

Annex H: Differences in student outcomes – further characteristics

Household residual income

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This annex should be read alongside the report ‘Differences in student outcomes – further characteristics’ (OfS 2020.30)

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Summary

Any questions or feedback related to this publication can be sent to William Rimington at official.statistics@officeforstudents.org.uk. This includes further detail of the results of applying our data quality framework, including specific disclosure rates and inconsistency scores.

1. Economic background is known to impact access to and successful outcomes in higher education. For example, students who were in receipt of free meals when at school, and therefore live in a low income household, have much lower rates of progression into higher education. Only 26.3 per cent of state-funded and special school pupils, who received free school meals at age 15, entered higher education by age 19 in 2018-19, compared with 45.1 per cent of students who did not receive free school meals.¹ Furthermore, those who do enter higher education have lower continuation, attainment and progression rates; for example, the rate of achieving a first or upper second class degree was 13.0 percentage points lower in 2018-19 for students who received free school meals than for those who did not.²
2. Household residual income (HRI) is a direct measure of economic background as it records household income after accounting for certain outgoings. It is this value that determines a student's access to income-assessed student finance. This investigation shows that as HRI increases so do continuation, attainment and progression rates.
3. The statistics in this annex apply to full-time undergraduate students domiciled in England, Wales and Northern Ireland at higher education providers in England. To be included in these calculations students must have a Student Loans Company (SLC) record and be recorded by the SLC as dependent upon their parents while studying. As a result, these HRI statistics relate to parental income when a student began their undergraduate studies.
4. The continuation rate of entrants in 2017-18 whose parents have a HRI of £42,601 and above was 93.7 per cent. This was 6.9 percentage points higher than the continuation rate of students whose parents were recorded as having a HRI of £0 (86.8 per cent).
5. Qualifiers in 2018-19 whose parents have a HRI of £42,601 and above had a rate of achieving a first or upper second class degree (83.5 per cent) that was 14.9 percentage points higher than students whose parents were recorded as having a HRI of £0 (68.6 per cent).
6. The rate of progression into highly skilled employment or further study at a higher level for qualifiers in 2016-17 was 72.7 per cent for students whose parents have a HRI of £42,601 and above. This progression rate is 7.6 percentage points higher than the rate for students whose parents were recorded as having a HRI of £0 (65.0 per cent).

¹ See the Department for Education's report 'Widening participation in higher education: 2020' at www.gov.uk/government/statistics/widening-participation-in-higher-education-2020.

² See Annex C of this report, available at www.officeforstudents.org.uk/publications/differences-in-student-outcomes-further-characteristics/.

7. The statistics included in this annex are raw continuation, attainment and progression rates and we have not used weighting or statistical modelling in their calculation to account for other student characteristics that can impact the rates of students with these characteristics.
8. Reporting of HRI is optional and not necessary if not seeking an income-assessed loan. Throughout the time series presented here the collection of HRI has been consistent. However, the boundaries for income-assessed loans and the amount of money received by students have not been consistent across this time period. This was especially the case between 2015-16 and 2016-17 and the HRI boundaries and access to finance changed markedly for students entering higher education in 2016-17 compared with those who entered in 2015-16.³ This change may have impacted the reporting of HRI and consequently the raw continuation rates calculated between 2015-16 and 2016-17 (and subsequent years of qualification for attainment rates). Further discussion of the reporting of HRI and the outcomes for students who do not report HRI can be found in the section 'Quality framework and student populations'.
9. The rates and differences in rates are rounded to one decimal place. We have not performed significance or sensitivity analysis on the raw rates included here. Small differences in rates may not represent statistically significant differences in outcomes for students with those characteristics. The differences in rates were also calculated using unrounded rates, meaning that the value of the differences can be 0.1 percentage point higher or lower than the difference between the rounded rates included in this annex.

³ See document 'How you're assessed and paid' available at www.gov.uk/student-finance/new-fulltime-students.

Differences in continuation

10. Continuation rates increase with parental HRI (Figure H1). Students whose parents have a HRI of £42,601 and above have the highest continuation rates and students whose parents are recorded as having a HRI of £0 have the lowest. For entrants in 2017-18 there was a 6.9 percentage point difference between these two groups of students.
11. The data on HRI is collected by the SLC and was linked onto data on the Education and Skills Funding Agency's (ESFA's) Individualised Learner Record (ILR) and the Higher Education Statistics Authority's (HESA's) student record and student alternative record. These statistics apply to full-time undergraduate or apprenticeship students domiciled in England, Wales and Northern Ireland, attending higher education providers in England.
12. To be included in the population⁴ for these calculations a student must have begun their course in 2011-12 or later and been recorded as dependent on their parents by the SLC in their year of entrance. It is possible to enter undergraduate study without applying for a loan from the SLC. In this circumstance these students will not have an SLC record. Furthermore, it is not compulsory for a student to declare their parent's HRI, meaning they can have an SLC record but no record of their parent's income. The continuation rates of students with an SLC record but a missing HRI can be found in the data file associated with this release and in Figure H4. In these calculations around 35,000 students a year are excluded from the access and participation population for not having an SLC record.⁵
13. Continuation rates are a measure of the proportion of entrants who either qualified, transferred to another higher education provider or continued their studies. All other students are deemed non-continuers. For full-time students this measure is based on student activity one year and 14 days after their commencement date.
14. Between 2011-12 and 2017-18 continuation rates have declined for all HRI groups, though the extent to which varies depending on the group (Table H1). During this time the continuation rate of students whose parents have a HRI of £42,601 and above dropped 1.4 percentage points. The rate of students whose parents have a HRI of between £25,001 and £42,600 dropped 1.1 percentage points and those whose parents have a HRI is between £1 and £25,000 dropped 1.7 percentage points. The continuation rates of students whose parents were recorded as having a HRI of £0 dropped 3.0 percentage points.
15. The size and variability of the differences in continuation rates vary depending on the group (Table H1). However, there is a consistent trend that the difference between £42,601 and above and the other groups increases as HRI drops.

⁴ The population and measure of continuation in higher education are based on our access and participation data algorithms. See our document 'Technical algorithms for institutional performance measures: Regulatory indicators, methodology and rebuild descriptions' at www.officeforstudents.org.uk/data-and-analysis/institutional-performance-measures/technical-documentation/.

⁵ See the data file associated with this release, available at www.officeforstudents.org.uk/publications/differences-in-student-outcomes-further-characteristics/, for the numbers of students who have been excluded from the access and participation population based on population restrictions.

Table H1: Differences in continuation rate between 2011-12 and 2017-18 by household residual income for full-time undergraduate students domiciled in England, Wales and Northern Ireland

HRI group	2011-12 rate	Difference in 2011-12 rate compared with £42,601 and above 2011-12 rate	2017-18 rate	Difference in 2017-18 rate compared with £42,601 and above 2017-18 rate
£42,601 and above	95.1%	N/A	93.7%	N/A
£25,001 - £42,600	93.8%	-1.3pp	92.7%	-1.0pp
£1 - £25,000	92.2%	-2.9pp	90.5%	-3.3pp
£0	89.8%	-5.3pp	86.8%	-6.9pp

Figure H1: The differences in continuation rate by household residual income for full-time undergraduate students domiciled in England, Wales and Northern Ireland



Note: The data used to create this chart can be found in the data file associated with this publication.⁶ Details of the student population can be found later in this annex.

⁶ Available at www.officeforstudents.org.uk/publications/differences-in-student-outcomes-further-characteristics/.

Differences in degree outcomes

16. The rate of achieving a first or upper second class degree (attainment rate) increases with parental HRI (Figure H2). Students whose parents have a HRI of £42,601 and above have the highest attainment rates and students whose parents are recorded as having a HRI of £0 have the lowest. For qualifiers in 2018-19 there was a 14.9 percentage point difference between these two groups of students.
17. The HRI data is collected by the SLC and was linked onto data on the ESFA's ILR and HESA's student record and student alternative record. These statistics apply to full-time students domiciled in England, Wales and Northern Ireland, who attended higher education providers in England and who qualified with a first degree or undergraduate with postgraduate components qualification.
18. To be included in the population⁷ for these calculations a student must have begun their course in 2011-12 or later and have been recorded as dependent on their parents by the SLC in their year of qualification. In these attainment calculations around 25,000 students a year are excluded from the access and participation population for not having an SLC record.⁸ This value differs from the 35,000 value in paragraph 12 as these attainment statistics are calculated for a different population from the continuation statistics.⁹ The attainment rates of students with an SLC record but a missing HRI value can be found in the data file associated with this release and in Figure H4.
19. Attainment rates are a measure of the proportion of students awarded Level 6+ undergraduate degree qualifications (first degree or undergraduate with postgraduate components) who received a first or upper second (2:1).
20. For all HRI groups attainment rates increased between 2014-15¹⁰ and 2017-18 and then mostly dropped between 2017-18 and 2018-19 (Figure H2), in line with the sector-level trend during this period.¹¹ The size of increase between 2014-15 and 2018-19 varies by group, with £42,601 and above and between £25,001 and £42,600 both increasing 3.0 percentage points while between £1 and £25,000 increased 2.5 percentage points. The attainment rate of students

⁷ The population and measure of attainment are based on our access and participation data algorithms. See footnote 4.

⁸ See footnote 5.

⁹ For further detail of the different populations see footnote 4.

¹⁰ Attainment rate data is available from 2013-14. However, as the HRI data is used for 2011-12 entrants onwards, the data for qualifiers for 2013-14 does not include students who completed their qualification in four years. Given that undergraduate with postgraduate component qualifications typically take four years to complete and have much higher attainment rates than first degrees, the difference in attainment rate between 2013-14 and 2014-15 will in part result from these additional students being included in the population. As we have five years of data for which the full population is available the rates for 2013-14 are not included in Figure H2 and are not discussed but this data can be found in the data file associated with this release.

¹¹ See www.officeforstudents.org.uk/news-blog-and-events/press-and-media/grade-inflation-for-first-classdegrees-stalls/.

whose parents were recorded as having a HRI of £0 increased 3.3 percentage points during this time.

21. Like continuation rates, the size and variability of the differences in attainment rates vary depending on the group with the consistent trend that the difference between £42,601 and above and the other groups increases as HRI drops (Table H2).

Table H2: Differences in attainment rate between 2014-15 and 2018-19 by household residual income for full-time first degree and undergraduate with postgraduate components students domiciled in England, Wales and Northern Ireland

HRI group	2014-15 rate	Difference in 2014-15 rate compared with £42,601 and above 2014-15 rate	2018-19 rate	Difference in 2018-19 rate compared with £42,601 and above 2018-19 rate
£42,601 and above	80.5%	N/A	83.5%	N/A
£25,001 - £42,600	77.2%	-3.3pp	80.2%	-3.3pp
£1 - £25,000	72.8%	-7.7pp	75.3%	-8.2pp
£0	65.3%	-15.2pp	68.6%	-14.9pp

Figure H2: The differences in rates of achieving a first or upper second class degree by household residual income for full-time first degree and undergraduate with postgraduate components students domiciled in England, Wales and Northern Ireland



Note: The data used to create this chart can be found in the data file associated with this publication.¹² Details of the student population can be found later in this annex.

¹² Available at www.officeforstudents.org.uk/publications/differences-in-student-outcomes-further-characteristics/.

Differences in employment outcomes

22. The rates of progression into highly skilled employment or further study at a higher level increase with parental HRI (Figure H3). Students whose parents have a HRI of £42,601 and above have the highest progression rates and students whose parents are recorded as having a HRI of £0 have the lowest. For qualifiers in 2016-17 there was a 7.6 percentage point difference between these two groups of students.
23. This HRI data is collected by the SLC and was linked to data on the ESFA's ILR and HESA's student record and student alternative record. These statistics apply to full-time undergraduate or apprenticeship students domiciled in England, Wales and Northern Ireland, who attended higher education providers in England.
24. Progression rates are based on the proportion of higher education leavers who say they are in highly skilled employment or studying at a higher level (or both) approximately six months after leaving. These outcomes are based on student responses to the Destinations of Leavers from Higher Education (DLHE) survey. The mapping of DLHE responses for progression rates is detailed elsewhere.¹³ The DLHE survey has been discontinued and the last year of data available is for 2016-17 qualifiers.
25. To be included in the population¹⁴ for these calculations a student must have begun their course in 2011-12 or later and been recorded as dependent on their parents by the SLC in their year of qualification. Furthermore, they must have qualified with an undergraduate qualification and have responded to the DLHE survey. The progression rates of students with an SLC record but a missing HRI can be found in the data file associated with this release and in Figure H4. In these progression calculations around 20,000 students a year are excluded from the access and participation population for not having an SLC record.¹⁵ This value differs from the values in paragraphs 12 and 18 as these progression statistics are calculated for a different population from the continuation and attainment statistics.¹⁶
26. For all HRI groups progression rates increased every year between 2014-15¹⁷ and 2016-17 (Table H3). The extent to which they increased during this time varies depending on the HRI group; £42,601 and above increased 5.4 percentage points, between £25,001 and £42,600 increased 5.6 percentage points and between £1 and £25,000 increased 5.3 percentage points. The progression rates of students whose parents were recorded as having a HRI of £0 increased 6.1 percentage points during this time.

¹³ See footnote 4.

¹⁴ The population and measure of progression are based on our access and participation data algorithms. See footnote 4.

¹⁵ See footnote 5.

¹⁶ For further detail of the different populations see footnote 4.

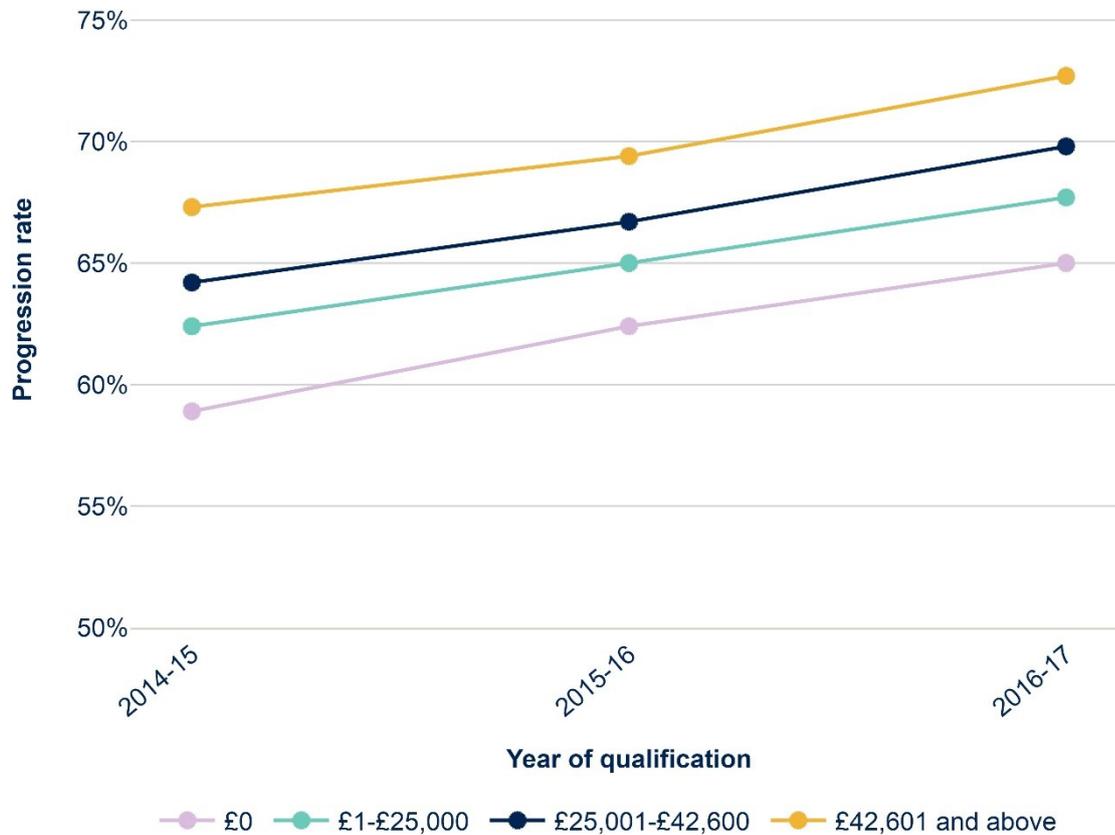
¹⁷ Progression rate data is available for 2013-14 in the data file associated with this release. However, as detailed in footnote 10, the data for 2013-14 only includes students who completed their undergraduate studies in three years or less so is less robust than subsequent years of data and is not included in Figure H3.

27. As with continuation and attainment, the size and variability of the differences in progression rates vary but consistently the difference between £42,601 and above and the other groups increases as HRI drops (Table H3). The changes in the differences in outcomes do not follow a single trajectory and in all cases the size of the differences between £42,601 and above and the other groups dropped between 2014-15 and 2015-16 but then increased again between 2015-16 and 2016-17.

Table H3: Differences in progression rate between 2014-15 and 2016-17 by household residual income for full-time undergraduate students domiciled in England, Wales and Northern Ireland

HRI group	2014-15 rate	Difference in 2014-15 rate compared with £42,601 and above 2014-15 rate	2016-17 rate	Difference in 2016-17 rate compared with £42,601 and above 2016-17 rate
£42,601 and above	67.3%	N/A	72.7%	N/A
£25,001 - £42,600	64.2%	-3.1pp	69.8%	-2.9pp
£1 - £25,000	62.4%	-4.9pp	67.7%	-5.0pp
£0	58.9%	-8.4pp	65.0%	-7.6pp

Figure H3: The difference in students progressing into highly skilled employment or further study at a higher level by household residual income for full-time undergraduate students domiciled in England, Wales and Northern Ireland



Note: The data used to create this chart can be found in the data file associated with this publication.¹⁸ Details of the student population can be found later in this annex.

¹⁸ Available at www.officeforstudents.org.uk/publications/differences-in-student-outcomes-further-characteristics/.

Quality framework and student populations

28. A summary of applying our data quality framework¹⁹ to the HRI data can be found in Table H4. This data is provided by the SLC and is not directly reported by higher education providers. The primary purpose of applying the framework was to allow a better understanding of this data.

Table H4: Summary of applying data quality framework to household residual income data

Framework criteria	Summary
Data source	Student Loans Company
Year data collection started	Not confirmed but assessed from 2011-12 onwards
Summary of data field	The income of the student's household after certain allowances have been taken into account
Student population data available for	Students domiciled in England, Wales and Northern Ireland who have an SLC record
Part I – Data availability	
I.A – documentation	Well documented
I.B – disclosure rate	Variable but in most years an HRI value is available for over 67% of students who have an SLC record
I.C – provider response	NA
Part II – Data quality	
II.A – identified data issues	Data not reported by providers but linked via SLC. Data not available for Scotland-domiciled students. Reporting HRI to SLC is not compulsory so incomplete record (see paragraph 34).
II.B – reporting consistency	Data not reported by providers so inconsistency score does not reflect whether data is being reported inconsistently. However characteristic-level inconsistency scores are around 2 in all years and below 3 at the level of category (HRI group). This indicates that the variability of the HRI groups at providers is low.
II.C – comparisons with public	Comparable statistics for the general population could not be found.
Outcome	Data used for 2011-12 entrants onwards.

29. HRI is assessed based on gross income (before tax and National Insurance) after accounting for certain costs such as dependents and pensions. Further details of the collection of HRI are published by the SLC.²⁰ The SLC collects HRI data to help assess student loan entitlement. Though the impact of HRI on loan eligibility has changed, the way it is assessed has been

¹⁹ See Annex A associated with this report, available at www.officeforstudents.org.uk/publications/differences-in-student-outcomes-further-characteristics/.

²⁰ See footnote 3.

consistent since 2009-10. It is thus valid to present this data as a time series despite the changes in loan allocation.

30. While the recording of HRI has been consistent, the boundaries for income-assessed loans and the amount of money received by students have not been. This was especially the case between 2015-16 and 2016-17 and the HRI boundaries and access to finance changed markedly for students entering higher education in 2016-17 compared with those who entered in 2015-16.²¹ This change may have impacted the reporting of HRI (see paragraph 34) and subsequently the raw continuation rates calculated between 2015-16 and 2016-17 (and subsequent years of qualification for attainment rates).
31. The assessment of HRI differs depending on the student's dependency status. If a student is dependent on their parents then HRI is based on parental income. However, if the student is independent then HRI is based on their income and their partner's income if they have one. Dependency status is determined by the SLC. Examples of why a student may be considered independent include being 25 years old and over, not living with their parents, being married, having children, and being a care leaver. A full list of reasons is published by the SLC.²² The background, experiences and outcomes of dependent and independent students are different so we treat the HRI data for these two groups of students separately. This being the case, the statistics in this annex only include students who are recorded as dependent. This allows more consistent, robust statistics while still including 75-80 per cent (varies depending on year) of students for whom HRI is known. The record of dependency status is available from 2011-12 onwards, which is the reason this is the earliest year of HRI data presented here.
32. HRI data is collected on continuous scale so we have condensed the data into groups for analysis and presentation. The groups we have chosen are; £0, £1-£25,000, £25,001-£42,600 and £42,601 and over. These group boundaries were determined based on values of HRI used when assigning loans and bursaries. A HRI value of £25,000 and under is the cut-off value for receiving a full maintenance loan. A HRI value of £42,600 is regularly used in the higher education sector as a cut-off figure when assigning bursaries. These groupings are based on loan criteria because an assessment of outcomes by HRI using more granular groups did not support any particular grouping.²³ As a result these loan criteria were used to allow us to condense this continuous data into groups.
33. HRI values of £0 are kept separate from the £1-£25,000 group and we do not use a combined '£25,000 and below' group because the £0 group have noticeably lower outcome rates than the £1-£25,000 group (Figures H1 to H3). This is also the case when comparing the £0 group with HRI values of £1-£2,500.²⁴

²¹ See footnote 3.

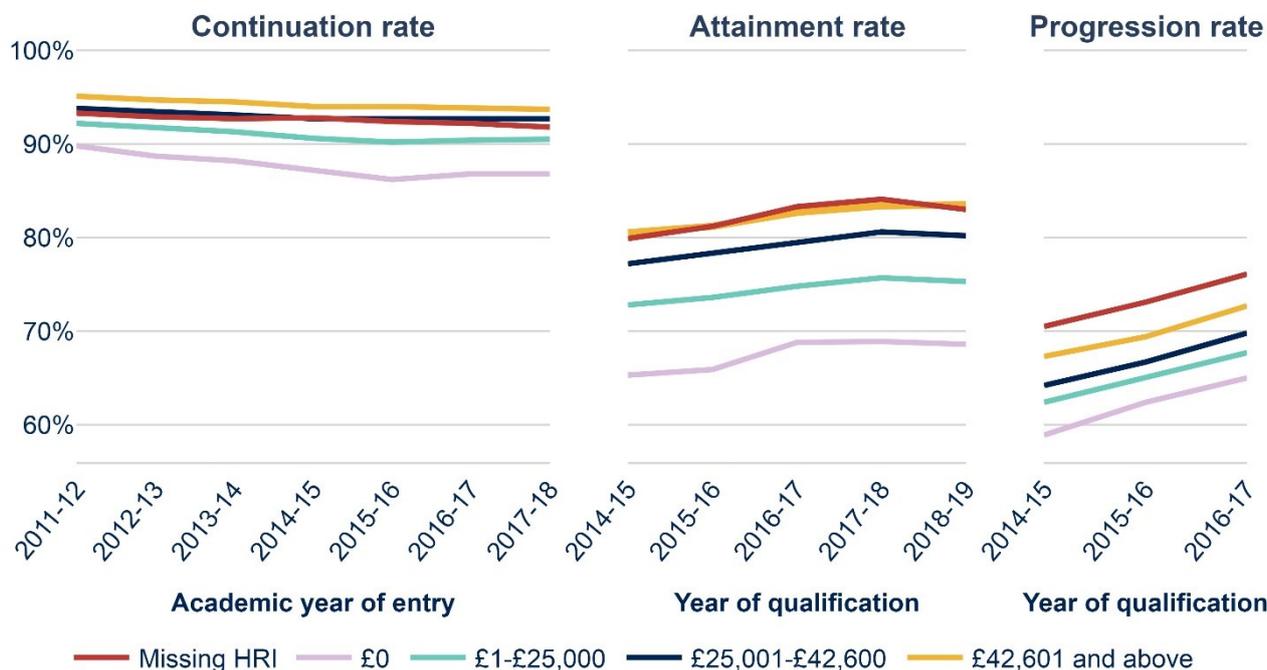
²² See footnote 3.

²³ The data file associated with this release, available at www.officeforstudents.org.uk/publications/differences-in-student-outcomes-further-characteristics/, contains continuation, attainment and progression rates by HRI when grouped into multiples of £2,500. The calculations and populations are identical to the outcomes statistics discussed here and the only difference is the increased granularity of the HRI groups.

²⁴ See footnote 23.

34. The disclosure of HRI is not a compulsory part of a student's loan application and we would not expect to have a 100 per cent disclosure rate for students who have an SLC record. If a student or their parents are aware that their HRI is at a level that means their student loan entitlement will not be increased by income assessment then there is no incentive to provide the necessary financial information. This leads to a reduction in disclosure rates.
35. Coming from a high HRI background is not the only reason that HRI may not be reported. For some courses, such as nursing prior to 2017-18, a student can have an SLC record but receive finance that is not assigned using HRI. Such a student does not have an incentive to provide this information.
36. As a result, the missing HRI group is likely a heterogeneous group of students who come from diverse HRI backgrounds.
37. Investigation of outcomes for dependent students with an SLC record but no HRI value did not find any consistent pattern of outcomes when compared with the HRI groups (see Figure H4). Continuation rates for the missing HRI group are most like the £25,001-£42,600 group whereas attainment rates are very similar to the £42,601 and above group. Progression rates for these students with missing HRI are over three percentage points higher than any other HRI group. A contributor to this increased progression rate is that the missing HRI group contains some students who are on courses that have direct routes into highly-skilled employment (see paragraph 35).
38. For these reasons we do not assume that all students with a missing HRI come from a high-income background and chose not to report HRI because of this high value. Instead this data is kept separate from the known HRI groups. As the missing HRI group represents a potentially diverse group of students from very different backgrounds this data is not presented in Figures H1 to H3 but can be found in the data file associated with this release and in Figure H4.

Figure H4: Continuation, attainment and progression rates for students with a missing household residual income value and how this compares with the known household residual income groups



Note: The data used to create this chart can be found in the data file associated with this publication.²⁵The data and students populations for the HRI groups that are not missing are identical to Figures H1 to H3.

39. HRI is not fixed as part of the student entry profile and can change each year. For the purposes of this analysis the first recorded HRI from the student’s current period of study at their provider is used rather than the HRI in the current year. This allows for greater consistency as a student is in the same group for each of the different outcome measures. In doing this we are measuring a student’s background prior to higher education. For the majority of students (over 80 per cent) HRI group does not change each year. Furthermore, over 95 per cent of students who change HRI group during their study switch to an adjacent group, likely representing a small increase or decrease in HRI that results in a change in group. By fixing HRI from the year of entry we prevent these instances where small fluctuations in HRI result in a change in group. For consistency, if HRI is missing for a student in their year of entrance but is known in subsequent years they are still recorded as having a missing HRI throughout these analyses.

40. These statistics apply to students domiciled in England, Wales and Northern Ireland. Students domiciled in Scotland are not included because of limited data availability. Student Finance England, Student Finance Wales and Student Finance Northern Ireland assess HRI using the same method.

41. For consistency with our access and participation populations apprenticeship students are included in these statistics but it should be noted that an SLC record is only available for around 1 per cent of apprenticeship students and HRI is often not available for these students.

²⁵ Available at www.officeforstudents.org.uk/publications/differences-in-student-outcomes-further-characteristics/.

42. As we are using HRI data from 2011-12 and later and we use HRI at entrance, when calculating these outcome statistics the populations have been limited to students who began their studies in 2011-12 or later. The first two years of qualifier data available by HRI (2011-12 and 2012-13) are not published as they relate to a small number of students who completed their studies in one or two years – it is not until the third year of data that more robust statistics can be produced. Further, the third year of data is not as robust as subsequent years²⁶ and as we have several years of the data available the results for 2013-14 are not included in the charts and tables but this data is included in the data file associated with this release. The qualifier population was not limited by the time it took to achieve the qualification.
43. Continuation, attainment and progression populations were based on those included in our access and participation data dashboard. Details of these populations can be found in the document ‘Technical algorithms for institutional performance measures: Regulatory indicators, methodology and rebuild descriptions’.²⁷ Where restrictions exist in the availability of this data, beyond those associated with the access and participation populations, then these were also applied. For example the access and participation populations include UK-domiciled students; however HRI data is not available for Scotland-domiciled students. Further detail of these restrictions can be found in the data file associated with this release.
44. For further detail of our data linking and analysis methods please contact William Rington at official.statistics@officeforstudents.org.uk. Please note that this is a new experimental approach to using HRI data. We are actively seeking feedback on our use of this data, including our population restrictions and use of HRI at entry. Any feedback can be sent to the email address above.

²⁶ See footnote 10.

²⁷ See footnote 4.



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