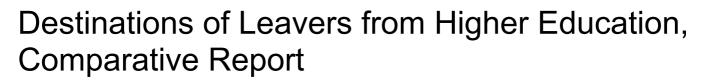


employment • further study • occupations • industries • qualifications • location of activity

# **DESTINATIONS OF LEAVERS**

from Higher Education, Comparative Report

Report prepared for HESA by the National Centre for Social Research Sarah Kitchen, Cherly Lloyd, Anna Vignoles, Steven Finch



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#### 1 SUMMARY

This report presents the findings from a comparison of graduates' labour market destinations from HESA's Destination of Leavers from Higher Education Survey (DLHE) with similar data from the Labour Force Survey (LFS). The report also considers the extent to which the DLHE and LFS graduate samples were comparable and the dimensions along which they differed. The principal difference was that the DLHE included only graduates from higher education who were surveyed three years after graduation whereas the LFS was a representative sample of all individuals of working age, including non-graduates. In order to make valid comparisons we have analysed LFS data for graduates separately and focused particularly on graduates aged 25 to 27 years who are close to the median age of graduates in the DLHE (26 years).

The main findings were as follows:

#### **Employment**

- The employment rate among DLHE respondents was similar to that for LFS graduates both for the 25 to 27 age group (89% compared with 90%) and for the full samples (89% compared with 87%).
- Graduate employment rates were much higher than those for non-graduates (70% on the LFS).
- The unemployment rate for DLHE respondents and LFS graduates was 2%.
- There was little difference between the employment rates of DLHE graduates according to gender (89% for male graduates and 90% for female graduates). Among the LFS graduates (who were older on average than the DLHE) male graduates had a slightly higher employment rate than female graduates (89% compared with 85%).
- The proportion of employed graduates who worked full-time was 86% for the DLHE and 80% for the LFS. While the proportions of 25 to 27 year old male and female graduates who worked full time were fairly similar, rates of full-time working were slightly higher for men than women on the full DHLE sample (90% compared with 83%) and much higher for LFS graduates (92% compared with 68%). These differences again reflect the different age profiles of these samples.
- The two surveys differed in their estimates of the proportion of employed graduates whose occupations were classified as being graduate jobs. Among the 25 to 27 age group, the DLHE showed 80% of employed graduates had graduate jobs while the corresponding proportion for employed LFS graduates was 68%. The proportions also differed for the full samples (80% for DLHE and 75% for the LFS).
- The most common industry sector for both DLHE and LFS graduates to be employed in was 'Public administration, education and health'. The profiles of the two surveys' samples for sector were guite consistent.

#### Income

- The two surveys' estimates of income for the 25 to 27 age group were quite consistent (a median of about £22,700). When the median incomes of the full samples of graduates were compared, the income was much lower for DLHE than for LFS (£23,000 compared with £29,000) which reflected the older age profile of the LFS sample.
- These median income levels of graduates were much higher than median incomes for non-graduates on the LFS (£17,400 for those aged 25 to 27 and £18,000 for all non-graduates of working age).

#### **Further Study**

11% of DLHE respondents were engaged in further study. This was a similar level to the proportion of LFS graduates who reported having attended a taught course in the previous 4 weeks (10%).

# 2 OVERVIEW

In this report we focus on comparisons between the Destinations of Leavers from Higher Education Survey (DLHE) and the Labour Force Survey (LFS). This section provides some background information about each survey.

To summarise briefly, the LFS is a publicly available and representative survey that has been used for a variety of labour market analyses. It does not focus on any particular education group and has therefore been used effectively to study the labour market outcomes of graduates (relative to non-graduates) and in particular has been used for research into the rate of return to higher education<sup>1</sup>. The LFS has some advantages compared to the DLHE. Certainly the LFS has larger sample sizes than the DLHE and, being more readily accessible is a useful data set with which to undertake analysis of relative graduate outcomes. However, the LFS was not designed as a graduate survey and it is by no means as rich as the DLHE survey. Furthermore, it contains only a limited longitudinal element, being largely a cross-sectional survey.

Below we give a brief description of the two data sources, highlighting features that will be pertinent when conducting any labour market analyses of graduates. We then outline the strengths and limitations of the LFS and the DLHE data sets, with a view to putting the DLHE survey into context with the LFS data. We then proceed to compare the empirical findings produced by our analysis of the DLHE data with similar analyses using the LFS data from October to December 2006, the same time period as the DLHE data collection. Lastly, we provide some conclusions and give recommendations about the potential usefulness of the DLHE for analysts.

Table 2.1 Key characteristics of the DLHE Survey and LFS

Age group	DLHE (UK domiciled)	LFS
Timescale	Winter 2006- Activity on 27 <sup>th</sup> November 2006	October to December 2006
Mode of data collection	Postal, telephone and online	First interview is face-to-face, subsequent interviews by telephone
Respondent age range	20-102	0-99
Sample size	24,237	122,380

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<sup>&</sup>lt;sup>1</sup> Including Walker, I. and Zhu, Y. (2001) The returns to education: evidence from the Labour Market Survey. DfES Research Brief No 313. Department for Education and Skills. McIntosh, S. (2002) Further analysis of the returns to academic and vocational qualifications. DfES Research Report (370). Department for Education and Skills. Dearden, L., McIntosh, S., Myck, M. and Vignoles, A. (2002) 'The Returns to Academic, Vocational and Basic Skills in Britain', Bulletin of Economic Research, vol 54, no. 3, pp. 249-274.

#### 2.1 The Destinations of Leavers from Higher Education Survey

The DLHE is carried out by the Higher Education Statistics Agency (HESA), the central source for the collection and dissemination of statistics about publicly-funded higher education in the UK. There are two stages to the survey. The first stage is a census of individuals who have completed Higher Education courses in the UK. This stage is carried out six months after the courses end (or longer period for a minority of eligible leavers) and is often referred to as the Early Survey. The second stage of the survey is conducted on a sample of around 60,000 leavers who responded at the first stage and takes the form of a follow-up around three-and-a-half years after leaving. This stage is referred to as the Longitudinal Survey. It is this survey which the current report focuses on.

The Longitudinal DLHE Survey for the 2002/03 cohort of leavers from Higher Education was carried out in the Winter of 2006 and concentrated on the graduates' main activity on the 27<sup>th</sup> November 2006, approximately three-and-a-half years after graduation. The questionnaire collected details of graduates' main activity during the survey period, any study they did, including any qualifications achieved since their 2002/03 graduation, levels of satisfaction with the course completed in 2002/03 and their career to date. In addition, a sub-sample of respondents were asked for details of all their activities since the Early Survey.

The DLHE survey achieved a response from 24,825 of the 55,900 sampled graduates, a gross response rate of 44%. This large sample size and satisfactory response rate, together with the high level of detail collected in the survey, make the longitudinal DLHE a rich data source for examination of graduates' experiences in employment.

# 2.2 The Labour Force Survey

The LFS is a widely-used source of information on graduates, particularly for comparing graduate and non-graduate labour market outcomes. The LFS is a quarterly survey of a representative sample of households in Great Britain, carried out by the Office for National Statistics. The data contains a longitudinal component in that individuals are surveyed for five successive quarters, with one fifth of the sample being refreshed in each quarter. Thus, the longitudinal element is relatively short. The LFS is a long-standing survey that has been carried out since the early 1990s, with a broadly consistent methodology, and so its data enable cross-sectional analysis to be carried out over a long period.

The LFS contains the usual background information about individuals' personal characteristics, including age, ethnicity, gender, highest qualification level, other qualifications, occupation, industry and a number of other job related variables. Thus, its data can be used to analyse the types of jobs held by graduates and how these change over time. As the LFS is a nationally representative survey, its data can be used to validate the DLHE's data on early graduate outcomes.

Another advantage of the LFS for analysis of graduate employment is that it covers both graduates and non-graduates and so allows their experiences to be compared. In particular, it has good measures of individual income, in the form of actual gross and net income measures as opposed to just banded income. It has detailed information on hours of work, thereby ensuring more accurate assessments of hourly earnings. In addition, it includes information on all qualifications held by each individual (from 1996) and therefore comparisons between graduates and non-graduates can control for other qualifications held by both groups of individuals. For analyses of wages and calculations of the rate of return to higher education it is a very suitable data set.

There are, however, limitations to the LFS. The data contains very little qualitative data on the higher education experienced by graduates and is clearly not as rich as the DLHE surveys, particularly regarding details of study currently being undertaken by respondents. The fact that the LFS data is not rich in other areas can be problematic. For example, other research suggests that ability and family background can determine both education level and, independently, have an effect on earnings. Yet as the LFS data contain no measure of a person's family background (such as the education level or occupation of an individual's parents), we cannot measure this in the data. Thus, when trying to determine the wage premium attributable to holding a degree, we are in danger of attributing the wage benefits of coming from a more advantaged socio-economic background or of being higher ability, to the fact that the person also happens to have a degree. This limitation of the LFS, and its resulting biases are discussed extensively in Dearden et al (2002).

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Another limitation of the LFS is that, although the overall sample size is very large, the number of graduates in a particular subject area is sometimes quite small. So certain kinds of analyses are limited by small cell sizes, for example examining the occupations and sector outcomes of graduates with different degree subjects. The limited information on the person's higher education also means the LFS cannot be used to undertake many types of graduate analyses. For instance, there is no information on the institution attended by the graduate, the degree class they achieved, nor what skills they have beyond their qualifications, nor whether they use such skills in their jobs.

In summary, while the LFS is not a graduate survey and cannot be used to examine many questions pertaining to higher education and the graduate labour market, it is an extremely useful source of data to make comparisons with the DLHE survey. Firstly, as the LFS is a nationally representative survey which collects data on key employment characteristics and qualification level, it is a good data source with which to compare the activities of LFS and DLHE graduates as a means to validate the DLHE survey. Secondly, the LFS enables the researcher to evaluate the benefits of higher education, at least in terms of employment and earnings, because the labour market situation of graduates can be compared with various non-graduate groups. This means that the LFS is suitable for addressing questions such as whether graduates are in higher paid jobs than non-graduates and what types of occupations and sectors are occupied by graduates, as compared to non-graduates, and how this has changed over time.

#### 3 EMPIRICAL ANALYSIS

#### 3.1 Comparison of demographic profiles

We will begin by comparing the demographic profiles of the LFS and the DLHE samples as differences between these may help to explain differences in employment experiences.

Table 3.1 shows the weighted age group profiles of the DLHE and LFS samples that were used in analysis. In order to be consistent with the LFS, DLHE analyses were restricted to UK-domiciled respondents. Analyses of the LFS were restricted to those of working age (aged 16-64) so that the DLHE sample could be compared with the general working population.

Table 3.1 Age profiles of the DLHE and LFS samples (weighted data)

Age group	DLHE (UK domiciled)	LFS (working age 16-64)
	%	%
16-21	0	12
22-24	26	6
25-29	43	10
30-39	13	22
40-49	11	23
50+	6	28
Base (unweighted):	24,237	74,108

The age profiles of the two samples differed considerably. As the DLHE is a sample of recent graduates, its age profile is quite young, centred on the 25 to 29 age group (Table 3.1). The LFS is a general population sample and has a wider age range than DLHE and an older profile, with the median age being about 40. The younger profile of DLHE graduates compared with the LFS graduates has implications for the wage analysis, given that wages tend to rise with age irrespective of education level.

Table 3.2 Sex and ethnicity profiles of the DLHE and LFS samples (weighted data)

		<b>,</b>
	DLHE (UK domiciled)	LFS (working age 16-64)
Sex	%	%
Female	58	51
Male	42	49
Base (unweighted)	24,237	74,108
Ethnicity	%	%
White	88	90
Black	3	2
Asian	7	5
Mixed	0	1
Chinese/ Other	2	2
Base (unweighted):	23,009	74,079

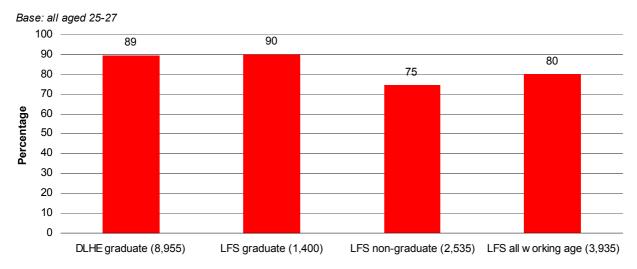
The weighted DLHE sample contains a higher proportion of female respondents than the weighted LFS sample (58% compared with 51%; Table 3.2). The ethnicity profiles of both samples were fairly similar with 12% of the DLHE sample and 10% of the LFS sample being non-white.

It is therefore important to recognise when making comparisons between the two surveys that the DLHE sample of graduates comprises a younger age profile and a slightly higher proportion of women than the general population LFS. In order to remove the effects of the different age profiles, some of the analyses presented later in this report are based on a sub-sample of respondents aged 25 to 27, close to the median age of DLHE respondents. We use data for the 25-27 age group to compare DLHE graduates with similarly-aged graduates from the LFS, while the full samples are used to show how the DLHE cohort compares with the workforce as a whole.

#### 3.1.1 Overall rates of employment

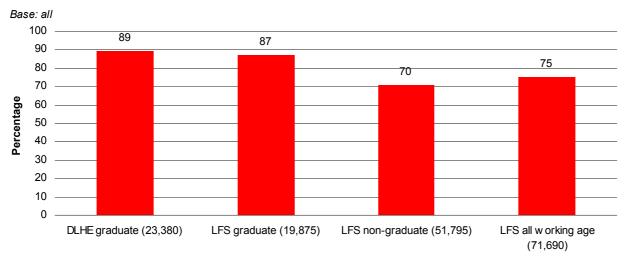
We have compared DLHE graduates with LFS respondents for both the narrow age range of 25 to 27 (Figure 3.1a) and all respondents of working age (Figure 3.1b).

Figure 3.1a Percentage in employment for DLHE graduates and LFS samples aged 25-27\*



<sup>\*</sup>Unweighted base sizes are shown in brackets

Figure 3.1b Percentage in employment for DLHE graduates and LFS samples (all age groups)\*



<sup>\*</sup>Unweighted base sizes are shown in brackets

For the 25 to 27 age group, the proportion of DLHE in employment was very similar to that for LFS graduates (89% compared with 90%; Figure 3.1a). The proportion was somewhat higher than for non-graduates of the same age on the LFS (75%).

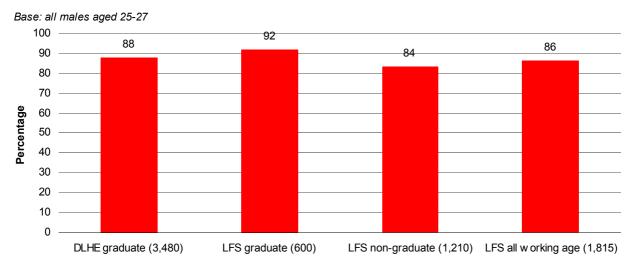
When the full DLHE and LFS samples of working age were analysed, the proportion of DLHE graduates in employment remained comparable with that of the LFS graduates (89% compared with 87%; Figure 3.1b), while the gap compared with non-graduates is slightly larger as only 70% of LFS non-graduates were in employment. The unemployment rate among UK domiciled DLHE graduates (2%) was the same as for all graduates in the LFS. This was lower than the rate of unemployment for LFS non-graduates (5%).

These comparisons suggest that the DLHE provides reliable evidence of graduate employment rates, since the findings are comparable with the LFS.

#### 3.1.2 Rates of employment for male graduates

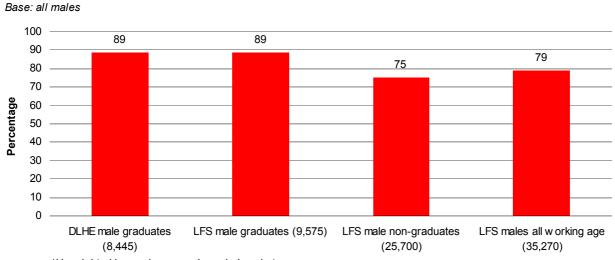
We repeated this analysis of employment rates for men and women so that any trends by gender could be highlighted. As before, we have compared male DLHE graduates with LFS respondents for both the narrow age range of 25 to 27 (Figure 3.2a) and all males of working age (Figure 3.2b).

Figure 3.2a Percentage in employment for male DLHE graduates and LFS samples aged 25-27\*



\*Unweighted base sizes are shown in brackets

Figure 3.2b Percentage in employment for male DLHE graduates and LFS samples (all age groups)\*



\*Unweighted base sizes are shown in brackets

The rate of employment among male DLHE graduates aged 25-27 was slightly lower than that for male LFS graduates of comparable age (88% compared with 92%; Figure 3.2a). The rate of employment for male graduates in both surveys was higher than for male LFS non-graduates (84%), though the difference was not particularly large.

When the full DLHE and LFS samples for men of working age were analysed, no difference was seen between the employment rate of men in the DLHE cohort of graduates and male graduates on the LFS (both were 89%; Figure 3.2b). So the rate of employment of men in the DLHE cohort was comparable with male graduates as a whole. This rate of employment was greater than for male non-graduates (75%).

The proportion of male graduates who were classed as unemployed was 3% for both the DLHE and the LFS.

#### 3.1.3 Rates of employment for female graduates

The DLHE results for female graduates were compared with LFS data in the same way as those for male graduates.

Figure 3.3a Percentage in employment for female DLHE graduates and LFS samples aged 25-27\*

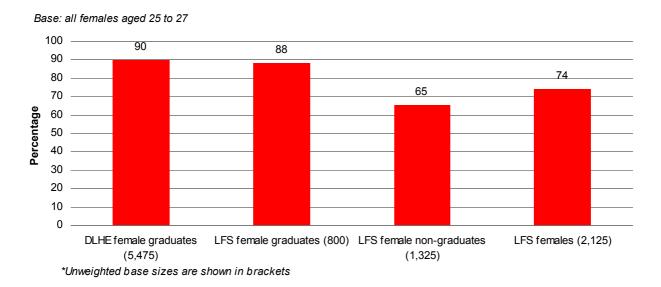
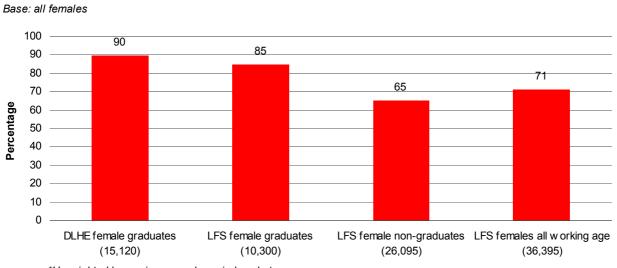


Figure 3.3b Percentage in employment for female DLHE graduates and LFS samples (all age groups)\*



<sup>\*</sup>Unweighted base sizes are shown in brackets

Firstly, for the 25 to 27 sub-group, the rate of employment for female DLHE graduates was very similar to that for comparable LFS respondents (90% and 88% respectively; Figure 3.3a). Female graduates on the DLHE had very similar rates of employment to male graduates (90% compared with 88%) whereas LFS female graduates were less likely to be employed than their male counterparts (88% compared with 92%). However, when allowance is made for the smaller sample sizes for this age group on the LFS, and for the differences in the designs of the two studies, these differences may be regarded as relatively minor. Indeed, employment rates for the DLHE and LFS samples for these gender and age sub-groups may be regarded as broadly similar.

The data for the full samples of female graduates show contrasting trends to those for male graduates. Whereas male DLHE graduates had a similar employment rate to those for all male graduates on the LFS, women DLHE graduates had slightly higher employment rates than their counterparts on the LFS (90% compared with 85%; Figure 3.3b). In other words, female DLHE graduates had a more similar rate of employment to their DLHE male counterparts than to female LFS graduates. This difference may be explained by the relative youth of the DLHE sample compared with the LFS sample which would have included more respondents who were parents and had stopped working for a period to look after their children.

As expected, the rate of employment of female LFS graduates was much higher than that for LFS non-graduates (85% compared with 65%). This difference was higher than was observed for men (89% for graduates compared with 75% for non-graduates). This reflects higher absence from the labour market due to parenting for female non-graduates compared with female graduates and men generally. It also partly reflects the different age profiles of the DLHE and LFS data. Younger women are not only more likely to have a degree but also to have different patterns of labour market participation than older women. Young female graduates are, for example, more likely to be in employment throughout their lives even after childbirth.

The proportion of female graduates who were classed as unemployed was 2% for both the DLHE and the LFS.

# 3.1.4 Full-time and part-time working

Both surveys recorded whether respondents worked full-time or part-time. For the 25 to 27 age group, 89% of employed DLHE graduates worked full-time while 6% worked part-time (4% were classified as self-employed). For LFS graduates of the same age, the proportion working full-time was about the same as DLHE (90%) while the proportion working part-time was higher (10%; the LFS classification did not include a self employed category).

For both surveys the proportions of male graduates aged 25 to 27 who worked full-time were higher than the proportions of female graduates of the same age. For the DLHE, the proportions were 91% for men and 88% for women. For the LFS the corresponding figures were 93% for men and 87% for women so the LFS showed a slightly larger gender gap for this incidence of full-time working for this age group of graduate.

Allowing for the slight difference in the classification of employment status between the two surveys (due to the inclusion of a self-employed category in the DLHE survey), the two surveys' data about the employment status of graduates aged 25 to 27 can be regarded as very similar.

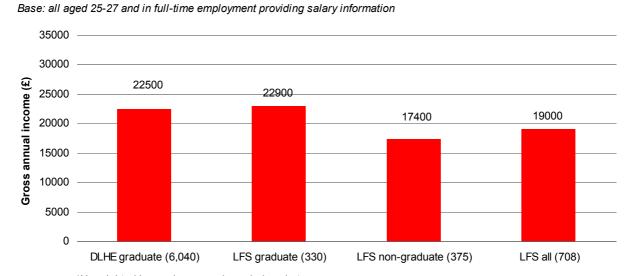
There was less correspondence between the two datasets when DLHE graduates were compared with all the LFS graduates of working age. The proportion of employed graduates working full-time was higher for the DLHE than for the LFS (86% compared with 80%).

Gender differences were more marked than for the 25 to 27 age group, particularly for the LFS sample. DLHE employed male graduates were more likely than their female counterparts to be working full-time (90% compared with 83%) and less likely to be working part-time (4%, 12%). The gender difference was greater for the LFS, reflecting its older age profile, with 92% of employed male graduates working full-time compared to only 68% of their female counterparts. An even larger gender diference was seen for LFS non-graduates with 90% of employed men working full-time compared with only 52% of employed women. These findings suggest how the the similarity observed in the proportions of full-time and part-time working among DLHE graduates three-and-a-half years after graduation may change as they grow older and have children.

#### 3.1.5 Income

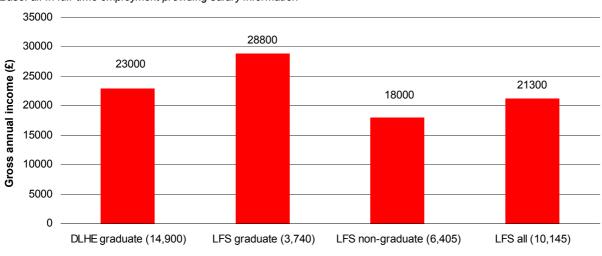
The median levels of income reported by graduates from the DLHE were compared with those from LFS respondents for both the 25 to 27 age group and overall. It should be noted that the bases for these analyses were somewhat lower than for other questions about employment as a proportion of respondents to each survey refused to provide income information.

Figure 3.4a Median gross annual income for full-time employees aged 25-27 years\*



\*Unweighted base sizes are shown in brackets

Figure 3.4b Median gross annual income for full time employees (all age groups)\*



Base: all in full-time employment providing salary information

\*Unweighted base sizes are shown in brackets

For the

25 to 27 age group, DLHE graduates and LFS graduates reported similar levels of median gross annual income, at £22,500 for DLHE graduates and £22,900 for LFS graduates. This encouraging level of correspondence suggests that the DLHE income data may be quite reliable. As expected, the level of income for graduates was appreciably higher than that of LFS non-graduates (median value £17,400; Figure 3.4a).

When the full samples were compared, the median income of DLHE graduates was shown to be lower than that for LFS graduates (£23,000 compared with about £29,000; Figure 3.4b). This difference is to be expected given that LFS graduates had an older age profile and had had a longer career in which to build their salaries. However, it is interesting to note that the income of LFS non-graduates did not increase much when the 25 to 27 age group as expanded to cover the full working population (from £17,400 to £18,000), suggesting that career income progression was much lower for non-graduate employees than for graduates.

These results show that three-and-a-half years after graduation, graduates had a higher salary on average than the working population as a whole, but a lower average salary than the whole graduate population. This is as expected as the DLHE graduates were predominantly in the early stages of their career while graduates in the LFS were, on average, at a more advanced stage in their careers.

#### 3.1.6 Type of occupation

In both the DLHE and the LFS respondents' occupations were coded to the SOC-HE classification devised by Elias and Purcell<sup>2</sup> that distinguishes whether or not they were occupations that would usually be carried out by graduates. In making comparisons on this measure for the two surveys it is important to note that a lower proportion of DLHE occupations than LFS occupations were coded into the SOC-HE classification scheme (89% compared with 100%). This reflects the different modes of interview with there being more incomplete data with the self-completion interviewing used on the DLHE than with the personal interviewing used on the LFS<sup>3</sup>. Cases without a successfully coded SOC-HE classification were excluded from the analysis of occupation type.

Ignoring the issue of the 11% of DLHE occupations that were not successfully coded into the SOC-HE framework, the proportion of employed DLHE graduates in graduate occupations was somewhat higher than for LFS graduates. For 25 to 27 year olds in employment, 80% of DLHE graduates were coded as having graduate jobs compared with only 68% of LFS graduates (Figure 3.5a). For the full employed populations, 80% for DLHE graduates and 75% of LFS graduates were coded as having graduate occupations. These comparisons suggest the possibility that the DLHE findings overestimate the proportion of graduates who are in graduate jobs (or, conversely, that this figure is underestimated by the LFS). Possible hypotheses for why the figure might be overestimated in the DLHE include differential response, whereby graduates with poorer jobs are less likely to respond to the study, or error in the recording or coding of occupations on the questionnaire.

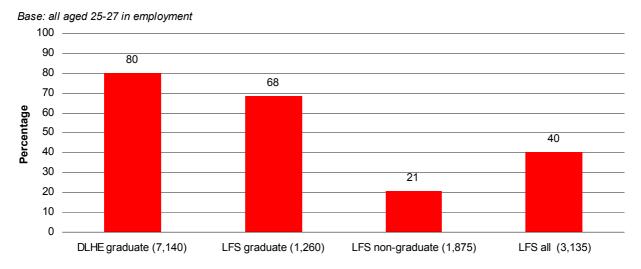
Whatever is the true proportion of graduates that have graduate jobs, the proportion of non-graduates with such jobs was much lower. The LFS shows that at the age of 25 to 27 years 68% of employed graduates had graduate jobs compared with 21% of employed non-graduates. Among the full working population, the proportion with graduate jobs rose appreciably to 75% for graduates but only slightly to 23% for non-graduates.

Taking the DLHE and LFS results together, the results were consistent with the view that the proportion of recent graduates in graduate occupations, some three-and-a-half years after graduation, is broadly indicative of the proportion of graduates who will end up in graduate occupations at an older age.

<sup>&</sup>lt;sup>2</sup> Elias and Purcell (2004) SOC (HE): A Classification of Occupations for Studying the graduate Labour Market.

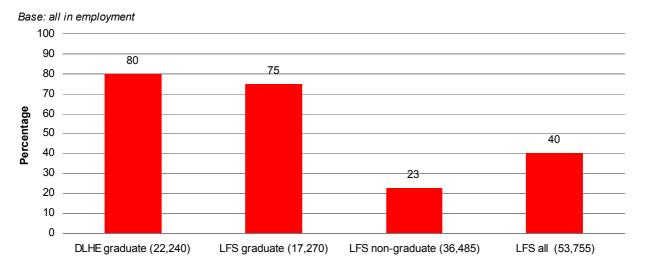
<sup>&</sup>lt;sup>3</sup> See HESA (2007) Destination of Leavers from Higher Educational Longitudinal Survey 2002/3 Cohort: Assessment of Robustness and Fitness for Purpose for further details and a discussion of the effect the different data collection methods used in DLHE had on occupation coding.

Figure 3.5a Percentage of employees in graduate occupations for aged 25-27 \*



\*Unweighted base sizes are shown in brackets

Figure 3.5b Percentage of employees in graduate occupations for all age groups\*



\*Unweighted base sizes are shown in brackets

For the 25 to 27 age group, the higher levels of graduate occupations in the DLHE compared with the LFS was observed for both men and women (Table 3.3a). However, when DLHE was compared with the full graduate population, contrasting patterns were observed for men and women. Whereas for female graduates the same trend of higher proportions of DLHE graduates having graduate jobs than LFS graduates was observed (81% compared with 72%; Table 3.3b), the proportions of male graduates with graduate jobs was similar for the two surveys (79% for DLHE and 78% for LFS). The same gender pattern was observed for employed non-graduates on the LFS (26% of men had graduate jobs compared with 19% of women). These differences reflect the differing age profiles of the two surveys that were discussed earlier. Whereas employed women in the mostly younger DLHE cohort were at least as likely as men to have graduate jobs, this was less common among older graduates in the LFS.

These findings show that recent female graduates three-and-a-half years after their graduation were just as likely as recent male graduates to have secured a graduate occupation. However, for the full working age population female graduates were slightly less likely than male graduates to have a graduate job.

Table 3.3a The proportion of employed males and females in graduate occupations for aged 25-27

	DLHE (all UK – domiciled)	LFS (with graduate qualifications)	LFS (without graduate qualifications)	LFS (all)
Males Graduate Occupation Non Graduate Occupation	% 79 21	% 68 32	% 21 79	% 38 62
Base: all in employment	2,710	555	1,015	1,570
Females Graduate Occupation Non Graduate Occupation	81 19	69 31	21 79	43 57
Base: all in employment	4,430	705	860	1,565

Table 3.3b The proportion of employed males and females in graduate occupations for all age groups

	DLHE (all UK – domiciled)	LFS (with graduate qualifications)	LFS (without graduate qualifications)	LFS (all)
Males Graduate Occupation Non Graduate Occupation	% 79 21	% 78 22	% 26 74	% 42 58
Base: all in employment	6,454	8,504	19,313	27,817
Females Graduate Occupation Non Graduate Occupation	% 81 19	% 72 28	% 19 81	% 37 63
Base: all in employment	12,118	8,767	17,171	25,939

#### 3.1.7 Sector of work

In both the DLHE and the LFS respondents' occupations were coded according to their industry sector. The distribution of DLHE graduates across industry sectors was quite similar to that of graduates on the LFS (Table 3.4).

The most common sector grouping for both groups was 'Public administration, education and health'. More than half (51%) of UK-domiciled DLHE graduates in employment and 44% of LFS graduates in employment were employed in this sector. The second most common sector, for both groups, was 'Banking, finance and insurance' in which a quarter (25%) of employed DLHE graduates and 22% of employed LFS graduates worked.

These findings suggest that the overall distribution of graduates across industry sectors three-and-a-half years after their graduation is likely to be reasonably consistent with the picture for graduates as a whole.

Table 3.2 Industry sector of those in employment

	DLHE (all UK – domiciled)	LFS (with graduate qualifications)	LFS (without graduate qualifications)	LFS (all)
	%	%	%	%
Agriculture and Fishing	0	1	2	1
Energy and Water	1	1	1	1
Manufacturing	7	10	14	13
Construction	1	4	10	8
Distribution, hotels and restaurants	7	9	24	19
Transport and Communication	3	4	8	7
Banking, finance and insurance	25	22	13	16
Public administration, education and health	51	44	21	29
Other services	5	6	6	6
Base: all in employment	20,150	17,241	36,459	53,700

The LFS data shows how the sectors of work differed between graduates and non-graduates. Graduates were more likely than non-graduates to be found in the 'public administration, education and health' (44% compared with 21%) and 'banking, finance and insurance' (22% compared with 13%) sectors. Lower proportions of graduates compared with non-graduates were found in the 'distribution, hotels and restaurants' (9% compared with 24%) and construction (4% compared with 10%) sectors.

#### 3.1.8 The proportion of graduates engaged in further Study

Both surveys recorded whether respondents were engaged in academic study at the time of the interview.

At the time of the DLHE Longitudinal Survey, 11% of UK-domiciled graduates were engaged in further study, either as their main activity or combined with employment. The LFS used a different question which asked respondents whether they had attended any taught courses in the past four weeks; in total, 10% of LFS graduates done so. Although the two surveys are not capturing exactly the same information, this suggests that the prevalence of further study among the DLHE cohort of graduates three-and-a-half years after graduation was similar to that among the whole graduate population.

LFS graduates were twice as likely as LFS non-graduates to have attended a taught course in the past four weeks (10% compared with 5%).

#### 4 CONCLUSIONS AND RECOMMENDATIONS

This report has compared data about the employment, income and further study of graduates in the DLHE and the LFS. The samples had quite different age profiles with the median age of DLHE respondents (three-and-a-half years after graduation) being 26 and that of the LFS respondents being about 40. Another difference in profile was that the DLHE had a higher proportion of women than the LFS (58% compared with 51%).

In order to see how the surveys' data compared for comparable populations, analysis was carried out for a subgroup of 25 to 27 year olds. The findings for graduates of this age in the two surveys were broadly comparable. They had similar rates of employment (about 89%) and among those who worked the rate of full-time working were similar (about 89%) and the median levels of income were similar (£22,500 for the DLHE and £22,900 in the LFS).

There was one notable difference, however, in that the proportion of employed DLHE graduates aged 25 to 27 who were classified as holding a graduate job (80%) was much higher than that for LFS graduates (68%). This was potentially due to some difficulty in classifying all the occupations in the DLHE data into the SOC-HE framework. Another possible cause is non-response in the DLHE by graduates who have failed to secure graduate level jobs.

The comparison of findings between the full DLHE and LFS graduates identified some gender differences in the employment status and type of occupation. The younger age profile and earlier lifestage of DLHE compared with LFS respondents mattered most for the analysis of female graduates. Recent female graduates (in the DLHE) were as likely as men to be in employment and secure graduate employment. However, older female graduates (in the LFS) showed less attachment to the labour market (whether voluntary or otherwise), with lower employment rates and a lower probability of being in graduate work than their male peers.

LFS graduates had higher salaries than DLHE graduates, which was another reflection of their higher average age. However, the distribution of LFS graduates and DLHE respondents across industry sectors suggested that the sector distribution observed among recent graduates was consistent with the general graduate population.

Despite the DLHE and LFS collecting different information regarding further study, a similar proportion of graduates were studying or had recently engaged in training in both data sets. In total, 10% of LFS graduate respondents had attended a taught course in the four weeks preceding the survey, with 11% of DLHE respondents being engaged in further study as their main activity of in addition to employment.

Another benefit of this analysis with the LFS was that it allowed the employment position of graduates to be compared with that of non-graduates. These comparisons show the extent to which graduates had higher rates of employment and earnings than non-graduates.

In conclusion, while the DLHE and LFS samples are similar enough to make comparisons between the two data sets, particularly in terms of graduates' earnings and employment outcomes, analysts need to bear in mind the nature of the DLHE sample. Specifically, the DLHE data includes recent and generally young graduates, some three-and-a-half years after graduation. While for men, the immediate labour market outcomes of these young and recent graduates may give a good approximation for the longer term prospects of male graduates, this is not necessarily true for women. In addition, the analysis suggests that there may be some genuine differences between the LFS and DLHE populations in terms of the proportions of younger graduates in graduate level jobs. This discrepancy may merit further investigation.



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