

Longitudinal Education Outcomes (LEO) from Universities: 2019/20: Scotland

An Official Statistics publication for Scotland



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Riaghaltas na h-Alba

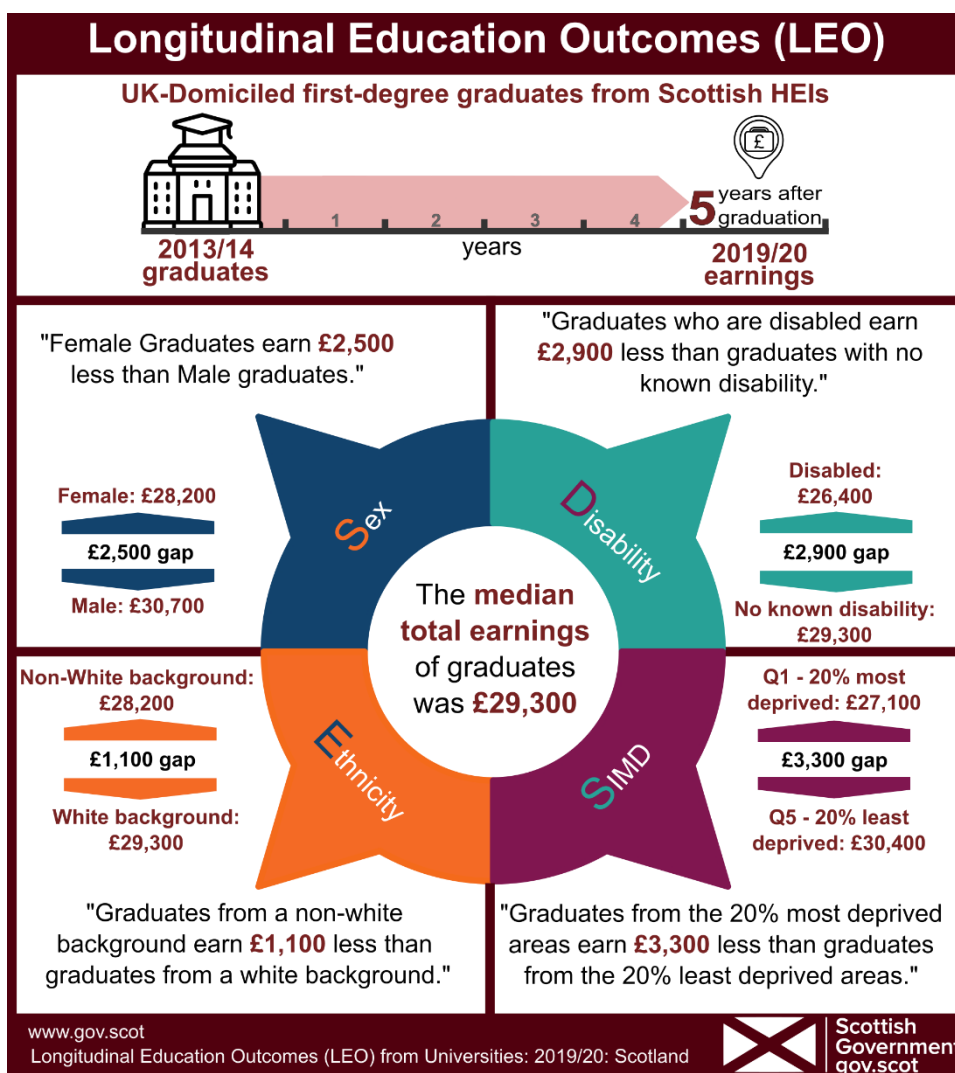
CHILDREN, EDUCATION AND SKILLS

This Official Statistics release presents employment and earnings outcomes for graduates of Scottish Higher Education Institutions (HEIs) five years after graduation. This is the fourth publication in Scotland to use the Longitudinal Education Outcomes (LEO) dataset to track graduates as they move from higher education into the workplace. Prior Scottish Government statistical releases of LEO data can be accessed via:

<https://www.gov.scot/collections/colleges-universities-young-people-training-and-employment-statistics/>

This publication is being released in conjunction with the Department for Education's (DfE) release. The DfE release, which contains further detailed datasets, can be accessed via:

<https://www.gov.uk/government/collections/statistics-higher-education-graduate-employment-and-earnings>



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Foreword

During 2020 and 2021, the statistical release of LEO from Universities was paused due to resourcing demands resulting from the COVID-19 pandemic, however data tables relating to Scottish data from the DfE's Graduate Outcomes statistical release continued to be published. Since the previous release of this publication in June 2019, the following changes have been made:

- Subjects are now grouped by the latest version of the Common Aggregation Hierarchy (CAH v1.3.4). This contains 35 subject groupings under the CAH 2 groupings, which is used in this release.
- Median earnings by Disability are now published in more detail for all graduates, however sex breakdowns continue to be reported at a high-level disability breakdown due to small cohort sizes.
- Ethnicity data has been included for the first time in this release, and similar to disability data has a detailed breakdown for all graduates, and a high-level ethnicity breakdown for the sex breakdown due to small cohort sizes.
- Although changed in our subsequent releases of data tables, we now include Sex in this release rather than Gender, due to a historical change in the Higher Education Statistical Agency's (HESA) variable on gender, and to maintain consistency with DfE's statistical release which also uses Sex.

Graduate cohort

This publication looks at the earnings of UK-domiciled first-degree graduates who are in sustained employment in the UK five years after graduating from a Scottish HEI. This means that for the 2013/14 cohort of graduates, we are looking at the earnings in the 2019/20 tax year. This is because the first full tax year graduates could have been in full-time employment would be the 2015/16 tax year, making 2019/20 the fifth full year after graduation.

This publication only covers graduates who are in 'Sustained employment only' with no further study.

For time periods one, three and ten years after graduation please see tables published by the DfE. <https://www.gov.uk/government/statistics/graduate-outcomes-leo-subject-by-provider-2019-to-2020>

Scotland and GB Comparison

Figure 1 shows a comparison of the distribution of total earnings of UK-domiciled first-degree graduates from HEIs in 2013/14 for Scottish and all GB HEIs five years after graduation. Overall, the median total earnings of graduates from Scottish HEIs was £29,300. Comparing this to previous equivalent cohorts of graduates from Scottish HEIs, the median total earnings for the 2012/13 graduates was £28,500, and for the 2011/12 graduates was £27,400.

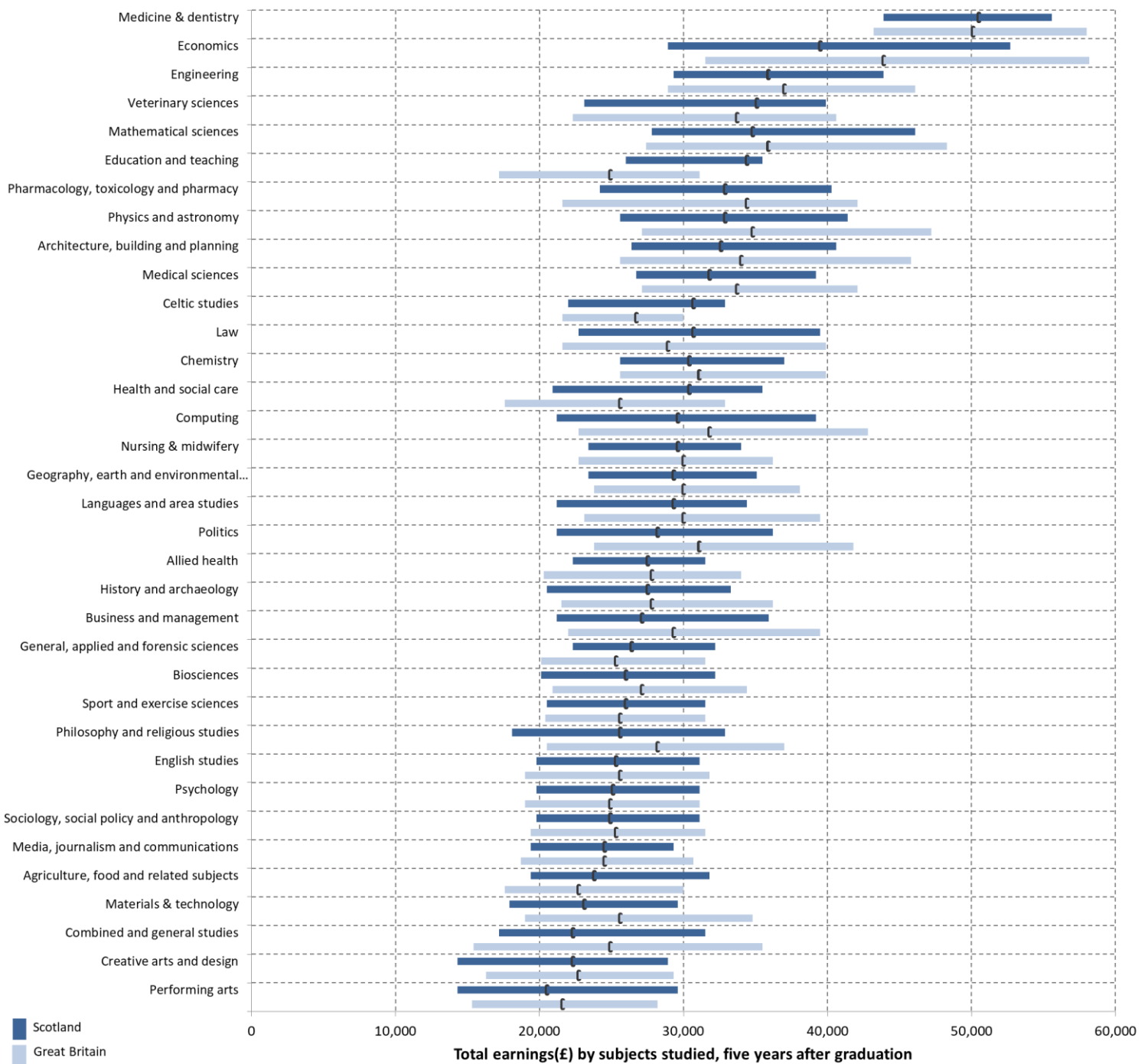
Out of the 35 subject areas, graduates of Scottish HEIs had higher median earnings in 10 of these subject areas compared to the median earnings for all GB HEIs, although historically, those graduating from Scottish HEIs earn more than those from GB HEIs overall. This is due to the large influence subject choice has on earnings, and how greatly earnings can vary across subjects.

For example, those who studied Medicine & dentistry at Scottish HEIs had median total earnings of £50,500 five years after graduation. In contrast, those who studied Performing arts at Scottish HEIs had median total earnings of £20,500 five years after graduation. For GB HEIs the same variation can be seen in these subject areas. Median earnings can vary between subject and institution for various reasons. Different HEIs will offer different courses that are considered to be in the same subject category, but could lead to vastly different career paths. Earnings also vary greatly across UK regions, particularly for graduates working in South East England and London, who typically receive higher-earnings than graduates in other regions of the UK.

See 'Data Quality' for some of the other issues to consider when looking at this data.

In Figure 1, subjects are ordered from those with the highest median earnings to the lowest median earnings for Scotland. The bars represent the inter-quartile range (quartile 1 to quartile 3) – the earnings of the middle 50 per cent of graduates in each subject will fall within this area. This is not comparable with Figure 1 in the DfE's publication, as this is a distribution of the number of graduates in HEIs by earnings, and DfE's figure 1 is a distribution of the median earnings for each university in GB.

Figure 1: Distributions of total earnings of graduates* by subject area, five years after graduation (lower quartile, median and upper quartile), Scotland, and GB, 2019/20 tax year



*UK-domiciled first-degree graduates 2013/14.

(1) Hours worked are not taken into account.

(2) Overall Scotland and GB comparison is not included as no overall GB figure is published for 2019/20.

Sex

Figure 2 shows the median total earnings for UK-domiciled first-degree graduates from Scottish HEIs five years after graduation split by subject area and sex.

Median earnings can vary greatly between subject and sex, and some subjects are more commonly studied by either males or females. For example, the majority of graduates from 'Engineering' and 'Physics and Astronomy' - which are typically higher-earning subjects, are male, whereas the majority of graduates from 'Health and social care' and 'Nursing and midwifery' – which are typically lower-earning subjects, are female. This is not the case for every subject, however given there are proportionally more males than females graduating from high earning subjects, it is likely to contribute towards some of the variation in earnings.

It shows that male graduates from 2013/14 earned on average £2,500 more than female graduates, with male graduates earning £30,700 in 2019/20 compared to £28,200 for female graduates.

Comparing this to previous equivalent cohorts of graduates from Scottish HEIs, male graduates from 2012/13 earned on average £2,500 more than female graduates (£29,900 for males and £27,400 for females), and male graduates from 2011/12 earned on average £3,000 more than female graduates (£29,600 for males and £26,600 for females).

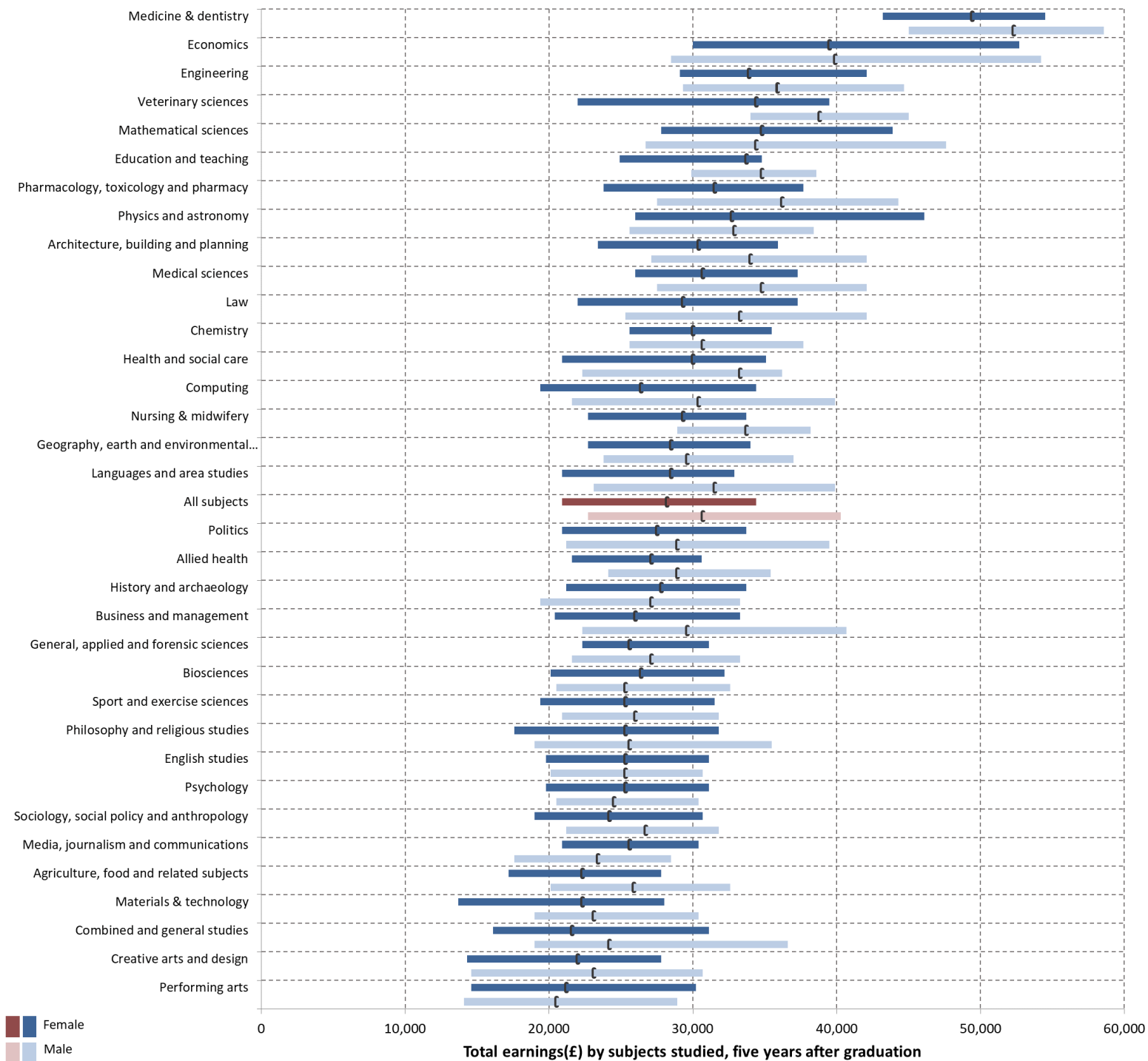
In 27 out of 35 subjects, males have higher median earnings than females five years after graduation. The largest difference is seen in 'Pharmacology, toxicology and pharmacy', where male graduates had median total earnings of £36,200 compared to £31,500 for female graduates.

Female median earnings only exceed male median earnings in 6 out of 35 subjects five years after graduation. Of these subjects, the largest difference is seen in 'Media, journalism and communications' where females had median total earnings of £25,600 compared to £23,400 for male graduates.

Due to small numbers of male graduates for subjects within 'Celtic Studies', the figures have been suppressed for both males and females.

'English Studies' was the only subject where the median earnings between males and females was equal, with those graduating in this subject earning £25,300.

Figure 2: Distributions of total earnings of graduates* from Scottish HEIs by subject area, five year after graduation (lower quartile, median and upper quartile), female and male, 2019/20 tax year



*UK-domiciled first-degree graduates 2013/14.

(1) Hours worked are not taken into account.

(2) Celtic Studies not included due to small cohort size.

Table 1: Median total earnings of graduates* from Scottish HEIs by subject studied and sex five years after graduation, 2019/20 tax year

Subject	Median total earnings (£)		
	Female graduates	Male graduates	All Graduates
Medicine & dentistry	49,400	52,300	50,500
Economics	39,500	39,900	39,500
Engineering	33,900	35,900	35,900
Veterinary sciences	34,400	38,800	35,100
Mathematical sciences	34,800	34,400	34,800
Education and teaching	33,700	34,800	34,400
Pharmacology, toxicology and pharmacy	31,500	36,200	32,900
Physics and astronomy	32,700	32,900	32,900
Architecture, building and planning	30,400	34,000	32,600
Medical sciences	30,700	34,800	31,800
Celtic studies	x	x	30,700
Law	29,300	33,300	30,700
Chemistry	30,000	30,700	30,400
Health and social care	30,000	33,300	30,400
Computing	26,400	30,400	29,600
Nursing & midwifery	29,300	33,700	29,600
Geography, earth and environmental studies	28,500	29,600	29,300
Languages and area studies	28,500	31,500	29,300
Politics	27,500	28,900	28,200
Allied health	27,100	28,900	27,500
History and archaeology	27,800	27,100	27,500
Business and management	26,000	29,600	27,100
General, applied and forensic sciences	25,600	27,100	26,400
Biosciences	26,400	25,300	26,000
Sport and exercise sciences	25,300	26,000	26,000
Philosophy and religious studies	25,300	25,600	25,600
English studies	25,300	25,300	25,300
Psychology	25,300	24,500	25,100
Sociology, social policy and anthropology	24,200	26,700	24,900
Media, journalism and communications	25,600	23,400	24,500
Agriculture, food and related subjects	22,300	25,900	23,800
Materials & technology	22,300	23,100	23,100
Combined and general studies	21,600	24,200	22,300
Creative arts and design	22,000	23,100	22,300
Performing arts	21,200	20,500	20,500
All	28,200	30,700	29,300

*UK-domiciled first-degree graduates 2013/14.

(1) Hours worked are not taken into account.

(2) 'x' denotes that data have been suppressed to prevent disclosure. All figures associated with cohorts smaller than 11 have been suppressed, and further suppression has been implemented to prevent disclosure by subtraction.

Disability

Table 2 shows the median total earnings for UK-domiciled first-degree graduates from Scottish HEIs five years after graduation split by disability (detailed level). It shows that graduates in 2013/14 with no known disability were earning £29,300 in 2019/20, compared to £26,400 for graduates with a disability. Graduates with no known disability also have higher earnings than graduates with any type of disability or impairment.

Graduates with mental health disability categorised as neurodivergent (such as ASD, dyslexia, or dyspraxia) earned £27,500, whereas graduates with a non-neurodivergent mental health disability (such as depression, schizophrenia or anxiety) earned £23,800. Those with a physical disability earned £27,100, and those with another type of disability or multiple disabilities earned £24,200.

Due to the data collection methods, where graduates have self-reported as having multiple disabilities, each condition will not be recorded separately. This may have an impact on graduates who have conditions that are associated with multiple disabilities or older graduates who may be more likely to have multiple disabilities.

Table 2: Median total earnings of graduates* from Scottish HEIs by disability (detailed level) five years after graduation, 2019/20 tax year

Disability (detailed level)	HESA codes - see (2)	Median total earnings (£)
Mental health disability (Neurodivergent)	10, 11, 51, 53	27,500
Mental health disability (non-Neurodivergent)	06, 55	23,800
Other or multiple disabilities	08, 96	24,200
Physical disability	02, 03, 04, 05, 07, 54, 56, 57, 58	27,100
Disabled	all codes above	26,400
No known disability	00, 99	29,300

*UK-domiciled first-degree graduates 2013/14.

(1) Hours worked are not taken into account.

(2) In line with HESA's collection policy, where it is not known whether or not a student has a disability, the student will be recorded as 'No known disability'. See HESA's website for HESA codes used and more details:

<https://www.hesa.ac.uk/collection/c13051/a/disable>.

Table 3 shows the median total earnings for UK-domiciled first-degree graduates from Scottish HEIs five years after graduation split by sex and disability (high-level). It shows that those who are disabled earn less than those with no known disability for both males and females. Males who graduated in 2013/14 with no known disability were earning £31,100 in 2019/20 compared to £27,800 for male graduates with a disability. Females who graduated in 2013/14 with no known disability were earning £28,200 in 2019/20 compared to £25,800 for female graduates with a disability.

Disability status is determined by the graduates' own self-assessment. See 'Methodology' section for more information.

Table 3: Median total earnings of graduates* from Scottish HEIs by disability (high-level) and sex five years after graduation, 2019/20 tax year

Disability (high-level)	Median total earnings (£)		
	Female graduates	Male graduates	All Graduates
Disabled	25,800	27,800	26,400
No known disability	28,200	31,100	29,300

*UK-domiciled first-degree graduates 2013/14.

(1) Hours worked are not taken into account.

(2) In line with HESA's collection policy, where it is not known whether or not a student has a disability, the student will be recorded as 'No known disability'. See HESA's website for more details:

<https://www.hesa.ac.uk/collection/c13051/a/disable>.

Ethnicity

Table 4 shows the median total earnings for UK-domiciled first-degree graduates from Scottish HEIs five years after graduation split by ethnicity (detailed level). It shows that graduates from 'Black, Black British or other black backgrounds' have the lowest earnings, with £25,300 in 2019/20. Those of 'Asian (Indian, Pakistani, or Bangladeshi) backgrounds' earned £28,200, those of 'White or White Scottish backgrounds' earned £29,300, and those of 'Mixed backgrounds' earned £29,800.

Those from 'other Asian backgrounds' earned £27,500, those from 'other white backgrounds' earned £26,000, and those from 'other ethnic backgrounds' had the highest earnings of £31,500.

Due to small cohort sizes, some ethnicities have been combined into a single ethnicity grouping (e.g. 'Other black background' was combined with 'Black or Black British'). Grouping the ethnicities may obscure some of the underlying differences in earnings between the ethnicities which make up the groupings, however this approach was necessary to protect against disclosure issues given small cohort sizes.

Table 4: Median total earnings of graduates* from Scottish HEIs by ethnicity (detailed level) five years after graduation, 2019/20 tax year

Ethnicity (detailed level)	HESA codes - see (2)	Median total earnings (£)
Black, Black British, or other black background	21, 22, 29	25,300
Mixed background	41, 42, 43, 49	29,800
Asian (Indian, Pakistani, or Bangladeshi) background	31, 32, 33	28,200
White or White Scottish	10, 13	29,300
Other Asian background	34, 39	27,500
Other Ethnic background	50, 80	31,500
Other White background	14, 15, 19	26,000

*UK-domiciled first-degree graduates 2013/14.

(1) Hours worked are not taken into account.

(2) Graduates whose ethnicity information is not known have been excluded from the table. See HESA's website for HESA codes used and more details:

<https://www.hesa.ac.uk/collection/c13051/a/ethnic>.

Table 5 shows the median total earnings for UK-domiciled first-degree graduates from Scottish HEIs five years after graduation split by sex and ethnicity (high-level). It shows that those from 'non-white backgrounds' earn less than those from 'white backgrounds' for both males and females. Males who graduated in 2013/14 from 'white backgrounds' were earning £31,100 in 2019/20 compared to £28,500 for male graduates from 'non-white backgrounds'. Females who graduated in 2013/14 from 'white backgrounds' were earning £28,200 in 2019/20 compared to £27,600 for female graduates from 'non-white backgrounds'.

Ethnicity is determined by the graduates' own self-assessment. See 'Methodology' section for more information.

Table 5: Median total earnings of graduates* from Scottish HEIs by ethnicity (high-level) and sex five years after graduation, 2019/20 tax year

Ethnicity (high-level)	Median total earnings (£)		
	Female graduates	Male graduates	All Graduates
All White backgrounds	28,200	31,100	29,300
All non-White backgrounds	27,600	28,500	28,200

*UK-domiciled first-degree graduates 2013/14.

(1) Hours worked are not taken into account.

(2) Graduates whose ethnicity information is not known have been excluded from the table. See HESA's website for more details:

<https://www.hesa.ac.uk/collection/c13051/a/ethnic>.

Scottish Index of Multiple Deprivation (SIMD)

Table 6 shows the median total earnings for Scottish domiciled first-degree graduates from Scottish HEIs five years after graduation split by Scottish Index of Multiple Deprivation (SIMD) quintiles. It shows that earnings decrease with each SIMD quintile, from the highest earnings in Quintile 5 (20% least deprived areas) to the lowest earnings in Quintile 1 (20% most deprived areas). Graduates from Quintile 5 who graduated in 2013/14 earned £30,400 in 2019/20 compared to those from Quintile 1 who earned £27,100.

These differences in earnings between SIMD quintiles are consistent for both females and males. Female graduates from Quintile 5 who graduated in 2013/14 earned £29,300 in 2019/20, compared to those from Quintile 1 who earned £26,400. Similarly, male graduates from Quintile 5 who graduated in 2013/14 earned £31,500 in 2019/20, compared to those from Quintile 1 who earned £28,200.

The differences in earnings between quintiles may be partially reflected by subject choice and higher education institution. Graduates from the 20% most deprived areas are less likely to attend certain universities than those from other areas, and are less likely to do subjects like Medicine and Engineering which have higher median earnings.

Both the Commissioner for Fair Access's annual report 2020: Fair Access to Higher Education: progress and challenges and the discussion paper on retention, outcomes and destinations provide evidence on subject and university choice for individuals from 20% most deprived areas: <https://www.gov.scot/about/how-government-is-run/directorates/advanced-learning-and-science/commissioner-fair-access/>

The quintile is determined by the SIMD rank associated with the graduates postcode when they enrolled into their studies, meaning that although the SIMD is based on the graduates' HESA records in 2013/14, the postcode associated with that record may predate 2013/14.

Table 6: Median total earnings of graduates* from Scottish HEIs by SIMD and sex five years after graduation, 2019/20 tax year

SIMD Quintile	Median total earnings (£)		
	Female graduates	Male graduates	All Graduates
Q1 - 20% Most Deprived	26,400	28,200	27,100
Q2	27,100	28,500	27,500
Q3	27,500	30,700	28,500
Q4	28,200	31,100	28,900
Q5 - 20% Least Deprived	29,300	31,500	30,400

*Scottish domiciled first-degree graduates 2013/14.

(1) Hours worked are not taken into account.

(2) SIMD 2012 has been used in this release, as this was the index available during the 2013/14 academic year.

Higher Education Institution (HEI) Level

Table 7 shows the median total earnings for UK-domiciled first-degree graduates from HEIs five years after graduation split by subject area and institution.

Due to small numbers of graduates in some subjects in certain HEIs and some HEIs not offering particular subjects, this table includes suppressed and missing values. Median earnings can also vary between subjects for various reasons.

Different HEIs will offer different courses that are considered to be in the same subject category, but could lead to vastly different career paths. For this reason, Table 7 should not be used as a means to rank HEIs or subjects.

More information is available in the 'Data Quality' section, which outlines some of the issues to consider when looking at this data.

Table 7: Median total earnings of graduates* from Scottish HEIs by subject area and HEI five years after graduation, 2019/20 tax year

Subject studied	Median total earnings (£)																		
	The University of Aberdeen	University of Abertay Dundee	The University of Dundee	Edinburgh Napier University	The University of Edinburgh	Glasgow Caledonian University	Glasgow School of Art	The University of Glasgow	Heriot-Watt University	Queen Margaret University, Edinburgh	The Robert Gordon University	Royal Conservatoire of Scotland	The University of St Andrews	SRUC	The University of Stirling	The University of Strathclyde	University of the Highlands and Islands	The University of the West of Scotland	
Agriculture, food and related subjects	x	-	x	-	x	-	-	x	-	-	-	-	-	23,800	x	-	21,800	-	
Allied health	x	25,300	31,300	x	-	28,200	-	-	-	25,300	28,000	-	-	-	-	26,400	-	28,200	
Architecture, building and planning	x	-	28,200	32,600	28,900	40,300	-	x	34,400	-	31,800	-	-	-	-	28,900	x	-	
Biosciences	26,400	29,100	24,700	24,900	31,100	27,600	-	26,000	23,800	x	31,800	-	30,000	22,500	21,200	27,400	-	21,600	
Business and management	37,700	23,800	30,000	27,100	35,500	27,800	-	37,700	28,500	24,700	29,300	-	x	24,900	28,200	32,900	23,400	23,400	
Celtic studies	x	-	-	-	x	-	-	x	-	-	-	-	-	-	-	-	30,000	-	
Chemistry	26,000	25,300	-	-	31,100	-	-	31,800	27,100	-	-	-	30,700	-	-	30,700	-	33,300	
Combined and general studies	-	-	-	-	20,900	-	-	x	-	-	-	-	21,200	-	-	-	x	-	
Computing	42,800	31,800	38,800	26,700	40,300	30,400	-	40,400	38,100	-	30,400	-	49,400	-	38,100	41,400	20,900	25,600	
Creative arts and design	20,900	23,800	22,000	24,900	24,000	24,300	22,300	29,600	22,300	-	21,000	-	-	-	-	-	15,700	18,700	
Economics	37,000	-	34,800	x	46,100	-	-	46,800	36,600	-	-	-	60,000	-	26,400	31,800	-	-	
Education and teaching	34,400	-	30,700	-	34,400	-	-	34,400	-	-	-	34,600	-	-	34,800	30,700	27,300	34,400	
Engineering	39,200	28,900	35,100	33,700	39,200	35,900	-	36,200	34,400	-	43,600	-	-	-	-	36,600	33,500	32,600	
English studies	26,000	-	24,500	22,700	25,600	-	-	25,800	-	-	-	-	30,400	-	23,400	23,100	-	-	
General, applied and forensic sciences	x	-	30,000	-	x	25,400	-	x	31,100	-	23,400	-	x	-	-	x	x	25,600	
Geography, earth and environmental studies	30,000	-	26,700	-	32,200	-	-	28,500	-	-	-	-	32,600	25,600	25,100	30,400	x	-	
Health and social care	-	-	33,100	x	33,700	35,100	-	22,500	-	-	31,100	-	-	-	33,300	35,300	25,800	27,100	
History and archaeology	27,800	-	26,400	-	30,700	-	-	26,000	-	-	-	-	30,700	-	25,300	27,100	19,000	-	
Languages and area studies	26,700	-	x	x	30,700	-	-	29,300	26,600	-	-	-	31,800	-	31,800	26,400	-	x	
Law	37,300	27,600	30,400	31,100	36,400	30,000	-	36,200	x	-	31,100	-	-	-	27,400	32,900	-	21,600	
Materials & technology	x	19,400	-	-	x	23,400	-	x	-	-	-	-	-	-	-	x	-	-	
Mathematical sciences	32,600	-	34,400	-	35,900	-	-	34,400	37,700	-	-	-	42,800	-	28,900	33,100	-	-	
Media, journalism and communications	-	-	x	23,400	-	26,400	-	-	-	24,500	23,800	-	x	-	24,900	28,200	-	23,400	
Medical sciences	34,400	-	x	-	41,700	30,700	-	28,900	-	32,900	32,600	-	x	-	-	-	-	-	
Medicine & dentistry	52,000	-	50,500	-	52,700	x	-	49,800	-	-	-	-	45,000	-	-	-	-	-	
Nursing & midwifery	-	27,100	28,900	29,600	31,800	31,500	-	30,400	-	27,800	28,500	-	-	-	28,500	-	x	30,000	
Performing arts	23,400	x	-	20,100	30,200	-	-	29,300	-	19,000	-	21,800	-	-	-	-	20,900	19,000	
Pharmacology, toxicology and pharmacy	28,500	-	47,200	-	x	22,300	-	26,900	-	x	37,300	-	-	-	-	33,700	-	-	
Philosophy and religious studies	30,400	-	22,000	-	30,000	-	-	22,300	-	-	-	-	30,000	-	23,700	-	x	-	
Physics and astronomy	x	-	32,900	-	36,200	-	-	32,800	28,900	-	-	-	33,700	-	-	34,000	-	26,400	
Politics	29,500	-	23,400	-	33,700	-	-	30,000	-	-	-	-	32,900	-	26,400	27,600	-	24,300	
Psychology	26,700	23,100	26,000	23,800	31,500	27,800	-	28,900	23,800	21,000	-	-	31,500	-	24,200	27,800	x	23,100	
Sociology, social policy and anthropology	27,400	23,200	x	24,900	27,400	24,700	-	29,300	-	x	26,400	-	31,100	-	24,900	28,500	x	22,700	
Sport and exercise sciences	x	22,900	x	24,500	35,500	-	-	28,900	27,100	-	27,100	-	-	-	25,400	-	x	25,300	
Veterinary sciences	-	-	-	19,900	37,300	-	-	35,900	-	-	-	-	-	-	-	-	-	-	

*UK-domiciled first-degree graduates 2013/14,

(1) Hours worked are not taken into account.

(2) '-' denotes there are zero individuals studying that subject at that HEI, 'x' denotes that data have been suppressed to prevent disclosure.

Methodology

Background methodology

Further detailed information is available in the Department for Education releases: <https://www.gov.uk/government/collections/statistics-higher-education-graduate-employment-and-earnings>

Higher Education Institutions (HEIs)

This publication covers graduates from HEIs. The corresponding DfE publication (<https://www.gov.uk/government/collections/statistics-higher-education-graduate-employment-and-earnings>) includes Higher Education delivered at English Further Education Colleges.

Suppression and rounding

In line with disclosure control rules, information based on fewer than 11 graduates has been suppressed. This follows HESA's suppression methodology.

All counts have been rounded to the nearest five, percentages to one decimal place and earnings to the nearest £100.

Data Quality

Users should be aware of some limitations around the data included in this publication;

Mode:

The employment data covers those with records submitted through the Pay As You Earn (PAYE) system and the Self-Assessed system. Neither systems collect information on the number of hours worked; therefore, whether an individual is working full-time or part-time cannot be ascertained. Work is underway to link the Annual Survey of Hours and Earnings (ASHE) to the LEO data, which will allow for a subset of the LEO data to contain information on full-time and part-time work patterns.

Career Path:

Different subjects will lead to different career paths, with some careers requiring further learning and training after the completion of their first-degree. This in turn may result in fluctuations in median earnings from one cohort of graduates to another.

Subject groupings and intake:

The subject groupings reported can cover a wide range of courses, some of which may yield higher median earnings than others. The selection of courses available at HEIs will vary as will the student intake to each course. As different courses can yield different median earnings, care should be taken when comparing subjects

across different HEIs. This release uses the Common Aggregation Hierarchy (CAH) v1.3.4 (level 2) for the subject groupings.

More information on the CAH can be found on HESA's website:

<https://www.hesa.ac.uk/support/documentation/hecos/cah>

Open University:

HESA made changes in the way they record Open University (OU) graduates by country of national centre in the 2014/15 academic year. Prior to 2014/15, all OU enrolments and qualifications were counted within England, where the OU has its administrative centre. Since figures in this release relate to graduates in 2013/14 from Scottish HEIs, graduates from OU are not included in this release.

More information on this change can be found on HESA's website:

<https://www.hesa.ac.uk/support/data-intelligence/national-centre-201415-publication-onwards>

Attainment:

Prior attainment bands are not provided for Scottish HEIs. No prior attainment is recorded for Scotland as the National Pupil Database (NPD) only records those who completed A levels at an English school. Coverage at HEIs in Scotland would therefore be limited to graduates who completed their A-levels in England before pursuing higher education in Scotland. The NPD also only covers qualifications obtained since 2002, meaning the majority of mature students are not expected to have an A level record on the NPD. Therefore mature students are not included in prior attainment calculations.

POLAR:

HESA do not publish POLAR figures for Scotland, as Scotland's relatively high participation rate and the high proportion of higher education students in further education colleges could misrepresent Scottish contributions to widening participation. Given this, this release does not include POLAR.

Time period

The time period for which employment and earnings data is reported in this publication is five years year after graduation. This refers to the full tax year five years after graduation. So, for the 2013/14 graduation cohort the figures five year after graduation refer to employment and earnings outcomes in the 2019/20 tax year.

Sustained employment only

Graduates are considered to be in sustained employment only if:

i) They were employed for at least one day for five out of the six months between October and March of the tax year in question or if they had a self-employment record in that tax year.

ii) They have no valid higher education study record at any UK HEI on the HESA database in the relevant tax year

Only graduates whose activity is recorded as “Sustained employment only” are included in this release.

Total earnings

Total earnings figures are included for graduates who have a valid earnings record (P14 or SA), and who are recorded as being in sustained employment in the 2019/20 tax year. Those in further study are excluded, as their earnings would be more likely to relate to part-time jobs.

For each graduate, the PAYE earnings reported for them on the HMRC P14 data for a given tax year are divided by the number of days recorded in employment across that same tax year. This provides an average daily wage that is then multiplied by the number of days in the tax year to calculate their annualised earnings.

This calculation has been used to maintain consistency with figures reported for further education learners after study. It provides students with an indication of the earnings they might receive once in stable and sustained employment.

The annualised earnings calculated are slightly higher than the raw earnings reported in the tax year. This is because the earnings of those who did not work for the entire tax year will be higher when annualised, however this difference decreases as time elapses after graduation. All earnings presented are nominal. They represent the cash amount an individual was paid and are not adjusted for inflation (the general increase in the price of goods and services).

The annualised PAYE earnings and raw self-assessment earnings are then added together to calculate the total earnings. If an individual has earnings only through PAYE or self-assessment, then their total earnings will be equal to their PAYE or self-assessment earnings.

These self-assessment earnings only includes profits from partnership enterprises and profit from sole-trader enterprises. As the self-assessment data does not include any information on the number of days worked for a tax year, the earnings cannot be annualised.

Scottish Index of Multiple Deprivation (SIMD)

The SIMD ranks small areas (data zones) in Scotland from most deprived to least deprived. The SIMD overall rank is calculated from the individual ranks of seven domains: Income, Employment, Health, Education/skills, Housing, Geographic access, and Crime. The quintiles represent 5 equal groups of the SIMD ranks, with quintile 1 representing the 20% most deprived areas, and quintile 5 representing the 20% least deprived areas.

We have used SIMD 2012 as this was the index available during the 2013/14 academic year, which aligns with the graduation cohort for this publication.

Further detailed information is available on the SIMD website:

<https://www.gov.scot/collections/scottish-index-of-multiple-deprivation-2020/>

Disability status

Disability status is collected by HESA in the student records, and based on the graduates own self-assessment. For this release, we have included both a detailed breakdown of disability by impairment group, and a high-level breakdown of disability by sex given the small cohort sizes when looking at further breakdowns by sex.

The high-level breakdown has two levels, those with no known disability and those with any type of disability. The detailed breakdown separates disability into four more detailed categories, which were produced by accessing cohort sizes of each individual disability type/impairment and liaising with equalities colleagues to ensure the disabilities were grouped together reasonably while maintaining a robust cohort size.

Further detail is available at HESA's website:

<https://www.hesa.ac.uk/collection/c13051/a/disable>

Ethnicity

Ethnicity is collected by HESA in the student records, and based on the graduates own self-assessment. For this release, we have included both a detailed breakdown of ethnicity, and a high-level breakdown of ethnicity by sex given the small cohort sizes when looking at further breakdowns by sex.

The high-level breakdown has two levels, those from white backgrounds and those from non-white backgrounds. The detailed breakdown separates the above high-level categories into seven more detailed categories, which were produced by accessing cohort sizes of each ethnic background and liaising with equalities colleagues to ensure the ethnicities were grouped together reasonably while maintaining a robust cohort size.

Further detail is available at HESA's website:

<https://www.hesa.ac.uk/collection/c13051/a/ethnic>

Sex

Sex is collected by HESA in the student records. In this release, the data is filtered to only include graduates who are recorded as 'Male' or 'Female' to avoid the risk of disclosure for graduates whose sex is recorded as 'Other', as often cohort sizes can be small.

Further detail is available at HESA's website:

<https://www.hesa.ac.uk/collection/c13051/a/sexid>

Background

The Small Business, Employment and Enterprise Act 2015 enabled the UK government, for the first time, to link higher education and tax data together to chart the transition of graduates from higher education into the workplace. The Department for Education (DfE) commissioned the Department for Work and Pensions (DWP) to link Higher Education Statistics Agency (HESA) records for the whole of the UK to the tax and benefits records.

This release presents employment and earnings outcomes for leavers of higher education five years after graduation. This publication is the third release in Scotland, to use the Longitudinal Education Outcomes (LEO) dataset to track higher education graduates as they move from higher education into the workplace.

This publication looks at those who graduated with a first-degree qualification from Higher Education Institutions (HEIs) in Great Britain, concentrating on those classified as UK-domiciled prior to entry to higher education. Figures are presented for all first-degree graduates and have not been split by full-time or part-time modes of study. On average, matching of over 95 per cent of each graduate cohort to tax and/or benefit data has been achieved.

The employment data covers those with records submitted through the Pay As You Earn (PAYE) system and records submitted through the self-assessment system. The core purpose of PAYE is to collect tax and its coverage reflects this. Up until April 2013, employers were not required to supply information to HMRC for individuals who earned below the Lower-earnings Limit (LEL) for National Insurance contributions, although for large employers these individuals were thought to be included due to the methods of data transfer. Since then, employers have been required to provide earnings information for all employees if even one employee of the company is paid above the LEL threshold. The self-assessment data captures the activity of individuals with income that is not taxed through PAYE, such as income from self-employment.

The PAYE and self-assessment systems do not collect information on the number of hours worked; therefore, whether an individual is working full-time or part-time cannot be ascertained currently. We are exploring the opportunity to link the LEO data to the Annual Survey of Hours and Earnings (ASHE), which will allow for a subset of the LEO data to contain information on full-time and part-time work patterns.

Self-assessed earnings are not published in isolation, rather they are included as part of a total earnings figure. See 'Total earnings' under Methodology for more information on this. All figures are based on UK tax, benefit and student records only: activity of those who move abroad to work or study after graduating is not reflected in the employment or further study figures. Instead, these individuals are categorised as 'activity not captured'.

Glossary

Academic year: Runs from 1 August to 31 July. For example, the 2013/14 academic year ran from 1 August 2013 to 31 July 2014.

The Customer Information System (CIS): A computer system used by the Department for Work and Pensions that contains a record for all individuals that have been issued with a National Insurance (NINO) number. It contains basic identifying information such as name, address, date of birth and NINO.

First-degree qualification: This covers qualifications commonly known as bachelor's degrees and also includes postgraduate bachelor's degrees at H level. Not all undergraduate courses are included: for example, the Professional Graduate Certificate in Education (PGCE), foundation degrees and Higher National Diplomas (HND) are excluded. However this does not necessarily mean that the degree is the first higher education qualification undertaken by the student.

Further study: The HESA Student Record is used to identify instances of further study in higher education, Students enrolled on further education courses, on some initial teacher training enhancement, booster and extension courses, or whose study status is dormant or who were on sabbatical are excluded from this indicator. Each tax year spans two academic years; therefore, graduates will be flagged as being in further study if they have a HESA record in one of these two academic years.

HEI: Higher Education Institution.

Higher Education Statistics Agency (HESA): HESA collect data from universities, higher education colleges and other specialist providers of higher education. In this publication we have used the HESA Student Record to identify our graduate base population and higher education further study instances.

Common Aggregation Hierarchy (CAH): A standardised way of classifying academic subjects and modules that allows for consistent analysis across the Higher Education Classification of Subjects (HECoS) and Joint Academic Coding System (JACS) coding frames.

PAYE: HMRC's system to collect Income Tax and National Insurance from employment. The LEO project uses information from the P45 to ascertain employment spell length and from the P14 (P60) to determine annual earnings.

Self-assessment: Self-assessment data captures the activity of individuals with income that is not taxed through PAYE, such as income from self-employment, savings and investments, property rental, and shares.

Sustained annualised earnings: The calculated average daily wage across the tax year grossed up to the equivalent annual figure.

Total earnings: The total of annualised PAYE earnings and raw self-assessed earnings.

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