Forecasting the potential Exchequer cost of the English HE funding system

Summary of findings for the Association of Colleges
November 2023

Overview of the analysis

London Economics

Introduction and context

- The recent reforms to student loan repayment terms implemented in response to the Augar Review (here) are expected to result in a large decline in the net Exchequer cost of the English higher education (HE) funding system (e.g. see here). However, in spite of these reforms, the Government's costs of the system continue to apply significant pressures on the public finances – particularly in the context of a demographic boom in the number of 16-18 year-olds.

- To assess the potential financial pressures of the system on the public purse going forward, we were commissioned by the Association of Colleges to **forecast the potential Exchequer cost associated with the English HE funding system by 2030-31**, under **different scenarios in relation to the future growth in student numbers**. In particular, we model a range of **illustrative scenarios in relation to the number of English domiciled first-year students starting undergraduate qualifications in each year**, to show the implications for the potential cost of the system at the start of the next decade, including:

  - An extrapolation of recent growth trends in student numbers, modelled here as the '**Baseline**' for comparison with all other scenarios;

  - **Scenario 1**: A 'levelling off' in student numbers, by assuming no further growth in first-year students going forward (e.g. a potential stagnation that could be driven by real-terms reductions in maintenance support and the decline in the graduate earnings premium over time);

  - **Scenario 2**: A further boost to student growth on top of growth trends in recent years (i.e. on top of the 'Baseline', e.g. due to declining labour market outcomes and reduced options for non-graduates);

  - **Scenario 3**: Within the same overall growth forecast as in the 'Baseline', a shift in demand from Level 6 (first degree) to Level 4/5 (sub-degree) study (e.g. due to a potential shift in policy focus on promoting sub-degree qualifications as a key means to upskilling the UK workforce).

Overview of the analysis

- Specifically, we estimate the cost of the full range of English fees and student support arrangements to the Exchequer, focusing on **English domiciled undergraduate students studying at higher education institutions (HEIs)[1] anywhere in the UK or at further education colleges (FECs) in England**. The analysis includes both full-time (FT) and part-time (PT) students, as well as all types of undergraduate qualifications (i.e. first degrees (Level 6[2]) and sub-degree qualifications[3] (Level 4/5)).

- The analysis is based on the **funding arrangements facing the cohort of English domiciled students starting qualifications in 2023-24** - i.e. the analysis focuses only on students who are subject to the new Plan 5 loan repayment terms for England - and we assume that there are no changes to the funding system by 2030-31[4]. However, we *also* assess how much Exchequer resource might be freed up under a **potential Employer Levy**, to consider a potential contribution to the funding system from employers as one of the key beneficiaries of higher education.

- The modelling assesses a range of **key metrics**, including:

  - Detailed student loan outcomes, e.g. the **Resource Accounting and Budgeting (RAB) charge[5]** (i.e. proportion of the total loan balance written off);

  - The **total student loan outlay** (i.e. the total value of loans issued to relevant (first-year and continuing) students in the academic year of interest); and

  - The **total Exchequer cost** of the system, including the (RAB-adjusted, i.e. 'net') cost of student loan support associated with these students, as well as the associated Teaching Grant funding paid to HEIs across the UK (where applicable).

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[1] This includes publicly funded higher education institutions as well as alternative providers located anywhere in the UK. Please see the Annex for more information on our methodological approach.

[2] i.e. Level 6 on the Regulated Qualifications Framework that is in use in England, Wales, and Northern Ireland.

[3] We exclude students studying for undergraduate-level institutional credits only (i.e. no formal qualifications), as these students are typically not eligible for public funding.

[4] Apart from growth in maintenance loan levels (which are typically increased with Retail Price Index (RPI) inflation over time) or loan repayment thresholds in subsequent academic years. Again, please see the Annex for more information.

[5] In each instance, the RAB charges (in % terms, estimated separately by qualification level, mode, gender, and lifetime earnings decile) are calculated based on the loan outlay and expected loan repayments of students in the 2023-24 cohort, i.e. students who started their qualifications in the 2023-24 academic year. We then apply these same RAB charges to assess the Exchequer cost associated with the total student body (including first-year and continuing students) in 2030-31 under each scenario.

Core modelling scenarios

The **Baseline** forecasts first-year student numbers up to 2030-31 based on recent trends in student growth per year. In addition, we modelled **3 alternative scenarios** in relation to the number of first-year students:

BASELINE: CURRENT TRENDS	SCENARIO 1: LEVELLING OF/NO GROWTH	SCENARIO 2: HIGHER GROWTH	SCENARIO 3: SWITCH TOWARDS LEVEL 4/5
Extrapolation from current growth trends using **3-year rolling compound annual growth rates (CAGRs)**[1]. • For example, first-year students in 2023-24 are estimated based on 2022-23 numbers, multiplied by the 3-year compound annual growth rate between 2019-20 and 2022-23[2, 3]	Assuming the **same number of first-year students in 2023-24 as in the Baseline, but that there is no growth in first-year students after that.** • i.e. we assume that the same number of first-year students enter the system in each year going forward	Assuming the **same number of first-year students in 2023-24 as in the Baseline,** but higher growth after that: • **2.0 percentage point uplift** to Baseline growth in each year for **FT students** • **0.5 percentage point uplift** to Baseline growth in each year for **PT students**	Assuming the **same *total* number of first-year students in all years as in the Baseline,** but within this total: • **Students studying in England:** 'Switch' from Level 6 (degrees) to Level 4/5 (sub-degree) qualifications): Doubling in Level 4/5 FT students in 2030-31 compared to Baseline, and 50% uplift for PT students[4]. Corresponding absolute declines in Level 6 students. • **Students studying in RUK:** Same numbers as in Baseline.

[1] CAGRs capture growth rates on an annually compounded basis—i.e. the annualised average rate of growth between two (non-consecutive) years.

[2] In the absence of available student data for 2022-23, the numbers for 2022-23 themselves are estimated, by multiplying data on student numbers in 2021-22 by the 2-year CAGR between 2019-20 and 2021-22. The 2-year CAGR was used here since the specific data on HE enrolments at FE colleges was not available prior to 2019-20 (the data was based on unpublished Individualised Learner Record student data provided to us by the AoC). Further note that the resulting forecasts are thus based on information for academic years impacted by the Covid-19 pandemic, and it is likely that the inclusion of additional years of historical years of data would impact the forecasting results.

[3] To ensure that the estimates capture the full nuance in recent growth trends, the forecasting is undertaken at a granular level, based on a breakdown of student numbers by location of study (English HEIs, Welsh HEIs, Scottish HEIs, NI HEIs, and English FECs), study mode, and level of study (distinguishing between first degrees, Foundation Degrees, Higher National Certificates/Diplomas (HNCs/HNDs), and other undergraduate qualifications). There are multiple instances where the resulting granular rolling CAGRs are negative (so that, for some of these student groups, the Baseline scenario forecasts a decline in the relevant number of students over time).

[4] We assume that the increased demand for Level 4/5 qualifications starts in 2025-26, and then assume constant annual growth rates (separately for full-time vs. part-time students) in each year from 2025-26 to 2030-31.

Alternative scenarios *with Employer Levy*

In addition to the above 'core' scenarios, we also analysed how much Exchequer resource might be freed up under Scenarios 1-3 through the introduction of an **Employer Levy for higher education**:

| BASELINE: CURRENT TRENDS	SCENARIO 1: LEVELLING OF/NO GROWTH	SCENARIO 2: HIGHER GROWTH	SCENARIO 3: SWITCH TOWARDS LEVEL 4/5
Extrapolation from current growth trends using **3-year rolling compound annual growth rates (CAGRs)**. • For example, first-year students in 2023-24 are estimated based on 2022-23 numbers, multiplied by the 3-year compound annual growth rate between 2019-20 and 2022-23	Assuming the **same number of first-year students in 2023-24 as in the Baseline**, but that there is **no growth in first-year students after that.** • i.e. we assume that the same number of first-year students enter the system in each year going forward	Assuming the **same number of first-year students in 2023-24 as in the Baseline**, but higher growth after that: • **2.0 percentage point uplift** to Baseline growth in each year for **FT students** • **0.5 percentage point uplift** to Baseline growth in each year for **PT students**	Assuming the **same *total* number of first-year students in all years as in the Baseline**, but within this total: • **Students studying in England**: 'Switch' from Level 6 (degrees) to Level 4/5 (sub-degree) qualifications): Doubling in Level 4/5 FT students in 2030-31 compared to Baseline, and 50% uplift for PT students. Corresponding absolute declines in Level 6 students. • **Students studying in RUK:** Same numbers as in Baseline.
	Alternative: + Employer Levy	**Alternative: + Employer Levy**	**Alternative: + Employer Levy**

For each scenario, we modelled a **0.2 percentage point increase in the employer National Insurance contribution rate (from 13.8% to 14.0%)** for students/graduates in the relevant student body (i.e. for English domiciled undergraduate students entering HE from 2023-24 onwards)[1].

[1] Similar to the RAB charge, we estimate the expected Employer Levy contributions as a proportion of the loan outlay, again for the 2023-24 cohort for simplicity (i.e. students who started their qualifications in the 2023-24 academic year). We then apply the resulting proportions to the estimated loan outlay associated with the total student body (including first-year and continuing student) in 2030-31, to estimate the potential Employer Levy contributions associated with these students.

Baseline: Growth based on current trends

Baseline: First-year students by mode

Forecast number of first-year undergraduate English domiciled students, by year and mode (000s)
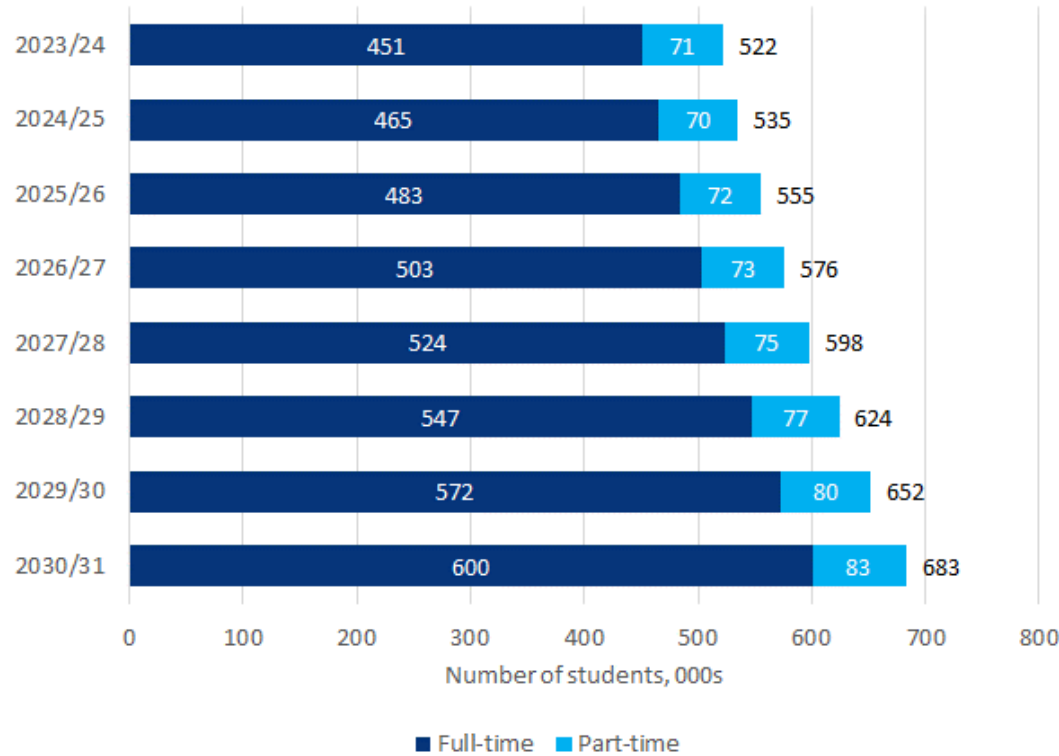
- Under the Baseline forecasts, based on recent growth trends over the last 3 years, the number of first-year English domiciled undergraduate students (studying anywhere in the UK) is predicted to increase from approximately **522,000** in 2023-24 to **683,000** in 2030-31 (a **31%** increase). This equates to an annual growth rate (CAGR) of roughly **4%** over the period[1]. This effectively incorporates the predicted demographic bulge that is expected to feed into post-compulsory education in the next decade.

- In terms of the breakdown by **mode of study**, and again reflecting recent growth trends, the Baseline scenario predicts a substantial increase in relevant **full-time students** over the period (**33%** increase, from **451,000** to **600,000**), with a more modest rise in **part-time students** (**16%** increase, from **71,000** to **83,000**).

Note: All numbers relate to English domiciled students studying anywhere in the UK (including UK HEIs and English FE colleges). Numbers are rounded to the nearest 1,000 and may not add up to the reported totals due to this rounding.
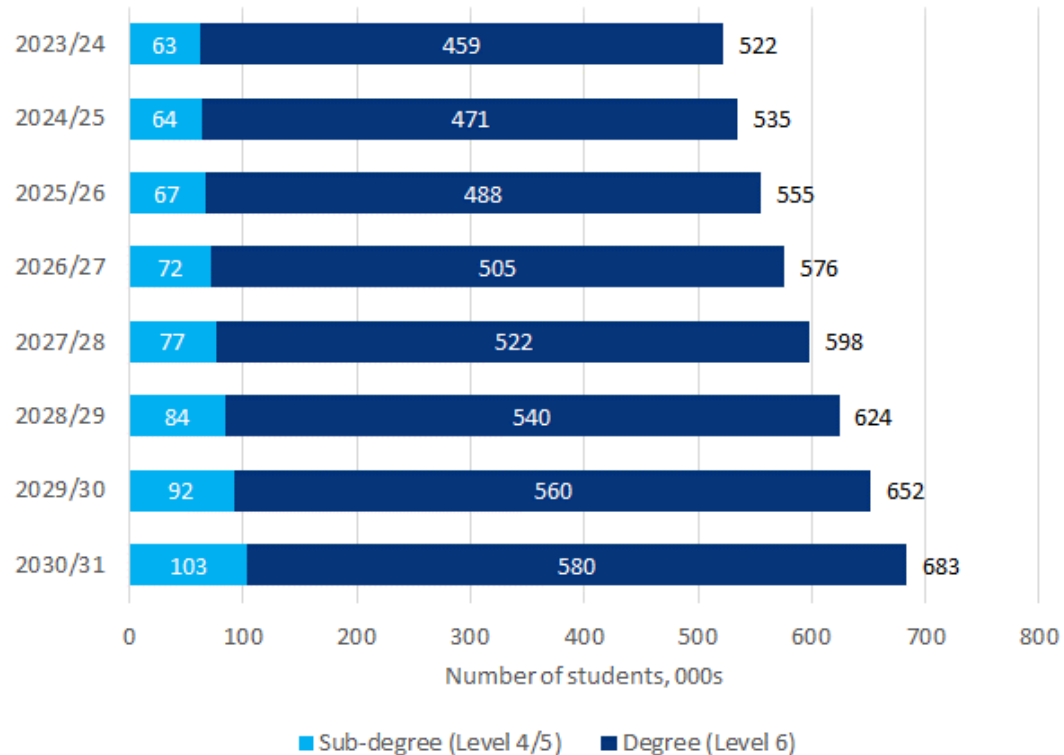
[1] As outlined above, the number of students in 2023-24 itself is estimated, due to the absence of available data for the current academic year. 2021-22 is the most recent academic year for which student data are currently available, and we used that information (alongside historical information for 2020-21 and 2019-20) to estimate student numbers in 2022-23 and 2023-24.

Baseline: First-year students by level

Baseline: Current trends

Forecast number of first-year undergraduate English domiciled students, by year and level (000s)

Year	Sub-degree (Level 4/5)	Degree (Level 6)	Total
2023/24	63	459	522
2024/25	64	471	535
2025/26	67	488	555
2026/27	72	505	576
2027/28	77	522	598
2028/29	84	540	624
2029/30	92	560	652
2030/31	103	580	683

Number of students, 000s

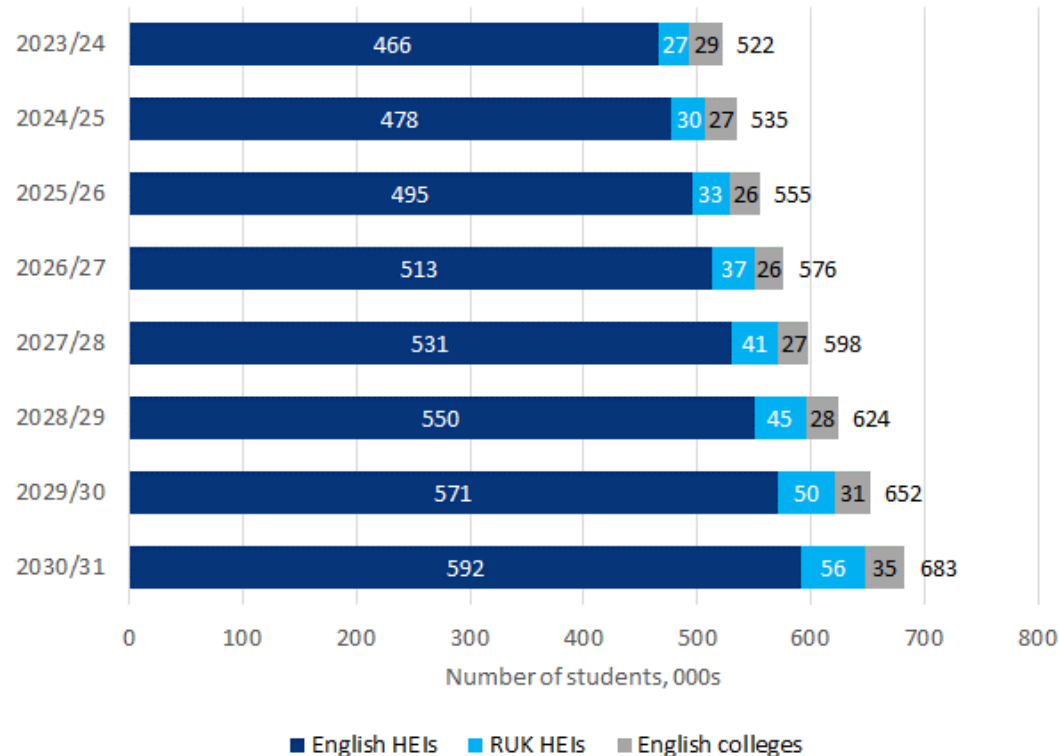- Sub-degree (Level 4/5)   ■ Degree (Level 6)

- In terms of the breakdown by **level of study,** under the Baseline, the number of relevant students undertaking **first degrees (i.e. Level 6 qualifications)** is predicted to increase by **26%** by 2030-31 (from **459,000** to **580,000**).

- In contrast, the relative increase in students enrolling in **sub-degree (i.e. Level 4/5) qualifications** is predicted to be much higher, estimated to increase by as much as **64%** (from **63,000** in 2023-24 to **103,000** in 2030-31).

- While the Baseline thus already predicts a strong increase in the demand for Level 4/5 qualifications, Scenario 3 models an even more substantial increase (by modelling a switch from degree level to sub-degree level qualifications).

Note: All numbers relate to English domiciled students studying anywhere in the UK (including UK HEIs and English FE colleges). Numbers are rounded to the nearest 1,000 and may not add up to the reported totals due to this rounding.
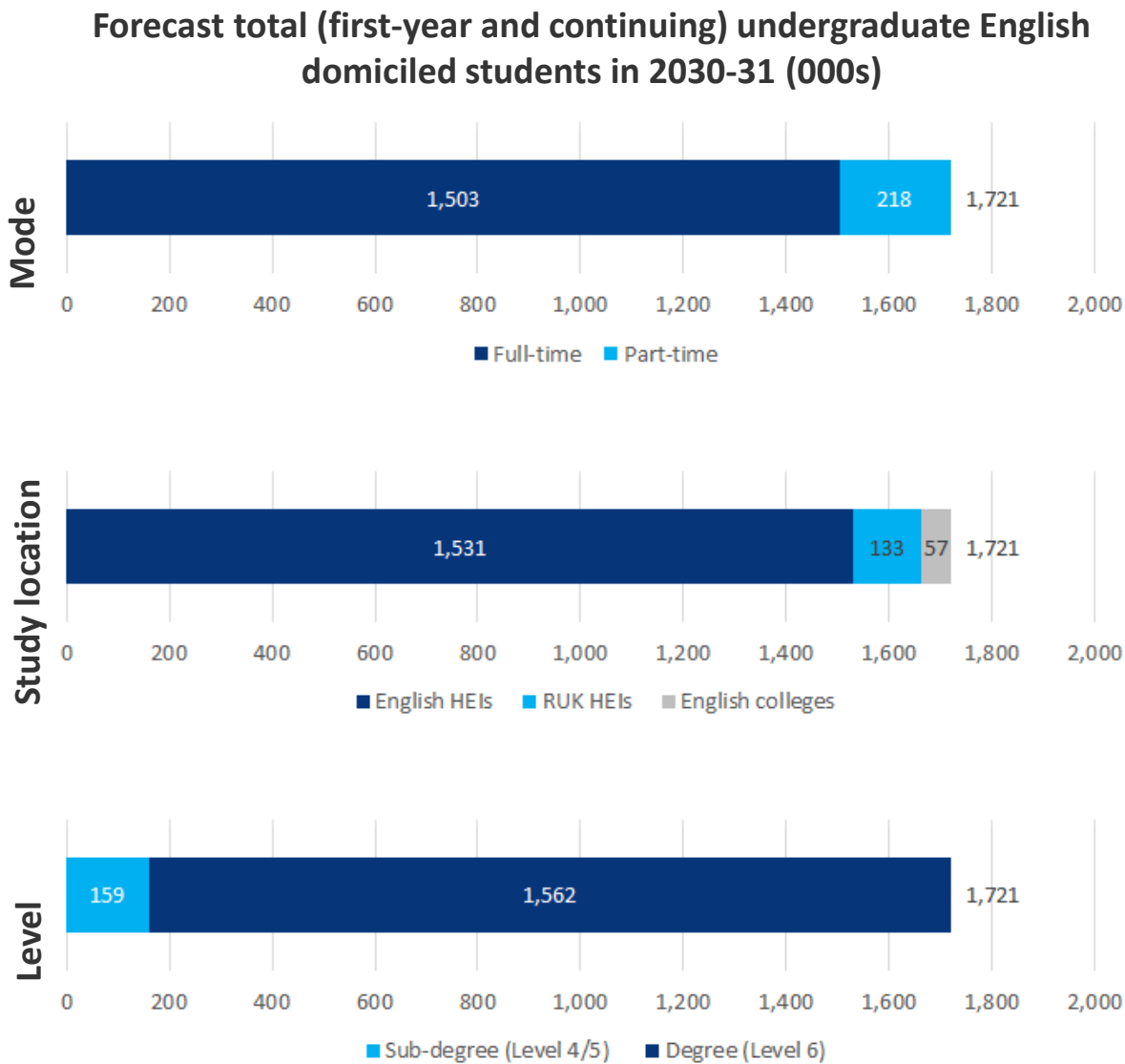
Baseline: First-year students by study location

Baseline: Current trends

Forecast number of first-year undergraduate English domiciled students, by year and study location (000s)

Year	English HEIs	RUK HEIs	English colleges	Total
2023/24	466	27	29	522
2024/25	478	30	27	535
2025/26	495	33	26	555
2026/27	513	37	26	576
2027/28	531	41	27	598
2028/29	550	45	28	624
2029/30	571	50	31	652
2030/31	592	56	35	683

Number of students, 000s

■ English HEIs   ■ RUK HEIs   ■ English colleges

- In terms of location of study, the Baseline forecasts a year-on-year increase in first-year students studying at **English HEIs and HEIs in the rest of the UK** (with a predicted **27%** and **105%** total increase over the period, respectively).

- However, the analysis predicts an initial *reduction* in students in the cohort starting qualifications at **English FE colleges** until 2026-27 (due to a recent overall downward trend in numbers for colleges). This is followed by a predicted increase between 2026-27 and 2030-31[1], so that these students are estimated to increase by **22%** overall between 2023-24 and 2030-31.

[1] The increase in these years is driven entirely by large recent growth in the number of (full-time) students starting 'other' undergraduate qualifications (other than first degrees, HNCs/HNDs, or Foundation Degrees). Based on the forecasting method under the Baseline, this increase is estimated to outweigh a decline in all other groups of students starting qualifications at FE colleges in England throughout those years.

Note: All numbers relate to English domiciled students studying anywhere in the UK (including UK HEIs and English FE colleges). Numbers are rounded to the nearest 1,000 and may not add up to the reported totals due to this rounding.

Baseline: Total student body in 2030-31

Forecast total (first-year and continuing) undergraduate English domiciled students in 2030-31 (000s)

- We then combine our above first-year student forecasts with assumptions in relation to the average study duration and continuation rates (separately by study mode and level[1]). This allows us to estimate the expected size of the **total student body** – i.e. including first-year *and* continuing students – in 2030-31, and, therefore, the associated total 'net' Exchequer cost and loan outlay in that year.

- The total number of relevant English domiciled undergraduate students expected to be enrolled in 2030-31 under the Baseline stands at approximately **1.72 million**. This includes:
  - **1.50 million** full-time students (**87%**), and **218,000** part-time students (**13%**);
  - **1.53 million** students studying at English HEIs (**89%**), **133,000** studying at HEIs in the rest of the UK (**8%**), and **57,000** at FE colleges in England (**3%**); and
  - **1.56 million** enrolled in first degrees (Level 6; **91%**), with the remaining **159,000** undertaking sub-degree qualifications (Level 4/5; **9%**).

Note: All numbers relate to English domiciled students studying anywhere in the UK (including UK HEIs and English FE colleges). Numbers are rounded to the nearest 1,000 and may not add up to the reported totals due to this rounding.

[1] Again, please refer to the Annex for more detail.

Baseline: Current trends

Baseline: Exchequer cost in 2030-31

Baseline: Current trends

Resource flows (£m/%)	Baseline
'Net' Exchequer cost (adjusted for RAB)	
Cost of maintenance loans	(£728m)
Cost of tuition fee loans	(£798m)
Cost of Teaching Grants	(£1,612m)
Total Exchequer cost	**(£3,139m)**
RAB charge (%)	**6.0%**
Loan outlay	
Maintenance loans	(£12,138m)
Tuition fee loans	(£13,496m)
Total loan outlay	**(£25,634m)**
Total student body	
# of students, 000s	**1,721**

Note: All monetary values are presented in cash terms in 2030-31 prices and rounded to the nearest £1m.
In each instance, the cost of maintenance loan and fee loan forgiveness is calculated by multiplying the estimated maintenance loan and fee loan outlay by the estimated RAB charge (capturing the proportion of the total loan balance (including accumulated interest) expected to be written off at the end of the 40-year loan repayment period). The RAB charge presented here represents the overall weighed average RAB charge (average across men and women, qualification levels, modes of study (i.e. full-time and part-time students), and lifetime earnings deciles).

- Under the Baseline scenario, the total estimated 'net' (i.e. RAB-adjusted) cost of the English undergraduate HE funding system in 2030-31 stands at approximately **£3.14bn**.

- Of this total, the **maintenance loan write-offs** cost the public purse approximately **£728m**, while **fee loan write-offs** cost **£798m**. The cost associated with the provision of **Teaching Grants** to HE providers is estimated at **£1.61bn** (including **£1.57bn** for English HEIs and FE colleges (allocated by the Office for Students) and **£41m** associated with students studying at Welsh providers[1] (allocated by the Higher Education Funding Council for Wales)).

- The total loan outlay in 2030-31 is forecast to be roughly **£25.63bn**, including **£12.14bn** in maintenance loans and **£13.50bn** in tuition fee loans issued to students in that year.

- The average RAB charge is estimated at **6.0%** (on average across all study levels and modes).

[1] English domiciled students studying in Scotland or Northern Ireland typically do not attract any Teaching Grant funding (from the Scottish Funding Council or the Department for the Economy Northern Ireland, respectively). This is because these students are charged much higher tuition fees as compared to 'home' students studying in these Home Nations – so that the Teaching Grants paid to Scottish and Northern Irish HEIs generally apply to 'home' domiciled students only.

Baseline: Exchequer loan outlay in 2023-24 vs 2030-31

Forecast total student loan outlay in 2023-24 vs. Baseline forecasts for 2030-31, £bn
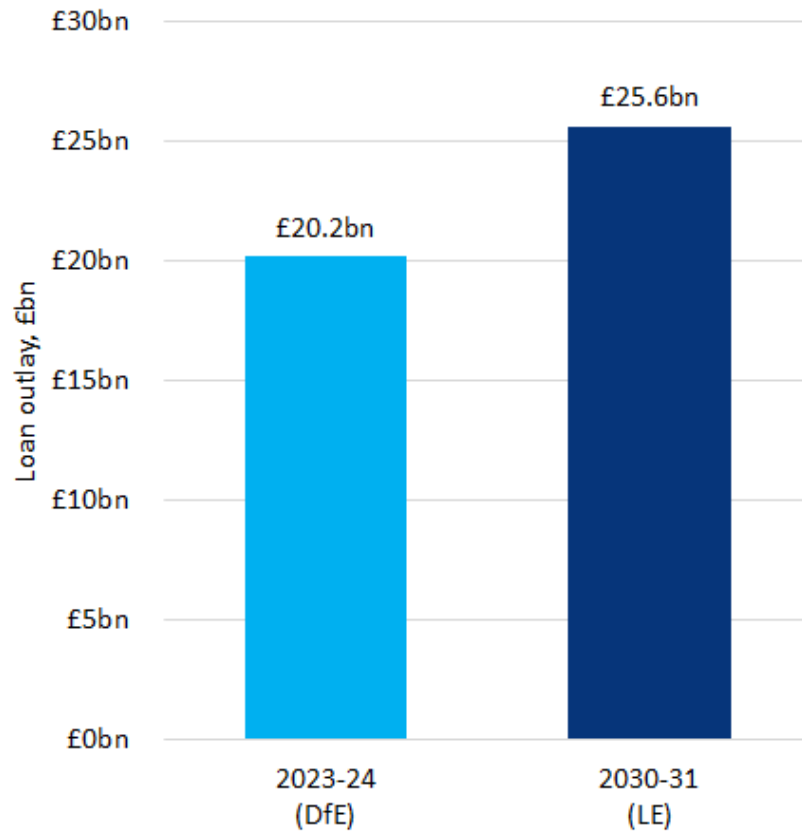
- As outlined above, our modelling exclusively focuses on **students who entered higher education from 2023-24 onwards**, i.e. those students who are subject to the new Plan 5 loan repayment terms that were introduced for new entrants from 2023-24 as part of the DfE's response to the Augar Review[1]. Hence, **our analysis does *not* provide estimates of the current total loan outlay associated with first-year *and* continuing students in 2023-24**.

- Instead, to assess the growth in the total loan outlay over time, we compare our 2030-31 estimates to **DfE student loan forecasts for England assessing the expected total loan outlay issued to all students in 2023-24**[2]. This comparison indicates that, under the Baseline growth scenario, the total loan outlay is estimated to increase from **£20.2bn** in 2023-24 to **£25.6bn**[3] in 2030-31 (a **27% increase in cash terms (i.e. nominal terms))**.

Note: All monetary values are presented in cash terms in current prices (i.e. in nominal terms), and rounded to the nearest £0.1bn.
[1] Again, see here for more information.
[2] See Department for Education (2023). 'Student loan forecasts for England'. Financial year 2022-23' (here). Note that the DfE data provides estimates for the given fiscal year, whereas our analysis focuses predominantly on academic years. The DfE data includes first-year students in 2023-24 (covered by Plan 5 repayment terms) *as well as* continuing students in that year (covered by the 'old' Plan 2 repayment terms that applied to students who entered HE from 2012-13 onwards).
[3] For comparison, our estimated loan outlay in 2030-31 under the Baseline mirrors the DfE's own long-term forecast of the total (Plan 5) loan outlay in 2030-31, which also stand at **£25.6bn** (see here).
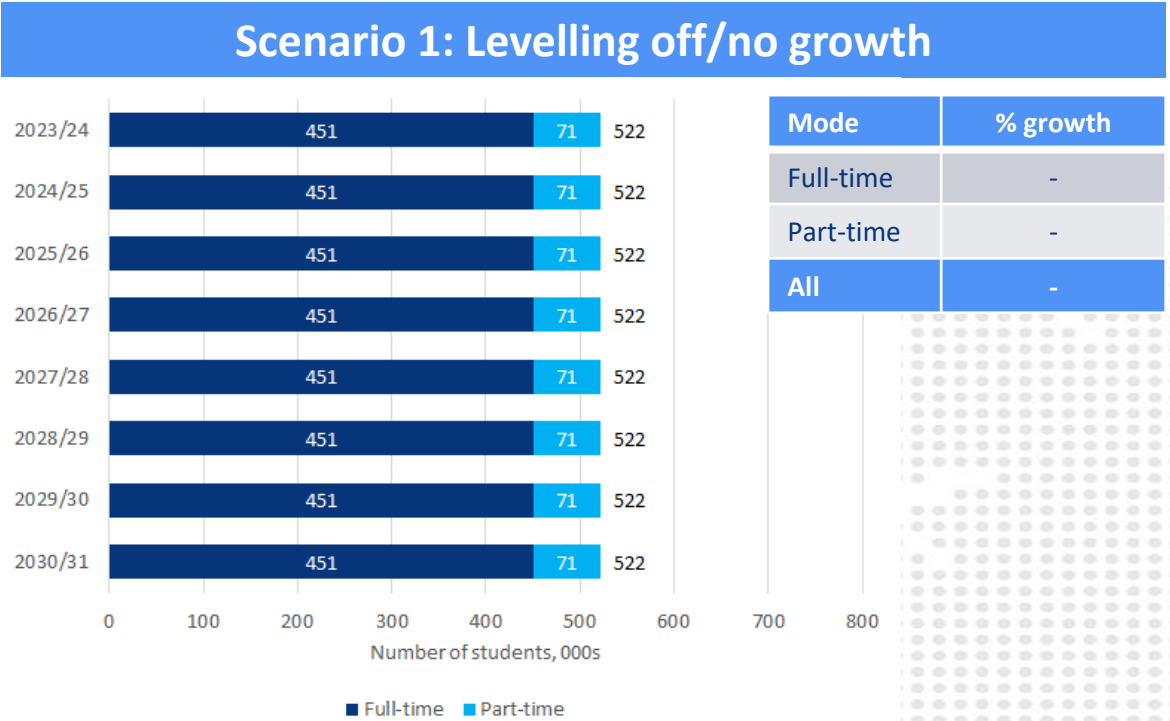
Scenario 1: Levelling off/no growth

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Scenario 1: First-year students by mode

Forecast number of first-year undergraduate English domiciled students, by year and mode (000s)

Baseline: Current trends

Mode	% growth
Full-time	33%
Part-time	16%
All	31%

Scenario 1: Levelling off/no growth

Mode	% growth
Full-time	-
Part-time	-
All	-

- Under **Scenario 1**, we assume the same number of first-year students in 2023-24 as in the Baseline. However, we then model **no further growth in the number of first-year students in subsequent years**.

- In other words, we assume the same number of first-year students between 2024-25 and 2030-31 as in 2023-24 – so that the total number of first-year students remains at **522,000** in each year. This compares to **683,000** students under the Baseline forecast for 2030-31.
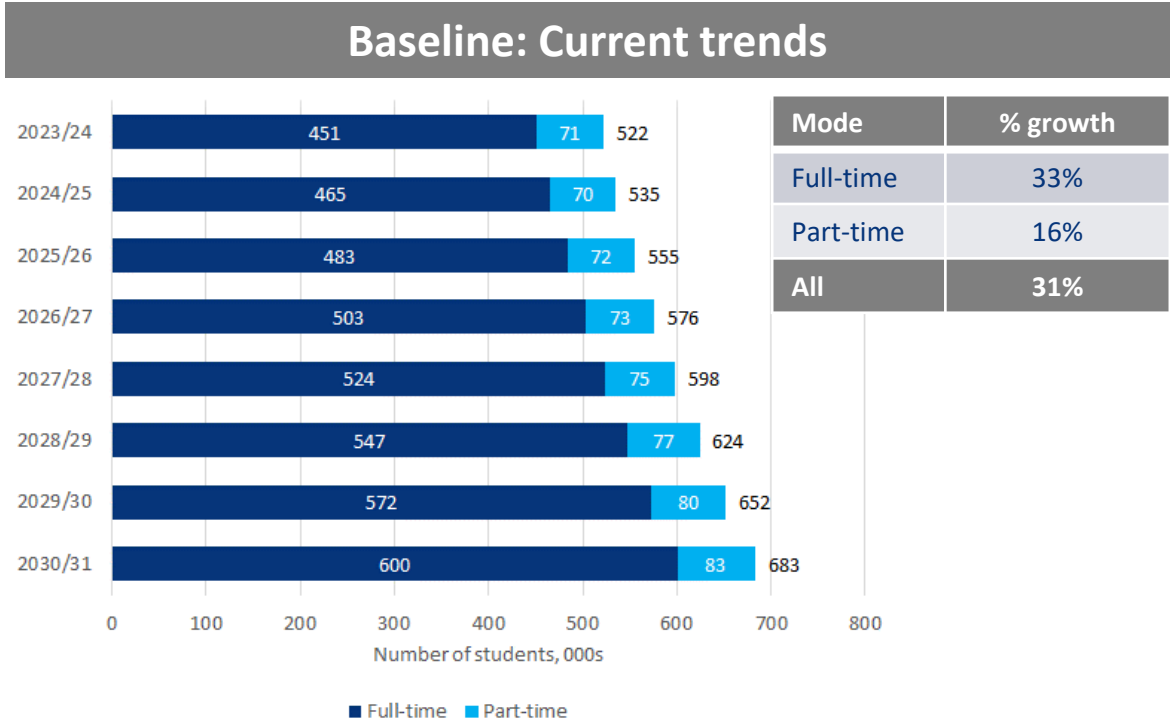
Scenario 1: First-year students by level

Forecast number of first-year undergraduate English domiciled students, by year and level (000s)

Baseline: Current trends

Level	% growth
Sub-degree	64%
Degree	26%
All	31%

Chart data (Baseline):

Year	Sub-degree	Degree	Total
2023/24	63	459	522
2024/25	64	471	535
2025/26	67	488	555
2026/27	72	505	576
2027/28	77	522	598
2028/29	84	540	624
2029/30	92	560	652
2030/31	103	580	683

■ Sub-degree (Level 4/5)   ■ Degree (Level 6)

Scenario 1: Levelling off/no growth

Level	% growth
Sub-degree	-
Degree	-
All	-

Chart data (Scenario 1):

Year	Sub-degree	Degree	Total
2023/24	63	459	522
2024/25	63	459	522
2025/26	63	459	522
2026/27	63	459	522
2027/28	63	459	522
2028/29	63	459	522
2029/30	63	459	522
2030/31	63	459	522

Number of students, 000s

■ Sub-degree (Level 4/5)   ■ Degree (Level 6)

- Under **Scenario 1**, we assume the same number of first-year students in 2023-24 as in the Baseline. However, we then model **no further growth in the number of first-year students in subsequent years**.

- In other words, we assume the same number of first-year students between 2024-25 and 2030-31 as in 2023-24 – so that the total number of first-year students remains at **522,000** in each year. This compares to **683,000** students under the Baseline forecast for 2030-31.
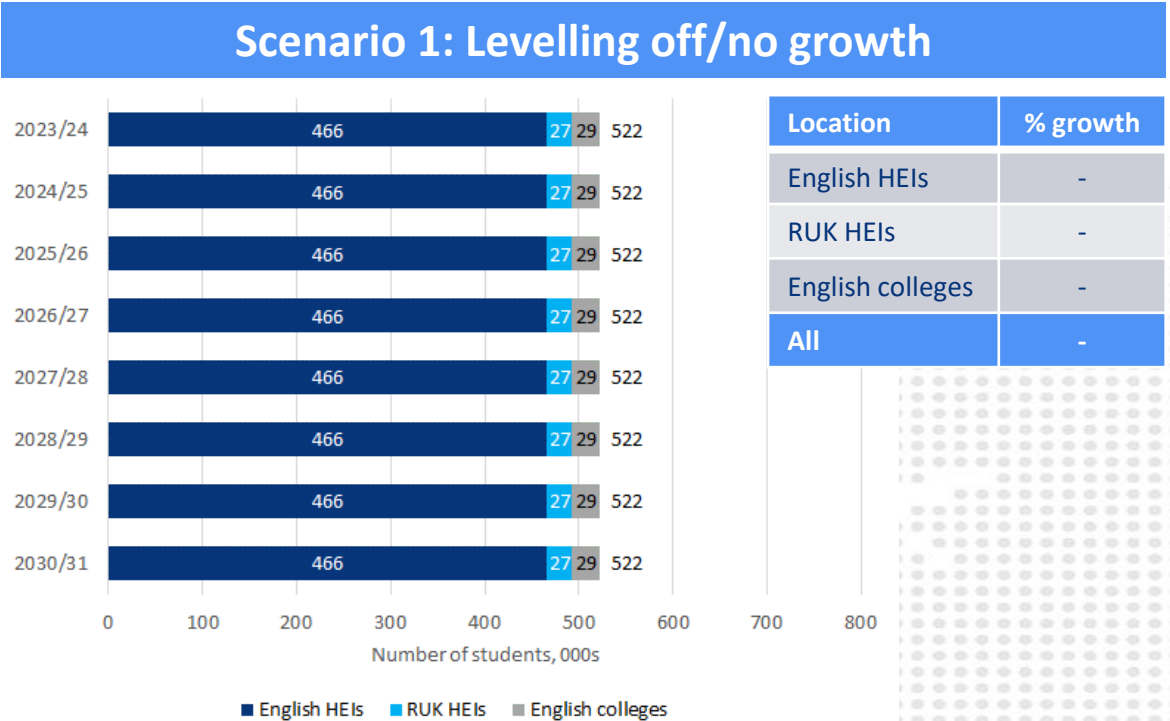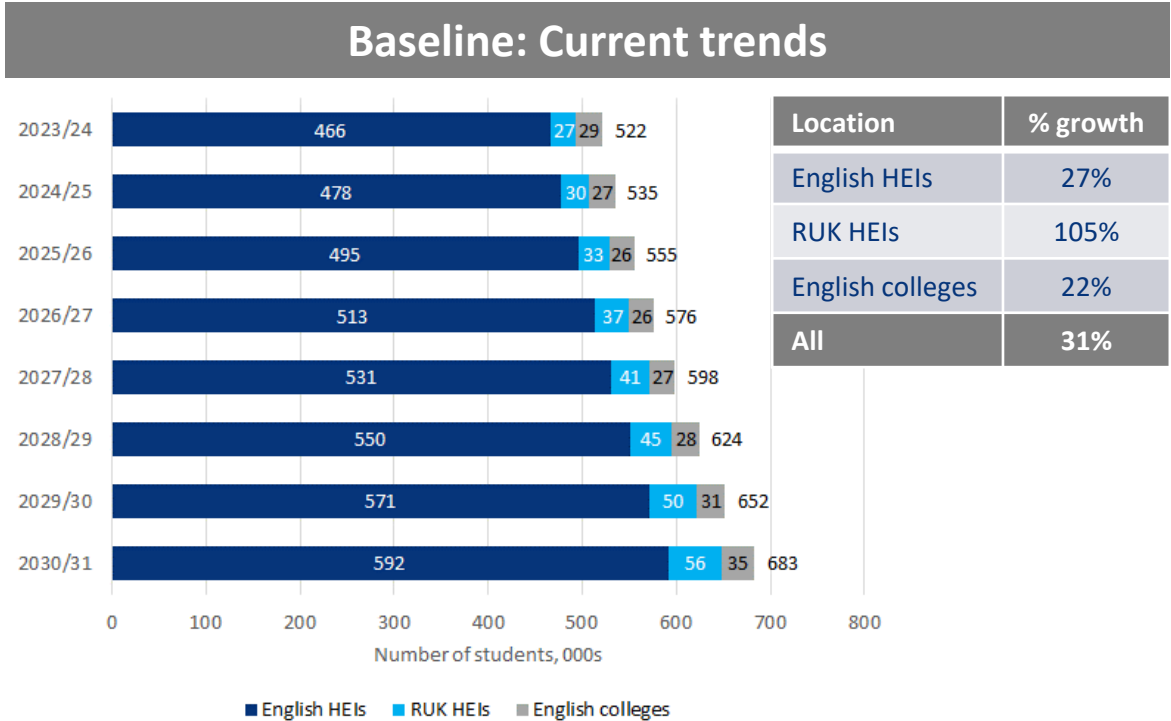
Scenario 1: First-year students by study location

Forecast number of first-year undergraduate English domiciled students, by year and study location (000s)

Baseline: Current trends

2023/24	466	27 29	522
2024/25	478	30 27	535
2025/26	495	33 26	555
2026/27	513	37 26	576
2027/28	531	41 27	598
2028/29	550	45 28	624
2029/30	571	50 31	652
2030/31	592	56 35	683

Number of students, 000s

■ English HEIs ■ RUK HEIs ■ English colleges

Location	% growth
English HEIs	27%
RUK HEIs	105%
English colleges	22%
All	**31%**

Scenario 1: Levelling off/no growth

2023/24	466	27 29	522
2024/25	466	27 29	522
2025/26	466	27 29	522
2026/27	466	27 29	522
2027/28	466	27 29	522
2028/29	466	27 29	522
2029/30	466	27 29	522
2030/31	466	27 29	522

Number of students, 000s

■ English HEIs ■ RUK HEIs ■ English colleges

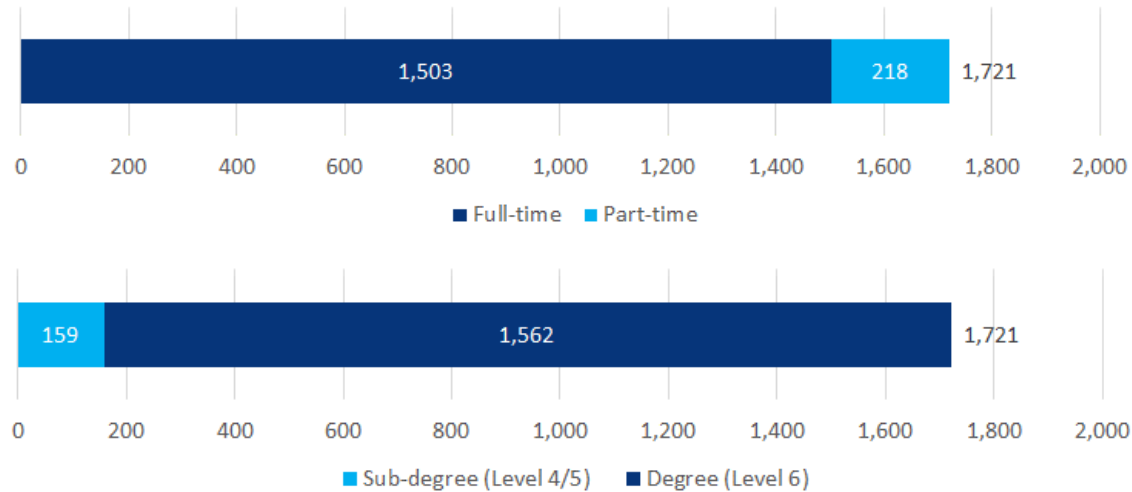| Location	% growth
English HEIs	-
RUK HEIs	-
English colleges	-
All	**-**

- Under **Scenario 1**, we assume the same number of first-year students in 2023-24 as in the Baseline. However, we then model **no further growth in the number of first-year students in subsequent years**.

- In other words, we assume the same number of first-year students between 2024-25 and 2030-31 as in 2023-24 – so that the total number of first-year students remains at **522,000** in each year. This compares to **683,000** students under the Baseline forecast for 2030-31.
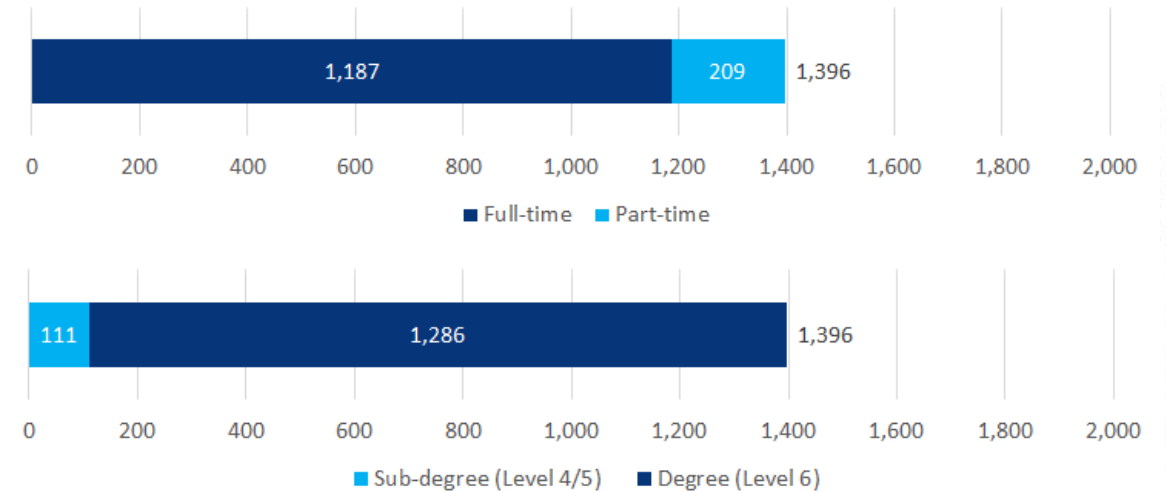
Scenario 1: Total student body in 2030-31

Forecast total (first-year and continuing) undergraduate English domiciled students in 2030-31 (000s)

Baseline: Current trends	Scenario 1: Levelling off/no growth

Baseline: Current trends
- 1,503 | 218 | 1,721 (Full-time / Part-time)
- 159 | 1,562 | 1,721 (Sub-degree (Level 4/5) / Degree (Level 6))

Scenario 1: Levelling off/no growth
- 1,187 | 209 | 1,396 (Full-time / Part-time)
- 111 | 1,286 | 1,396 (Sub-degree (Level 4/5) / Degree (Level 6))

- Compared to the Baseline, the lower number of expected first-year students entering HE in each year results in a smaller total relevant student body in 2030-31. While the number of English domiciled undergraduate students expected to be enrolled in 2030-31 under the Baseline stands at **1.72 million**, this stands at roughly **1.40 million** under Scenario 1 (a **-19%** difference, or **-325,000** students).

Scenario 1: Exchequer cost in 2030-31

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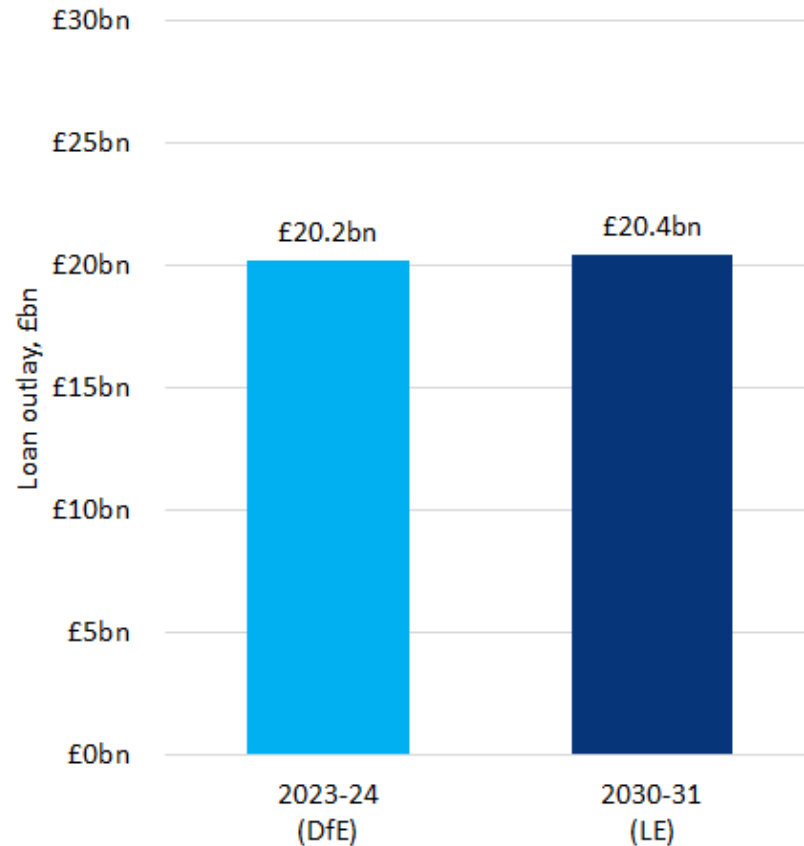| Resource flows (£m/%)	Baseline	Scenario 1	Difference
'Net' Exchequer cost (adjusted for RAB)			
Cost of maintenance loans	(£728m)	(£591m)	£137m
Cost of tuition fee loans	(£798m)	(£650m)	£149m
Cost of Teaching Grants	(£1,612m)	(£1,319m)	£293m
Total Exchequer cost	**(£3,139m)**	**(£2,560m)**	**£579m**
RAB charge (%)	**6.0%**	**6.1%**	**+0.1 pp**
Loan outlay			
Maintenance loans	(£12,138m)	(£9,659m)	£2,479m
Tuition fee loans	(£13,496m)	(£10,759m)	£2,737m
Total loan outlay	**(£25,634m)**	**(£20,418m)**	**£5,217m**
Total student body			
# of students, 000s	**1,721**	**1,396**	**-325**

Note: All monetary values are presented in cash terms in 2030-31 prices and rounded to the nearest £1m.

[1] Again, RAB charge estimates are calculated based on the loan outlay and expected loan repayments of students in the 2023-24 cohort, i.e. students who started their qualifications in the 2023-24 academic year. We then apply these same RAB charges (separately by mode and level) to assess the Exchequer cost associated with the total student body (including first-year and continuing student) in 2030-31 (again by mode and level). Any difference in the average RAB charge between the scenarios here is driven entirely by differences in the predicted distribution of students in 2030-31 (and the associated loan outlay) by study mode and level between the different scenarios.

Scenario 1: Levelling off/no growth

- **Scenario 1** would *reduce* the 'net' Exchequer cost of the system in 2030-31 by **£579m**, to **£2.56bn** (an **18%** decline). Given the much lower predicted number of students, all items of Exchequer expenditure would be reduced, with the decline standing at **£137m** for the cost of maintenance loans write-offs, **£149m** for fee loan write-offs, and **£293m** for Teaching Grants.

- The **£1.32bn** that would be incurred in **Teaching Grants** to HEIs includes approximately **£1.30bn** for English HEIs and FE colleges and **£22m** associated with students studying at Welsh HEIs.

- The total loan outlay in 2030-31 would also be much lower than under the Baseline, declining by **£5.22 billion** to **£20.42bn** (a **20%** reduction). The value of maintenance loans issued would be **£2.48bn** lower, while the fee loan outlay would be **£2.74bn** lower than under the Baseline.

- The RAB charge would be (almost) unchanged, at **6.1%** [1].

Scenario 1: Exchequer loan outlay in 2023-24 vs 2030-31

Scenario 1: Levelling off/no growth

Forecast total student loan outlay in 2023-24 vs. Scenario 1 forecasts for 2030-31, £bn

- Again, as for the Baseline, we also compare our 2030-31 loan outlay estimates under Scenario 1 to the DfE's student loan outlay estimates for England in 2023-24[1], to assess the **growth in loan outlay over time** under this scenario.

- This comparison indicates that, as expected, under Scenario 1, the estimated total loan outlay in 2030-31 (**£20.4bn**) would be effectively the same as in 2023-24 (**£20.2bn**) (compared to a **27%** increase over time under the Baseline forecasts for 2030-31). This is driven by the assumed constant number of first-year students entering HE in each year under this scenario (since we assume no growth in first-year students between 2023-24 and 2030-31[2]).

Note: All monetary values are presented in cash terms in current prices (i.e. in nominal terms), and rounded to the nearest £0.1bn.
[1] Again, see Department for Education (2023). 'Student loan forecasts for England'. Financial year 2022-23' (here).
[2] As well as constant continuation rates (and, therefore, a constant number of continuing students each year).

Scenario 1+: Exchequer cost in 2030-31 *with Employer levy*

Scenario 1+

Resource flows (£m/%)	Baseline	Scenario 1+	Difference
'Net' Exchequer cost (adjusted for RAB)			
Cost of maintenance loans	(£728m)	(£591m)	£137m
Cost of tuition fee loans	(£798m)	(£650m)	£149m
Cost of Teaching Grants	(£1,612m)	(£1,319m)	£293m
Employer Levy contributions	-	£1,833m	£1,833m
Total Exchequer cost	**(£3,139m)**	**(£727m)**	**£2,412m**
RAB charge (%)	**6.0%**	**6.1%**	**+0.1 pp**
Loan outlay			
Maintenance loans	(£12,138m)	(£9,659m)	£2,479m
Tuition fee loans	(£13,496m)	(£10,759m)	£2,737m
Total loan outlay	**(£25,634m)**	**(£20,418m)**	**£5,217m**
Total student body			
# of students, 000s	**1,721**	**1,396**	**-325**

- In addition to the above 'core' results (incorporating the current funding system for English domiciled students starting undergraduate qualifications from 2023-24), we also assessed the implications for the Exchequer costs of the system under the introduction of a potential Employer Levy for HE. Specifically, we modelled a **0.2 percentage point increase in the employer National Insurance contribution rate** (from **13.8%** to **14.0%**) for students/graduates in the relevant student body in 2030-31.

- Under these assumptions, the (post-graduation) Employer Levy contributions associated with students enrolled in 2030-31 were estimated at approximately **£1.83bn**, so that the net public cost of the English undergraduate funding system would decline to **£727m** under Scenario 1. This compares to **£3.14bn** under the Baseline system with no Employer Levy.

Note: All monetary values are presented in cash terms in 2030-31 prices and rounded to the nearest £1m.

Scenario 2: Higher growth

Scenario 2: First-year students by mode

Forecast number of first-year undergraduate English domiciled students, by year and mode (000s)

Baseline: Current trends

Year	Full-time	Part-time	Total
2023/24	451	71	522
2024/25	465	70	535
2025/26	483	72	555
2026/27	503	73	576
2027/28	524	75	598
2028/29	547	77	624
2029/30	572	80	652
2030/31	600	83	683

Number of students, 000s

Mode	% growth
Full-time	33%
Part-time	16%
All	31%

Scenario 2: Higher growth

Year	Full-time	Part-time	Total
2023/24	451	71	522
2024/25	474	71	544
2025/26	502	72	575
2026/27	533	74	607
2027/28	565	76	641
2028/29	602	79	681
2029/30	641	82	723
2030/31	685	86	771

Number of students, 000s

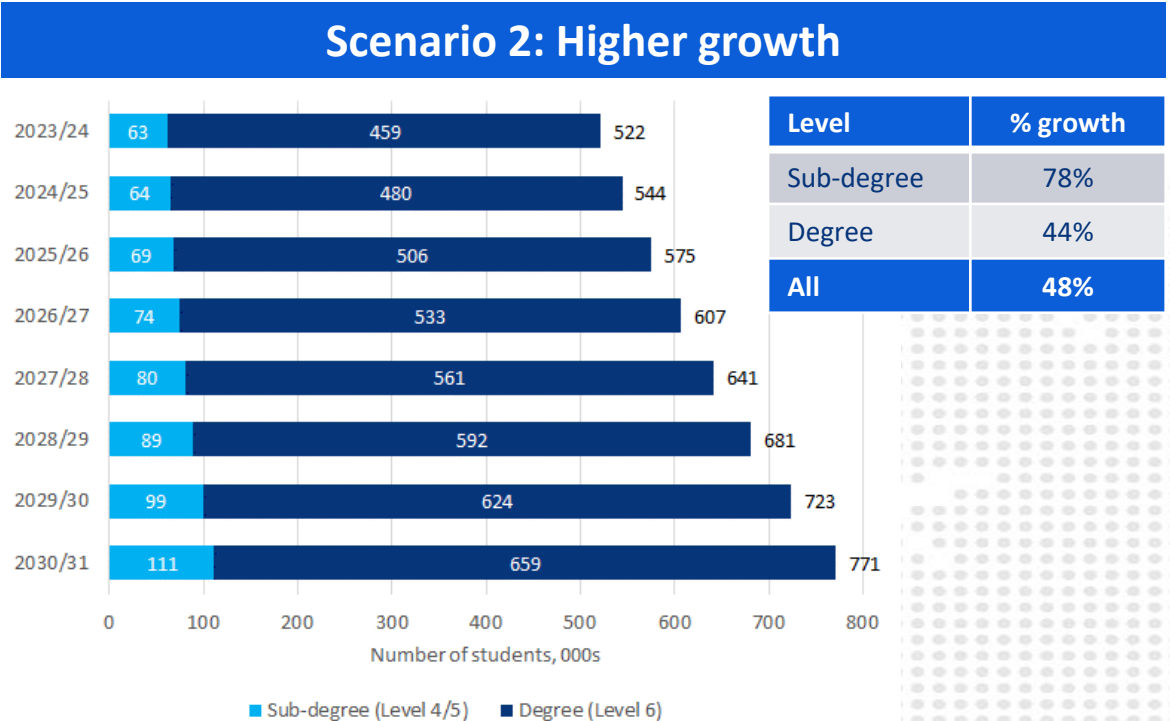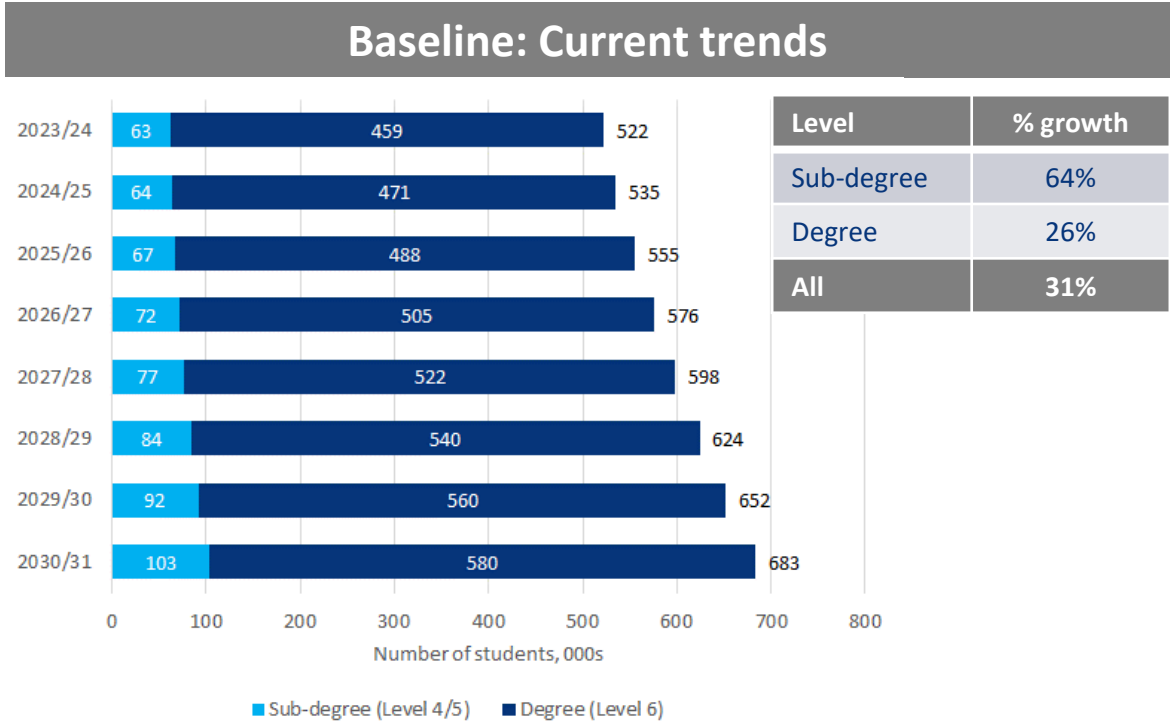| Mode	% growth
Full-time	52%
Part-time	20%
All	48%

■ Full-time ■ Part-time

- In **Scenario 2**, we again model the same number of first-year students in 2023-24 as in the Baseline, but higher annual student growth rates compared to the Baseline in all subsequent years. Specifically, we model a **2 percentage point uplift** to Baseline growth rates in each year for **full-time students**, and a **0.5 percentage point uplift** for **part-time students**.

- As a result, under Scenario 2, the predicted increase in the number of first-year students over time is much larger, rising from **522,000** students in 2023-24 to **771,000** in 2030-31 (a **48%** increase overall, and approximately **6%** per year on average).

- Within this total, full-time students would increase to **685,000** by 2030-31 (a **52%** increase over the period, vs. **33%** in the Baseline), while the number of part-time students would increase to **86,000** (a **20%** increase, compared to **16%** in the Baseline).

Scenario 2: First-year students by level

Forecast number of first-year undergraduate English domiciled students, by year and level (000s)
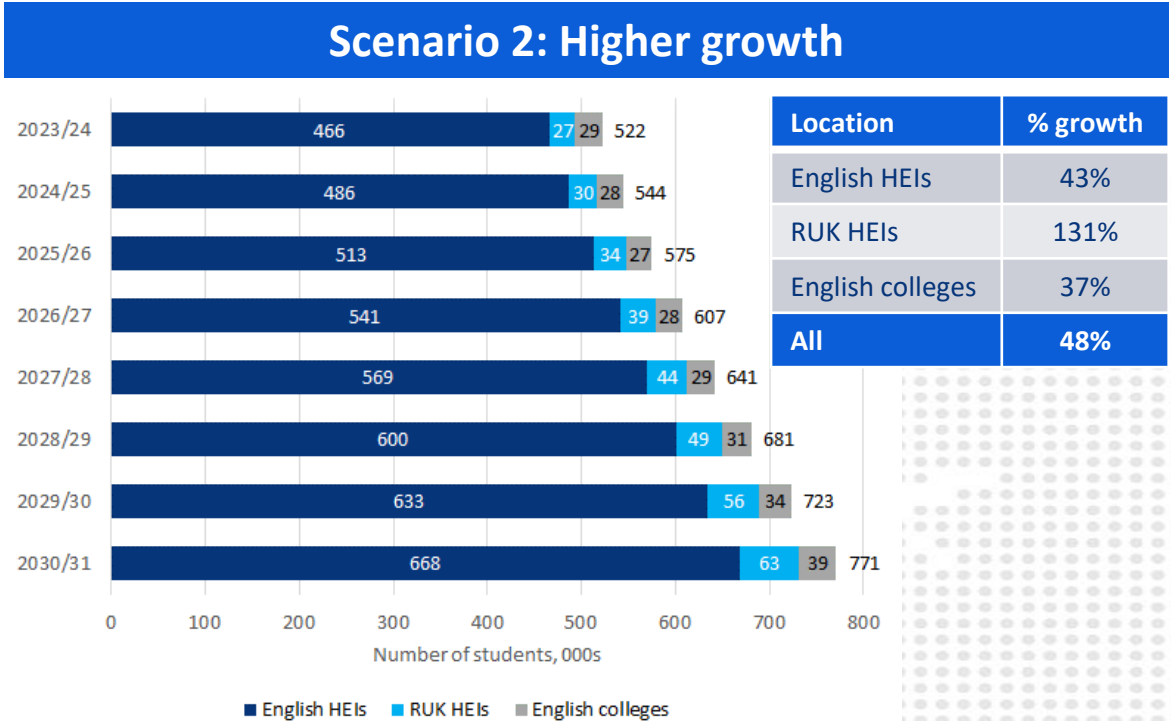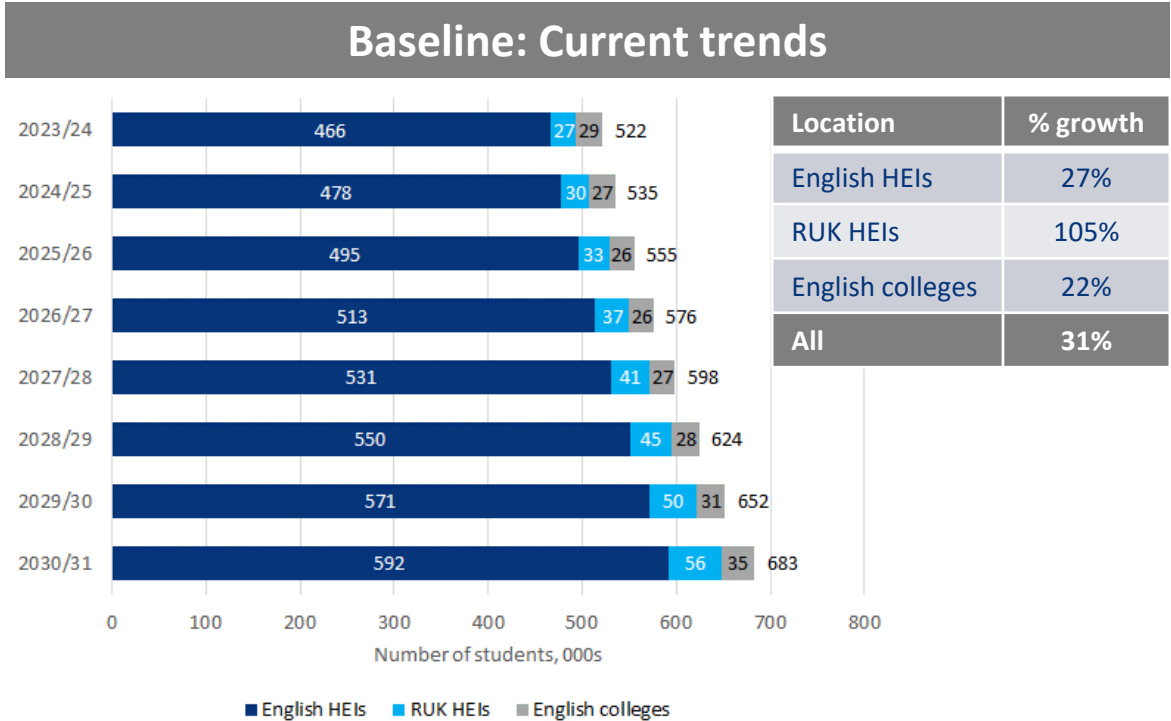
Baseline: Current trends

Level	% growth
Sub-degree	64%
Degree	26%
All	31%

Years shown (Sub-degree | Degree | Total):
- 2023/24: 63 | 459 | 522
- 2024/25: 64 | 471 | 535
- 2025/26: 67 | 488 | 555
- 2026/27: 72 | 505 | 576
- 2027/28: 77 | 522 | 598
- 2028/29: 84 | 540 | 624
- 2029/30: 92 | 560 | 652
- 2030/31: 103 | 580 | 683

Sub-degree (Level 4/5) Degree (Level 6)

Scenario 2: Higher growth

Level	% growth
Sub-degree	78%
Degree	44%
All	48%

Years shown (Sub-degree | Degree | Total):
- 2023/24: 63 | 459 | 522
- 2024/25: 64 | 480 | 544
- 2025/26: 69 | 506 | 575
- 2026/27: 74 | 533 | 607
- 2027/28: 80 | 561 | 641
- 2028/29: 89 | 592 | 681
- 2029/30: 99 | 624 | 723
- 2030/31: 111 | 659 | 771

Sub-degree (Level 4/5) Degree (Level 6)

- In terms of study level, Scenario 2 would also imply higher growth rates in the number of both Level 4/5 and Level 6 students as compared to the Baseline. By 2030-31, Scenario 2 would result in an increase in sub-degree students to **111,000** (a **78%** increase over the period, vs. **64%** in the Baseline), and the number of students enrolled in degree-level study would increase to **659,000** (a **44%** increase, compared to **26%** in the Baseline[1]).

[1] The relatively larger boost in growth for students at degree level is due to first degree students being much more likely to undertake their studies on a full-time rather than a part-time basis (compared to sub-degree level students, where the split between full-time and part-time study is more even), since we assume a larger percentage point uplift in growth among full-time students under this scenario.

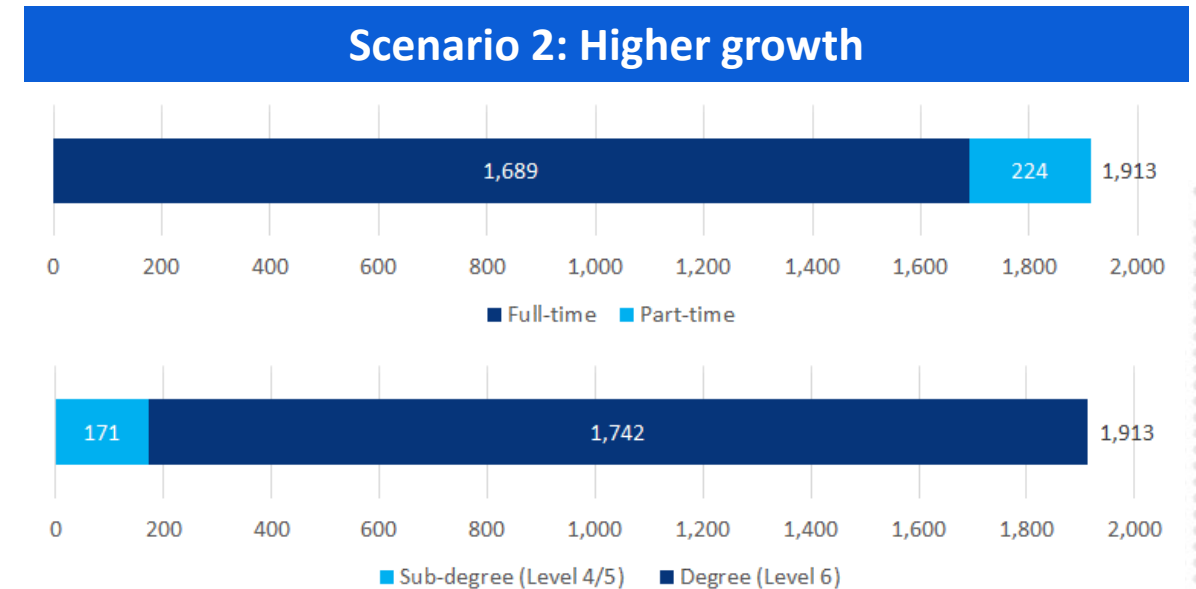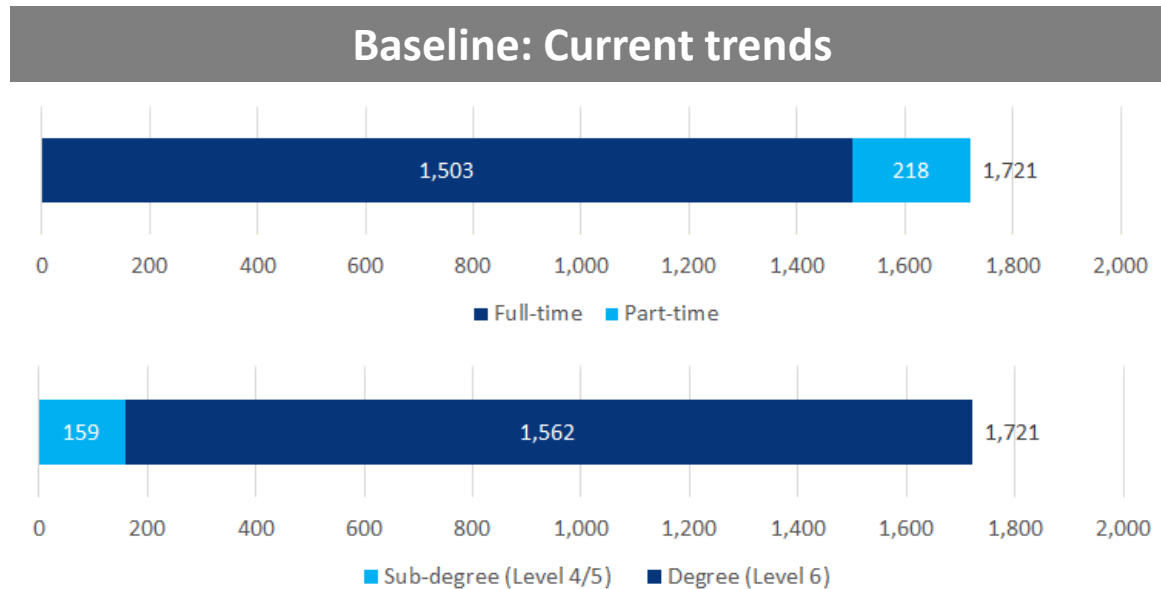# Scenario 2: First-year students by study location

Forecast number of first-year undergraduate English domiciled students, by year and study location (000s)

Baseline: Current trends

Location	% growth
English HEIs	27%
RUK HEIs	105%
English colleges	22%
All	**31%**

Scenario 2: Higher growth

Location	% growth
English HEIs	43%
RUK HEIs	131%
English colleges	37%
All	**48%**

- In terms of location of study, by 2030-31, Scenario 2 would result in an increase in students studying at English HEIs to **668,000** (a **43%** increase over the period, vs. **27%** in the Baseline), while the number of students enrolled at RUK HEIs would increase to **63,000** (a **131%** increase, compared to **105%** in the Baseline). The number of students studying at English FE colleges would rise to **39,000** (a **37%** increase over the period, compared to **22%** in the Baseline – with colleges again experiencing lower growth than English or RUK HEIs).

Scenario 2: Total student body in 2030-31

Forecast total (first-year and continuing) undergraduate English domiciled students in 2030-31 (000s)

Baseline: Current trends	Scenario 2: Higher growth

Baseline: Current trends

Full-time: 1,503 | Part-time: 218 | Total: 1,721
(scale 0 – 2,000)
■ Full-time ■ Part-time

Sub-degree (Level 4/5): 159 | Degree (Level 6): 1,562 | Total: 1,721
(scale 0 – 2,000)
■ Sub-degree (Level 4/5) ■ Degree (Level 6)

Scenario 2: Higher growth

Full-time: 1,689 | Part-time: 224 | Total: 1,913
(scale 0 – 2,000)
■ Full-time ■ Part-time

Sub-degree (Level 4/5): 171 | Degree (Level 6): 1,742 | Total: 1,913
(scale 0 – 2,000)
■ Sub-degree (Level 4/5) ■ Degree (Level 6)

- Compared to the Baseline (and in contrast to Scenario 1), the *larger* number of first-year students modelled under Scenario 2 results in a *larger* total relevant student body in 2030-31. The predicted student body of English domiciled undergraduate students in 2030-31 stands at **1.72 million** under the Baseline; under Scenario 2, this would instead increase to approximately **1.91 million students** (a **+11%** difference, or **+192,000** students).

Scenario 2: Exchequer cost in 2030-31

Scenario 2: Higher growth

Resource flows (£m/%)	Baseline	Scenario 2	Difference
'Net' Exchequer cost (adjusted for RAB)			
Cost of maintenance loans	(£728m)	(£810m)	(£82m)
Cost of tuition fee loans	(£798m)	(£890m)	(£92m)
Cost of Teaching Grants	(£1,612m)	(£1,801m)	(£189m)
Total Exchequer cost	**(£3,139m)**	**(£3,501m)**	**(£363m)**
RAB charge (%)	**6.0%**	**5.9%**	**-0.1pp**
Loan outlay			
Maintenance loans	(£12,138m)	(£13,597m)	(£1,459m)
Tuition fee loans	(£13,496m)	(£15,125m)	(£1,629m)
Total loan outlay	**(£25,634m)**	**(£28,722m)**	**(£3,088m)**
Total student body			
# of students, 000s	**1,721**	**1,913**	**+192**

- Compared to the Baseline, the larger size of the student body modelled under Scenario 2 would *increase* the 'net' Exchequer cost of the system in 2030-31 by **£363m**, to approximately **£3.50bn** (a **12%** increase). Here, the larger student numbers would imply a rise in all components of Exchequer cost, with the cost of maintenance and fee loan write-offs increasing by **£82m** and **£92m**, respectively. Teaching Grants would increase by **£189m**, to **£1.80bn** (including **£1.76bn** of funding for English HEIs and colleges, and **£45m** for Welsh HEIs).

- The total loan outlay in 2030-31 would increase by **£3.09bn** compared to the Baseline, to **£28.72bn** (a **12%** increase). The maintenance loan outlay would be **£1.46bn** higher, and the fee loan outlay would be **£1.63bn** higher than under the Baseline.

- Again, as under Scenario 1, the RAB charge would be essentially unchanged, at **5.9%**.

Note: All monetary values are presented in cash terms in 2030-31 prices and rounded to the nearest £1m.

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Scenario 2: Higher growth

Forecast total student loan outlay in 2023-24 vs. Scenario 2 forecasts for 2030-31, £bn
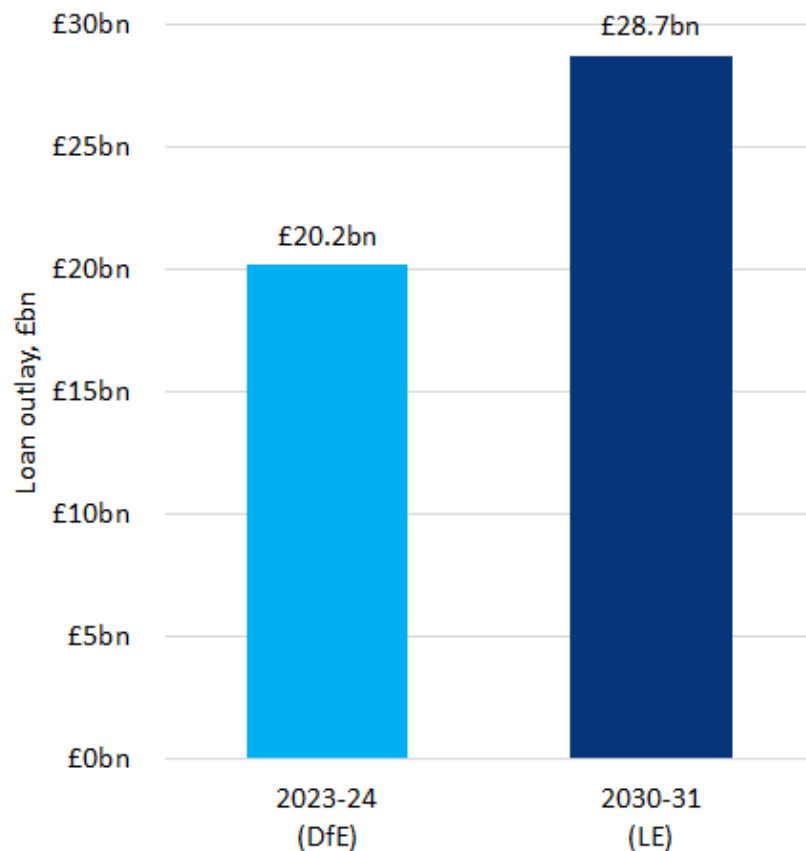
- Again, we also compare our 2030-31 loan outlay estimates under Scenario 2 to the DfE's student loan outlay estimates for England in 2023-24[1], to assess the **growth in loan outlay over time** under this scenario.

- This comparison indicates that the higher student growth assumed under Scenario 2 would result in a **substantial increase** in the student loan outlay over time, from **£20.2bn** in 2023-24 to **£28.7bn** in 2030-31. This is equivalent to a **42% increase** (again in nominal (cash) terms) and compares to a **27%** increase over the period under our Baseline forecasts.

Note: All monetary values are presented in cash terms in current prices (i.e. in nominal terms), and rounded to the nearest £0.1bn.

[1] Again, see Department for Education (2023). 'Student loan forecasts for England'. Financial year 2022-23' (here).

Scenario 2+: Exchequer cost in 2030-31 *with Employer levy*

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Resource flows (£m/%)	Baseline	Scenario 2+	Difference
'Net' Exchequer cost (adjusted for RAB)			
Cost of maintenance loans	(£728m)	(£810m)	(£82m)
Cost of tuition fee loans	(£798m)	(£890m)	(£92m)
Cost of Teaching Grants	(£1,612m)	(£1,801m)	(£189m)
Employer Levy contributions	-	£2,621m	£2,621m
Total Exchequer cost	**(£3,139m)**	**(£880m)**	**£2,258m**
RAB charge (%)	**6.0%**	**5.9%**	**-0.1pp**
Loan outlay			
Maintenance loans	(£12,138m)	(£13,597m)	(£1,459m)
Tuition fee loans	(£13,496m)	(£15,125m)	(£1,629m)
Total loan outlay	**(£25,634m)**	**(£28,722m)**	**(£3,088m)**
Total student body			
# of students, 000s	**1,721**	**1,913**	**+192**

- In addition to the above 'core' Scenario 2, again, we then assessed the Exchequer costs of the system under a potential Employer Levy for HE (using the same Employer Levy assumptions as for Scenario 1).

- Here, the (post-graduation) Employer Levy contributions associated with students enrolled in 2030-31 were estimated at approximately **£2.62bn** (compared to **£1.83bn** under Scenario 1), so that the net public cost of the funding system would decline to **£880m**. This compares to **£3.14bn** under the Baseline system with no Employer Levy.
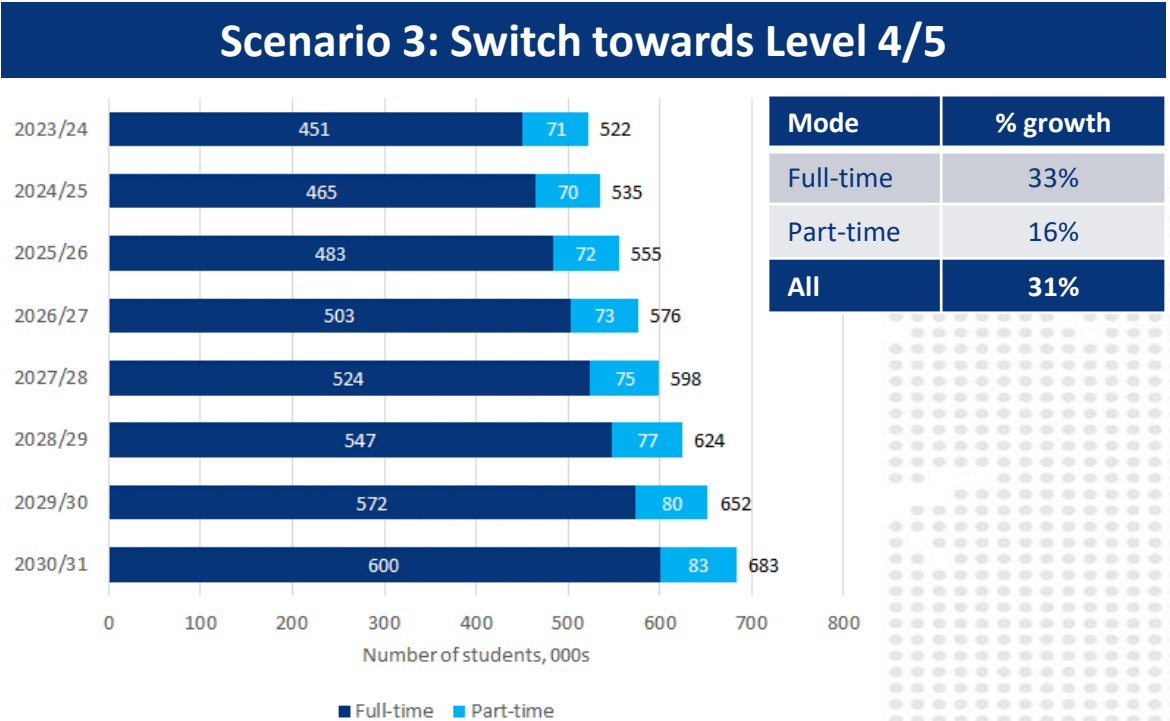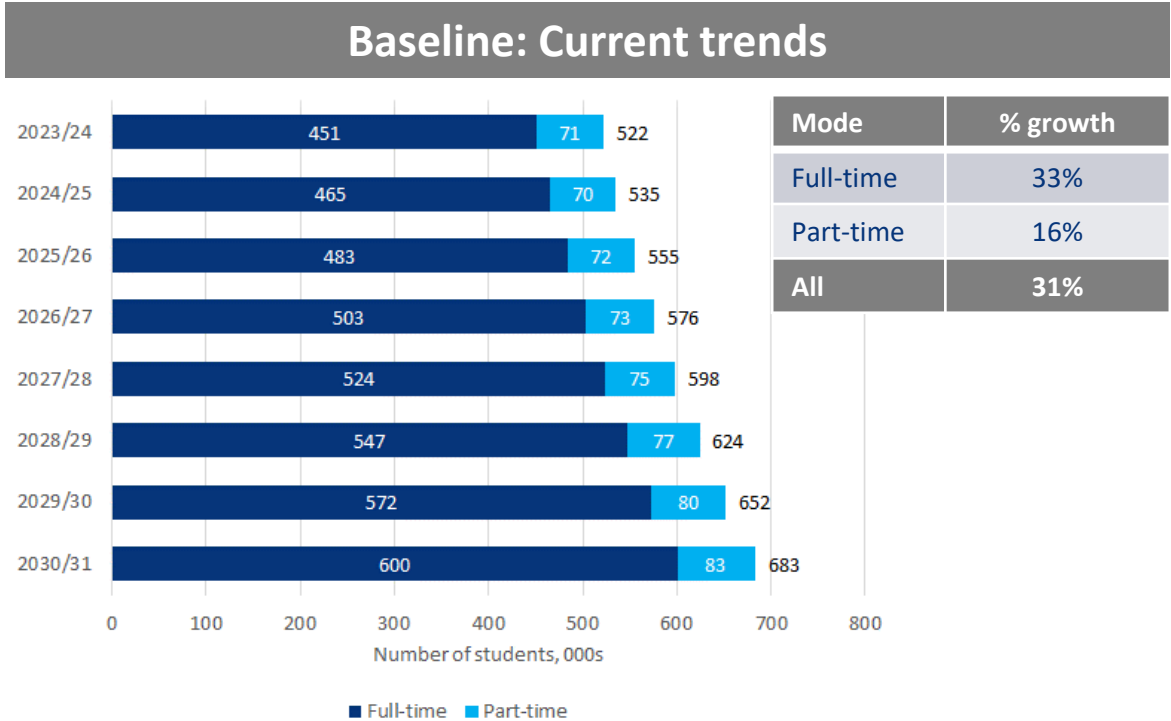
Note: All monetary values are presented in cash terms in 2030-31 prices and rounded to the nearest £1m.

Scenario 3: Switch in demand towards Levels 4/5

Forecast number of first-year undergraduate English domiciled students, by year and mode (000s)

Baseline: Current trends

Year	Full-time	Part-time	Total
2023/24	451	71	522
2024/25	465	70	535
2025/26	483	72	555
2026/27	503	73	576
2027/28	524	75	598
2028/29	547	77	624
2029/30	572	80	652
2030/31	600	83	683

Mode	% growth
Full-time	33%
Part-time	16%
All	31%

Number of students, 000s
■ Full-time ■ Part-time

Scenario 3: Switch towards Level 4/5

Year	Full-time	Part-time	Total
2023/24	451	71	522
2024/25	465	70	535
2025/26	483	72	555
2026/27	503	73	576
2027/28	524	75	598
2028/29	547	77	624
2029/30	572	80	652
2030/31	600	83	683

Mode	% growth
Full-time	33%
Part-time	16%
All	31%

Number of students, 000s
■ Full-time ■ Part-time

- Scenario 3 assumes an underlying shift from Level 6 qualifications (i.e. first degrees) to Level 4/5 qualifications (i.e. sub-degree qualifications such as HNCs/HNDs) among students studying in England, but within the same number of first-year students entering HE each year as in the Baseline. Hence, this scenario results in the **same aggregate number of first-year students as under the Baseline**.

- The overall distribution of students by **mode of study** would also be unchanged compared to the Baseline forecasts.

Scenario 3: First-year students by level

Forecast number of first-year sub-degree (Level 4/5) students studying in <u>England</u>: Baseline vs. Scenario 3 (000s)

Full-time
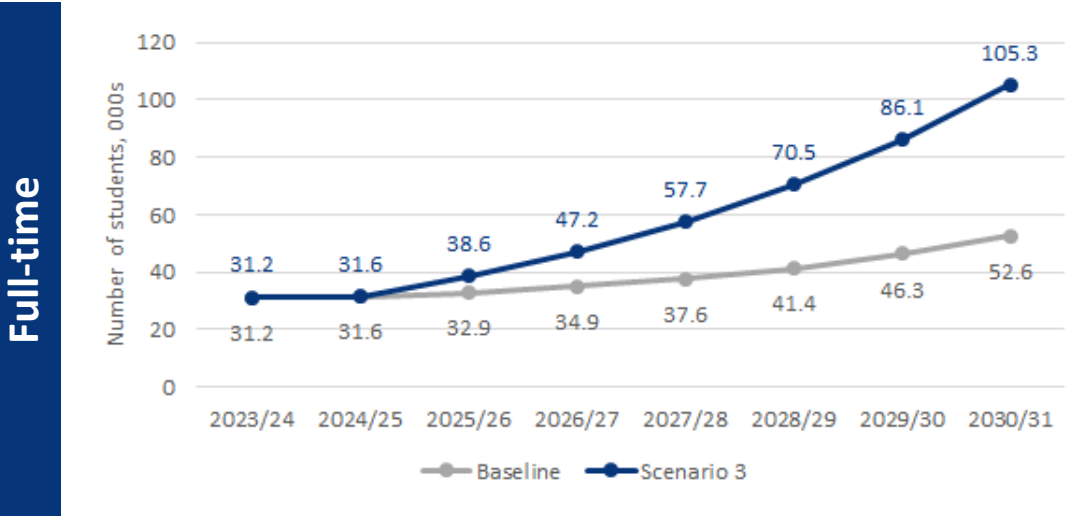
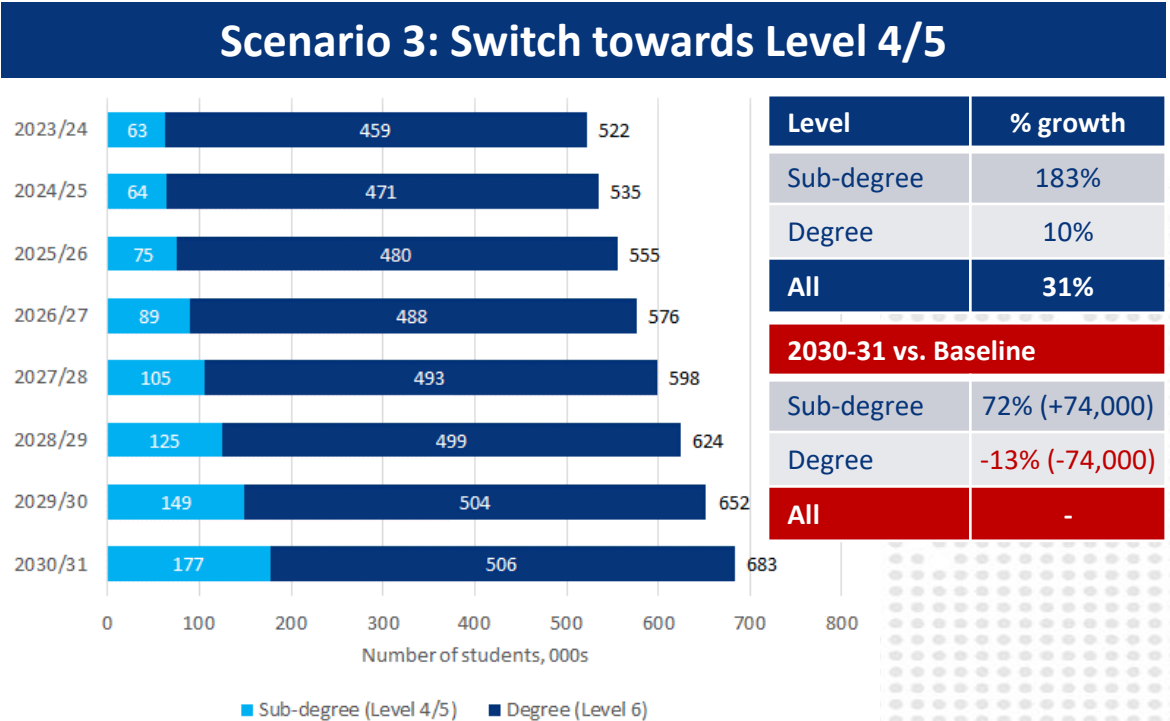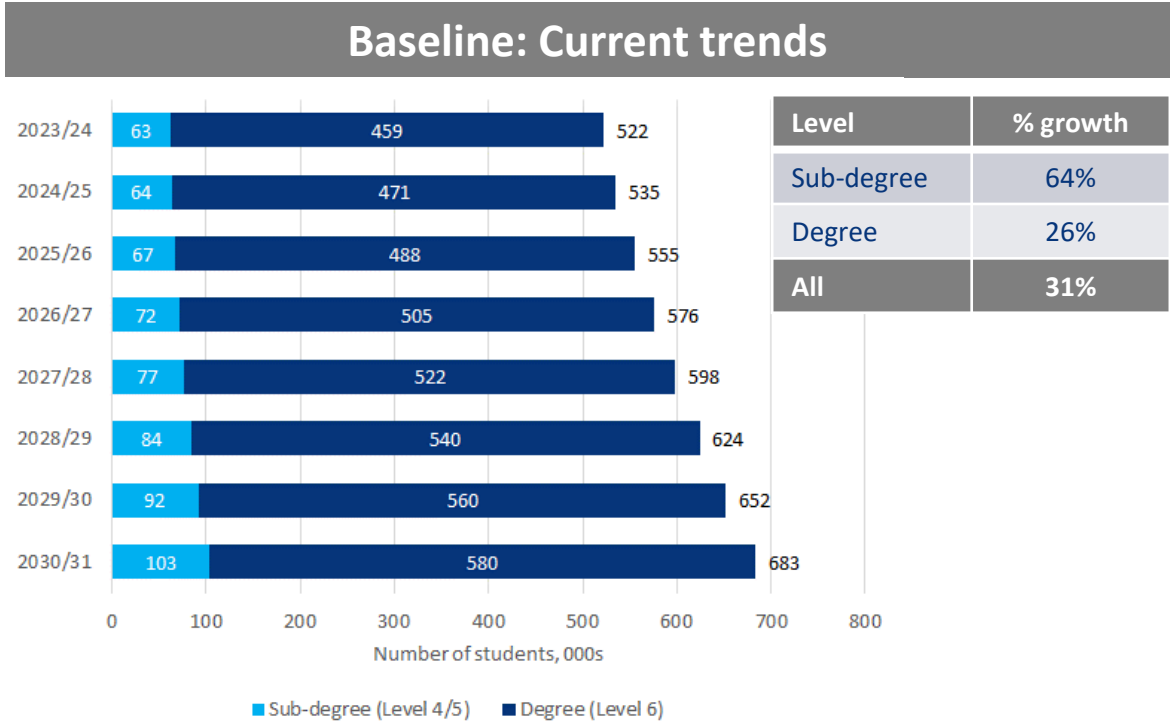100% uplift in 2030-31 relative to Baseline

Part-time
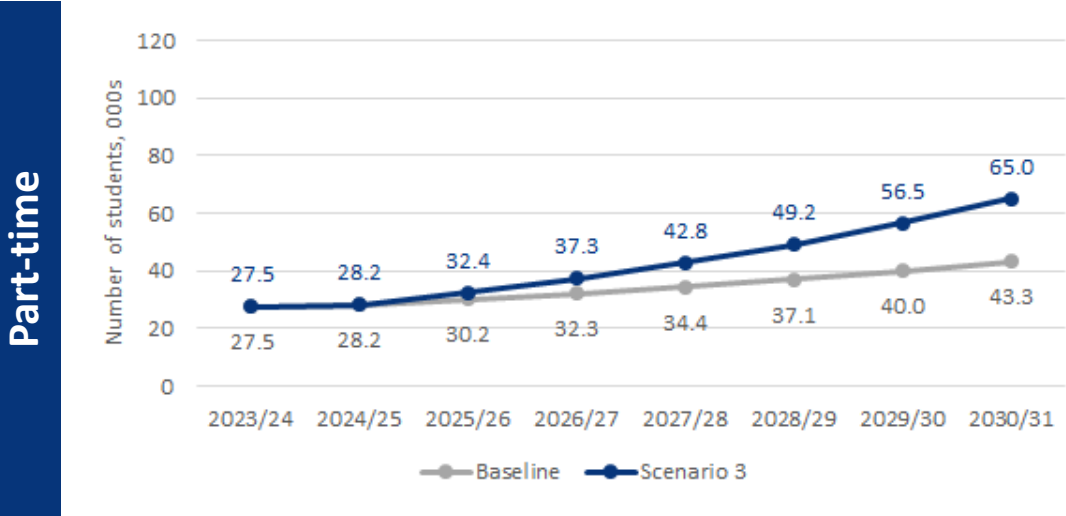
50% uplift in 2030-31 relative to Baseline

- However, under Scenario 3, we assume a significant 'switch' in students' demand from Level 6 to Level 4/5 in England (i.e. for students at English HEIs and colleges only, but no change for students studying in RUK):

  - For **full-time students**, we model a **100%** uplift in Level 4/5 students in 2030-31 compared to the predicted Baseline number in that year. Hence, in 2030-31, the number of FT Level 4/5 students in England would stand at approximately **105,300** under Scenario 3, compared to **52,600** in the Baseline[1] (a **52,600** difference). Accordingly, there would be **52,600** fewer FT Level 6 students.

  - For **part-time students**, we model a **50%** uplift in the number of Level 4/5 students in 2030-31 compared to the Baseline number in that year. Hence, in 2030-31, the number of PT Level 4/5 students in England would stand at **65,000**, compared to **43,300** in the Baseline (a **21,700** difference) – and there would be **21,700** fewer PT Level 6 students.

- We assume that the increased demand for Level 4/5 would begin in 2025-26 (i.e. we essentially model what might happen if there were a significant policy shift towards promoting sub-degree qualifications over the next two years).

[1] Numbers here are rounded to the nearest 100, and may not add up to the reported totals due to this rounding.

Scenario 3: First-year students by level

**Forecast number of first-year undergraduate English domiciled students, by year and level (000s)**

Baseline: Current trends

Level	% growth
Sub-degree	64%
Degree	26%
All	31%

Scenario 3: Switch towards Level 4/5

Level	% growth
Sub-degree	183%
Degree	10%
All	31%
2030-31 vs. Baseline	
Sub-degree	72% (+74,000)
Degree	-13% (-74,000)
All	-

- Given the assumed switch towards Level 4/5 qualifications, Scenario 3 would imply very significant growth in the number of sub-degree level first-year students between 2023-24 and 2030-31, from **63,000** to **177,000** (a **183%** increase, vs. **64%** in the Baseline). In other words, compared to the Baseline, there would be **74,000** *additional* students starting Level 4/5 qualifications in **2030-31** (**177,000** under Scenario 3 vs. **103,000** under the Baseline).

- Conversely, the growth in students starting Level 6 qualifications would be much lower than under the Baseline, increasing from **459,000** in 2023-24 to **506,000** in 2030-31 (a **10%** increase, vs. **26%** in the Baseline). Hence, compared to the Baseline, there would be **74,000** *fewer* students starting Level 6 qualifications in 2030-31 (**506,000** under Scenario 3 vs. **580,000** in the Baseline).

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Forecast number of first-year undergraduate English domiciled students, by year and study location (000s)

Baseline: Current trends

Year			Total
2023/24	466	27 29	522
2024/25	478	30 27	535
2025/26	495	33 26	555
2026/27	513	37 26	576
2027/28	531	41 27	598
2028/29	550	45 28	624
2029/30	571	50 31	652
2030/31	592	56 35	683

Number of students, 000s

■ English HEIs ■ RUK HEIs ■ English colleges

Location	% growth
English HEIs	27%
RUK HEIs	105%
English colleges	22%
All	**31%**

Scenario 3: Switch towards Level 4/5

Year			Total
2023/24	466	27 29	522
2024/25	478	30 27	535
2025/26	495	33 27	555
2026/27	511	37 28	576
2027/28	526	41 32	598
2028/29	541	45 38	624
2029/30	556	50 46	652
2030/31	571	56 55	683

Number of students, 000s

■ English HEIs ■ RUK HEIs ■ English colleges

Location	% growth
English HEIs	23%
RUK HEIs	105%
English colleges	93%
All	**31%**

- In terms of location of study, since HE provision at FE colleges predominantly focuses on sub-degree level qualifications[1], the switch towards Level 4/5 under Scenario 3 would result in substantial growth in first-year students enrolling at English FE colleges between 2023-24 and 2030-31, from **29,000** to **55,000** (a **93%** increase, vs. **22%** in the Baseline). In other words, compared to the Baseline, there would be **20,000** *additional* **first-year students enrolled at English FE colleges in 2030-31** (**55,000** under Scenario 3 vs. **35,000** under the Baseline).

- In contrast, there would be **20,000** *fewer* **first-year students enrolled at English HEIs** (**571,000** under Scenario 3 vs. **592,000** under the Baseline), with students at English HEIs growing from **466,000** in 2023-24 to **571,000** in 2030-31 (a **23%** increase, vs. **27%** under the Baseline).

[1] For example, in 2021-22 (which is the latest academic year for which actual student number data is currently available), **69%** of first-year students in the relevant cohort of English domiciled students studying at English FE colleges were enrolled in sub-degree level qualifications (with the remaining **31%** undertaking first degrees). In contrast, students at English HEIs are much less likely to undertake sub-degree qualifications (**8%** of students), with the vast majority instead undertaking first degrees (**92%**).

Forecast total (first-year and continuing) undergraduate English domiciled students in 2030-31 (000s)
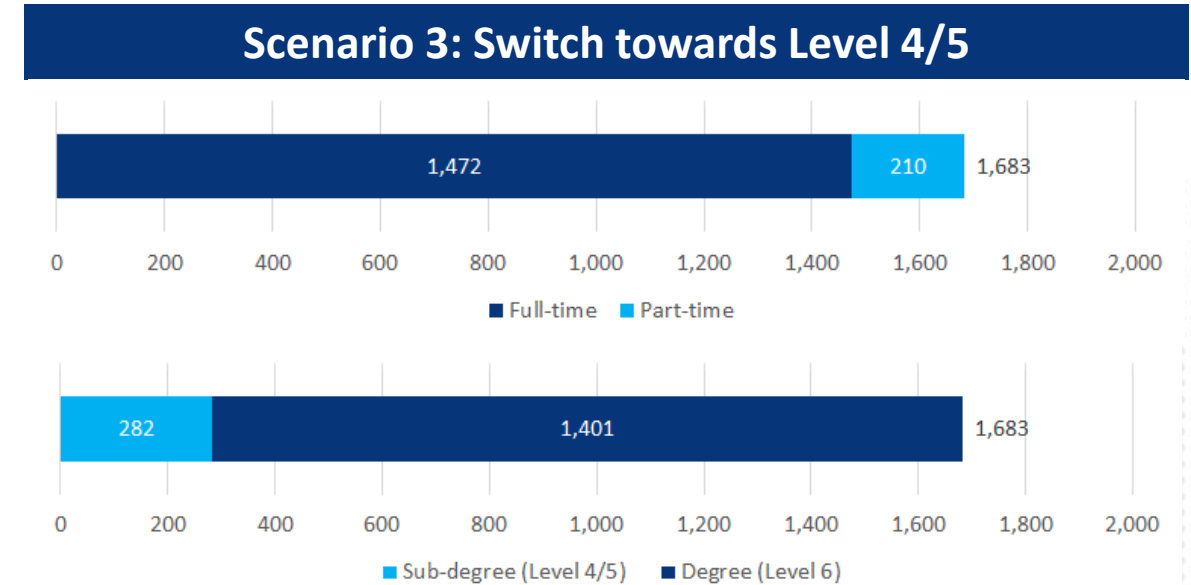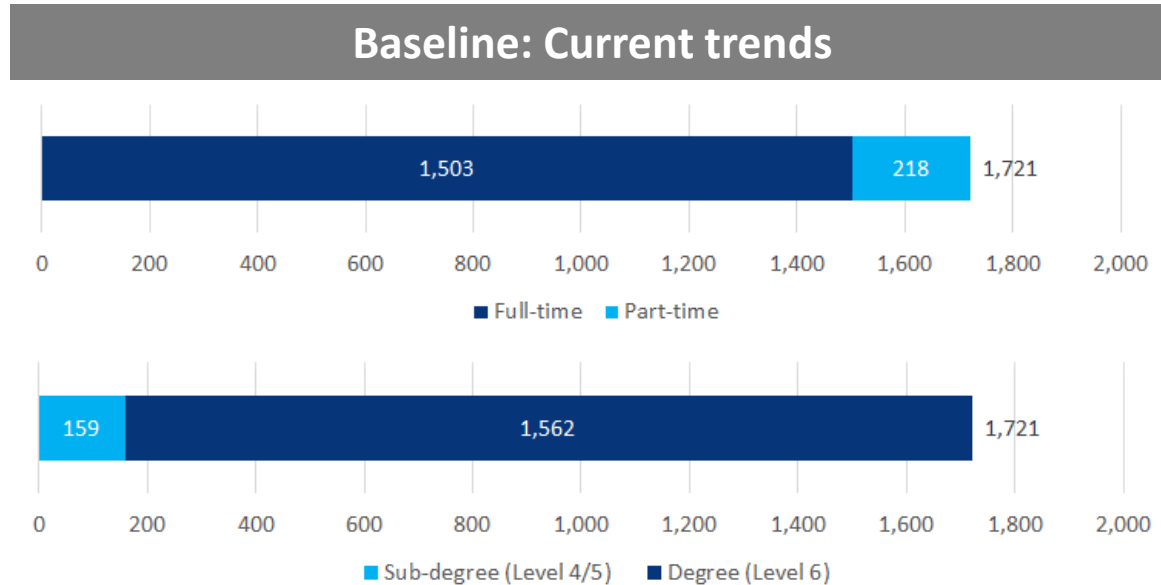
- As above, Scenario 3 is based on the same total number of *first-year* students entering HE in each year of interest as under the Baseline.

- However, given the typically shorter study duration and lower continuation rates for sub-degree qualifications compared to first degrees[1], the total relevant student body in 2030-31 would be slightly *smaller* than in the Baseline (**1.68 million** in Scenario 3 vs. **1.72 million** under the Baseline; a difference of **-2%**, or **-38,000** students). In other words, Scenario 3 assumes the same number of *first-year* students in 2030-31 as in the Baseline, but in a somewhat lower number of *continuing* students in that year[2].

[1] Please see the Annex for more information on our assumptions in relation to average study durations and continuation/completion rates.
[2] In both scenarios, first-year students in 2030-31 stand at **683,000**. The number of continuing students stands at **1.04 million** in the Baseline, and approximately **1.00 million** under Scenario 3.

Scenario 3: Exchequer cost in 2030-31 (1)

Scenario 3: Switch towards Level 4/5

Resource flows (£m/%)	Baseline	Scenario 3	Difference
'Net' Exchequer cost (adjusted for RAB)			
Cost of maintenance loans	(£728m)	(£775m)	(£47m)
Cost of tuition fee loans	(£798m)	(£837m)	(£39m)
Cost of Teaching Grants	(£1,612m)	(£1,575m)	£37m
Total Exchequer cost	**(£3,139m)**	**(£3,188m)**	**(£50m)**
RAB charge (%)	**6.0%**	**6.5%**	**+0.5 pp**
Loan outlay			
Maintenance loans	(£12,138m)	(£11,883m)	£255m
Tuition fee loans	(£13,496m)	(£13,026m)	£470m
Total loan outlay	**(£25,634m)**	**(£24,910m)**	**£725m**
Total student body			
# of students, 000s	**1,721**	**1,683**	**-38**

- Compared to the Baseline, the assumed switch from Level 6 towards Level 4/5 under Scenario 3 would result in a **reduction in the Exchequer loan outlay** to students in 2030-31 by **£725m** (from **£25.63bn** in the Baseline to **£24.91bn** under Scenario 3).

- This reduction is driven by the slightly smaller student body, but also the typically lower fees charged (and therefore fee loans issued) to students undertaking sub-degree qualifications compared to first degrees[1], so that the shift from Level 6 towards Level 4/5 qualifications results in a lower average fee loan per student per year.

- In relation to maintenance loans, note that our analysis does not take account of the fact that students enrolled in Level 4/5 programmes are typically more likely to be 'commuter' students, and as such are eligible for the smaller maintenance loan available to students classified as 'Living At Home' (LAH). As a result, our modelling potentially *overestimates* the total loan outlay under Scenario 3 (and therefore *underestimates* the relative reduction in the total student loan outlay under Scenario 3 compared to the Baseline).

Note: All monetary values are presented in cash terms in 2030-31 prices and rounded to the nearest £1m.
[1] As outlined in the Annex, we assume an average tuition fee (gross before fee waivers) of approximately **£9,170** per full-time first degree student per year, compared to **£7,570** for full-time Foundation Degrees, and **£6,600** for students undertaking HNCs/HNDs or other undergraduate qualifications.

Scenario 3: Exchequer cost in 2030-31 (2)

Scenario 3: Switch towards Level 4/5

Resource flows (£m/%)	Baseline	Scenario 3	Difference
'Net' Exchequer cost (adjusted for RAB)			
Cost of maintenance loans	(£728m)	(£775m)	(£47m)
Cost of tuition fee loans	(£798m)	(£837m)	(£39m)
Cost of Teaching Grants	(£1,612m)	(£1,575m)	£37m
Total Exchequer cost	**(£3,139m)**	**(£3,188m)**	**(£50m)**
RAB charge (%)	**6.0%**	**6.5%**	**+0.5 pp**
Loan outlay			
Maintenance loans	(£12,138m)	(£11,883m)	£255m
Tuition fee loans	(£13,496m)	(£13,026m)	£470m
Total loan outlay	**(£25,634m)**	**(£24,910m)**	**£725m**
Total student body			
# of students, 000s	**1,721**	**1,683**	**-38**

Note: All monetary values are presented in cash terms in 2030-31 prices and rounded to the nearest £1m.
[1] Teaching Grants associated with students studying at Welsh HEIs are the same here as under the Baseline, since Scenario 3 assumes no change in the number of English domiciled students studying in the rest of the UK.
[2] A potential increase in the number of students undertaking labour market focused, employer-supported Level 4/5 qualifications might potentially result in an in increase in post-graduation earnings for these students in the future, and, therefore, a decline in the RAB charge (though note that an increase in the supply of Level 4/5 graduates into the labour market might also instead have a negative effect on these students' post-graduation labour market outcomes in the near term).

- In spite of the reduction in the loan outlay, the 'net' RAB-adjusted Exchequer cost of the system in 2030-31 is estimated to *increase slightly* (by **£50m (2%)** compared to the Baseline, to **£3.19bn**). There are two opposing effects here:
  - The **cost of Teaching Grants would *decrease*** by **£37m**, due to the smaller expected size of the student body. The **£1.58bn** in total Teaching Grants in 2030-31 under Scenario 3 includes **£1.54bn** of funding for English HEIs and colleges, and **£41m** for Welsh HEIs[1]).
  - In contrast, the **cost of Exchequer loan write-offs would *increase*** compared to the Baseline, by **£47m** for maintenance loans and **£39m** for fee loans. Here, the reduction in the loan outlay to students is outweighed by the fact that the estimated RAB charges associated with sub-degree qualifications are higher than for first degrees (i.e. a larger proportion of the loans issued to sub-degree students is written off by the Exchequer, due to their lower average post-graduation earnings[2]). This is reflected in a small increase in the average RAB charge under Scenario 3, from **6.0%** to **6.5%**.

Scenario 3: Exchequer loan outlay in 2023-24 vs 2030-31

Forecast total student loan outlay in 2023-24 vs. Scenario 3 forecasts for 2030-31, £bn
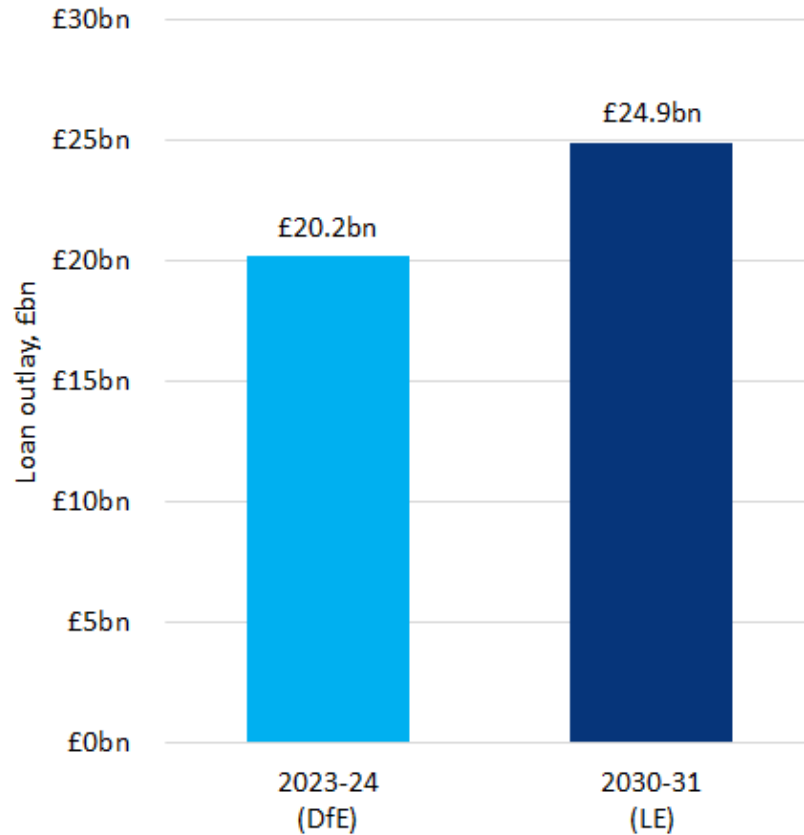
- Again, we then compare our 2030-31 loan outlay estimates under Scenario 3 to the DfE's student loan outlay estimates for England in 2023-24[1], to assess the **growth in loan outlay over time** under this scenario.

- This comparison indicates that the estimated total loan outlay would increase from **£20.2bn** in 2023-24 to **£24.9bn** in 2030-31 under Scenario 3. This is equivalent to a **23%** increase and compares to a **27%** increase under our Baseline forecasts for 2030-31.

Note: All monetary values are presented in cash terms in current prices (i.e. in nominal terms), and rounded to the nearest £0.1bn.
[1] Again, see Department for Education (2023). 'Student loan forecasts for England'. Financial year 2022-23' (here).

Scenario 3+: Exchequer cost in 2030-31 *with Employer levy*

Scenario 3+ (left side vertical label)

Resource flows (£m/%)	Baseline	Scenario 3+	Difference
'Net' Exchequer cost (adjusted for RAB)			
Cost of maintenance loans	(£728m)	(£775m)	(£47m)
Cost of tuition fee loans	(£798m)	(£837m)	(£39m)
Cost of Teaching Grants	(£1,612m)	(£1,575m)	£37m
Employer Levy contributions	-	£2,308m	£2,308m
Total Exchequer cost	**(£3,139m)**	**(£880m)**	**£2,258m**
RAB charge (%)	**6.0%**	**6.5%**	**+0.5 pp**
Loan outlay			
Maintenance loans	(£12,138m)	(£11,883m)	£255m
Tuition fee loans	(£13,496m)	(£13,026m)	£470m
Total loan outlay	**(£25,634m)**	**(£24,910m)**	**£725m**
Total student body			
# of students, 000s	**1,721**	**1,683**	**-38**

- Finally, we again also analysed the Exchequer costs of the system under a potential Employer Levy for HE (again using the same Employer Levy assumptions as for Scenario 1 and Scenario 2).

- Under Scenario 3, the Employer Levy contributions associated with students enrolled in 2030-31 would stand at approximately **£2.31bn** (compared to **£1.83bn** under Scenario 1 and **£2.62bn** under Scenario 2). As a result, the net public cost of the funding system in Scenario 3 would decline to **£880m**[1] (compared to **£3.14bn** under the Baseline system with no Employer Levy).

Note: All monetary values are presented in cash terms in 2030-31 prices and rounded to the nearest £1m.
[1] Coincidentally, Scenario 3+ would result in the same net Exchequer cost as Scenario 2+ (both estimated at £880m, respectively).

Conclusion

London Economics

Conclusion: Comparison of Exchequer cost in 2030-31 vs. Baseline

Resource flows (£m/%)	Baseline (Current trends)	Scenario 1 (Levelling off/no growth)		Scenario 2 (Higher growth)		Scenario 3 (Switch towards Level 4/5)	
		Total	Diff. to Baseline	Total	Diff. to Baseline	Total	Diff. to Baseline
'Net' Exchequer cost (adjusted for RAB)							
Cost of maintenance loans	(£728m)	(£591m)	+£137m	(£810m)	-£82m	(£775m)	-£47m
Cost of tuition fee loans	(£798m)	(£650m)	+£149m	(£890m)	-£92m	(£837m)	-£39m
Cost of Teaching Grants	(£1,612m)	(£1,319m)	+£293m	(£1,801m)	-£189m	(£1,575m)	+£37m
Total Exchequer cost	(£3,139m)	(£2,560m)	**+£579m**	(£3,501m)	**-£363m**	(£3,188m)	**-£50m**
Loan outlay							
Maintenance loans	(£12,138m)	(£9,659m)	+£2,479m	(£13,597m)	-£1,459m	(£11,883m)	+£255m
Tuition fee loans	(£13,496m)	(£10,759m)	+£2,737m	(£15,125m)	-£1,629m	(£13,026m)	+£470m
Total loan outlay	(£25,634m)	(£20,418m)	**+£5,217m**	(£28,722m)	**-£3,088m**	(£24,910m)	**+£725m**
Total student body							
# of students, 000s	1,721	1,396	**-325**	1,913	**+192**	1,683	**-38**

Lower net Exchequer cost and loan outlay vs. Baseline (due to lower expected student numbers)

Higher net Exchequer cost and loan outlay vs. Baseline (due to higher expected student numbers)

Higher net Exchequer cost vs. Baseline (due to higher RAB) but *lower* loan outlay (due to lower average fees + slightly lower expected student numbers)

Note: All monetary values are presented in cash terms in 2030-31 prices and rounded to the nearest £1m.

Conclusion: Comparison of loan outlay in 2030-31 vs. 2023-24

Total student loan outlay in 2023-24 vs. forecasts for 2030-31 under each scenario, £bn
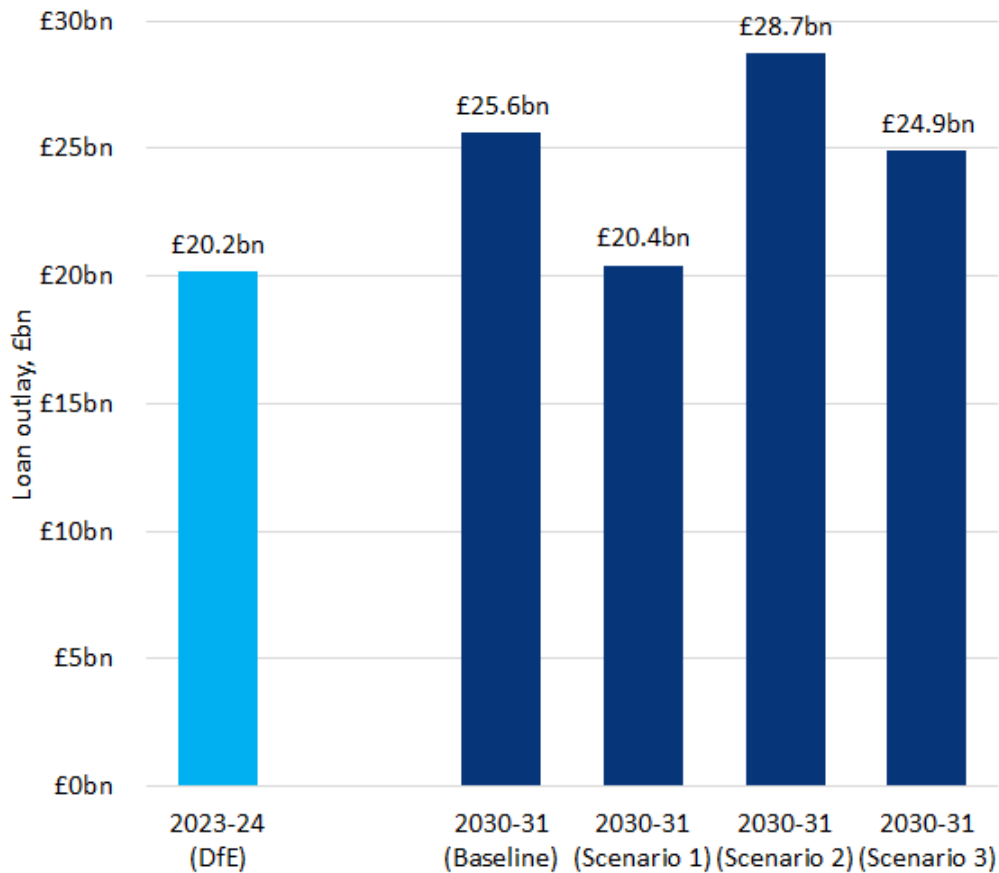
Note: All monetary values are presented in cash terms in current prices (i.e. in nominal terms), and rounded to the nearest £0.1bn.
[1] Again, see Department for Education (2023). 'Student loan forecasts for England'. Financial year 2022-23' (here). [2] Again, note that our estimated Baseline loan outlay in 2030-31 mirrors the DfE's own long-term forecast of the total (Plan 5) loan outlay in 2030-31 of **£25.6bn** (see here).

- **Importantly, all scenarios (except the 'levelling off/no growth' assumption under Scenario 1) forecast substantial increases in the total Exchequer loan outlay by 2030-31.**

- The estimated value of loans issued to English domiciled students in 2023-24 stands at **£20.2bn** (again based on DfE estimates[1]). In contrast, under the substantial rises in student numbers under the different scenarios here, this would increase to:

  - **£25.6bn** under our **Baseline** student forecasts (a **27%** increase in cash terms (i.e. nominal terms) compared to 2023-24[2]);

  - As much as **£28.7bn** under the even stronger growth in student numbers assumed in **Scenario 2** (a **42%** increase vs. 2023-24); and

  - **£24.9bn** under the assumed switch from Level 6 towards Level 4/5 qualifications under **Scenario 3** (a **23%** increase compared to 2023-24). This is lower than the Baseline forecast – i.e. a switch towards Level 4/5 qualifications would lessen the increase in loan outlay - driven predominantly by the typically lower fees charged (and therefore fee loans) for sub-degree qualifications compared to first degrees. Again, note that our analysis does *not* take account of the fact that Level 4/5 students are also typically more likely to be 'commuter' students, and as such receive lower maintenance loans – so that our modelling here likely *overestimates* the total loan outlay under Scenario 3.

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ANNEX
Methodology and assumptions

Assumptions and methodology

Student profile

- Our student forecasts make use of historical information on the number of **English-domiciled first-year students starting undergraduate qualifications at higher education institutions throughout the UK[1], or at FE colleges in England, in academic years 2019-20, 2020-21, and 2021-22** (where 2021-22 is the latest year for which this information is currently available). Data for HEIs and FE colleges in England was provided to us by the Association of Colleges (based on an analysis of HESA data (for HEIs) and Individualised Learner Record data (for FE colleges) undertaken by RCU[2]). Data on students studying at HEIs in the rest of the UK was based on data published by HESA (here)[3]. The information was broken down by academic year, level of study, mode of study, and location of study. We **exclude students studying for institutional credits only** (i.e. no formal qualifications), as these students are typically not eligible for public funding.

- To estimate the expected size of the *total* student body (i.e. including first-year *and* continuing students) under each scenario, we make use of separate annual **continuation rates**. Specifically, based on data published by the Office for Students (here), we assume an annual continuation rate of **90.5%** for full-time first degree students and **78.2%** for part-time first degree students. At sub-degree level, the assumptions stand at **81.3%** for full-time students and **83.1%** for part-time students. These percentages capture the proportion of students that were continuing in the study of a HE qualification (or have gained a qualification) approximately 1 year after they started their course (for full-time students) or 2 years after their started their course (for part-time students, where we have assumed a constant drop-out rate each year to get to an assumed *annual* continuation rate). The continuation rate data covers UK domiciled students studying at HEIs and FE colleges located in England only.

- Part-time students are assumed to study at **50% full-time equivalence (FTE)**[4].

- The underlying analysis of the RAB charge and loan repayments is undertaken separately by gender (as well as by level, mode, and lifetime income decile). Based on HESA information on English domiciled qualification completers who graduated from HEIs anywhere in the UK in 2021-22 (but excluding FE colleges) by gender and qualification level (here), we assume the following **gender split**:

Qualification level	Full-time		Part-time	
	Male	**Female**	**Male**	**Female**
Other undergraduate	48%	52%	36%	64%
HNC/HND	50%	50%	85%	16%
Foundation Degree	26%	74%	35%	65%
First degree	41%	59%	44%	56%

- We assume the following **average age at enrolment** (based on HESA information[5]) and **average duration of qualification attainment** (by qualification level and study mode):

Qualification level	Age at enrolment		Study duration	
	Full-time	**Part-time**	**Full-time**	**Part-time**
Other undergraduate	29	34	1	2
HNC/HND	23	28	2	4
Foundation Degree	28	32	2	4
First degree	22	31	3	6

[1] Including publicly funded higher education institutions as well as alternative providers anywhere in the UK. [2] The data for English providers was adjusted by the RCU for any double-counting between HEIs vs. FE colleges in relation to franchising students. Specifically, the data for students at HEIs was adjusted to exclude students taught under a franchising agreement between a HEI and a college (in which case the student was counted as part of the college numbers). [3] Note that the data also includes a negligible number of English domiciled students enrolled at FE colleges in Wales. [4] Based on data provided by HESA on the average study intensity among all UK domiciled first-year part-time students studying at HEIs (but excluding FE colleges (except in Wales)) anywhere in the UK in 2021-22 (separately by study level, and again excluding students studying for credit only). [5] The assumptions in relation to the age at enrolment are based on data provided by HESA on the average age at enrolment among all UK domiciled first-year students starting HE qualifications anywhere in the UK in 2021-22 (separately by study level and mode). Again, this HESA information excludes students studying at FE colleges (except Welsh FE colleges).

Assumptions and methodology

<div style="writing-mode: vertical">**Fees, fee loans, and bursaries**</div>

- The analysis assumes a (gross) *maximum* tuition fee charged to English domiciled **full-time students** in 2023-24 of **£9,250**, and approximately **£4,620** for part-time students (pro-rata, based on the corresponding full-time fee adjusted for part-time study intensity). Combining these *maximum* fees with an analysis published by the DfE ([here](#)) on the % difference between the average vs. the maximum fees for UK domiciled students enrolled at English HE providers (in 2016-17, by qualification level)[1], we assume the following *average* fees per student per year (all rounded to the nearest £10):

Qualification level	Maximum fee		Average fee	
	Full-time	**Part-time**	**Full-time**	**Part-time**
Other undergraduate	£9,250	£4,620	£6,600	£3,300
HNC/HND	£9,250	£4,620	£6,600	£3,300
Foundation Degree	£9,250	£4,620	£7,570	£3,790
First degree	£9,250	£4,620	£9,170	£4,580

- The above fees constitute *gross* fees before the deduction of any fee waivers. In terms of these **fee waivers as well as other (non-fee) bursaries** provided to students, based on Office for Student data from its access and participation plans monitoring exercise (last undertaken in 2020-21, [here](#)), according to institutions' access plans for 2023-24, we assume that approximately **0.3%** of the tuition fee charged in excess of the Basic Fee (of **£6,165** per annum for full-time students) is handed back to students in the form of fee waivers/bursaries, with an additional **9.6%** provided through maintenance bursaries. Mirroring the current household income thresholds associated with maintenance loans for English domiciled undergraduate students, we assume that these bursaries are only available to students with a household income of **£25,000** or less. We assume that these bursaries available in England also apply to English domiciled students studying in **Wales**, **Scotland**, and **Northern Ireland**.

- We deduct the resulting estimated fee bursary/waiver from the above average fees per student per year (though note that the relatively low estimated fee bursary has a negligible impact on the assumed 'net' fee).

- We assume that both full-time and part-time students cover the resulting average net fees by taking out a **tuition fee loan** of the same amount from the Student Loans Company. Based on SLC data on student support provided to English students in 2021-22, we assume a **fee loan take-up rate of 96% for full-time students**[2] (i.e. that 96% of all full-time students in the relevant student body avail of this fee loan), and **44% for part-time students**.

- We assume that the resulting fees and fee loans **remain constant** over time (i.e. we assume that the fees will continue to remain frozen in ever year up to and including 2030-31).

[1] The DfE analysis was based on data for the 2016-17 academic year (when the maximum full-time fee cap stood at £9,000), so we calculated the percentage difference in that maximum fee vs. the average fees estimated by the DfE and applied the resulting percentages to the £9,250 maximum fee applicable to students in 2023-24. Further note that the DfE analysis used 2016-17 Student Loans Company data to assess the average tuition fee charged per full-time UK domiciled first-year student in receipt of a public tuition fee loan who were enrolled at *English* higher education providers (including publicly funded HEIs and FE colleges, but excluding alternative providers). In the absence of similar information for other Home Nations, we applied the same assumptions to English domiciled students studying in Wales, Scotland, and Northern Ireland. In addition, while the DfE analysis was based on full-time students only, we applied the same assumptions to part-time students. Also note that the DfE analysis did *not* include any information for students undertaking 'other undergraduate' qualifications, so we used the same assumptions for these qualifications as for HNCs/HNDs.
[2] The full-time take-up rate was calculated by dividing the number of English domiciled full-time undergraduate students in receipt of SLC fee loans in 2021-22 (i.e. *funded* students from SLC data, [here](#)) by the *total* number of English domiciled full-time undergraduate students studying at UK HEIs in 2021-22 (from HESA data, [here](#)). We undertook similar calculations for part-time students to estimate the part-time fee loan take-up rate.

Assumptions and methodology

Maintenance loans

- In terms of **maintenance funding** under the current funding system (in 2023-24):

  - **Full-time students** living away from home outside of London (LAFHOL) are currently eligible for a maximum maintenance loan of **£9,978** (for household income up to £25,000), declining to a minimum of **£4,651** (for household income of more than £62,343). Students living away from home in London (LAFHIL) are eligible for a maximum loan of **£13,022** (for household income up to £25,000), declining to a minimum of **£6,485** (for household income of more than £70,040); and students living at home (LAH) are eligible for a maximum loan of **£8,400** (for household income up to £25,000), declining to a minimum of **£3,698** (for household income of more than £58,291)

  - **Part-time students** are eligible for the same maintenance loans as full-time students but on a pro-rata basis (so that, based on the assumed 50% study intensity, we assume that LAFHOL part-time students are eligible for a maximum maintenance loan of **£4,989** (again for household income up to £25,000)).

- We have modelled full-time students' maintenance loan eligibility by **students' living conditions**, separately for full-time students living at Home (LAH, 23% of students), living away from home outside of London (LAFHOL, 63% of students) and living away from home in London (LAFHIL, 14% of students)[1]. For part-time students, based on the same sources, we assume that 25% live at home (LAH), 68% live away from home outside of London (LAFHOL), and 7% live away from home in London (LAFHIL).

- In terms of **maintenance loan take-up rates**, again based on SLC data on student support for English domiciled undergraduate students in 2021-22, we assume a maintenance loan take-up rate of **94% for full-time students**, and **44% for part-time students**[2].

- In terms of students' **household income**, we base eligibility for means-tested maintenance loans on the current household income thresholds applied by the SLC:

  - As there is no comparable information on students' household income levels available for English domiciled students, we combine these thresholds with separate information from the Student Loans Company (SLC, here) on the distribution of *Welsh* domiciled undergraduate students by household income. Specifically, our assumptions are based on the proportion of Welsh domiciled students in receipt of full, partial, or nil maintenance grants from Student Finance Wales in 2021-22 (and the associated household income thresholds applicable to Welsh maintenance grants in that year) – separately for full-time students and part-time students.

  - We then adjust the information to 2023-24 values to reflect the fact that average household income is expected to grow over time, by applying OBR estimates of UK annual average earnings growth in 2022-23 and 2023-24 (here).

  - In addition, as the information is based on Wales, we adjust the assumptions for differences in average household income between England and Wales. Specifically, we adjust the assumptions for the ratio of median gross weekly earnings in England vs. Wales, based on 2022 data from the Annual Survey of Hours and Earnings published by StatsWales (here; note that 2022 is the latest year for which this information is currently available).

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[1] The distribution of students across these different living conditions is based on information from the 2014-15 Student Income and Expenditure Survey for England (on the proportion of full-time students living at home vs. living away from home; here), combined with HESA data on the number of first-year English domiciled full-time undergraduate students living in London vs. elsewhere in the UK, in 2021-22 (here).

[2] The full-time take-up rate was calculated by dividing the number of English domiciled full-time undergraduate students in receipt of SLC maintenance loans in 2021-22 (i.e. *funded* students from SLC data, here) by the *total* number of English domiciled full-time undergraduate students studying at UK HEIs in 2021-22 (from HESA data, here). Part-time maintenance loans were only introduced for new students starting from 2018-19 onwards, so it was not sensible to undertake a similar calculation for these students here; therefore, we instead assume that the part-time maintenance loan take-up rate is the same as the above-discussed part-time fee loan take-up rate (44%).

Assumptions and methodology

Maintenance loans

- In terms of growth in maintenance loans over time, we assume that:
  - **Students' household income** increases with UK-wide nominal average earnings growth in each year;
  - **Maximum maintenance loans** grow with RPI inflation; and
  - The **household income thresholds associated with maintenance loans** (which have remained almost unchanged since 2017-18) remain constant in all years.

Calculating the RAB charge

- We use the following equation to calculate the RAB charge:

$$RAB\ charge = \frac{NPV\ loan\ outlay - NPV\ repayments}{NPV\ loan\ outlay}$$

- Again, note that, in each instance, the RAB charges (in % terms, by level, mode, gender, and lifetime income decile) are calculated based on the loan outlay and expected loan repayments of students who started their qualifications in the 2023-24 academic year (i.e. students in the 2023-24 cohort). We then apply these same RAB charges to assess the Exchequer cost associated with the total student body (including first-year and continuing students) in 2030-31.

- The RAB charge is therefore calculated based on the net present value of the aggregate loan outlay provided to students in the 2023-24 cohort over the course of their studies (i.e. in total throughout all years of study), as well as the net present value of the total estimated loan repayments expected to be made by these students after they graduate.

Loan repayment terms

- In terms of **student loan repayment terms**, based on the new Plan 5 loan repayment terms (here) introduced for English domiciled students starting undergraduate qualifications from 2023-24 onwards (as part of the DfE's response to the Augar Review):
  - Student loans accumulate **0% real interest**; instead, outstanding loan balances are only indexed against the **Retail Price Index (RPI) inflation** (i.e. adjusted with inflation each year), so that all graduates (irrespective of income) are charged the same interest rate.
  - Loans are repaid at a rate of **9% of earnings in excess of £25,000** per annum (with the earnings threshold frozen until 2026-27 inclusive, and uprated with RPI inflation thereafter); and
  - All loans are written off **40 years** from the Statutory Repayment Due Date (SRDD).

Inflation, growth & discount rates

- We use the most recent Office for Budget Responsibility medium- and long-term forecasts in relation to the expected **RPI** per annum as well as expected **nominal average earnings growth** per annum (see here, from the OBR's March 2023 Economic and Fiscal Outlook (which were the most recent forecasts available at the time that the analysis was undertaken)). Note that the Retail Price Index will be effectively abolished from 2030 onwards, after which it will equal the (lower) measure of Consumer Price Index inflation.

- In terms of discount rates used to calculate the **RAB charge** (which is based on expected loan repayments and loan outlay in NPV terms in constant prices), we assume a real discount rate of **-1.3% + RPI** up to and including 2029-30, and **-0.2%** from 2030-31 onwards (based on official HM Treasury discount rates for financial instruments to be applied as of 31st March 2023, see here and here).

Assumptions and methodology

Teaching Grants

- As outlined above, the analysis focuses on **English domiciled students studying at higher education institutions anywhere in the UK** (including FE colleges in England). Therefore, the estimated level of Teaching Grant funding associated with the cohort includes teaching grants paid to **English HEIs and FE colleges** (by the Office for Students) and **Welsh HEIs** (by the Higher Education Funding Council for Wales).

- In contrast, English students studying in **Scotland** and **Northern Ireland** typically do not attract any teaching grant funding (from the Scottish Funding Council and the Department for the Economy Northern Ireland, respectively). This is because these students are charged much higher tuition fees as compared to 'home' students studying in Scotland and Northern Ireland – so that the teaching grant paid to HEIs by the respective HE funding bodies in Scotland and Northern Ireland generally applies to 'home' domiciled students only.

- The average Teaching Grant per student studying in **England** is derived by combining assumptions on the high-cost subject funding rate per FTE student by subject band (in 2023-24) with information on the distribution of students by subject band (both published by the Office for Students, here), as follows:

Subject band	Funding per FTE, £	% of FTE students
Band A	£11,290	2%
Band B	£1,694	21%
Band C1.1	£282	10%
Band C1.2	£126	11%
Band C2	-	18%
Band D	-	37%
Total	-	**100%**

- Combining this with the average 'other targeted allocations' funding per student (e.g. including premium funding to support retention), the average total Teaching Grant per full-time student studying in **England** was estimated at approximately **£1,060** per year. Based on average study intensity, the average funding per part-time student was estimated at approximately **£530**.

- To estimate the average level of Teaching Grant per student per year for students studying in **Wales**, we use HESA financial data (here) and student data (here) for the 2021-22 academic year (in the absence of more recent information). We divide the total Teaching Grant income received by institutions in Wales by the total number of relevant students to whom these Teaching Grants typically apply (where we exclude any non-EU domiciled students and higher degree research students, as well as EU first-year students (since, from 2021-22 onwards, these students are typically no longer eligible for Teaching Grant funding due to the significant changes to funding rules for EU students post-Brexit). We again adjusted for the assumed average study intensity among full-time students vs. part-time students, to arrive at separate rates of Teaching Grant funding per student per year by study mode.

- Using this approach, we assume the following **average Teaching Grant funding rates per student per year** in other Home Nations (rounded to the nearest £10) :

Study location	Full-time	Part-time
Wales	£490	£240
Scotland	-	-
Northern Ireland	-	-

- We assume that these Teaching Grant funding rates do *not* increase over time (i.e. we assume the same amount per student per year in every year of interest throughout the analysis here).

Assumptions and methodology

Graduate earnings

- The estimation of student loan outcomes (such as the RAB charge) relies on **forecasts of graduates' predicted lifetime earnings** by qualification level (again broken down into first degrees, Foundation Degrees, HNCs/HNDs and other undergraduate qualifications), gender, study mode, and lifetime income decile. To estimate these lifetime earnings profiles, we make use of **pooled UK Quarterly Labour Force Survey (LFS) data for the period 2010Q1 to 2023 Q2**, combined with information from the **1970 British Cohort Study (BCS)** (which follows a cohort of individuals born in a single week of April 1970 (in England, Wales, and Scotland), with the most recent data available for age 46 of the cohort).

- Using the **Labour Force Survey** data, we first assessed the annual salaries (expressed in June 2023 prices, inflated using Consumer Price Index (CPI) data) of individuals in possession of each of the different higher education qualifications[1]. For each type of qualification, the earnings were assessed separately by income decile (including the 1st to 9th income deciles and the 95th percentile[2]), gender, and age (for first degrees) or age band (for qualifications below degree level (due to sample size)). To generate 'smoothed' age-earnings profiles for sub-degree qualifications, the original results by age band were assigned to the mid-point of the given band (e.g. age 28 for age band 26-30), and we then assumed constant annual growth between two given mid-points (e.g. we assumed constant annual growth between age 28 (the mid-point of band 26-30) and 33 (the mid-point for band 31-35)).

- To assess the expected loan repayments for part-time students specifically (who typically start repaying their loans *during study*), we further calculated earnings by decile (and the 95th percentile) for individuals in possession of Level 3 qualifications as their highest level of attainment (used as part-time students' assumed earnings during study), again separately by age and gender.

- The LFS analysis provided us with earnings estimates by decile (and qualification level, mode, and gender) where the earnings deciles are defined *at each individual age* (e.g. the 1st decile at age 30 means that 10% of individuals in the data have earnings smaller than or equal to the given earnings *at that age*). However, to take account of graduates' income mobility over their lifetime (i.e. the extent to which graduates move across the income distribution over time), we then **combined the LFS results with an analysis of data from the BCS** (focusing on data for ages 26 to 46 of the 1970 cohort) to generate **age-earnings profiles by lifetime earnings decile**.

- Specifically, based on weekly earnings information available within the BCS data, we again divided individuals within the distribution into 10 income deciles *at each individual age* observed in the study[3]. Again, the analysis was undertaken separately by gender and qualification level attained, where we distinguished between individuals in possession of first degrees vs. all other undergraduate qualifications (note that a further disaggregation into different types of sub-degree qualifications was not possible within the BCS data).

- From the LFS analysis, we then imported the estimated annual earnings value (in June 2023 prices) corresponding to each age and income decile (again separately by qualification level[4]).

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[1] This includes all individuals in possession of the given qualification, *irrespective of* whether that qualification was their highest educational attainment or not (e.g. the average earnings for individuals in possession of first degrees includes individuals who subsequently completed a Master and/or Doctorate degree).
[2] The 95th percentile here was used to approximate the earnings for individuals on the 10th decile (i.e. rather than using the actual value for the 10th (i.e. 100th percentile) within the LFS data, since this captures the maximum earnings value observed in the data in each instance and is likely to include very significant outliers).
[3] Note that the BCS data is not available for each separate age, but is instead based on multiple 'sweeps' of data collections undertaken at specific ages for the cohort (e.g. age 26, 30, 34, 38, 42, and 46; see here for more information). We assume here that individuals stay in the same decile between two sweeps (and stay in the last recorded decile after the age of 46). In addition, to boost sample size, imputation was undertaken in case of a respondent not being available at a given age (or missing information more generally).
[4] Again, separately for first degrees, Foundation Degrees, HNCs/HNDs, and other undergraduate qualifications.

Assumptions and methodology

Graduate earnings

- Using the merged LFS/BCS data, we then computed the lifetime earnings for each individual in the data, based on the sum of annual earnings between the assumed first year post-graduation (i.e. the age at completion for each given qualification (e.g. age 25 for full-time first degrees)[1]) and the assumed age of retirement (68). This allowed us to assign each individual to a *lifetime* earnings decile (again by gender and qualification level).

- Finally, for each single year of age, we then computed the **average earnings among all individuals within the specific lifetime earnings decile** (e.g. the average earnings at age 30 among individuals in the 1st lifetime earnings decile), i.e. we generated age-earnings profiles by lifetime decile (for each gender and qualification). We then further 'smoothed' these age-earnings profiles using 3-year rolling averages.

Graduate employment probabilities

- Again using LFS data, we also calculated the **employment rate** (i.e. the proportion of individuals in employment) for individuals in possession of the different qualification levels of interest, by age/age band, and gender.

- To reflect the fact that the age of retirement is planned to be increased to age 68 (compared to 65 for most respondents in the historical LFS data), we assume that the trend in employment rates observed from the age of 55 onwards will reflect the trend currently observed from age 52 onwards (in other words, the analysis 'shifts' the decline in employment rates due to approaching the age of retirement back by 3 years). As a result, the decline in employment rates occurs at a slower rate than what is observed in the historical LFS data[2], so that our estimated employment rates at age 68 are in line with what is currently observed at age 65.

- Combining the resulting age-earnings and age-employment profiles, we then estimate the **employment-adjusted annual age-earnings profiles** of individuals in possession of each qualification, by study mode, gender, and lifetime earnings decile. We **adjust these age-earnings profiles for expected future growth, i.e. to account for the fact that earnings are expected to increase over time** (using the above-mentioned Office for Budget Responsibility forecasts of average nominal earnings growth per year (see this slide)).

[1] See this slide for more information on our assume ages at graduation by qualification level and mode among the 2023-24 student cohort.
[2] We use a 2-year annualised change to determine these new rates of decline (to provide a smoother evolution).