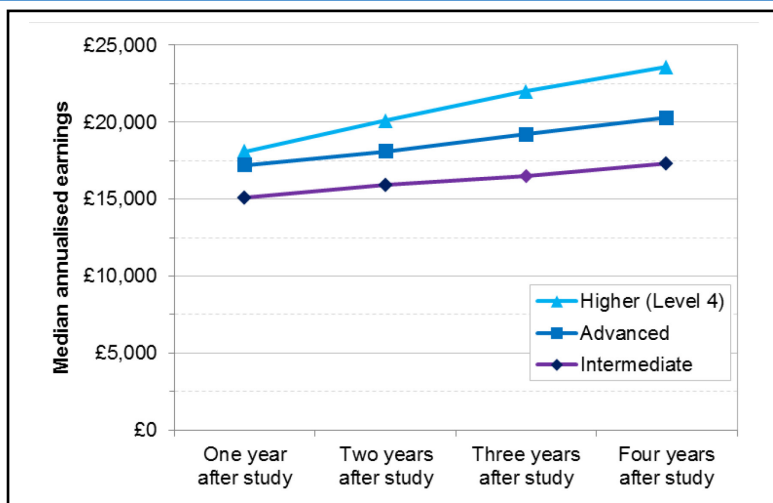




15 Dec 2016

Median annualised earnings post apprenticeship grow at a faster pace at higher levels



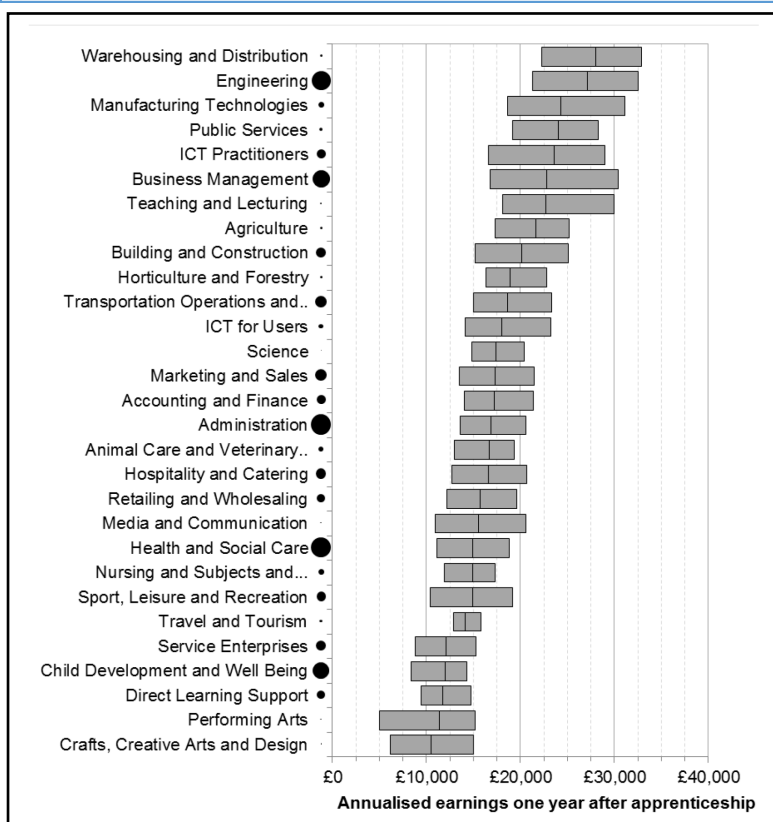
Median annualised earnings for learners that achieved an apprenticeship between August 2010 and July 2013 were

- £15,100 one year after study for **intermediate** apprenticeships rising 15% to £17,300 four years after study;
- £17,200 one year after study for **advanced** apprenticeships rising 18% to £20,300 four years after study;
- £18,100 one year after study for **higher (level 4)** apprenticeships rising 30% to £23,600 four years after study.

Source: Longitudinal Education Outcomes Study.

1. Adult apprenticeship achievers.

Large variations in median annualised earnings across sector subject areas



One year after study, median annualised earnings for achievers of **advanced apprenticeships** between August 2010 and July 2013 were

- Highest in warehousing and distribution at £27,600.
- Lowest in crafts, creative arts and design at £10,600.

Of the five largest sector subject areas which together accounted for over 60% of achievers of advanced apprenticeships, median annualised earnings were

- Highest in engineering at £27,000.
- Lowest in child development and well being at £12,100.

The earnings estimates are lower where there are typically higher numbers of learners in part time employment, such as childcare.

This, and further features of the data described later in this paper, should be considered when interpreting the estimates.

Source: Longitudinal Education Outcomes Study.

1. Adult advanced apprenticeship achievers only.
2. The bubble size represents the number of learners that achieved apprenticeships in that sector subject area relative to the total of all advanced apprenticeship achievers.

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About this release

This working paper presents experimental estimates on the earnings outcomes of adult learners that achieved an apprenticeship. It uses the linked administrative data that form the Longitudinal Education Outcomes Study (LEO). This publication focuses on adult learners that achieved apprenticeships between August 2010 and July 2013 and their observed earnings after training up to the 2014/15 tax year.

We have published similar experimental statistics from LEO data previously; details of these publications are provided at the end of this paper.

In this publication

The following tables are included in the release:

- Subject and provider tables (Excel .xls)
- Underlying data (open format .csv)

The annex to this paper explains the methodology used to produce the estimates and references further information on the data sources, their coverage and quality.

Feedback

We welcome feedback on any aspect of this document and the methodology and presentation of these statistics. Please direct all comments and queries to FEOutcomesData@bis.gsi.gov.uk.

1. Introduction

This publication presents earnings estimates post training for adult learners that achieved apprenticeships. These update [previous estimates](#) released in December 2014 and use the same source used to produce similar estimates for Higher Education [graduates](#) published in December 2016. The estimates come from the Longitudinal Education Outcomes Study¹ (LEO) which is formed of administrative data on learners across schools, further education and higher education joined together with their employment and benefit histories.

Separate [research](#)² from LEO has previously estimated the labour market returns to different further education qualifications. This showed that when comparing learners with similar characteristics, those who achieve further education qualifications are better off than those who start but do not achieve, and that these benefits occur across a broad range of sectors. On average, 3-5 years later, achievers of intermediate apprenticeships earn 11% more and achievers of advanced apprenticeships earn 16% more.

The earnings estimates published here are experimental and known features should be considered when interpreting them, such as impact of lower income for those in part time employment. These effects are described in greater detail in section 3.

Coverage

The estimates cover learners that:

- achieved an apprenticeship between August 2010 and July 2013;
- were age 19 or older at the start of the academic year they achieved their apprenticeship;
- achieved an apprenticeship as their highest qualification in the academic year.

The earnings estimates are based on information recorded through the Pay As You Earn (PAYE) system used to collect Income Tax and National Insurance from employment by Her Majesty's Revenue and Customs (HMRC). They show what learners actually earned post study, and include learners who may not have been employed in the same sector in which they achieved their apprenticeship. Any income recorded through the self-assessment tax system has not been included in the estimates. Such information exists but the data is complex and further development work is required to produce a robust figure.

Measures

There are two main earnings measures presented in this report:

- annualised earnings;
- annualised earnings above £21,000.

In addition to the median, the upper and lower quartile earnings are also presented. In the case of all measures, the estimates only include learners that in the tax year being measured

- were in sustained employment;
- had some recorded earnings;
- were not in further training at a Higher Education institute.

The earnings for learners that were not employed for the entire tax year have been adjusted up to the equivalent full tax year earnings to reach an annualised amount. The PAYE system does not record reliable information on hours worked so part time earnings have not been adjusted to the full time equivalent.

The proportion of learners that had annualised earnings above £21,000 provides a further indication of the distribution of earnings amongst learners. The threshold value of £21,000 is close to the median gross

¹ The [privacy notice](#) on gov.uk explains how LEO data is shared and used.

² Bibby, D., Buscha, F., Cerqua, A., Thomson, D. and Urwin, P. (2014), "[Estimation of the labour market returns to qualifications gained in English Further Education](#)", Department for Business, Innovation and Skills, Research Paper No. 195.

income across all employees in the UK and is also the current repayment threshold for learners that took out advanced learner loans³.

A full definition of sustained employment and how the earnings measures were calculated is provided in the Technical Annex.

2. Headline findings (Table 1, Figures 1-4)

Across all learners that achieved an apprenticeship between August 2010 and July 2013, the median annualised earnings in the first full tax year after training were greater at higher level apprenticeships; increasing from £15,100 for intermediate apprenticeships to £18,100 for higher (level 4) apprenticeships.

Earnings also increased steadily each extra year after achievement. On average, median annualised earnings rose 5% every year for intermediate apprenticeships, 6% every year for advanced apprenticeships, and 10% for higher (level 4) apprenticeships. This pattern was also reflected in the proportion that had annualised earnings above £21,000, where the proportion rose at a rate twice as quickly for higher (level 4) apprenticeships compared to advanced apprenticeships.

Table 1: Median annualised earnings for adult apprenticeships by level
Apprenticeship achievers, August 2010 to July 2013

Apprenticeship	Median annualised earnings				Annualised earnings above £21,000			
	Tax years post training				Tax years post training			
	One year	Two years	Three years	Four years	One year	Two years	Three years	Four years
Intermediate	£15,100	£15,900	£16,500	£17,300	21%	25%	29%	33%
Advanced	£17,200	£18,100	£19,200	£20,300	33%	37%	42%	47%
Higher (Level 4)	£18,100	£20,100	£22,000	£23,600	31%	44%	56%	64%
Higher (Level 5)	£27,200	£27,800	-	-	68%	67%	-	-

Source: Longitudinal Education Outcomes Study.

Estimates are also presented above for higher (level 5) apprenticeships. These are based on a limited sample of around 200 apprentices that all achieved their training in the 2012/13 academic year, so are not discussed further here.

Variation across sector subject areas

There is a large variation in median annualised earnings when looking at the estimates by sector subject area, and in some cases even within subject areas across different apprenticeship frameworks. Figure 1 shows the median annualised earnings in the first full tax year post training advanced apprenticeships by sector subject area. Similar charts for intermediate and higher level apprenticeships are included in Annex A.

In addition to the impact of the training, the factors below will impact on the earnings estimates

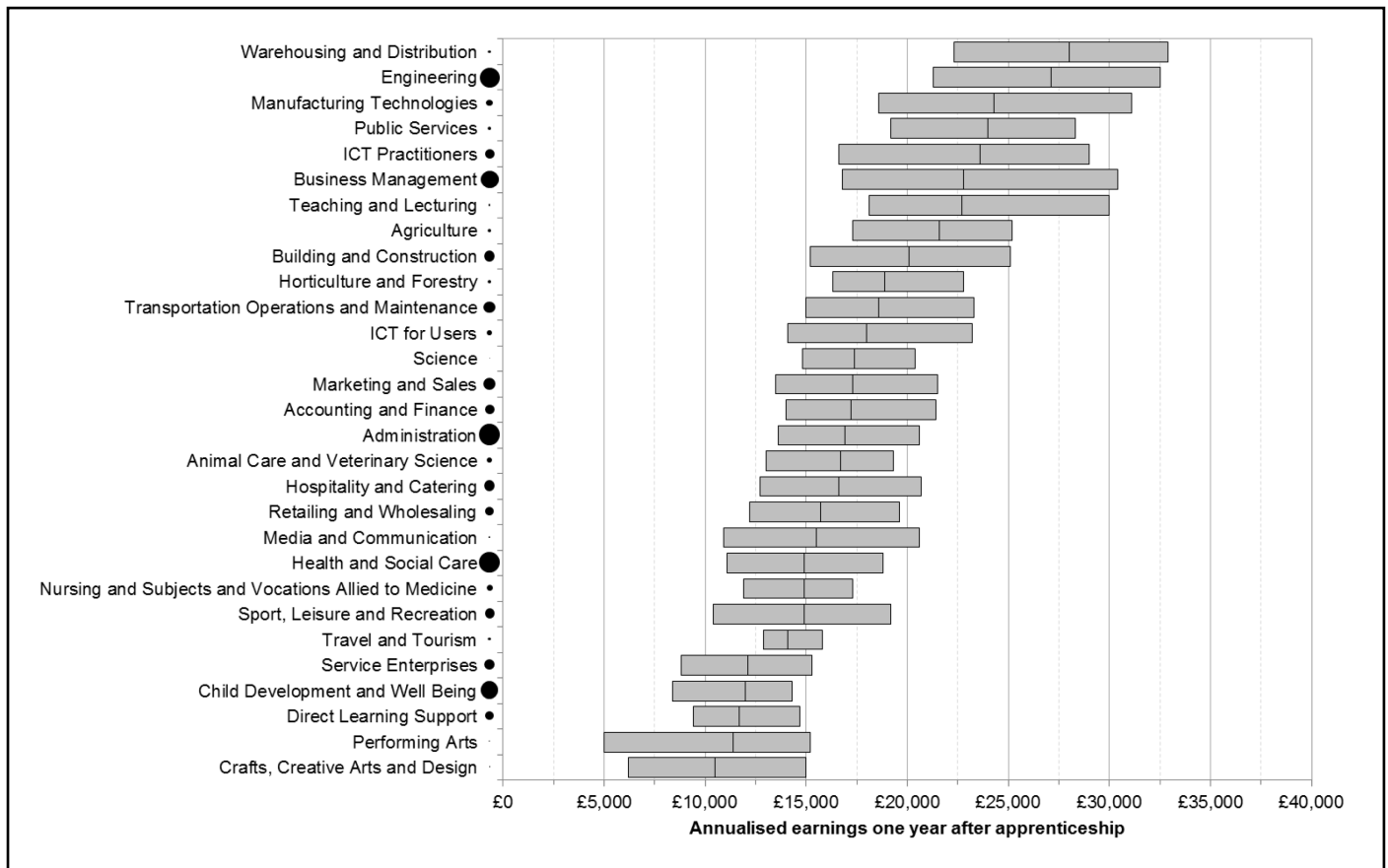
- the number of achievers in part time employment;
- the employment history of achievers;
- pay conditions within the local labour market;
- additional income recorded through the self-assessment tax system.

The effect of part time employment and self-assessment are discussed in more detail in section 3.

³ Apprenticeships are not funded through the loans system. This will be more relevant when earnings estimates for non-apprenticeship training are produced in the future.

Figure 1: Annualised earnings one year after apprenticeship by sector subject area (lower quartile, median, upper quartile)

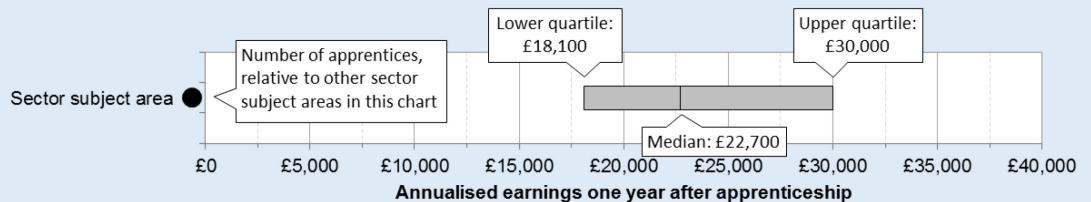
Sector subject area tier 2, advanced apprenticeship achievers, August 2010 to July 2013



Source: Longitudinal Education Outcomes Study.

1. The bubble size represents the number of learners that achieved apprenticeships in that sector subject area relative to the total of all advanced apprenticeship achievers.

Figure 2: How to read the chart in Figure 1



The **median** earnings is calculated by ranking all learners' annualised earnings and taking the value at which half of learners fall above and half fall below.

The **lower quartile** earnings is calculated by ranking all learners' annualised earnings and taking the value at which three quarters of learners fall above and one quarter fall below.

The **upper quartile** earnings is calculated by ranking all learners' annualised earnings and taking the value at which one quarter of learners fall above and three quarters fall below.

Variation across training providers

The median annualised earnings at a provider are heavily dictated by the provision they offer, as seen above by the large variation in earnings across sector subject areas. The chart below shows the range of median annualised earnings across training providers for each sector subject area. Similar charts for intermediate and higher level apprenticeships are included in Annex A.

For example, the median annualised earnings of learners that achieved an advanced apprenticeship in hospitality and catering were

- at least £16,300 for half of providers (median);
- at least £15,000 for three quarters of providers (lower quartile);

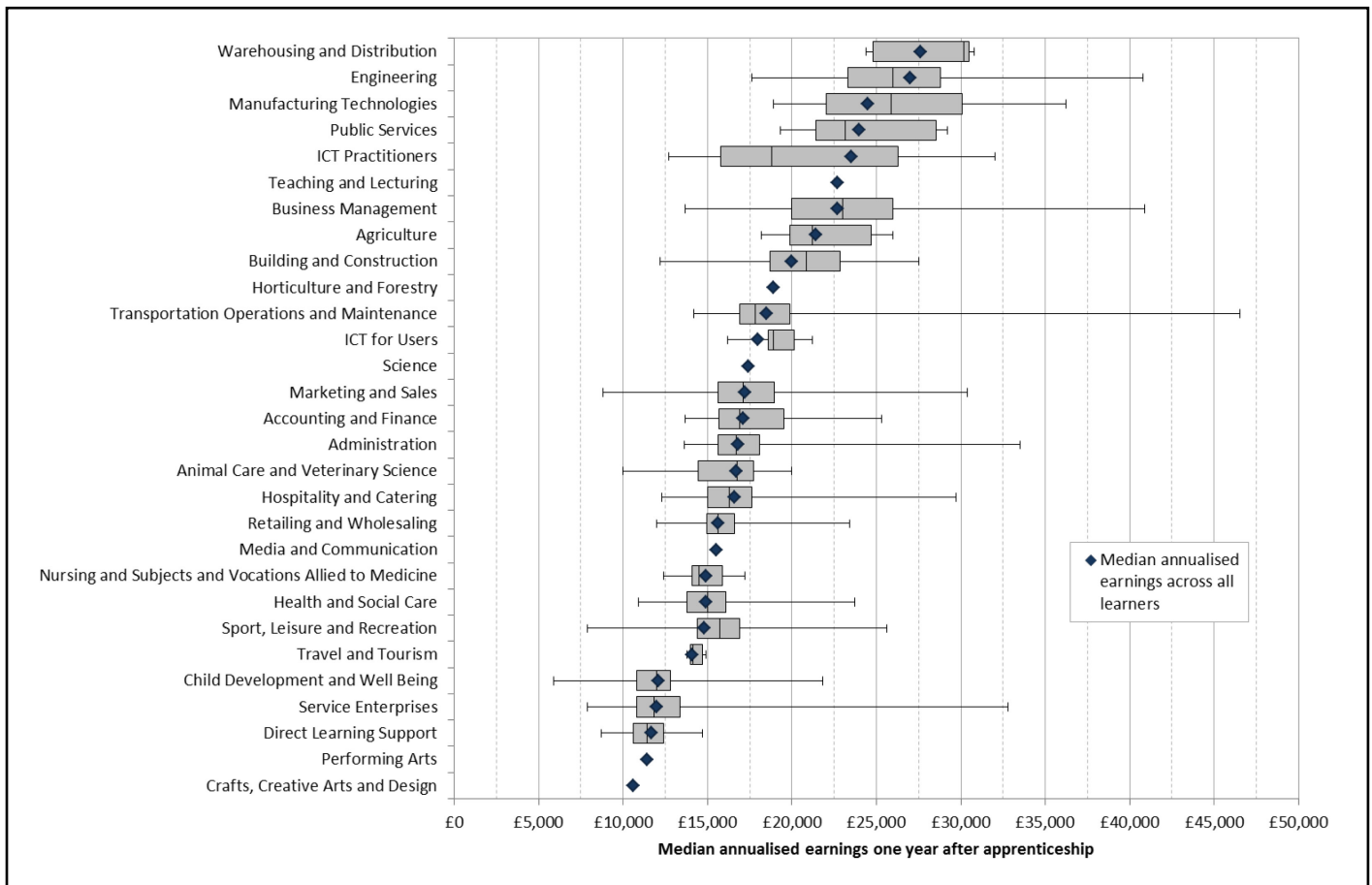
- at least £17,600 for one quarter of providers (upper quartile);
- a minimum of £12,300 and a maximum of £29,700 across all providers.

In some cases, the median annualised earnings across training providers is different to the median annualised earnings across all learners. This is because not all providers have an equal number of learners and so account for a different proportion of the overall total.

As mentioned above, even when within subject areas some of the variation in the estimates may be due to the different frameworks on offer. For example, within transport operations and maintenance, the providers with the highest median annualised earnings delivered frameworks in rail transport engineering, where the lower earnings were normally for those offering frameworks in vehicle maintenance and repair. This effect needs to be considered when interpreting the estimates.

The earnings have been published at a provider level to support future discussion and development work around improving the availability of information for learners to help them make informed choices about what to study and where, considering all the educational routes available to them. There are not any plans to use these estimates within the proposed accountability framework that will utilise the new [outcome-based success measures](#).

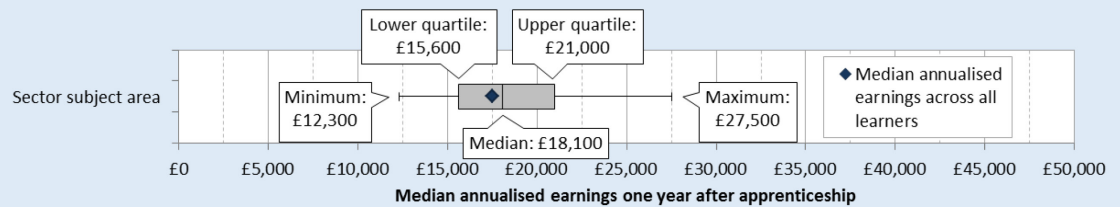
Figure 3: Distribution of median annualised earnings across training providers for each sector subject area one year after apprenticeship (minimum, lower quartile, median, upper quartile, maximum)
Sector subject area tier 2, advanced apprenticeship achievers, August 2010 to July 2013



Source: Longitudinal Education Outcomes Study.

1. A minimum of 5 providers is required to appear in the distribution.

Figure 4: How to read the chart in Figure 3



The **median** earnings is calculated by ranking all providers' median annualised earnings and taking the value at which half of providers fall above and half fall below.

The **lower quartile** earnings is calculated by ranking all providers' median annualised earnings and taking the value at which three quarters of providers fall above and one quarter fall below.

The **upper quartile** earnings is calculated by ranking all providers' annualised earnings and taking the value at which one quarter of providers fall above and three quarters fall below.

3. Features of the data

Sample size and rounding

The median annualised earnings are rounded to the nearest one hundred pounds and have been published where there are valid earnings for at least 30 learners within a tax year. As the estimates cover learners that achieved apprenticeships across three academic years, the estimates for the fourth year after training will only include learners that achieved their apprenticeships in the first of those academic years. This also means that for levels and subject areas where apprenticeships have only been offered more recently, such as higher (level 5) apprenticeships, there will be a shorter time series of earnings.

For the proportion with annualised earning above £21,000 the figures are rounded to the nearest percent and capped below 5% and above 95% to remove any risk of disclosure. These appear as 4% and 96% respectively.

Part time employment

The PAYE records from HMRC do not include reliable information on the hours worked in employment so it is not possible to accurately distinguish between learners in full time and part time employment. Therefore part time earnings are not adjusted to the full time equivalent amount.

Where there are high levels of part time employment within a group of learners, the median annualised earnings will be lower as a result. This is the case for sector subject areas like child development and wellbeing where many of the employment opportunities working with children are part time. It is important to note that the number of people in part time employment may be as much due to the preferred working pattern of the learners as what is being offered by employers.

Self-assessment income

The estimates do not include any income that was recorded through the self-assessment tax system. This means that earnings will be underreported for learners who have self-assessment income in addition to earnings from paid employment collected by the PAYE system. Learners that recorded their income entirely through the self-assessment tax system are not included in the estimates.

Self-assessment information on sole traders has been used to update employment estimates for further education learners in the most recent [outcome-based success measures](#) publication. For earnings, the data is more complex and further development work is required to use this source to develop a robust estimate.

Low earners

Historically, employers were not required to supply HMRC with tax and employment information for employees that earned below the National Insurance lower earnings limit. In April 2013 HMRC introduced

Real Time Information, from which point nearly all employees are captured⁴. So far there has been little evidence of this having any significant impact on the earnings estimates.

4. Accompanying tables

The following tables are available in Excel format on the department's statistics website:

Learners across all years

- 1a Annualised earnings post training for apprenticeships by level, 2010/11 to 2012/13
- 1b Annualised earnings post training for apprenticeships by sector subject area tier 1, 2010/11 to 2012/13
- 1c Annualised earnings post training for apprenticeships by sector subject area tier 2, 2010/11 to 2012/13
- 1d Annualised earnings post training for apprenticeships by framework, 2010/11 to 2012/13
- 1e Annualised earnings post training for apprenticeships by provider and sector subject area tier 2, 2010/11 to 2012/13

2010/11 cohort

- 2a Annualised earnings post training for apprenticeships by level, 2010/11
- 2b Annualised earnings post training for apprenticeships by sector subject area tier 1, 2010/11
- 2c Annualised earnings post training for apprenticeships by sector subject area tier 2, 2010/11
- 2d Annualised earnings post training for apprenticeships by framework, 2010/11

2011/12 cohort

- 3a Annualised earnings post training for apprenticeships by level, 2011/12
- 3b Annualised earnings post training for apprenticeships by sector subject area tier 1, 2011/12
- 3c Annualised earnings post training for apprenticeships by sector subject area tier 2, 2011/12
- 3d Annualised earnings post training for apprenticeships by framework, 2011/12

2012/13 cohort

- 4a Annualised earnings post training for apprenticeships by level, 2012/13
- 4b Annualised earnings post training for apprenticeships by sector subject area tier 1, 2012/13
- 4c Annualised earnings post training for apprenticeships by sector subject area tier 2, 2012/13
- 4d Annualised earnings post training for apprenticeships by framework, 2012/13

5. Further information (Table 2)

There have been several other publications that have use the same underlying data source as the estimates in this paper. The table below lists the most relevant of these and provides a link to each publication.

Table 2: Related publications since December 2014

Publication	Description
Graduate outcomes, by degree subject and university	Employment and earnings of higher education graduates broken down by graduate characteristic, subject studied and university attended.
Adult further education: outcome-based success measures	Experimental statistics on employment and continued education of adults finishing funded further education training between 2011 and 2014.

⁴ Since April 2013 HMRC require employers to return information for all employees if any of their employees are paid above the threshold for National Insurance. Previously employers were required to return information only for employees that were paid above the tax threshold; however in practice many employers return information for all their employees anyway.

Publication	Description
Destinations of KS4 and KS5 pupils: 2015 (provisional)	Provisional data on key stage 4 (KS4) and key stage 5 (KS5) students in further education, employment and training destinations.
Improvements to destinations of key stage 5 students: time series	Statistical working paper presenting improvements to the coverage of student destinations over time following inclusion of new data.
Graduate outcomes: longitudinal education outcomes (LEO) data	Experimental statistics on employment and earnings of higher education graduates using matched data from different government departments.
Further education for benefit claimants	Analyses training for learners on benefits in England using government data for the 2014 to 2015 academic year.
Further education qualifications in maths and English: returns and benefits	Research analysing the economic benefits associated with further education qualifications in maths and English.
Adult further education: measuring success - detailed proposals	Consultation and response on detailed proposals for using and publishing new outcome based success measures for adult further education.
Further education: comparing labour market economic benefits from qualifications gained	Estimates the economic benefits to an individual from achieving further education qualifications.
Further education: impact of skills and training on the unemployed	This research estimates the economic benefits to unemployed individuals from achieving further education qualifications.
Average earnings after further education: 2010 to 2013	Experimental data showing average earnings up to 3 years after completing further education study, by qualification achieved in 2009 to 2010.

6. Technical information

A short methodology document is included as an annex within this paper. This explains the methodology to produce the estimates and references further information on the data sources, their coverage and quality.

7. Get in touch

Media enquiries

Press Office News Desk, Department for Education, Sanctuary Buildings, Great Smith Street, London SW1P 3BT.

Tel: 020 7783 8300

Other enquiries/feedback

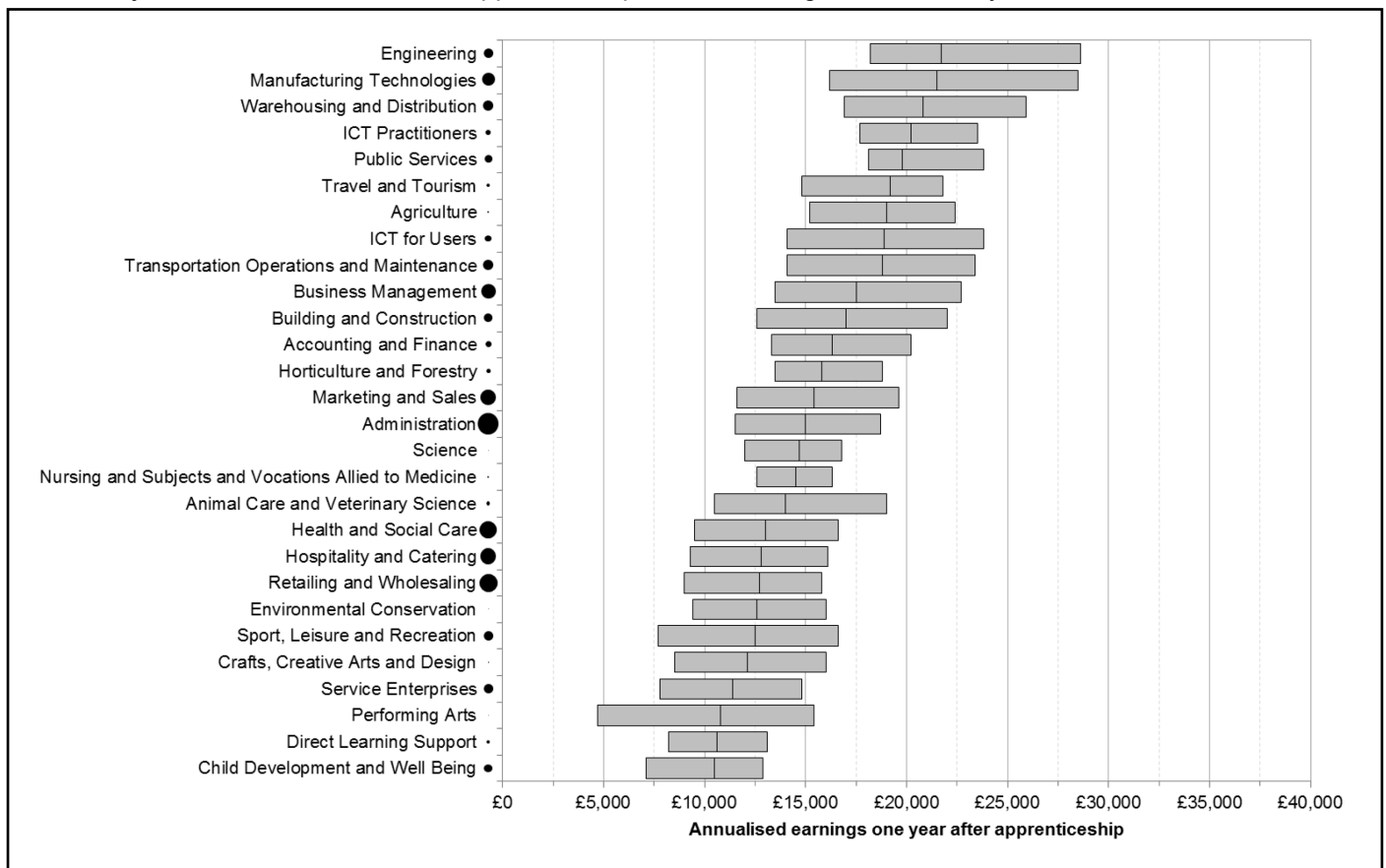
Anthony Harris, Further Education, Department for Education, 1 Victoria Street, London, SW1H 0ET.

Email: FEOutcomesData@bis.gsi.gov.uk

Annex A: Additional charts (Figures 5-8)

Figure 5: Annualised earnings one year after apprenticeship by sector subject area (lower quartile, median, upper quartile)

Sector subject area tier 2, intermediate apprenticeship achievers, August 2010 to July 2013

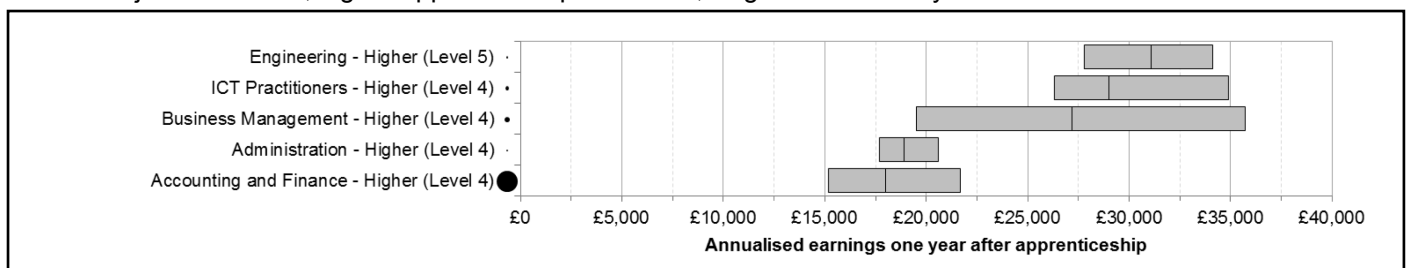


Source: Longitudinal Education Outcomes Study.

1. The bubble size represents the number of learners that achieved apprenticeships in that sector subject area relative to the total of all advanced apprenticeship achievers.

Figure 6: Annualised earnings one year after apprenticeship by sector subject area (lower quartile, median, upper quartile)

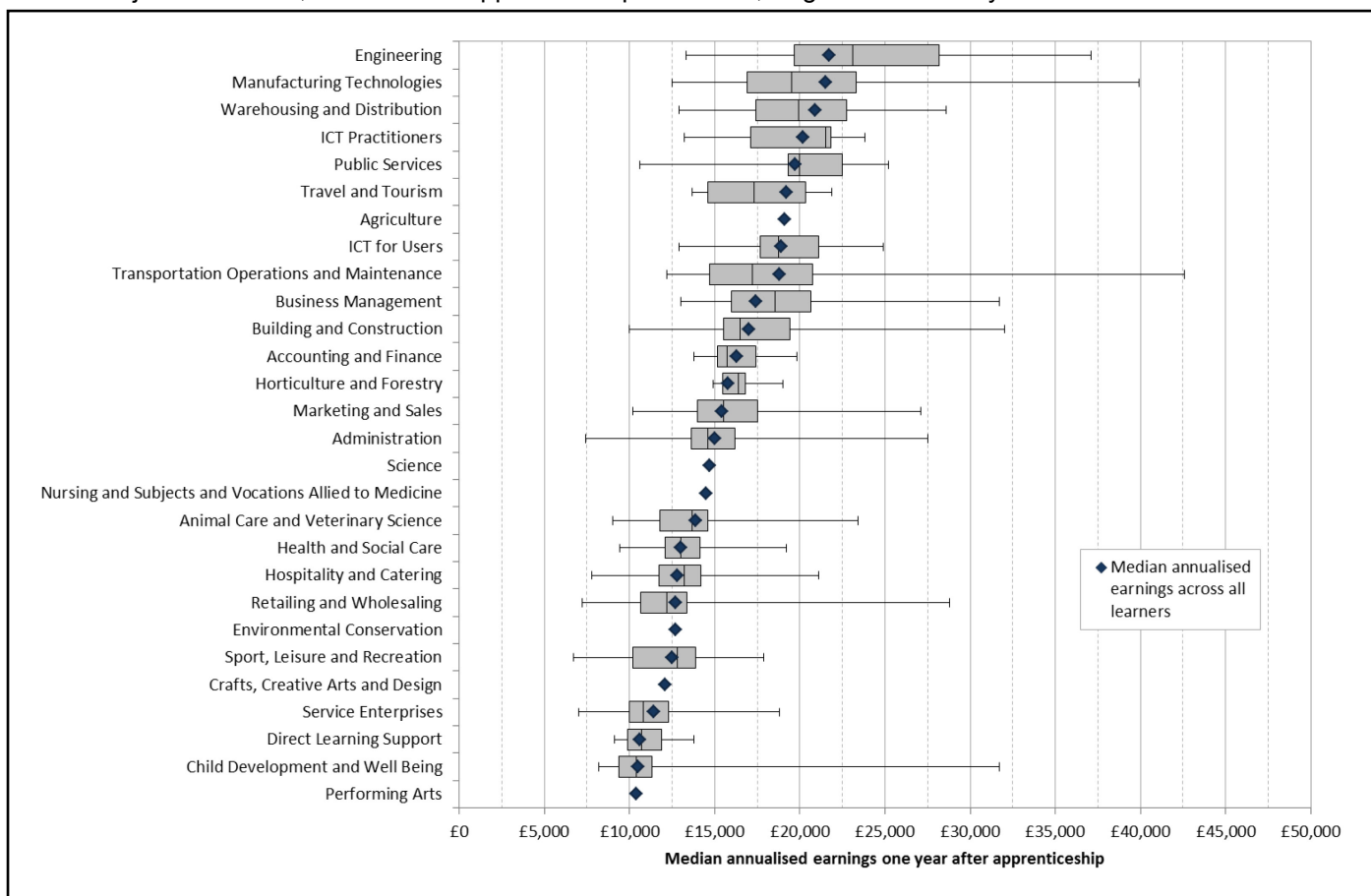
Sector subject area tier 2, higher apprenticeship achievers, August 2010 to July 2013



Source: Longitudinal Education Outcomes Study.

1. The bubble size represents the number of learners that achieved apprenticeships in that sector subject area relative to the total of all advanced apprenticeship achievers.

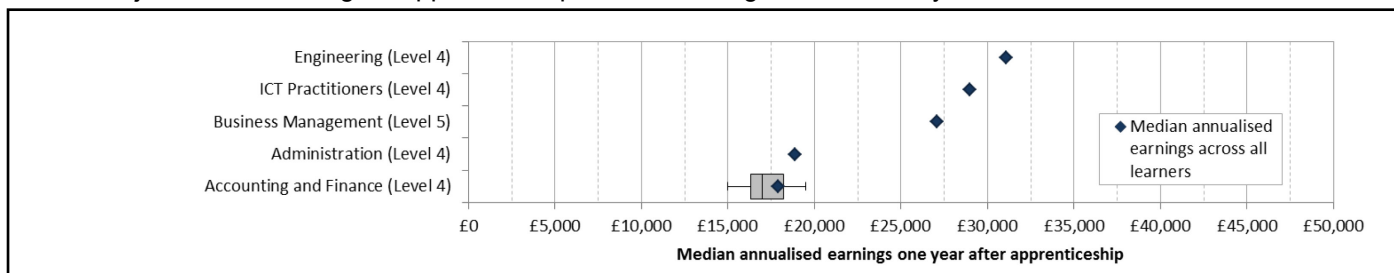
Figure 7: Distribution of median annualised earnings across training providers for each sector subject area one year after apprenticeship (minimum, lower quartile, median, upper quartile, maximum)
Sector subject area tier 2, intermediate apprenticeship achievers, August 2010 to July 2013



Source: Longitudinal Education Outcomes Study.

1. A minimum of 5 providers is required to appear in the distribution.

Figure 8: Distribution of median annualised earnings across training providers for each sector subject area one year after apprenticeship (minimum, lower quartile, median, upper quartile, maximum)
Sector subject area tier 2, higher apprenticeship achievers, August 2010 to July 2013



Source: Longitudinal Education Outcomes Study.

1. A minimum of 5 providers is required to appear in the distribution.

Annex B: Technical note (Figure 9)

This annex provides further technical information on how the estimates in this paper have been produced. The estimates are primarily based on the definitions used for outcome-based success measures; further details on which can be found in that publication [here](#), alongside details on the matching process and underlying data sources.

Learners in scope

The set of learners used in outcome-based success measures have been further filtered to include only those that achieved the qualification that they completed. This publication only includes estimates for adult apprenticeships; however non-apprenticeship learning aims are taken into account when considering how to treat learners that had multiple learning aims (see below).

Estimates are published for adult learners that achieved their apprenticeship between 1 August 2010 and 31 July 2013, i.e. the 2010/11, 2011/12 and 2012/13 academic years. The latest year of earnings data relates to the 2014/15 tax year so any learners that achieved their apprenticeship after 5 April 2014 would not have had sufficient time for a full tax year of earnings to be calculated. Therefore estimates covering learners that achieved their apprenticeship in the 2013/14 academic year are not included.

Learners with multiple learning aims

Within each academic year, estimates are reported on a learner, rather than a learning aim basis. In the case where a learner achieved multiple eligible aims within the academic year, estimates are reported against their highest level aim. Where a learner achieved more than one aim at the same level, the estimate is reported against the most recently achieved. The full hierarchy used to select between aims is listed below:

- Highest qualification
 - Higher apprenticeship (Level 7)
 - Level 7
 - Higher apprenticeship (Level 6)
 - Level 6
 - Higher apprenticeship (Level 5)
 - Level 5
 - Higher apprenticeship (Level 4)
 - Level 4
 - Advanced apprenticeship
 - Full Level 3
 - Intermediate apprenticeship
 - Full Level 2
- Most recently achieved aim.
- Lowest aim sequence number (a unique number used in the Individualised Learner Record).

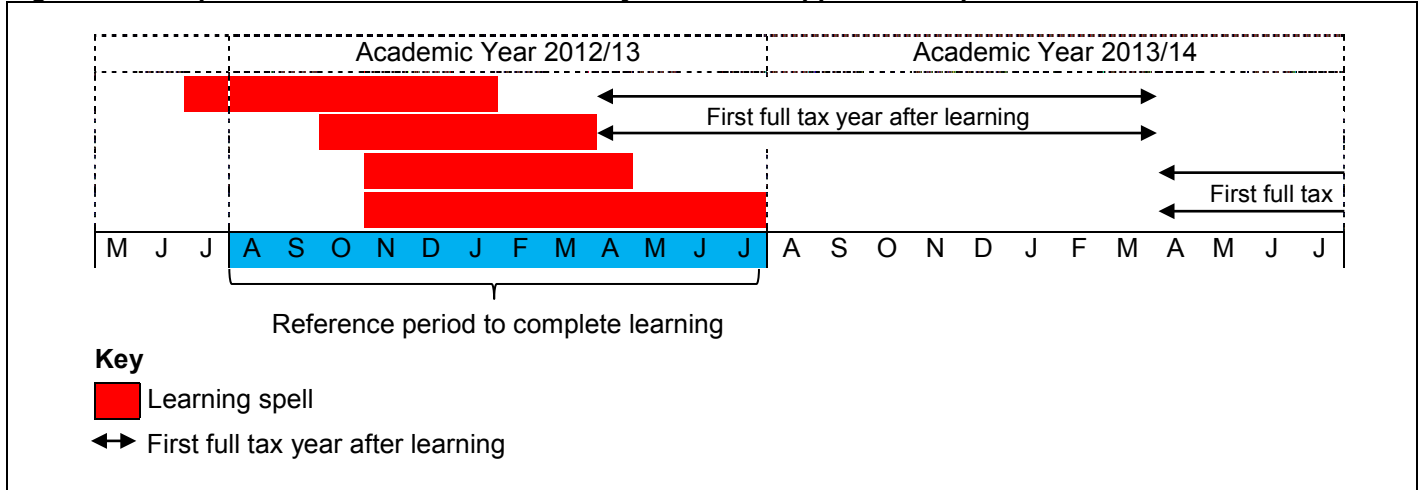
Measure: sustained employment

For learners to be in sustained employment they must have been recorded in paid employment in five out of six months between October and March in the tax year of interest. This is calculated using the same methodology as for outcome-based success measures – further details can be found in the technical note in the annex of that publication [here](#).

Measure: annualised earnings

The earnings estimates are calculated on a tax year basis, e.g. 6 April 2014 to 5 April 2015. Earnings are first reported in the first full tax year after the recorded end date of the apprenticeship. Apprenticeships are not fixed to the academic year cycle so may end on any date, which means that the gap between the date a learner achieved their apprenticeship and the next full tax year can range from anywhere between 1 day (if their training finished on 5 April) and a year (if their training finished on 6 April). Some examples are shown in Figure 9 below.

Figure 9: Example scenarios of how the first tax year after an apprenticeship is selected



The estimates only include learners that in the tax year being measured

- were in sustained employment;
- had some recorded earnings;
 - any zero or negative earnings are excluded as these normally refer to corrections from the previous financial year;
 - where learners have multiple employments within a tax year their earnings from all employments are summed together;
- were not in further training at a Higher Education institute;
 - learners are excluded where the financial year and academic years overlap, e.g. if they were at a Higher Education institute in the 2012/13 academic year then their earnings for the 2012/13 tax year are not included in the earnings estimates;
 - learners in further training at a Further Education institute are not excluded.

The **median** earnings is calculated by ranking all learners' annualised earnings and taking the value at which half of learners fall above and half fall below.

The **lower quartile** earnings is calculated by ranking all learners' annualised earnings and taking the value at which three quarters of learners fall above and one quarter fall below.

The **upper quartile** earnings is calculated by ranking all learners' annualised earnings and taking the value at which one quarter of learners fall above and three quarters fall below.

The proportion of learners with **annualised earnings above £21,000** only includes those with annualised earnings, as with the median, lower and upper quartile. Therefore learners not in sustained employment or with zero earnings are not included in any of the calculations.

All estimates are in nominal terms, i.e. not adjusted for inflation.



Department
for Education

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