% they converge. It shows an overall grad prem of £11.2k , but only the top three bands actually are getting any premium at all. This shows that you need a banding breakdown (and not just the overall average) because this will show where the convergence point occurs, and thus can be used to inform policy makers where line could be drawn in terms of %HE participation rates.

So the problem lies in that if only one figure of the overall average grad prem is published then the mere existence of this being a positive figure is interpreted /mis-interpreted as follows : -

1 - **Correct interpretation** - People with higher academic ability (who on average will attend HE in higher numbers) on average earn more than those with lower academic ability (who on average will attend HE in lower numbers)
2 - **Incorrect Interpretation** - Everybody should enter HE no matter what their level of prior academic attainment as they should all anticipate improving their pay in accordance with this average premium. i.e. Act as if everybody is going to be able to tap into this average

grad prem no matter what their prior academic attainment and no matter how high the %HE participation rate rises.

This incorrect interpretation completely ignores the inevitable consequences of diminishing marginal returns, and by publishing only the overall average, then the Graduate Labour Market Stats is effectively condoning this concept to be ignored.

---

4 - Schedule of recent press articles showing problems with Mass HE

Date Complied : 21st March 25

https://www.timeshighereducation.com/opinion/uk-fails-students-not-facing-diminishing-graduate-returns

"Averages aren't enough. We need to know when HE expansion causes the marginal premium to disappear. It was probably long ago" says Paul Wiltshire

https://www.timeshighereducation.com/news/he-participation-above-30-cent-squeezes-graduate-premium

"Falls in the average earnings graduates receive compared with their peers without degrees are mostly attributable to those with lower prior academic attainment receiving next to no wage bump, according to the paper from campaign group University Watch, which has been backed up by Royal Statistical Society data scientists."

https://www.theguardian.com/commentisfree/2024/nov/10/englands-universities-flex-their-muscles-to-hike-fees-while-students-get-a-bum-deal

"Canny PR suggests critics are against aspiration but who is policing the spread of poor-quality degrees?"

https://www.telegraph.co.uk/news/2024/04/08/time-to-admit-we-need-fewer-students/

"Job opportunities for graduates are now falling faster than other roles. The great university con has been exposed"

https://www.ft.com/content/c3abb769-f281-4c36-92f5-6f01b868031d

Graduates face an uphill battle to employment

"Recruiters also report that students and employers are contending with a mismatch between the skills they acquire at university and what employers want."

https://www.theguardian.com/money/2025/feb/10/britons-hunting-for-a-job-uk-jobseekers-pay

Despite hopes that gaining a degree would lead to well-paid work, many graduates said they had been forced to take low-paying or part-time positions.

https://www.telegraph.co.uk/news/2024/12/07/how-minimum-wage-obliterated-worth-of-university-degree/

"With the mandatory pay rate matching starting salaries in many careers, middle-class graduates paying back student debts feel betrayed"

https://www.theguardian.com/money/article/2024/aug/29/uk-graduates-struggle-job-market

"Graduates described "soul-destroying" job hunts in many apparently saturated fields spanning months or even years, companies that had "ghosted" applicants who had completed online assessments or taken months to respond, and being unable to land jobs they felt they were overqualified for."

https://www.telegraph.co.uk/family/life/45k-debt-no-job-end-british-university-degree-worth-having/

"I feel that a few of my friends are trying to extend their youth a bit by delaying going to work," he says. "Many of them aren't that interested in their subjects."

https://www.timeshighereducation.com/news/record-competition-lower-salaries-tough-graduate-job-market

"Record competition, lower salaries in 'tough' graduate job market

The Institute of Student Employers' (ISE) annual survey records the highest number of applications per job since it first started collecting data in 1991"

https://www.theguardian.com/commentisfree/2025/jan/06/graduate-without-future-politics-uk

"Yet there is little mention of the graduate without a future, a group that first emerged after the 2010 student protests and continues to grow in numbers.

Across the UK there are nearly 5 million graduates working in non-graduate roles. The much-vaunted graduate premium – the idea that graduates earn more than non-graduates over their lifetime – is in drastic decline."

https://policyexchange.org.uk/blogs/time-to-ban-the-graduate-only-job-the-era-of-the-indiscriminate-expansion-of-higher-education-is-at-an-end/

"The Government should now go further and consider banning employers from advertising graduate only jobs. There are many capable people who did not do well in school exams and, in recent years, have found themselves squeezed out of professional careers in which they could have flourished.

Clearly people still require key skills but these can usually be acquired on the job and through routes other than full time study, as used to be the case"

https://cps.org.uk/research/the-value-of-university/

"University students in England are being ripped off by the current tuition fee system. On average students are leaving university with £45,000 in debt – nearly 50% more than the median graduate salary in the US."

"In a new report for the Centre for Policy Studies think tank, Conor Walsh argues that while the university sector has expanded hugely in recent decades, increasing student numbers has been prioritised at the expense of quality of courses and employment outcomes."

https://www.timeshighereducation.com/opinion/father-four-students-i-think-far-too-many-people-go-university
"A-level results day celebrations belie a vicious spiral of demand for degrees that damages students and society"

"we have bloated numbers of students in all subjects (Law is a good example of this; it is estimated that there are 6 times as many places on law courses as there are for the next step training places in Law courses to qualify as a solicitor)"

https://www.telegraph.co.uk/politics/2023/08/19/university-gillian-keegan-education-secretary/

"Gillian Keegan (then Education Secretary) is concerned that higher education is simply a default position for parents, teachers and students"

https://www.oxfordmail.co.uk/news/opinion/columns/24581825.oxford-university-students-speak-frustrating-job-market/

"It is certainly no secret that the current job market graduates face as they leave university is one of the toughest in years as fewer spots are available for roles.

This leaves many graduates concerned about the probability of obtaining a job, never mind in an area which they love"

https://wonkhe.com/blogs/maybe-too-many-people-go-to-university/

"Just because the existing system of high participation gives a graduate premium, it doesn't necessarily follow that the current system is the optimal system, or that it proves that we need as high participation as possible."

https://www.theguardian.com/money/article/2024/aug/04/id-be-better-off-if-i-hadnt-been-to-uni-uk-graduates-tell-of-lives-burdened-by-student-loans

“My student debt makes me not want to earn more, as my equivalent rate of tax would be 38%,” she said. “I see not repaying my loan as an act of defiance.”

https://www.telegraph.co.uk/business/2024/12/11/england-third-graduates-feel-overqualified-job/

“Britain has too many graduates doing jobs they consider to be beneath them, a study has indicated”

https://www.theguardian.com/commentisfree/2024/sep/13/bankrupt-student-mental-illness-britain-universities-young-people

“Someone should ask if formal education should stop at 18 and a flexible concept of “further” education take over.”

https://debatingmatters.com/topic/skills-gap-too-many-people-are-going-to-university/

“According to Sir Peter Lampl, the founder and chairman of the Sutton Trust, ‘there are too many kids going to university. Too many graduates come out with a lot of debt, and in many cases they come out with skills that the marketplace doesn’t want “

https://www.mirror.co.uk/money/jobs/graduate-career-degree-university-study-30511829

“Less than half of graduates are working in a career that relates to their degree.”

https://www.telegraph.co.uk/money/jobs/schools-universities/140k-student-debt-university-feels-like-scam/

“It just feels like a massive scam, the whole thing, and no one actually cares about what they are doing to the young generation.”

https://www.theguardian.com/commentisfree/2024/feb/11/why-go-to-university-when-its-almost-impossible-to-pay-off-a-student-loan

“Universities make it very hard to judge the value of their courses, yet it has never been more vital”

“We can’t look young people in the eye and tell them the degrees that are a prerequisite for so many jobs represent a good deal for them.”

https://www.linkedin.com/pulse/harsh-realities-uk-job-market-wake-up-call-employers-sarah-bryer-frsa-58bie/

“Here’s another hard truth: the UK education system is churning out graduates with degrees that no longer match the needs of the market.”

https://www.spectator.co.uk/article/are-too-many-young-people-going-to-university/

"Unless you believe the somewhat unconvincing notion that UK school students have been getting steadily smarter, more sophisticated, and better educated each year, quality will decline, and entry standards will fall," said Tettenborn in The Spectator

https://www.telegraph.co.uk/news/2024/08/06/young-people-have-realised-university-is-a-con/

“Having noted that the average student now leaves university with an eye-watering debt of £48,470, and that many graduates end up in jobs that don’t actually require a degree, our astute teenagers have arrived at the sensible conclusion that – unless you’re doing a course that will lead directly to a secure and well-paid career, such as medicine – it’s no longer worth bothering.”

https://www.cityam.com/the-debate-do-too-many-people-go-to-university/

“A strong proportion of graduates, particularly those that attended universities that were once polytechnics, are now working in non-graduate roles – leaving them saddled with around 30 grand worth of student debt, for something that could have been achieved three years earlier for free. The existence of this complete imbalance of skills to job requirements is clearly indicative that too many people go to university! “

“Give students more choice outside the university bracket, more help to make a decision aged 18, and be more honest about what is required to undergo a Bachelor’s degree. This would make a better country, and likely one in which fewer people went to university”

https://www.telegraph.co.uk/money/jobs/inside-hellish-jobs-market-applicants-face-140-1-odds/

“Almost six months, more than 100 job applications and around 10 interviews later, Malini, 22, had still not landed that coveted, first-step-on-the-ladder graduate job.”

“Competition has reached a fever pitch, with the average employer receiving 140 applications per role, according to the Institute of Student Employers.”

https://www.bbc.co.uk/news/articles/cx2j8v8wvrko

“Studying for a masters degree in environmental science, Zach was inspired by the ambition of a better job, but renting on his own was "out of the question, unless you want to live in a shoe box", and buying still feels out of reach.”

"It's getting harder to save. It feels like there is no hope getting on the housing ladder in London," he said.”

https://www.telegraph.co.uk/news/2024/01/16/collapse-of-universities-would-be-great-news-for-britain/

“We need to rethink the purpose of higher education. Sadly, we aren't going to do that until the current system falls apart”

“Every autumn, far too many of our young people set off to rack up vast personal debt (on average, £45,000 each), in return for which they will receive ..... a sheet of paper confirming that they now hold an absolutely useless degree.”

“I’m thinking of degrees that are more traditional, but ultimately just as worthless, such as philosophy, history of art and English literature.
All fascinating subjects. But there’s no point in getting a degree in them. I should know”

https://www.neilobrien.co.uk/p/higher-education-higher-costs

“But young people in Britain have it tough, and the large repayments and high marginal rates they face are an important part of that”

https://www.telegraph.co.uk/business/2024/12/17/graduates-struggle-to-find-work-lack-of-jobs-britain/

“Faith-Hope Mbachu always dreamt of becoming a lawyer. So when she started her law degree at Nottingham Trent University, she felt excited and optimistic.

Unfortunately, those feelings had disappeared by the time she graduated and entered the jobs market. “I’ve probably applied for 200 to 300 jobs if I’m being honest,” she says.”

https://conservativehome.com/2020/06/01/neil-obrien-rebalancing-higher-and-technical-eduation-the-universities-should-reform-themselves-or-have-reform-forced-on-them/

"But somewhere along the way we lost sight of the Robbins principle – which wasn't "more students", but places *for those who can benefit"*

https://www.mirror.co.uk/news/business/england-highest-percentage-overqualified-workers-34285219

"When questioned about the high rates of overqualification and participation in higher education in England, Mr Schleicher stated: "I do think there are signs that the British university system has been overextending itself."

https://www.economist.com/international/2024/11/18/is-your-masters-degree-useless

"New data show a shockingly high proportion of (Masters) courses are a waste of money"

https://www.fenews.co.uk/skills/how-much-is-your-degree-worth/#:~:text=The%20average%20graduate%20will%20earn%2023%25%20more%20over%20their%20lifetime,do%20not%20study%20at%20university.

"62% of British adults believe that a degree has no impact on earning potential"

https://www.varsity.co.uk/news/28860

"On top of this fewer than 40% of graduates see university as having paid off financially based on their current earnings, with 12% saying that a university career has made them financially worse off."

https://www.telegraph.co.uk/business/2024/12/11/england-third-graduates-feel-overqualified-job/

"Highly qualified graduates are earning markedly less than they would expect after years of study, OECD says"

https://www.telegraph.co.uk/money/tax/labour-betrayed-young-voters-face-70pc-tax-rises/

" promise of a graduate wage premium barely exists. Nearly half of recent graduates and more than 30pc of non-recent graduates work in non-graduate jobs. Until employers signal that a degree is no longer a prerequisite, or that an apprenticeship is similarly valued to a degree, who would put any young person off seeking a degree qualification?"

https://www.if.org.uk/2025/03/25/there-is-more-than-one-version-of-student-loan-fraud/

Paul Wiltshire, founder of University Watch and student finance campaigner, argues in his new report that the HE sector is mis-selling degrees to unsuspecting young adults and extracting fee income via student loans on an industrial scale