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Full report

# The Class of '99

## A study of the early labour market experiences of recent graduates

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October 2005

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# The *Class of '99:*
# A study of the early labour market experience of recent graduates

A report to the Department for Education and Skills

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## Executive Summary

*Introduction*

1. This report presents results from a detailed investigation of the early careers of graduates who gained their degrees in the mid and late 1990s. The investigation was designed to relate the experience of higher education to later outcomes, notably career opportunities, given the expansion of higher education and significant changes in the funding of undergraduate degree programmes which took place during the 1990s. The information presented will be of interest to a variety of audiences, from those engaged in educational planning or with graduate recruitment to young people about to embark on a programme of higher education and those who fund their studies.

2. The data in this report come from two national surveys and follow-up interview programmes of UK graduates who completed undergraduate degree courses in 1995 and 1999: the *Moving On* survey, whose respondents were surveyed in Winter 1998/9 and subsequently re-surveyed seven years after graduation in Winter 2002/03 and a similarly-selected sample, referred to as the *Class of '99*, followed up in Spring 2003. The samples were drawn from those who graduated from undergraduate degree courses at 38 UK higher education institutions (HEIs), selected to be representative of the full range of UK undergraduate degree-holders.

3. This report focuses on the early career paths of 1999 graduates, but a considerable component of it involves comparison between their responses and those of the 1995 cohort. The data for both studies derive from self-completion postal questionnaires, completed by over 9,600 graduates who completed undergraduate programmes in 1995 and approximately 8,600 who completed comparable programmes in 1999. As with the 1995 sample (but in somewhat more detail, as had been done for the *Seven Years On* study), the *Class of '99* survey findings were supplemented by qualitative data collected in a follow-up programme of interviews. For the 1999 graduating cohort, interviews were conducted with 100 respondents, disproportionately targeting graduates who had experienced difficulty in accessing appropriate employment.

*What were these highly qualified labour market entrants doing at the time of the survey? (Chapter 2)*

4. At the point at which the *Class of '99* was surveyed:

- nearly all the graduates were in employment, with only 3 per cent of men and less than 2 per cent of women unemployed and seeking work;

- self employment was very low - only 4 per cent of men and 3 per cent of women;
- nearly 70 per cent of men and 66 per cent of women were in full-time employment related to their long-term career plans;
- a significant minority - around 7 per cent of men and 8 per cent of women - were in postgraduate study at the time of the survey (approximately 4 years after gaining a first degree);
- the most popular reason for taking their current job was 'It was exactly the type of work I wanted', followed by 'It offered interesting work' and 'I wanted to work in this region';
- the overwhelming majority of graduates worked in the service sector, with 55 per cent of female graduates employed in either education or other public services;
- male graduates were also most likely to work in other public services, but were more evenly spread throughout all sectors of the economy;
- the majority of graduates worked in gendered occupational contexts;
- the majority of respondents appeared, at the time of the survey, to be in appropriate jobs - as managers and senior officials, professionals or associate professional and technical job-holders, according to the current standard occupational classification (SOC 2000) and in a 'graduate' job category, according to SOC (HE), a new classification of occupations developed to analyse change in the graduate labour market.

*What is a graduate job? (Chapter 3)*

5. Evidence from the work histories provide by these graduates and from the more detailed interviews was analysed to provide insight into the extent to which degrees had been required to enable graduates to access jobs, and the extent to which skills and knowledge acquired on undergraduate programmes were used on a day-to-day basis in the course of their work. Using the SOC (HE) classification, changes in the patterns of graduate labour market integration between the 1995 and 1999 cohort were examined. Graduates in the later cohort appear to have been somewhat less likely to have moved into traditional graduate jobs, but also less likely to be in non-graduate jobs and more likely to be in what are termed 'new graduate occupations' – jobs which have recently offered graduates opportunities to develop their careers, or which relate to recent changes in technology and/or work organisation. The characteristics of graduates in these categories of job reinforce previous findings that there is a qualitative gap between the 'graduate job' categories and non-graduate jobs in terms of requirement for qualifications and skills, and in the responsibilities and duties inherent in the posts described. We conclude that an undergraduate degree had been necessary to access most of the new graduate jobs and there was some evidence that increasing levels of qualifications were being required for some of these, and possibly for modern graduate occupations. The majority of new and *niche*

graduate job-holders interviewed appeared to be employed in jobs where they felt they were required to use their higher education, either directly or indirectly – so that it makes sense to label these jobs - often hybrid administrative/technical with a specialist management component - as graduate jobs that required their incumbents to manipulate or manage information, or manage people or processes.

6. There was a correlation between the 'maturity' of SOC (HE) categories and job quality, with those in the longer-established categories (traditional graduate jobs and modern graduate jobs) more likely both to require and use degree qualifications and learning. Comparing responses to occupational and work context criteria in the survey and interview data, a qualitative difference was consistently revealed between the four graduate job categories on one hand, and non-graduate jobs on the other.

7. Where respondents indicated that their degree had been a job requirement for non-graduate work this may represent credential inflation. However, there was evidence that, in some instances, it indicated areas of employment with significant graduate niches and well-trodden graduate routes into them, or areas where non-graduate work experience tends to be regarded by employers as a necessary stage for entry into an industry or profession.

8. Similar patterns of movement into employment where qualifications, skills and knowledge were required over the course of early career were evident for the graduates of 1995 and 1999. While the number of graduates employed in non-graduate employment fell over the four years since graduation, the proportions of those in such employment reporting that a degree had been required for their jobs and that they were required to use their degree skills and knowledge had increased over time. This reflects increasing blurring between graduate and non-graduate jobs; changing skills and knowledge requirements in some occupations; more diverse patterns of occupational access and graduate/non-graduate division of labour; and the emergence of new graduate occupations or occupational niches. To an extent, it may also reflect the vagaries of occupational classification, with those inaccurately classified as holding a non-graduate job becoming a larger proportion of a shrinking group. The proportions of graduates in *niche* graduate jobs reporting that their degrees had been required for their jobs and that they were required to use their degree skills and knowledge had also increased over the period between graduation and survey. This could suggest that graduates in such employment had been increasingly entering graduate-appropriate employment in these occupational areas.

9. Over two-thirds of 1999 graduates rated their current jobs as being appropriate for somebody with their qualifications and one in five rated their jobs as 'ideal'.

Response was strongly correlated with SOC (HE) category of job, however, with non-graduate job-holders (especially women) substantially less likely to have rated their job as appropriate and those in *niche* graduate jobs less likely to have done so than those in the other 'graduate job' categories.

10. Although many of the interview respondents were selected on the basis of appearing to be less successfully integrated to the labour market than average - on the basis of occupation, salary, or their subjective evaluation of career development at the time when they completed the survey questionnaire - we found that several had moved on since then and were in more appropriate employment – reflecting the slow (or in some cases, leisurely!) integration of many graduates into graduate careers. A minority of graduates clearly remained under-employed, however, and the characteristics associated with labour market success and disenchantment are examined in Chapters 7 and 10.

*Are graduate employment prospects changing? Tracking and comparing the early career paths of the 1995 and 1999 cohorts (Chapter 4)*

11. The early career profiles of 1999 graduates are almost identical to those exhibited by the earlier cohort. However, against a background of falling unemployment generally, the experience of unemployment among the 1999 graduates during the two years after graduation was slightly lower than for the 1995 graduates. The distribution of the duration of unemployment among the 1995 and 1999 cohorts were similar, with short spells of unemployment immediately after graduation dominating. The likelihood of experiencing longer spells of unemployment varied by class of degree awarded, with those with lower grades more likely to be in this category. In terms of subject studied, Arts graduates were most likely to have experienced significant unemployment while law, business, education and medicine graduates were least likely to have done so.

12. Working in non-graduate jobs was a common experience following labour market entry. Almost half of the *Class of '99* who were employed immediately following their studies were employed in such occupations, but subsequent 'non-graduate' employment fell rapidly and by four years after graduation, only 15 per cent of employed respondents remained in non-graduate occupations. During early careers, participation in such employment was generally lower for the 1999 than the 1995 cohort. Graduates who had studied subjects at the vocational end of the subject/discipline spectrum, such as medicine, education, engineering, and mathematics and computing, were less likely to have obtained employment in non-graduate occupations following graduation, while at the other end of the subject spectrum, graduates with degrees in the humanities had relatively high levels of

employment in these jobs. Female graduates were more likely than males to work in non-graduate jobs in their early careers, as were those of both sexes who had achieved relatively low degree results.

13. Employment in traditional graduate occupations was 4-6 per cent lower among the 1999 graduates than in the earlier cohort, but a higher proportion of the 1999 graduates were employed in modern and new graduate jobs.

*Access to information about career opportunities and routes into employment (Chapter 5)*

14. To explore the ways in which graduates made decisions about career choices and career development, and the sources of information and guidance that they drew upon, the survey data were amplified by rich interview data. The interviews with a small sub-sample of the overall population had been targeted to focus predominantly, but not exclusively, on those whose early careers indicated that they had experienced difficulties in accessing appropriate or well-rewarded employment rather than on those who were achieving the 'glittering prizes' of high income and elite occupations. These interviews provided detailed supporting evidence that reinforced and explicated the survey findings, illustrating how graduate careers are by no means homogenous. Graduates achieved varying degrees of success and encountered a wide range of opportunities and obstacles in their career development, reflecting the growing diversity of the graduate labour market.

15. Approximately 75 per cent of respondents reported using careers advisory services; 80 per cent used newspapers, internet sources and other publications; two-thirds had drawn upon personal contacts (– family, professional or academic, summarised as 'networks'); and 42 per cent had used recruitment agencies. Networks were considered most useful overall, which may have worrying implications for equal opportunities. Conversely, although use of careers advisory services was among the most popular approach, approximately half of all graduates who had used them had not found them particularly useful.

16. In terms of the diversity of sources and propensity to use them among different categories of students, those from a managerial and professional social class background reported making greater use of networks and careers advisory services than those from lower socio-economic groups. To some extent, this is likely to reflect the fact that graduates of new universities reported a lower propensity to have used careers advisory services than those from old universities. There were considerable differences in patterns of use and reported usefulness of the different sources of advice and information according to age of respondent and degree subject, with

vocational graduates less likely to have required or sought information and guidance and those, paradoxically, with greatest need for guidance (for example, those with poor degree results and less immediately-marketable degree subjects) least likely to have accessed it or found it useful.

17. The qualitative data illustrated how recruitment agencies had been an important source of jobs and information about careers for 1999 graduates, especially for those in the newer areas of graduate employment such as ICT and specialist areas of management and business services. Agencies had been a route into organisations with career potential, often via non-graduate jobs initially, for a significant proportion of interviewees. Compared to their 1995 peers, 1999 graduates were more likely to be in permanent employment throughout the period following graduation, but career trajectories and the qualitative interviews highlighted the importance of temporary and fixed-term employment in the early stage of graduate careers which was not necessarily associated with inappropriate employment.

18. The interviews provided evidence that pro-activity and persistence in pursuing career opportunities tended to have secured desired career goals. They also supported the survey findings that work placement and prior experience were positively correlated with entry into graduate level employment. The accounts provided by respondents provided testimony to the diversity of characteristics, circumstance, expectations and aspirations of the graduate labour supply, and to the different degrees to which different categories of graduates have access to information and advice, both through formal and informal channels, that can help them to access employment opportunities and make wise career decisions. Assimilation into appropriate employment takes longer for some graduates than others, but from the evidence of both cohorts studied in the course of this investigation, appropriate and satisfying work appears to have been obtained by the majority of those entering the labour market in the late 1990s.

*The earnings of graduates in their early careers (Chapter 6)*

19. This analysis of the earnings of a nationally representative group of graduates, all of whom gained their degrees in July 1999, reveals a number of interesting findings. First, there is evidence of a significant gender gap in the earnings of recent graduates. Some three to four years after graduation, women graduates working full-time reported earnings that were approximately 15 per cent lower than those reported by male graduates. In part this reflects a number of factors which are well known, if not well understood. Men work longer hours, they occupy sectors which command higher earnings generally (insurance, business, finance, information technology, etc.) and they tend to work in the private sector rather than the public or not-for-profit

sectors. Adjusting for these factors, we find that there remains a significant gender gap in pay. Part of this reflects the impact of gender segmentation at the workplace (women tend to work in workplaces where their kind of work is undertaken by other women, and this has a negative impact upon their earnings). A significant residual part of the gender gap (5 per cent) remains unaccounted for by any other factor than gender.

20. Perhaps the most important result that emerges from this analysis is provided by the comparison between the earnings achieved by the 1995 and 1999 cohorts. After making adjustments to account for differences in the timing of data collection, the findings indicate that the earnings of the later cohort do not appear to have kept pace with earnings increases more generally in the economy. This may be particular to this cohort, reflecting the circumstances prevailing in 2003/04 – or it may be the first indication that the graduate earnings premium, which in the UK remains high by international standards, is beginning to reflect a decline in the excess demand for graduate skills and knowledge that has characterised the situation prevailing throughout the 1990s. Further monitoring of the situation is required to establish whether or not this is the case.

*Who gets the good jobs and who has difficulties? (Chapter 7)*

21. Graduates were employed in a wide range of occupations. However, it is important to understand factors that are associated with being employed in non-graduate occupations. A number of factors related to an increased likelihood of being employed in a non-graduate occupation. In terms of personal characteristics, females were approximately a fifth more likely than males to be employed in such jobs four years after graduation, and those who reported that they had a long term illness or disability were more than twice as likely to be employed in a non-graduate occupation as those with no such restriction. Graduates who had remained in the region in which they lived immediately before studying for their 1999 qualification were more likely to be employed in non-graduate occupations.

22. In terms of subject studied, graduates with degrees in medicine and related subjects, education, engineering and law were least likely to be employed in non-graduate occupations and those with degrees in the humanities and languages most likely. Educational attainment at A-level, type of HEI attended and degree performance were all important determinants of likelihood of being in such a job. These findings reveal the extent to which employers take into account not only performance of individuals at degree level, but also previous academic achievement and the type of institution where graduates have studied.

23. Respondents who had undertaken a work placement integral to their course or had undertaken work to gain useful career related experience while studying, were less likely to be employed in a non-graduate occupation.

24. As far as subjective assessment of job quality was concerned, the 1999 cohort reported generally higher levels of positive job attributes compared to the 1995 graduates. Despite the evidence of a decline in the real earnings of graduates between 1995 and 1999, no decline was observed in the proportion of respondents indicating that their job provided a competitive salary. It is concluded that the different expectations held by members of the diverse graduate labour supply and alternative options available to them need to be taken account of in evaluating labour market outcomes.

*Seeking a degree of advantage: education and training after graduation (Chapter 8)*

25. Well over half the sample (57 per cent) reported having taken some form of career-related training or education since graduation. Comparing the 1995 and 1999 graduates 3.5 and 4 years after graduation respectively, similar broad patterns of the uptake of further education and training were reported. There was little gender difference in the propensity to undertake different forms of postgraduate training or education, apart from the fact that a higher proportion of women reported taking PGCEs. Different patterns of propensity to undertake various forms of postgraduate training or education were evident, however, according to age, SOC (HE) category of current job, undergraduate institution of study and subject of study. There was no significant difference according to social class background, even in the case of the likelihood of respondents having undertaken a Masters degree.

26. The probability of a graduate having undertaken a Masters degree since graduation in 1999 was positively linked to, amongst other factors, having graduated under the age of thirty, having a degree in humanities, social science, natural science or engineering, having left university with no debt and having attended a pre-1992 university. Those graduates who had undertaken postgraduate education and training had done so for a variety of reasons, including to fulfil entry requirements for a particular occupation or achieve progression within an occupation or organisation (sometimes out of non-graduate employment), as a means of putting off career decisions and to 'buy time' and in order to 're-orientate' career in a different direction and to widen their career options. There was broad similarity between men and women across the sample in the reasons given for undertaking further education and training, although women were slightly more likely to indicate specific career objectives and men more likely to indicate a desire to improve employment prospects

more generally. There were differences in individual motivation to undertake further education and training according to the age of respondent, subject of study and current occupation but there was little difference in motivation according to type of institution attended at undergraduate level.

27. Almost half of all survey respondents expected that they would study full-or part-time for further qualifications in the next five years. The qualitative data suggested that the majority recognised the need for further training and education and continuous professional development to achieve longer-term career goals.

*The financial legacy: student indebtedness and the impact of debt on early career development and outcomes (Chapter 9)*

28. The 2002-3 survey collected information from the 1999 cohort on student indebtedness at the time of graduation. Given continuing changes in the mechanisms of student support, these findings should be treated with caution, in terms of their applicability of these findings to present and future cohorts of graduates. Nonetheless, 77 per cent of the respondents reported that they had some kind of repayable debt upon the completion of their studies during 1999. Among those with debt, the mean total amount of repayable debt was estimated to be £6,205, with the median level of repayable debt estimated to be lower at £5,500. Debts from the Student Loans Company accounted for 66 per cent of all repayable debts. Students with degrees in arts were most likely to report that they had repayable debt at the end of their studies and had the highest levels of debt. Those with degrees in mathematics and computing, medicine and related subjects, and business studies were least likely to report that they had repayable debt at the end of their studies.

29. The survey revealed that 92 per cent of respondents had undertaken paid work while studying for their 1999 qualification. Across all groups of respondents, 85 per cent indicated that they undertook paid work during the vacations while 47 per cent had undertaken paid work during the term time. The incidence of term time working was more prevalent among respondents from lower social class backgrounds. Undertaking paid employment while studying was associated with poorer levels of academic performance, although this was dependent upon when the work was undertaken. Taking account of all other variables, those who worked during term time were estimated to be approximately a third less likely to gain a ‘good’ degree (First or Upper Second Class Honours) compared to those who undertook no paid work during the course of their studies. Working during the vacation was not estimated to have had a detrimental effect upon degree performance.

30. A quarter of those with repayable debts indicated that their choices following graduation had been limited in some way by their debts. Among this group of respondents there were lower levels of participation in further full time study. A persistently higher level of employment in non-graduate occupations was also found among this group compared to those who had either no debt or those who indicated that their debts had not effected their options. There appeared to be no difference in participation in further study or employment in non-graduate occupations by level of debt. Therefore, it is not the absolute level of debt *per se* that is associated with subsequent career profiles but how graduates are affected by this debt. The mechanisms through which debt may affect an individual's choices are complex and not uniform across different groups of respondents.

*Was it worth it? (Chapter 10)*

31. Most 1999 graduates embarked on higher education believing that their qualification and experience would improve their employment prospects but over half also saw higher education as an opportunity to achieve their potential. Only very small minority (3.5 per cent of graduates) reported that they would choose, with hindsight, not to have entered higher education. Members of this minority were more likely to be male, to have achieved a lower degree grade, to have come from a lower socio-economic group, to have attended a new university and to have had their career options affected by student debt. They also reported higher expectations that going to university would improve their job prospects, but less likelihood of having had a particular career in mind when choosing to enter higher education.

32. Over 80 per cent of graduates surveyed reported being either reasonably or very satisfied with their career to date but the majority of graduates did not measure the value of their degrees (and career satisfaction) purely in terms of economic returns. Similarly, the interview respondents gave a wide range of responses when asked what they valued most about their undergraduate experience. Four broad themes were discernible; labour market advantage, skills development, academic and intellectual stimulation and achievement, and social and personal development.

33. Overall, the vast majority of interviewees considered their undergraduate education to have been a good investment: some citing subsequent labour market success and access to employment or further education and training; others stressing the opportunity for personal development. However, given the close relationship between higher education and early career success, the perception of the 'worth' of holding a degree tended to be closely related to the degree to which they were satisfied with their career development.

# CHAPTER 1

## The expansion of higher education, economic restructuring and graduate employment

There have been major changes in both UK higher education participation and in higher education funding in the last two decades, with consequent changes in the profile of the supply of new graduates to the labour market. Between 1984 and 2003, UK higher education expanded student numbers by more than 300 per cent[1]. By the end of the 1990s, each year was seeing well over 30 per cent of young people continuing into tertiary education, with 300,000 people completing undergraduate and sub-degree diploma courses in higher education institutions (HEIs) or further education institutions (FEIs).

Consequently, the graduate labour market for the new entrants is now different to that of 10-15 years earlier, and access to employment opportunities more broadly has been profoundly affected by higher education expansion. At the same time, the impact of technology - particularly information and communication technology - has been affecting both the ways in which organisations are structured and work is organised in and among organisations and their networks (Castells 2000, 2001; Rubery *et al.* 2002).

In common with that of most developed countries (OECD 2004), UK higher education policy has increasingly been based upon an evaluation of existing evidence of individual rates of return to higher education and assessment of future skills needs, with increasing focus on the instrumental rather than intrinsic value of higher education to both the individual and society as a whole. The demand for highly-qualified employees grew at the end of the 20th century in tandem with the expansion of higher education provision and such growth is projected to continue (Hogarth and Wilson 2004). Both European and UK higher education and employment policies take it as axiomatic that investment in higher education, as part of a wider programme of investment in lifelong learning and skills development, needs to be a core component of education, employment and social policies in a competitive global economy where development of knowledge and skills rather than material resources and production of commodities will increasingly represent the blueprint for prosperity in the 21st century (European Commission 1995, 2002, 2003; DfES 2003, 2004a, 2004b).

There has been considerable debate, however, about the extent to which this may be an optimistic interpretation of the evidence (Brown *et al.* 2001; Crouch *et al.* 1999; Keep and Mayhew 1999, 1996; Reich 1991). Are highly-qualified entrants to the labour market, whether

[1] The total number of Home higher education students in the UK increased by almost two-thirds between 1991/92 and 2003/04. Overall, there were over 1.8 million higher education students in the UK in 2003/04, of which just over a million were on first degree courses. (HESA, 2002)

or not they have developed particular skills and knowledge related to ICT, *knowledge workers* who constitute the core of the workforce required in the increasingly competitive global economy (Albert and Bradley 1997)? Conversely, has higher education expansion led to an over-supply of qualified labour market entrants and growth in credentialism, so that the value of a degree has diminished? There is some evidence that access to the most prestigious and well-rewarded graduate opportunities remains largely restricted to an *elite* whose access to these jobs is predicated less on academic achievement than upon social and educational advantage for which the foundations were laid prior to 'the starting line' at which graduates compete for jobs (Brown and Hesketh 2004)

Until recently, the individual benefits of tertiary study appear to have remained considerable, whether measured according to financial or more intrinsic criteria. Evidence from the analysis of the UK 1995 graduate cohort indicated that, although the integration of graduates to appropriate jobs for people with their skills and qualifications continued over the first four years and beyond, those who graduated in the mid-1990s had largely been integrated successfully, and were being appropriately rewarded by employers. The majority of graduates expressed satisfaction with their employment and career development and it appeared from this data and from wider evidence of relative graduate and non-graduate earnings trends in the UK workforce as a whole that the graduate premium was holding up well (Elias and Purcell *op cit.* 2004, Purcell and Elias 2004, Elias *et al* 1999).

These findings illustrate aspects of the increasing diversity of HEI experiences. The range of courses offered and the age and ability ranges of new graduate entrants to the labour market have expanded far beyond precedent. As ICT continues to facilitate and require skill changes (Felstead *et al.* 2002) and adds to the impact of progressive restructuring of the economy (Gallie and White 1998) it becomes increasingly important for individuals, educationalists and policy-makers to understand the dynamics of the graduate labour market and costs and benefits in higher education investment for different categories of graduates. Is there evidence of graduate under-utilisation (Mason 1996, 2002; Wolf 2003; Battu *et al.* 2000)? Where are there shortages and over-supply of highly skilled labour? What do higher education qualifications *mean*, in terms of access to jobs and employability? Does the graduate labour market operate efficiently and cost-effectively, from the points of view of all the stakeholders?

In the past, possession of a degree has generally provided access to substantially higher lifetime earnings, but projections that this will continue to be the case are extrapolated from the experience of previous generations of graduates who benefited from an *elite* higher education system in the UK. Does a degree continue to facilitate entry to career opportunities and lead to higher earnings in the short term - and will it continue to lead to higher lifetime earnings? The rates of return to different HE qualifications, and the extent to which graduates

are integrated into the labour force into jobs which value and build upon their higher education, have profound implications for higher education policy-makers as well as for graduates and intending students. Without the assurance that investment of time in higher education will produce advantaged access to labour market opportunities, growth in the participation of under-represented groups, in line with the current educational policy objectives, is unlikely to be achieved.

This report sets out the main findings from analysis of the *Class of '99* project, along with some comparative analysis of the findings from the earlier 1995 graduate cohort study surveyed in Winter 1998/9. Two other reports have also been produced to report on particular sub-samples of these graduates: the second focusing on the recruitment and retention of teachers and the career development and perceived career options of those who trained as teachers, also conducted on behalf of the DfES[2] and the third examining the careers of the graduates within the two samples who were Northern Ireland domiciled or had studied at HEIs in Northern Ireland, conducted on behalf of the Department of Employment and Learning (Northern Ireland)[3]. In both the latter cases, data from further research conducted on the 1995 graduate cohort (an ESRC/HECSU funded project titled *Graduate Careers Seven Years On)* were also used[4].

In this UK national report, we examine in detail evidence relating to the transition from higher education to employment provided by a representative sample of UK graduates who completed their undergraduate degrees in 1999. We also compare their experiences with those of an earlier sample who graduated in 1995. Details of these samples, and the profile of the respondents, are provided in Chapter 2. Chapter 3 addresses the question 'What is a graduate job', investigating the nature of graduate skills and knowledge. Chapter 4 is based upon the work histories provided by all respondents to these postal surveys, tracing the movement of graduates into the labour market after completing their first degrees. Chapter 5 looks at the role of intermediaries in the process of entering the labour market – careers advisors, careers services and the part played by employment agencies.

Chapter 6 examines one of the main indicators used to measure the 'success' of a graduate's education, presenting findings from a detailed analysis of the earnings of graduates, comparing the situation of the 1999 cohort with the 1995 cohort. Chapter 7 pursues the question of higher education outcomes further by examining other measures of job

2 *Education as a Graduate Career: Entry and Exit from Teaching as a Profession* (Purcell, K., N. Wilton, R. Davies and P. Elias) 2005 forthcoming, to be published by DfES.

3 *Northern Ireland's graduates: the classes of '95 and '99* (Purcell K., Elias, P., Davies, R. and N. Wilton) 2005 *forthcoming*, to be published by DEL(NI).

4 This study, which was a 1995 cohort second sweep survey and interview programme, was funded by the Economic and Social Research Council (ESRC) and the Higher Education Careers Services Agency (HECSU). It was directed jointly by Peter Elias and Kate Purcell. For further information about existing and forthcoming publications from this study, see www.warwick.ac.uk/go/glmf or www.uwe.ac.uk/bbs/research/esru/7-up.shtml

characteristics – the kind of work graduates do and their assessment of the quality of their jobs. Chapter 8 looks at the relationship between the undergraduate degree studied, career intentions and postgraduate study. Chapter 9 presents an interesting analysis of the indebtedness of graduates following their first degree course. Finally, chapter 10 attempts to bring all of these findings together by posing the question 'Was it worth it?' – exploring, in particular, subjective assessments by respondents about how far higher education added value to the *Class of '99.*

More detailed material is confined to a set of appendices. Appendix 1 gives an overview of the career outcomes reported by the 1999 HND and DipHE course-leavers who completed the questionnaire, whose responses are excluded from the main report. The strengths and weaknesses of the methodology and achieved sample are discussed in Appendix 2, as is the design and analysis of the interview programme, where the sample was selected to allow for exploration of the difficulties encountered by disadvantaged and disaffected graduates. Appendix 3 contains detailed statistical tables that underlie some of the analyses presented in this report.

# CHAPTER 2

## Who are these highly qualified labour market entrants?

### 2.1 Introduction

The purpose of this chapter is to map the demographic and educational characteristics of the sample of graduate labour market entrants and the population from which it has been drawn. Primarily, it provides a profile of the sample of 1999 graduates whose experiences of the transition from higher education to employment form the basis of this research. We report their current career outcomes – whether or not they are in employment and, where relevant, sector of employment, occupation, working conditions and work context. We also summarise their educational characteristics: their distribution by type of institution, degree subject and class of degree, and their prior educational qualifications. Alongside comparisons with the overall population of graduates using national statistics, comparison will also be made, where appropriate, with data collected from a similar survey of an earlier cohort; those who graduated in 1995 and who were surveyed at a slightly earlier stage in their careers, 3½ years after graduation.

One in two UK domiciled[5] 1999 course-leavers from undergraduate degree and diploma courses at 38 UK Higher Education Institutions (HEIs) were surveyed between February 2003 and April 2004[6]. The survey yielded 9,236 responses, consisting of 8,571 respondents who had completed first degrees, 293 who had completed DipHEs and 254 who had completed HNDs. In total, those who had completed undergraduate degrees accounted for 93 per cent of the overall sample. Most of this report focuses exclusively on those who completed first degrees in 1999. Appendix 1 provides an analysis of the outcomes of respondents who had completed undergraduate diploma courses in 1999. Appendix 2 gives details of the methodology adopted and shows comparisons of key characteristics of the sample with Higher Education Statistics Agency (HESA) statistics for the population from which they were drawn. In particular, we draw attention to the fact that disproportionately more women than men responded to the survey. In the analysis that follows in this and subsequent chapters, the data have been weighted to take account of this bias.

Minority ethnic graduates constituted less than 10 per cent of the respondents to this survey whereas, in the undergraduate population as a whole, they represented approximately 16 per cent at the time that the study was undertaken (Connor *et al.* 2004). This under-representation almost certainly derives from the two-stage sampling strategy adopted to facilitate comparison with the 1995 cohort. Connor *et al. (ibid.*), in a comprehensive study of

5 Overseas students studying in UK on undergraduate courses were excluded from the sample.

6 See Appendix 2 for details of sampling and methodology.

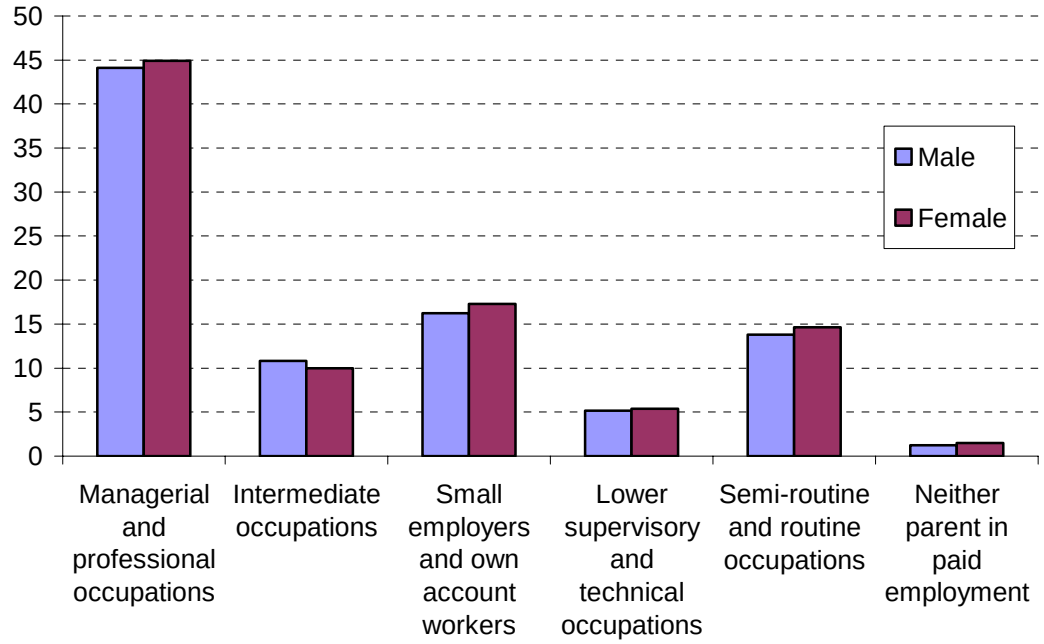
minority ethnic group participation in higher education, discussed how such student participation tends to have been clustered in particular regions, at particular universities and disproportionately distributed across the subject/discipline spectrum. Given the finding from the latter study that there were significant differences in the minority ethnic population, in terms of both participation and outcomes, and the under-representation of minority ethnic graduates in this one, we have not undertaken extensive analysis of the significance of ethnicity on outcomes, but we do include it as a variable in key statistical investigations – such as, for example, the variables associated with the financial return to higher education in Chapter 6.

The demographic characteristics of the sample in general, however, largely reflect the changing profile of the undergraduate population at the end of the 20th century. Over half were women (53.6 per cent) and approximately 15 per cent had studied as mature students who had prior experience of the labour market. In the report, we investigate the significance of age for outcomes by classifying respondents into one of three in age groups: *young*, who graduated before they were 25; *young mature* graduates, who graduated between the ages of 25 and 29; and *older mature* graduates, who graduated at the age of 30 or over. Of the sample who had completed undergraduate degrees, approximately 85 per cent were young graduates, 5 per cent 'young mature' and 10 per cent older matures. There was little difference in the gender composition of these groups.

The decision was taken to exclude part-time students, primarily because the Open University, at which the majority of undergraduate part-time students study, was not included in the sample of HEIs, but also because a separate study of graduates who had studied was approaching completion at the time that this study commenced (Brennan *et al.* 1999a, 1999b). Seven per cent of respondents had, nevertheless, studied part-time, which reflects the difficulties encountered by some of the HEIs in the sample in selecting the target respondents and, along with responses from other respondents who should not have been included in the survey, illustrates the deficiencies of some of the *alumni* mailing lists; a significant variable in consideration of response rates, as discussed in Appendix 2. Six per cent had studied on sandwich courses where they spent a substantial component of the course in structured work experience.

Figure 2.1 shows the social class background of the sample by gender, assessed according to the occupations of their parents when they were 14 – the age at which most young people in the UK make significant educational choices that facilitate or restrict future educational and employment options. It illustrates the well-established relationship between social class and propensity to participate in higher education (Ferri *et al.* 2003; Dearing Report; Connor and Dewson 2001; Metcalfe 1997).

**Figure 2.1: Parental background of sample (NSSEC*), by gender**



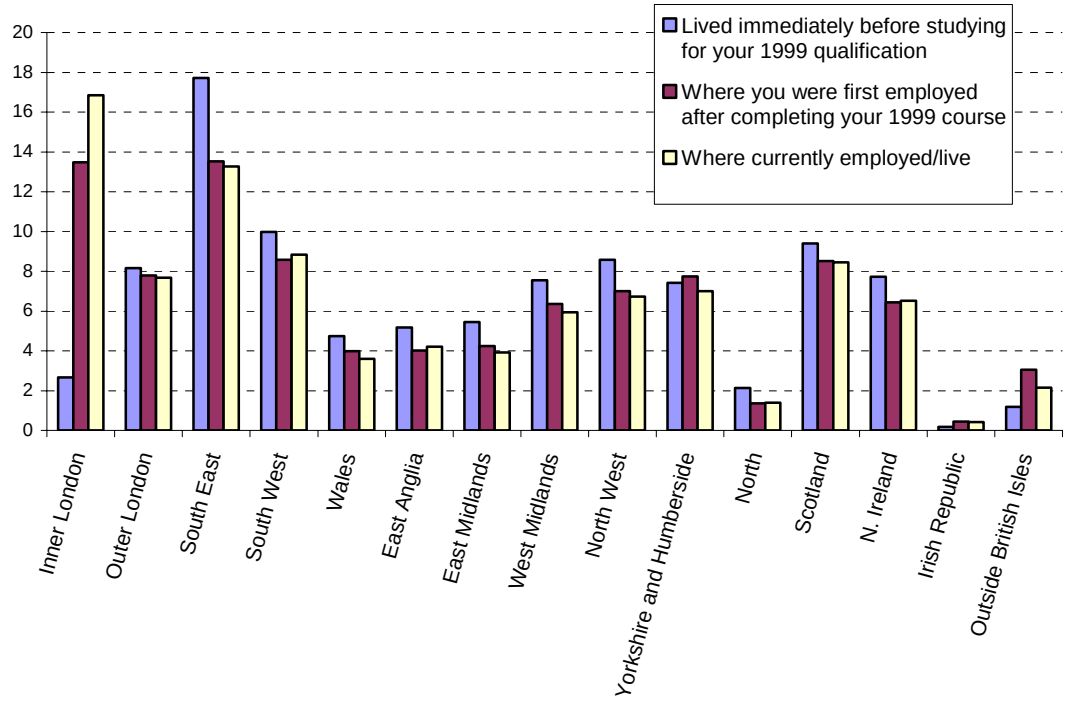

Source: The *Class of '99*: Early Career Paths of 1999 Graduates
Note: * NSSEC is the National Statistics Socio-economic Classification.

We asked respondents about the highest educational qualifications of their fathers, mothers, siblings and partners and this gives an interesting insight into the impact of higher education expansion and the restructuring of socio-economic structures and opportunities. Just over a quarter (26 per cent) of graduates had fathers with degrees and 19 per cent had mothers with degrees, but of those with partners, a third had graduate partners and of those with siblings, half had at least one brother or sister who also had a degree. Nevertheless, recent evidence suggests that current rates of intergenerational social mobility in the UK are relatively low in comparison with other European countries and social origins, although far from deterministic, have remained highly significant in relation to occupational outcomes (Breen 2004; Aldridge 2004; Erikson and Goldthorpe 1992).

Figure 2.2 outlines the regional composition of the sample at three different points in time: firstly, where they lived prior to study; secondly, where they were first employed immediately after completing their 1999 degree; and thirdly, where they were living/working at the time of the survey. This is important given the distribution of graduate employment opportunities, skewed heavily towards London and the South East of England (as will be discussed more fully in Chapter 7), and a high degree of geographical mobility is evident in the early years of the careers of graduates. The most notable point is the significant inflow of graduates into Inner London which corresponds with the outflow of graduates from most other UK regions (particularly other parts of South East England). As far as the Inner London region is

concerned, an important distinction needs to be made between 'working' and 'living'. The first measure asks about where respondents lived, the final measure where they worked or lived.

**Figure 2.2: Regional composition of sample**




Source: The *Class of '99*: Early Career Paths of 1999 Graduates

In terms of national identity, over two-thirds considered themselves British, 29 per cent English, 8 per cent Scottish, 4 per cent Welsh, 4 per cent Northern Irish, 4 per cent Irish and nearly 4 per cent 'other'[7].

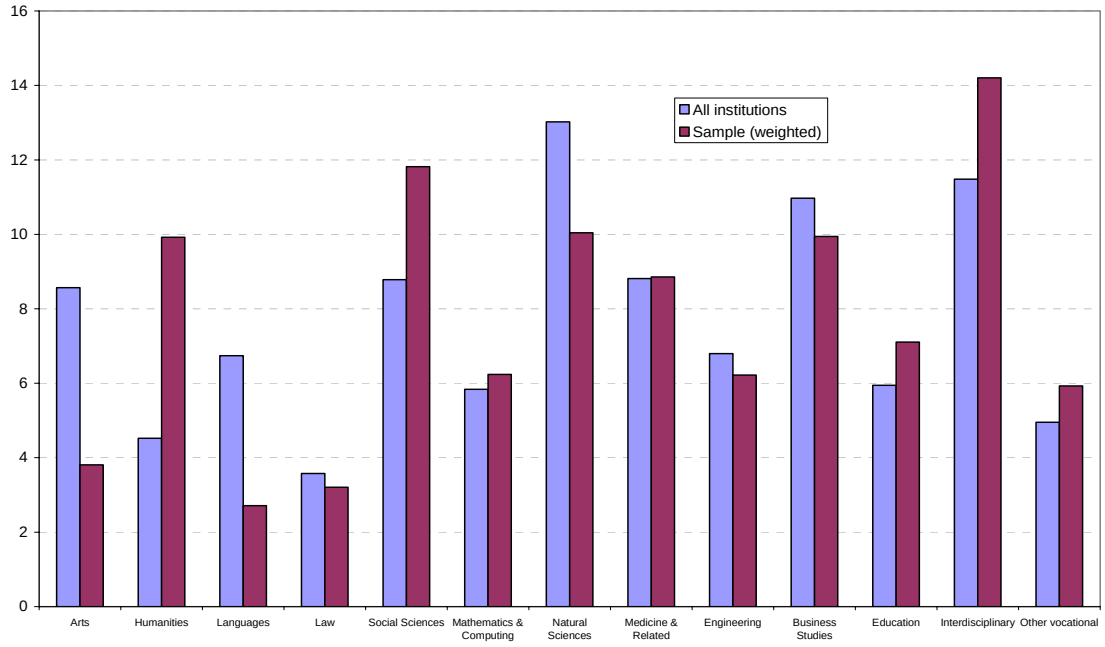
## 2.2 Educational Characteristics

We turn now to educational variables: background in terms of institution attended, subject studied and class of degree achieved. We also examine the relationship between type of school attended and institution of study

Figure 2.3 summarises the subject distribution of the sample, comparing this with similar information from the Higher Education Statistics Agency for first degrees awarded in 1998-99.

7 Respondents could indicate more than one of these.

**Figure 2.3: Subject of study, comparison of survey sample and population**

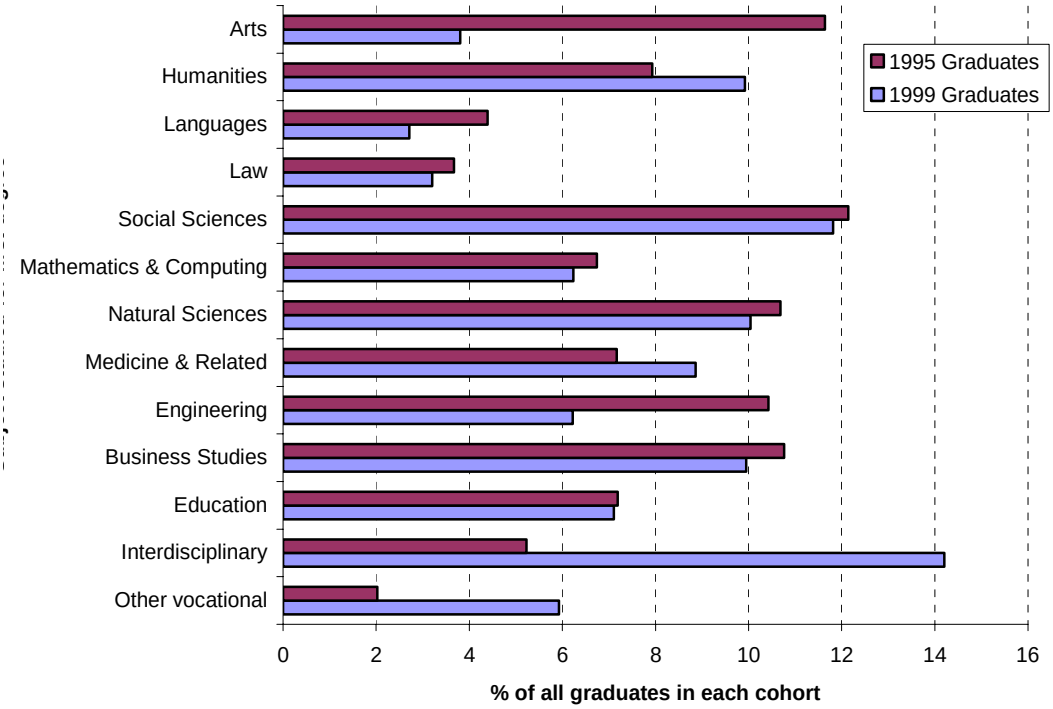



Sources: The *Class of '99*: Early Career Paths of 1999 Graduates/HESA (qualifications obtained, full-time undergraduates - domestically-domiciled graduates only)

In some areas there are significant differences between the sample and the population, all of which are explicable in terms of the sampled HEIs or likelihood that some subjects may have been classified, by the respondents and the coders who subsequently checked the self-coding, somewhat differently to the HESA classification on which the full population distribution is based. No specialist institutions were included in the sample of HEIs from which survey respondent were drawn. The subject category 'Interdisciplinary' presents particular problems, in that it is likely that graduates who studied on what HESA listed as interdisciplinary programmes may have responded to the question by identifying themselves by the subject that they had come to regard as their major discipline. On this basis, the apparent 'over-sampling' of, in particular, humanities, social sciences and 'other vocational' subjects is likely to reflect the misclassification of interdisciplinary subjects.

In the course of the report, we will compare the employment trends and early career outcomes of the 1999 cohort surveyed with those of the 1995 cohort, so it is important to explore the extent to which the subject profile of the two cohorts may contribute to an explanation for differences in access to employment, earnings and occupational distributions.

**Figure 2.4 Subject distributions of 1995 and 1999 graduate cohorts**

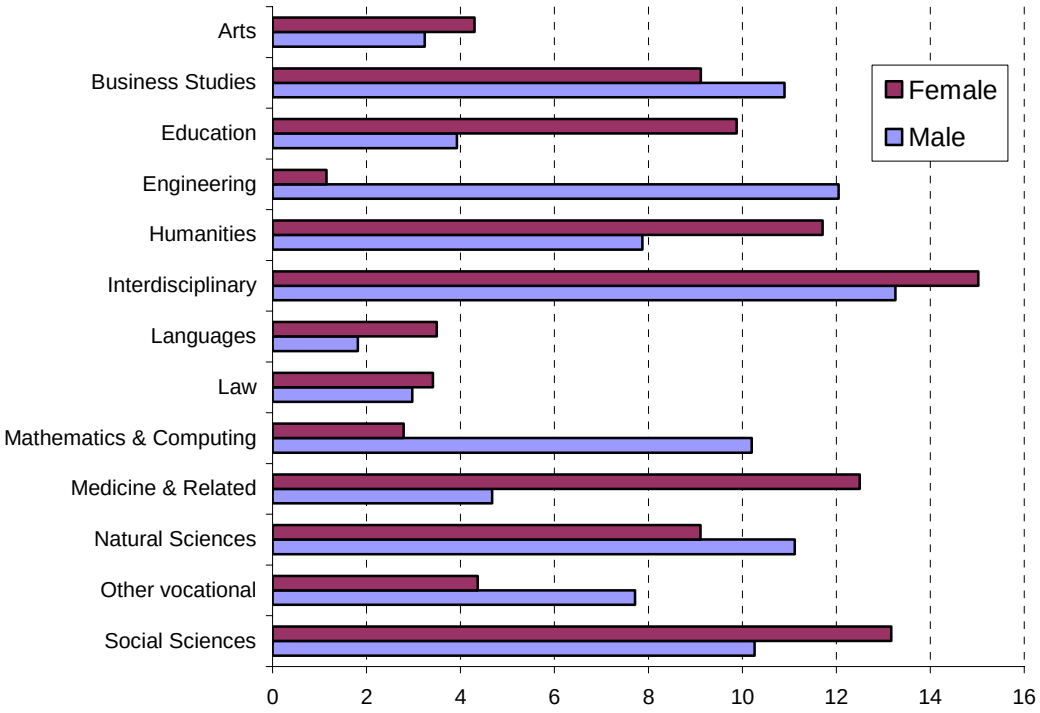



Sources: *Moving On*: Early Career Paths of 1995 Graduates
The *Class of '99*: Early Career Paths of 1999 Graduates

Figure 2.4 reveals that there are significant differences in the distribution of subjects studied between the 1995 and the 1999 cohorts. In part this reflects the greater attention that was paid to the coding of information about the subject of the 1999 degree, where responses were re-coded on the basis of a full description of the degree rather than reliance on self-coding to broad categories: for example, History graduates in university Arts faculties sometimes classified themselves as 'Arts' rather than 'Humanities' graduates and examples of such inaccurate classification was rectified in the *Class of '99*, but not for the *Moving On* analysis. Part may also arise from the difference between the two sample populations, with the addition of five new HEIs with different faculty and subject area organisation - selected to adjust for regional response bias evident in the sample of 33 HEIs used for the 1995 cohort. See Appendix II for discussion of the representativeness of the sample.

Another variable to be borne in mind when interpreting trends and outcomes is the different gender distribution across the sample, in terms of degree subjects studied. Figure 2.5 outlines the gender composition of the 1999 sample according to the subject of their degrees and when gender differences are outlined in the report, it is important to bear in mind this subject/discipline difference in the profiles of the gender sub-samples.

**Figure 2.5: Subject of study, by gender**



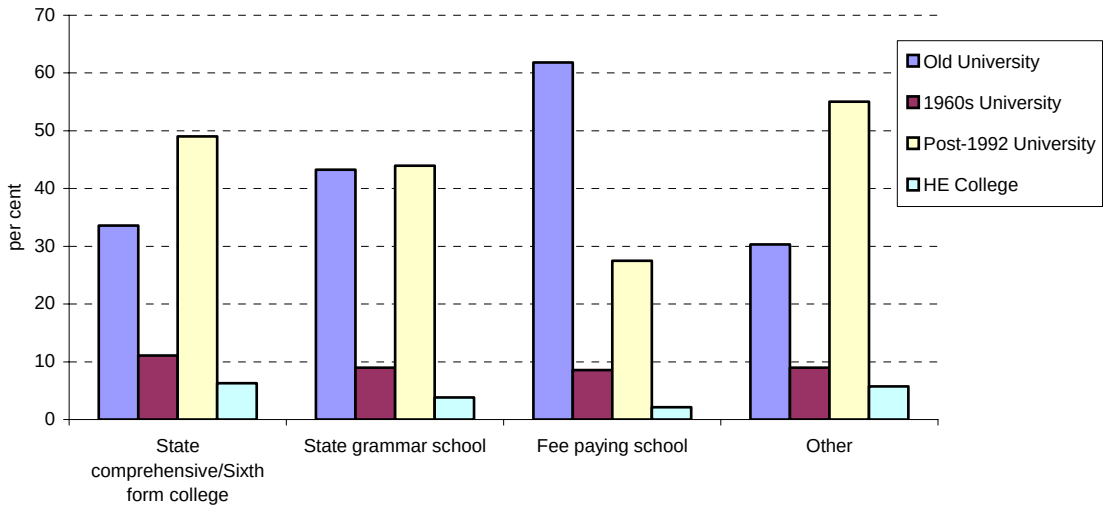

Source: The *Class of '99*: Early Career Paths of 1999 Graduates

In terms of the mode of study, 89 per cent of the sample studied for their qualification on a 'normal' HEI-based 3-4 year full-time undergraduate programme of study basis, 6 per cent had studied part-time for all or some of their courses and 7 per cent had undertaken sandwich courses. Less than one per cent of the sample studied via distance learning. HESA statistics for qualifications obtained in the year 1998-1999 indicate that, 10 per cent of 1999 first degree graduates had studied part-time.

Of the full 1999 sample, approximately 40 per cent had attended an old (ancient or 'redbrick' university), 10 per cent a 1960s campus or ex-College of Advanced Technology (CAT), 45 per cent a post-1992 university and 5 per cent a HE college. Very little difference is evident according to the gender distribution apart from a slightly greater propensity amongst females to have attended a HE college (7 per cent compared to 4 per cent). In terms of type of school attended, 64 per cent of the sample had attended a state comprehensive school, 16 per cent had attended a state grammar school, 15 per cent a fee-paying school and 5 per cent another type of school.

Figure 2.6 outlines the type of institution at which the sample achieved their degrees according to the type of school they had attended. Overall, half of those from a state comprehensive had attended a post-1992 university and approximately one-third attended an old university. In comparison, over 60 per cent of those from a fee-paying school attended an old university and just over one-quarter a post-1992 university.

**Figure 2.6: Type of school attended, by type of institution attended**




Source: The *Class of '99*: Early Career Paths of 1999 Graduates

Figure 2.7 shows the grouped A-level scores for young and young mature graduates, for those who attended at an 'old university' (pre 1960) and for those who gained their degrees at a 'new university' (post 1992). The impact of selection into the old universities is clearly apparent, with over 70 per cent of the survey respondents from this group having 20 points or more, compared with only a quarter of the respondents from the new universities.

**Figure 2.7: A level scores (or equivalent) of graduates who completed their degrees under the age of 25, by type of HEI where they had studied**

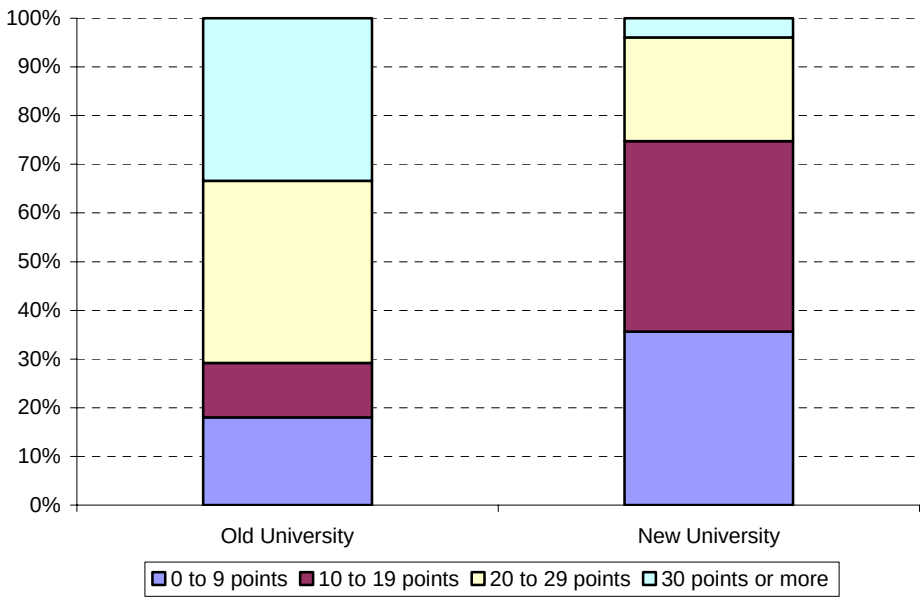



Table 2.1 outlines the class of degree obtained by the sample in comparison with the overall population. In general terms, it appears that the sample of 1999 graduates is skewed towards

those graduates who had achieved higher awards. The gender distribution of the class of degree achieved by the sample shows that women were notably more likely to have obtained an upper second (55 per cent compared to 46 per cent respectively); men were marginally more likely to have obtained all other classes of degree. The clue to one aspect of the different distributions is provided by the significant difference in proportions obtaining unclassified or ordinary degrees. To some extent, this is likely to reflect the omission of 'monotechic' institutions from the HEI sample, since these specialist institutions are more likely to award unclassified degrees that also endow professional practitioner status.

**Table 2.1: Class of degree, comparison between survey sample and population**

| | Survey Sample | All 1998/99 Graduates |
|---|---|---|
| First Class | 10.6 | 7.9 |
| Upper Second | 51.1 | 42.4 |
| Lower Second | 29.8 | 35 |
| Third Class/Pass | 8.3 | 7.9 |
| Unclassified/Ordinary Degree | 0.23 | 6.9 |

Source: The *Class of '99*: Early Career Paths of 1999 Graduates; HESA.

## 2.3 Employment outcomes

Table 2.2 shows the current situation as reported by graduates at the time of the survey. It indicates that the vast majority of the sample is in full-time employment, with a little more than two-thirds overall being in full-time employment related to their long-term career plans. Female graduates were more likely to be in part-time employment and in postgraduate study of some kind but males were more likely to be either self-employed or unemployed.

**Table 2.2: Current situation, by gender**

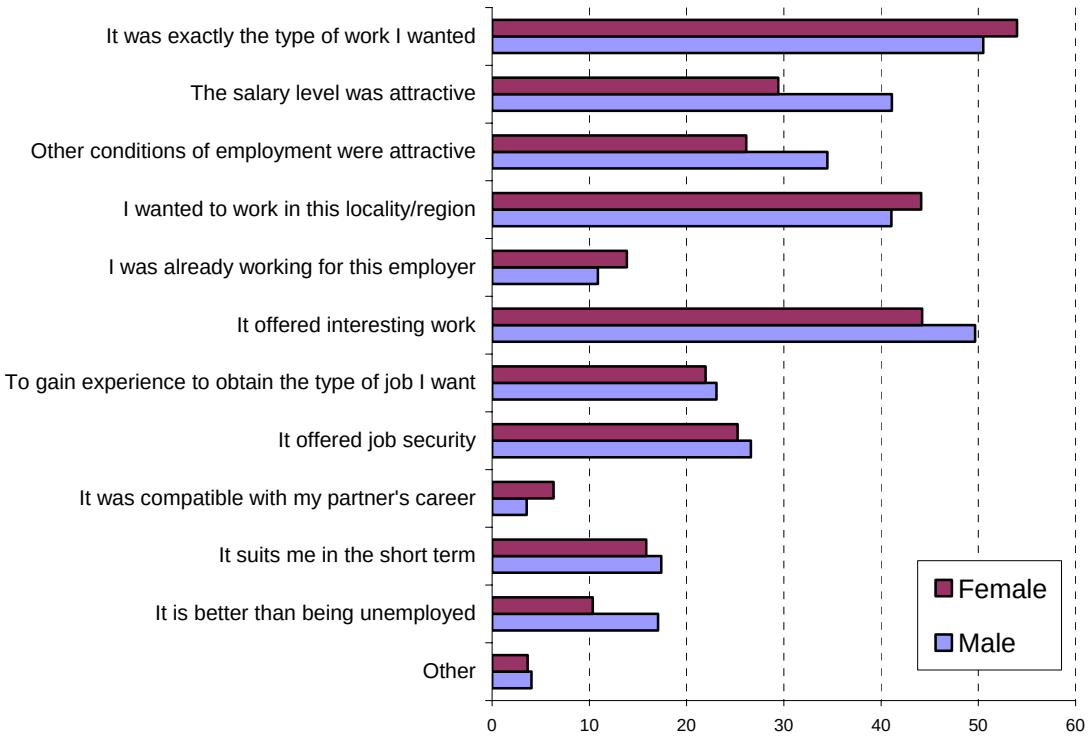
| | **Male** | **Female** |
|---|---|---|
| Full-time related to long-term career plans | 69.5 | 65.7 |
| Part-time related to long-term career plans | 1.5 | 4.7 |
| In full-time employment (other) | 16.6 | 17.6 |
| In part-time employment (other) | 1.7 | 3.1 |
| Self-employed | 4.2 | 3.0 |
| Postgraduate study | 6.5 | 8.3 |
| Unemployed and seeking work | 3.2 | 1.9 |
| Out of the labour force/not seeking work | 0.8 | 1.7 |
| Other | 2.2 | 3.2 |

Source: The *Class of '99*: Early Career Paths of 1999 Graduates

Aggregating male and female responses, Figure 2.8 outlines the reasons given by respondents in employment for taking their current job. Most notably, male respondents were more likely than women to have given the extrinsic reasons of 'attractive salary' and 'other

conditions of employment'. However, they were also more likely to say it was better than being unemployed. Women appeared marginally more concerned with the context of employment in that they were more likely to indicate that location was important and that it was compatible with their partners' career. Whilst women were more likely to say that the job was 'exactly the type of employment I wanted', men were more likely to indicate the potential for interesting work.

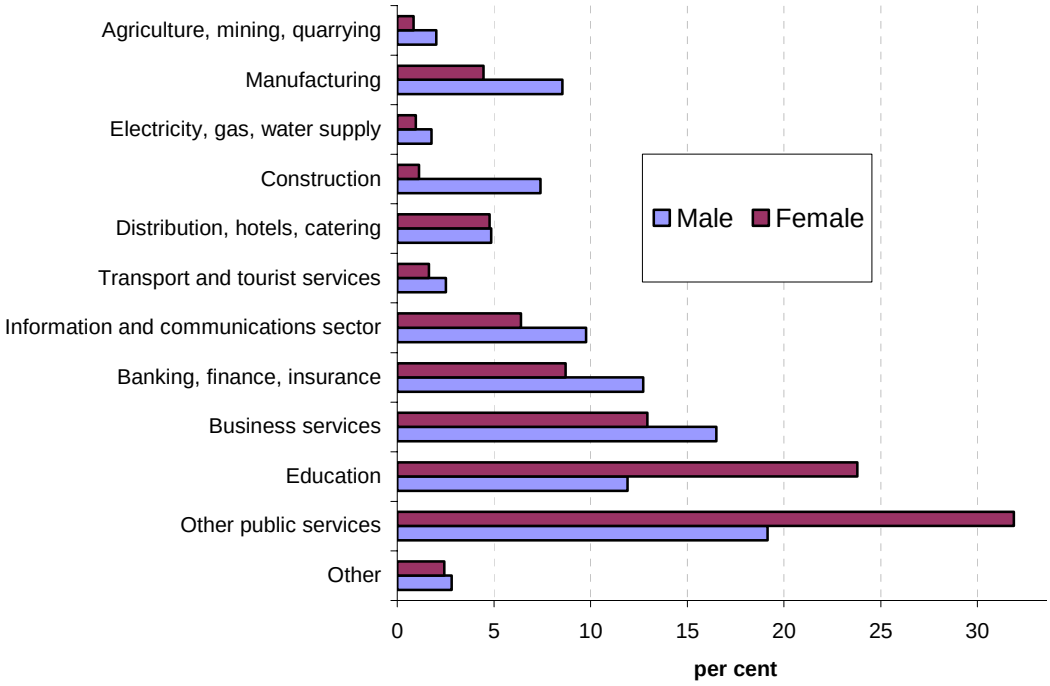
**Figure 2.8: Reasons for taking current job, by gender**




Source: The *Class of '99*: Early Career Paths of 1999 Graduates

Figure 2.9 outlines the sectoral distribution of the sample according to gender. Most obviously women were significantly more likely to be employed in the public sector (overall, 48 per cent compared to 29 per cent for men). It is also worth noting that women were more likely to work in the not-for-profit sector (7 per cent compared to 4 per cent of men). As a result of this significant public sector bias for female employment, men were more likely to be working in all other sectors, most notably construction and manufacturing although significantly higher proportions also worked in the ICT, banking and finance and business services sector.

**Figure 2.9: Sector of current employment of 1999 graduates, by gender**

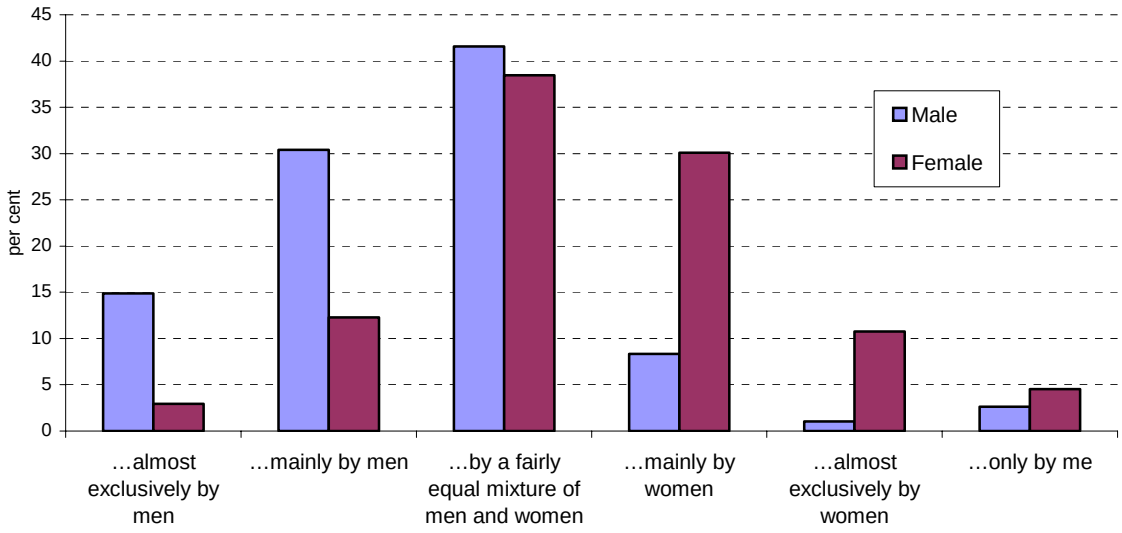



Source: The *Class of '99*: Early Career Paths of 1999 Graduates

Figure 2.10 shows the extent to which the respondents were working alongside men and women doing similar work in their current jobs. Industries and occupations where women predominate tend to be lower-paying than average, for a variety of largely historical reasons, but ongoing analysis of the 1995 cohort has revealed that among graduates in similar graduate occupations, occupational gender segmentation in organisations was significantly related to gender pay differentials (Purcell and Elias 2004b).

The figure illustrates considerable symmetry in the extent to which respondents of both sexes were working in 'gendered' jobs at their place of work. Approximately 45 per cent of men and 40 per cent of women were working in jobs either exclusively or mainly with colleagues of the same sex.

**Figure 2.10: Response to statement 'In my workplace, my type of job is done …' (see response categories below)**




Source: The *Class of '99*: Early Career Paths of 1999 Graduates

Table 2.3 outlines the contractual status of employed graduates at time of the survey comparing the graduates of 1999 and 1995 at a similar point in time after graduation. There is close similarity between the two cohorts in terms of the proportions working under different contractual arrangements.

**Table 2.3: Contractual basis of current job, 1999 and 1995 graduates (as percentage of all in employment)**

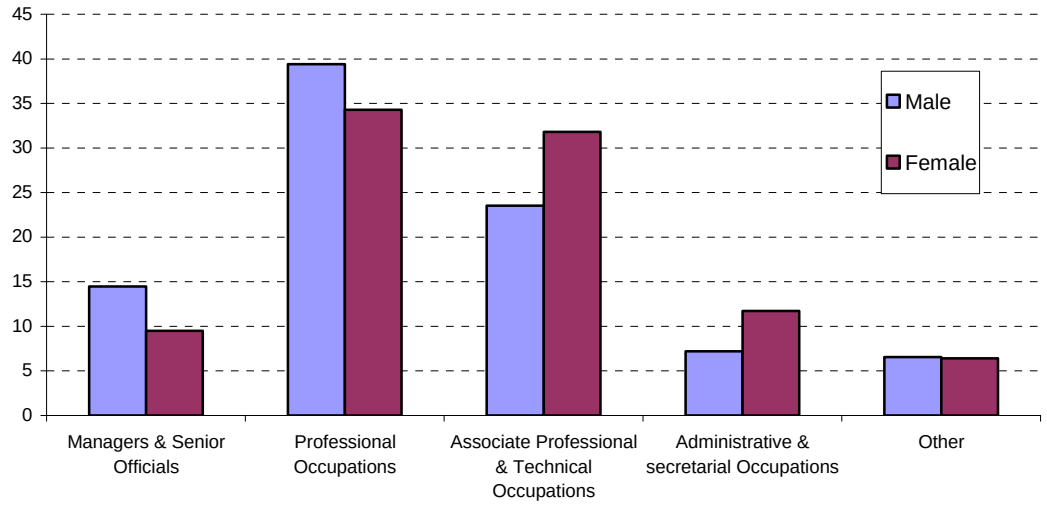
| | 1999 Graduates | 1995 Graduates |
|---|---|---|
| Permanent or open-ended contract | 77.5 | 76.3 |
| Fixed-term contract | 11.5 | 14 |
| Probationary period prior to confirmation | 3.3 | 2.4 |
| Self-employed | 2.8 | 2.9 |
| Temporary, through an agency | 1.5 | 1.9 |
| Other temporary or casual | 1.4 | 2.4 |

Source: The *Class of '99*: Early Career Paths of 1999 Graduates; *Moving On*: Career Paths of 1995 Graduates

Finally, in this chapter, we examine the types of occupation in which the graduates of 1999 were employed. For this we use two occupational classifications; SOC2000 and SOC (HE). According to distribution by SOC2000 major groups, it is evident from Figure 2.11 that men were more likely than women to be employed in the 'managers and senior officials' and 'professional' occupations. Conversely, women were significantly more likely to be employed in occupations defined as 'associate professional and technical' and 'administrative and

secretarial'. This may be due to sectoral differences in employment between men and women and this will be addressed in more detail in Chapter 7.

**Figure 2.11: Occupational classification of current job (SOC2000), by gender**

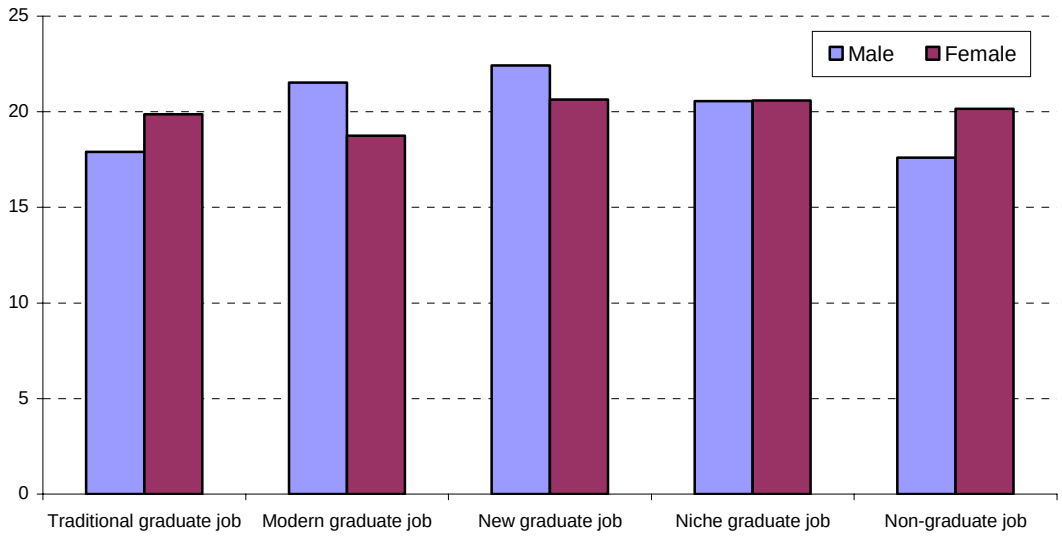



Source: The *Class of '99*: Early Career Paths of 1999 Graduates

Finally, Figure 2.12 outlines the distribution of the sample according to SOC (HE). The growing complexity of the (graduate) labour market and labour supply require a means of segmenting jobs and occupations beyond simply a straight graduate/non-graduate duality. Changes in occupational structures and the expansion of higher education have meant that graduates are entering the workforce in different ways than in the past and are becoming integrated into the occupational structure in a wider variety of roles than hitherto. In order to reflect this diversity, we utilise SOC (HE); an occupational classification designed to facilitate the analysis of change in the graduate labour market, classifying occupations according to generational change in the proportion of degree holders in them, the qualifications required to enter them and the levels of skills and knowledge required in order to perform the job competently. The classification distinguishes five categories of jobs in which graduates are employed: traditional, modern, new, *niche* and non-graduate[8]. We use this typology to map the types of jobs that the 1999 graduates were doing four years after graduation. Along with survey questions about the skills used, responsibilities exercised and career prospects perceived by respondents, and subjective assessments of the extent to which their jobs were appropriate for people with their skills and qualifications, we are able to outline what it is to be in a job described under each heading in SOC (HE) and to evaluate the extent to which respondents were likely to be in suitable jobs for graduates. Overall, whilst the broad distribution shows little difference according to gender, women were more likely to be in both traditional and non-graduate jobs whilst men predominated in modern and new graduate jobs.

8 Full details of this classification are given in Elias and Purcell (2004a).

**Figure 2.12: SOC (HE) category of current job, by gender**




Source: The *Class of '99*: Early Career Paths of 1999 Graduates

## 2.4 Summary

In this chapter, we have outlined the characteristics of the 1999 sample upon whose early career experiences this report is predominantly based. We have discussed the ways in which their profile differs from the population from which they were drawn and assess the extent to which such differences may introduce an element of response bias or mis-represent the experiences of the 1999 graduate cohort. As in all comparable surveys, women's response rate was higher than men's, minority ethnic graduates were under-represented and there was a somewhat greater propensity for more successful graduates (in terms of class of degree achieved) to have participated in the survey. We conclude that although these factors need to be borne in mind, they are unlikely to have led to significant misrepresentation of the population or its experiences or career outcomes. The strengths and weaknesses of the methodology and achieved sample are discussed in Appendix 2, and the interview programme sought to identify difficulties encountered by disadvantaged and disaffected graduates.

The chapter concluded with an account of the employment profile of the *Class of '99* approximately four years after graduation. This shows that:

- nearly all the graduates were in employment, with only 3 per cent of men and less than 2 per cent of women unemployed and seeking work;
- self-employment was very low - only 4 per cent of men and 3 per cent of women;
- nearly 70 per cent of men and 66 per cent of women were in full-time employment related to their long-term career plans;

- a significant minority - around 7 per cent of men and 8 per cent of women - were in postgraduate study;
- the most popular reason for taking current job was 'It was exactly the type of work I wanted', followed by 'It offered interesting work and 'I wanted to work in this region';
- the overwhelming majority of graduates work in the service sector, with 55 per cent of female graduates employed in either education or other public services;
- male graduates were also most likely to work in other public services, but were more evenly spread throughout the sectoral spectrum;
- as previous research has revealed, the majority of graduates worked in gendered occupational contexts; and finally,
- although there were interesting differences in the occupational distribution of women and men that will be explored further in this report, the majority of respondents appeared, at the time of the survey, to be in appropriate jobs - as managers and senior officials, professionals or associate professional and technical job-holder, according to the current standard occupational classification (S0C2000) and in a 'graduate' job category, according to SOC(HE), a new classification of occupations developed to analyse change in the graduate labour market.

In the next chapter we explore in more detail what a graduate job entails and the extent to which the 1999 cohort appeared to have achieved such employment four years after graduation.

# CHAPTER 3

## What is a graduate job? Skills, knowledge and employability

### 3.1 Introduction

As higher education has expanded, the proportion of new labour market entrants with degrees has grown, the number of courses and institutions awarding degrees has expanded, and the range of occupations undertaken by graduates has become increasingly diverse. The big question is; how far are graduates entering jobs that require and use their higher education skills and knowledge? Are they accessing appropriate work for people with their skills and qualifications? Employers have traditionally used possession of a degree as a proxy for a variety of traits they deem desirable in their employees, including ability, above average literacy and numeracy, the ability to engage in and complete challenging tasks that involve problem-solving and communication skills – and implicitly, the potential to learn and develop as innovative career staff. Is it the case that they have continued to recruit 1999 graduates *as graduates* rather than simply because they are the best candidates for jobs in an increasingly highly-qualified pool of candidates?

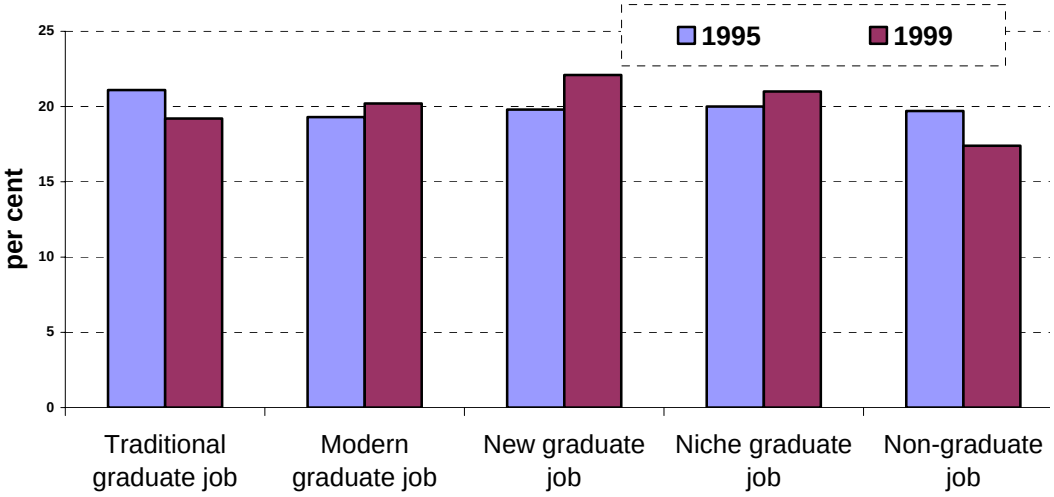
Defining what constitutes 'a graduate job' is not easy, but it is possible to identify jobs for which particular levels of education, or types of education, are required – and jobs that cannot be accessed without prior completion of an undergraduate degree, regardless of whether the subject knowledge or the discipline-specific skills developed on the degree are required in order to do the job well. The qualifications required to enter occupations are inherently culturally relative and change over time, as occupations (and the boundaries between them) evolve and are affected by wider changes in the labour market; organisational and technological change, but also change in the labour supply. A good example of the interplay between supply and demand-side variables in effecting change is the increasing participation of women in the labour force throughout the twentieth century, which led to changes in the construction of jobs - both in terms of how work was organised (for example, on a part-time basis) and how tasks were allocated and responsibilities demarcated - leading to change in divisions of labour among occupations in both manufacturing (Glucksmann 1990) and white-collar employment (Crompton 1988).

A great deal has been written about the post-industrial 'knowledge economy' both by theorists and policy-makers who advocate an increase in higher education participation in order to meet the needs of economies and from their critics, who allege that expansion in demand for knowledge workers has been grossly exaggerated, that the greatest increase in jobs appears likely to be among routine service workers (Brown and Hesketh 2004; Thompson *et al.* 2001) and that an increasingly high proportion of graduates are 'over-educated' or under-employed

(*e.g.* Dolton and Vignoles 2000). The debate so far has tended to be conducted by participants with partial evidence, or who have examined change in particular segments of the labour market, or organisations in it, on the basis of selective evidence. The recent surveys of 1995 graduates (Elias *et al.* 1999; Elias and Purcell 2004a) and now this one, both covering the full spectrum of UK undergraduate provision, enable us to explore the extent to which recent graduates have been integrated into the labour market in jobs that require and draw upon (or build upon) their higher education.

Interestingly, comparing the distribution of 1999 respondents in employment with the equivalent 1995 sample, it appears that they are significantly less likely to be in either traditional or non-graduate jobs than the earlier cohort and more likely to be in modern, new or *niche* graduate jobs.

**Figure 3.1 Distribution of those in employment by SOC (HE) classification, comparing 1995 graduates 3.5 years after graduation and 1999 graduates 4 years after graduation**




Source: The *Class of '99*: Early Career Paths of 1999 Graduates

The different profiles of the two samples may indicate a deterioration or improvement in opportunities or job quality, or reflect change in the labour market or simply the extra nine months, on average, spent in it by the later cohort. We will explore recent trends further in this report, as we compare the characteristics and rewards of the different categories of occupations.

If we look at the requirements for the different types of occupation, we find (as was found in the study of 1995 graduates seven years after graduation), that the more established categories of graduate jobs appeared to have been more likely to both require and use degree qualifications and learning, and that there was a qualitative difference between the four graduate job categories and non-graduate jobs. Table 3.1 indicates a similar pattern.

*Traditional* graduate jobs were most likely to have required degrees – and more often, particular degrees in terms of subjects and grades – and also considerably more likely to have required postgraduate credentials: higher degrees or professional training and qualification. The profiles exhibited by *modern* and *new* graduate jobs are relatively similar, both of which consist substantially of newer professions and associate professions and managerial jobs in sectors where substantial numbers of graduates have increasingly been employed in the second half of the 20th Century. *Niche* graduate jobs had a slightly different overall profile - somewhere between new and non-graduate jobs in terms of likelihood of requiring and building upon qualifications and most likely of all SOC (HE) categories to reflect internal labour market mobility.

The extent to which management jobs are represented in 'modern', 'new'*, 'niche'* and, possibly, non-graduate occupations is indicated by the more frequent relevance of previous employment experience. The puzzle, as with the *Seven Years On* study, is that nearly half of those in ostensibly *non-graduate* jobs claimed that their degree had been required and in well over a quarter of non-graduate cases, subject studied was also perceived to have been relevant. As in all the SOC (HE) categories, respondents in non-graduate occupations were more likely to say they were using their skills than their subject knowledge and least likely to say that a degree had been required. An examination of the jobs of those who gave positive answers on each of these three dimensions suggests that interpretation of the use of skills and, to a lesser extent, subject knowledge, may often have been on the basis of a somewhat optimistic assessment of using such skills or knowledge in a job for which they were overqualified - for example, teaching assistant, care assistant, museum attendant, clerk. What they clearly meant, in such cases, was that their degree had given them a competitive advantage in obtaining these jobs, because employers rightly saw that their knowledge and skills would be likely to enhance performance, in a job which did not require, or pay a premium for, undergraduate knowledge and skills. On the whole, such recruitment is likely to reflect credential inflation.

However, this was not universally the case for those in 'non-graduate' jobs. Detailed investigation of the cases of those who responded that a degree had been required often revealed occupations where job titles may have been misleading or could have included, in particular contexts, graduate-entry jobs or jobs requiring high level skills or substantial responsibility: for example, 'trainee accountant', 'catering manager', administrator/health and safety co-ordinator' and 'transport planner' - all of which have *niches* with well-worn graduate routes into them. In addition, as the example of the museum attendant reflects, it has long been the norm in sectors such as arts and heritage management that experience of routine work is a necessary stage for graduates on the route into careers. Furthermore, the fact that graduates in 'non-graduate' jobs in the workforce as a whole have higher average earnings

than non-graduates suggests that employers are paying a graduate premium for their services[9].

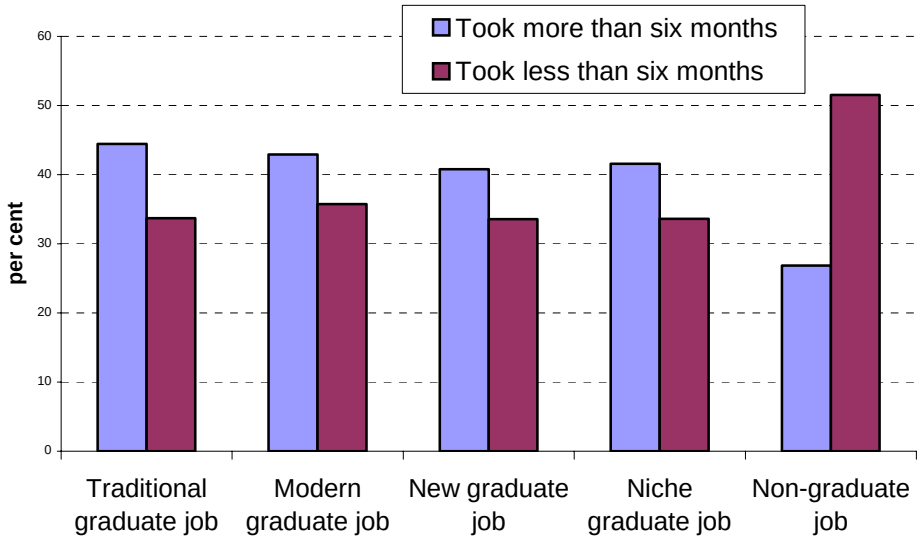
**Table 3.1: Factors considered by 1999 employed graduates to have been relevant in enabling them to obtain their current employment**

| | **SOC (HE) category** (%) | | | | | |
|---|---|---|---|---|---|---|
| | Traditional | Modern | New | Niche | Non-graduate | All in employment |
| Possession of degree | 92.3 | 83.0 | 78.7 | 63.3 | 47.3 | 73.5 |
| Subject studied | 73.0 | 56.6 | 50.2 | 39.4 | 28.7 | 49.8 |
| Class of degree obtained | 48.1 | 32.6 | 33.6 | 23.8 | 14.1 | 30.8 |
| Recognition by professional body of undergraduate course | 27.6 | 18.1 | 20.2 | 11.0 | 4.6 | 16.6 |
| Postgraduate qualification | 34.1 | 15.0 | 10.8 | 7.6 | 7.7 | 14.9 |
| Professional qualification gained subsequently | 33.6 | 10.3 | 12.7 | 10.4 | 7.6 | 14.9 |
| Experience in current organisation in other job | 15.9 | 15.6 | 17.4 | 20.4 | 16.1 | 17.2 |
| Employment experience in another organisation | 24.9 | 31.2 | 39.7 | 37.3 | 40.1 | 35.6 |
| N = 70,690 (weighted sample) | | | | | | |

The complexity of a job may correlate with the time it takes to learn to do it competently, and this is one of the variables used to classify occupations. Figure 3.2 compares the proportions of those stating that it took less than three months and those stating that it took more than six months. This shows clearly the different perceptions of those in graduate and non-graduate jobs, lending credibility to the classification.

9 See chapter 6, the section in Appendix 2 on SOC (HE), Elias and Purcell(2004a) and Purcell *et al.* (2004) for further discussion of 'graduate' and 'non-graduate' occupations.

**Figure 3.2: Time taken to learn to do current job competently: comparing shorter and longer perceived learning spans by SOC (HE)**

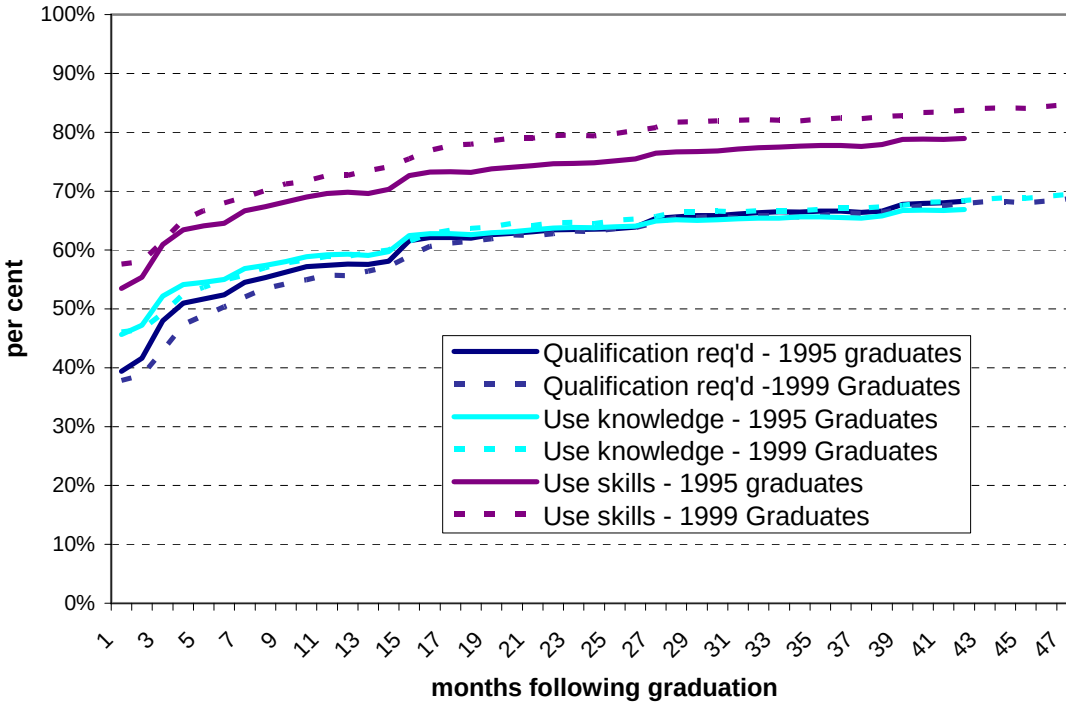



In the remainder of this chapter we explore the evidence about the relationship between higher education and the extent to which the early career trajectories of the 1999 cohort are indicative of integration into the labour market appropriately or of graduate under-employment. We will do this by examining the extent to which they reported that a degree had been required for the jobs they obtained, their assessment of whether they used their degree subject knowledge or skills developed on their undergraduate programmes, their assessment of whether the work that they were doing was appropriate for someone with their skills and qualifications and their detailed reports, in the follow-up interviews, of the jobs that they did and the relationship between these and their higher education. We will make some comparisons between the evidence provided by this cohort and the 1995 cohort surveyed earlier, to throw some light on recent trends in the integration of graduates, but most of the chapter will be concerned with the experiences of this particular 1999 cohort.

A comparison of the employment trajectory profiles of two recent cohorts for which we have data is revealing. Figure 3.3 shows that although there may be a growing element of discrepancy between the views graduates and employers have about what constitutes a graduate job at the initial first destination stage of graduate recruitment – illustrated by the gap between the extent to which employers required degrees and graduates perceived that they were required to use their graduate skills – it seems that the later cohort were somewhat less likely to have been required to have a degree than the earlier one in their first jobs after graduation, but somewhat more likely to be using their graduate skills both at the outset and throughout the period surveyed. This could be indicative of credential inflation, of course, with employers requiring degrees for jobs where previously, this had not been specified or simply recruiting and utilising graduates in non-graduate jobs where they were the strongest

applicants. Nevertheless, the picture shows similar trends of increasing movement of graduates into jobs where their qualifications, skills and knowledge were required, on continuing upward trajectories – illustrating the fact that a significant proportion of graduates take some time to enter employment that builds on their higher education. Figure 3.3 appears to show that as their careers progressed, the later cohort were as likely as the earlier one to be in jobs where a degree was required, marginally more likely to enter jobs where they were required to use their graduate knowledge and substantially more likely to have reported using their graduate skills.

**Figure 3.3: A comparison of the extent to which a degree was required, subject studied used and skills used, by 1995 and 1999 graduate cohorts in employment between graduation and the point of survey 3-4 years later**



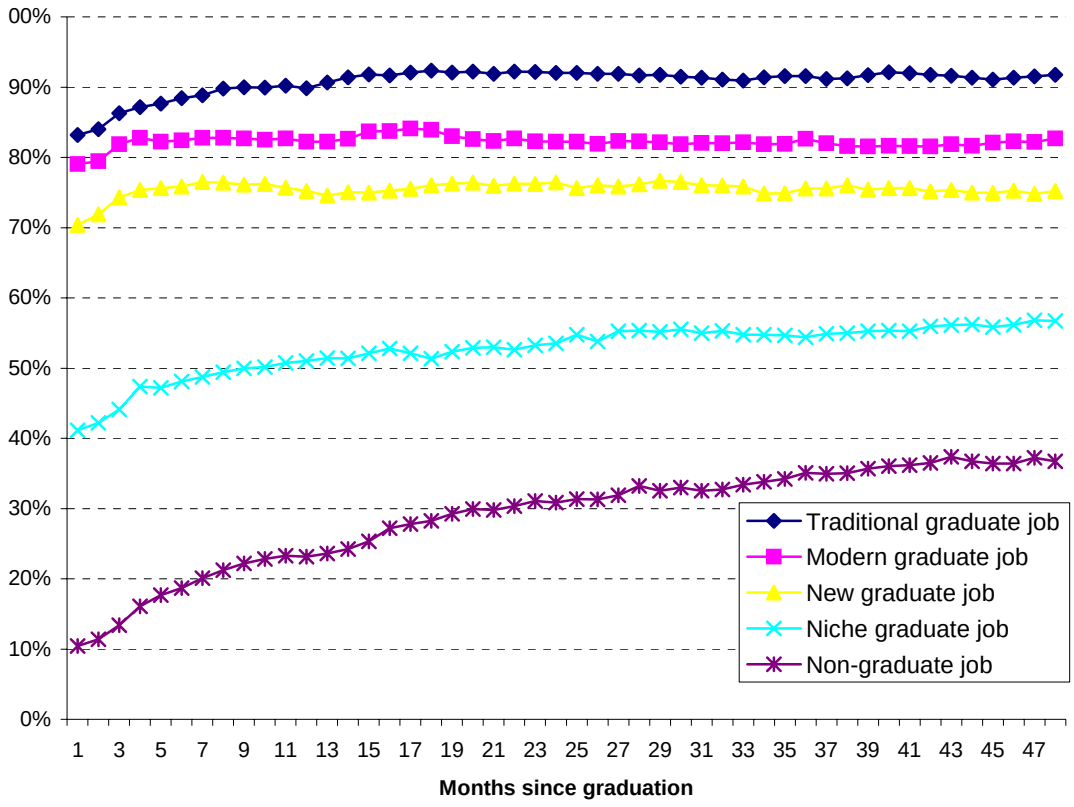

If we examine the integration of the 1999 graduates into jobs where their degree had been required over the period between graduation and being surveyed in 2003, we find, reinforcing the current job findings reported in Table 3.1, that there is a strong relationship between requirement for a degree and SOC (HE) category.

Figure 3.4 reveals that the proportions of those in traditional, modern and new graduate jobs who had required a degree changed little between first jobs and the occupations in these categories four years after graduation, whereas the proportions of those in *niche* and non-graduate jobs who had stated that a degree had been required had risen substantially over the period: by 16 per cent in the case of *niche* graduate jobs and by 27 per cent in the case of non-graduate jobs. This suggests that:

a) a significant proportion of the shrinking minority of those in the SOC (HE) non-graduate occupational category at the end of the time period recorded were not in the same kinds of non-graduate jobs entered by a considerably larger proportion of the sample immediately following graduation, and

b) well over half of those in *niche* graduate occupations 3-4 years after graduation appeared to be in the graduate *niches* of those occupations, doing work for which their degrees had been required - but *niche* occupation-holders were less likely than those in the other 'graduate job' categories to be in jobs for which a degree had been required.

**Figure 3.4: Extent to which 1999 graduates stated that their degree was required for jobs held since graduation**




It is important to draw attention to the finding that while a degree was perceived as an essential pre-requisite for most jobs undertaken by graduates, at this stage in their careers, particularly in specific organisational or industry labour markets, respondents perceived that the importance of qualifications had diminished as experience became the more important factor in accessing more senior jobs or promotion, regardless of whether a degree had been required to obtain such experience.

> *'I wouldn't have needed a degree to go into that job, because you could have gone in at a basic level and worked your way up, which some of the people here are doing presently. But going in at that level, I got the job directly because of what I knew and what I had achieved at* [my previous organisation and] *obviously I got* ***that*** *job from having the degree, so indirectly, yes a degree has helped me get the job and go in and move up as I have. I didn't go in on some sort of particular graduate programme and the law degree isn't relevant to what I am doing, but it was an indirect path from gaining experience in the previous role and that was what they liked, to give me the job as a manager here, I suppose'.*
> (039, male law graduate, bar manager, hotel and catering, previous salary £15k-£18k, current salary not recorded, non-graduate job)

However, while changes may indicate increasing credentialism in the labour market as employers are responding to the increasing supply of graduates by raising the qualification requirement for posts that would traditionally been done by non-graduates, the interviews provided evidence of changing requirements for entry into particular jobs and professions. Sometimes increased graduate recruitment reflected changing skills requirements (for example, in the use of ICT) in particular occupations. Librarian posts are an interesting example of relatively low-paid jobs in a competitive job market that require an increasingly diverse range of skills and qualifications and where new specialisms have led to unequivocally 'New' graduate jobs within a more established 'Modern Graduate' profession. One respondent described how sophisticated use of information technology had become increasingly central and that, in order to gain chartered status of the professional body, essential for many jobs in the occupation, the credential requirements had increased significantly in what was felt to have been a relatively short period of time:

> *'It is very important to gain charter-ship because a lot of job adverts now will say, not only do you need a Masters qualification, or some kind of qualification in library information science, but they will say chartered status would be good to have, or handy to have. It would help with your application if you had that. Twenty years ago, you didn't even need a degree to get into the profession; you just started from the bottom. Now you need all these qualifications.'*
> (034, female natural science graduate, intranet content officer, public services, £15k-£18k, modern graduate job)

Another graduate employed in the same sector reflected that his advantages were a very good degree and appropriate vocational higher degree, but interpersonal and presentation skills had become increasingly regarded as important job pre-requisites and his disadvantage was that:

> '*I can be a bit quiet and stuttery…your typical librarian. Nowadays you have to be more confident and outgoing.'*
> (021, male humanities graduate, library assistant, public services, £10k-£12k)

Similarly, perhaps more likely a result of changing regulation and skills/knowledge requirement associated with the post, a graduate working as a land agent reported how change in the supply of labour had effectively closed off the non-graduate route into the occupation of land agent [still a non-graduate occupation in terms of SOC (HE) criteria]:

> *'I would say that now all the land agents working for our firm have all got at least an undergraduate degree but traditionally it wasn't necessary. It's all changed I don't know how many years ago… when the Royal Institute of Chartered Surveyors made it a stipulation that it wasn't enough just to have a diploma and that you needed a proper degree in order for it to be accredited'.*
>
> (038, male law graduate, assistant land agent, business services, £12k-£14k, niche graduate job)

As the graduate labour supply has become more diverse, established patterns of occupational access, career paths and divisions of labour between graduate and non-graduate employees have been challenged. The extent to which employers' recruitment and construction of jobs has changed has depended on particular industry traditions and organisational cultures and structures. We asked interviewees whether other employees at their organisation doing similar work also had degrees and, if not, whether this affected the allocation of work in the occupational group or the way in which differently-qualified job incumbents carried out their work. What was particularly apparent was that in many of the newer 'graduate' occupations and in particular organisations, especially in the public sector, non-graduate colleagues of the 1999 graduates were typically older and more experienced:

> *'A lot of* [non-graduates at my level] *tend to have been in the civil service for a long time. In lots of respects, they know the job, possibly more than I do. But sometimes they are possibly less challenging about it. It maybe a generalisation, but possibly the ones with degrees challenge more, but also think slightly broader and more in depth, although that is a generalisation because obviously a specific individual may do, but it tends to be that if you haven't got a degree, you probably reach that grade at a slower rate. You can be more fast-tracked, I think, depending on how you do as well and also whether people pick up on it, but it's probably expected that you have a degree to do that. Certainly the Cabinet Office one, which is how I got into the civil service, you had to be a graduate; it was a graduate entry level thing. Yes, you can go as far as you want without a degree, really it's supposed to be a meritocracy as well, you don't necessarily have to have a degree, but it's possibly expected of the certain kind of grade and person in the grade and how far they are going to go and how quickly they are going to go'.*
>
> (023, female humanities graduate, civil servant, £24k-£27k, non-graduate job)

> *'*[Non-graduate colleagues at the same level] *are doing pretty much the same work as me but really, the job requires business knowledge which most have accumulated over long service and good technical knowledge of the system… there's a good ten year age gap between myself and the next youngest team member'.*
>
> (025, male business studies graduate, project team member, manufacturing £21k-£24k, modern graduate job)

Sometimes there were clear distinctions between the tasks and areas of operation carried out by graduates and non-graduates that were less permeable than the organisational grading structure; for example:

> *'At my managerial level in the company there are two sorts of people, one would be specialist like the* [job] *I do and I would think all those require a degree but there is a real culture of training and moving up and around the business and a*

*lot of people have been in the business a long time and have moved up steadily so I should think there are a few people who don't have a degree'.*

(019, male interdisciplinary graduate, senior public affairs manager, energy provider, £33k-£36k, modern graduate job)

*'The editorial side of publishing… I think is recognised as a graduate industry and that you need a degree to enter it. They are not particularly fussy what sort of degree, a lot of people I work with have English degrees but, but no; you wouldn't hear of anyone in editorial side of publishing without a degree … but there are* [non-graduates] *on the other side of the company, like the sales side of the company, without degrees, entry level jobs with promotion prospects maybe'.*

(040, male humanities graduate, editor, publishing, previous salary £15k-£18k, modern graduate job)

Blurring of the graduate/non-graduate dichotomy is likely to increase in future but what is important is that many graduates who report working alongside non-graduate colleagues doing similar work often reported the degree as having been an advantage in terms of rapid promotion or direct entry into higher levels of organisations, and this is certainly reflected in the wider labour market analyses we have conducted (see Elias and Purcell 2004).

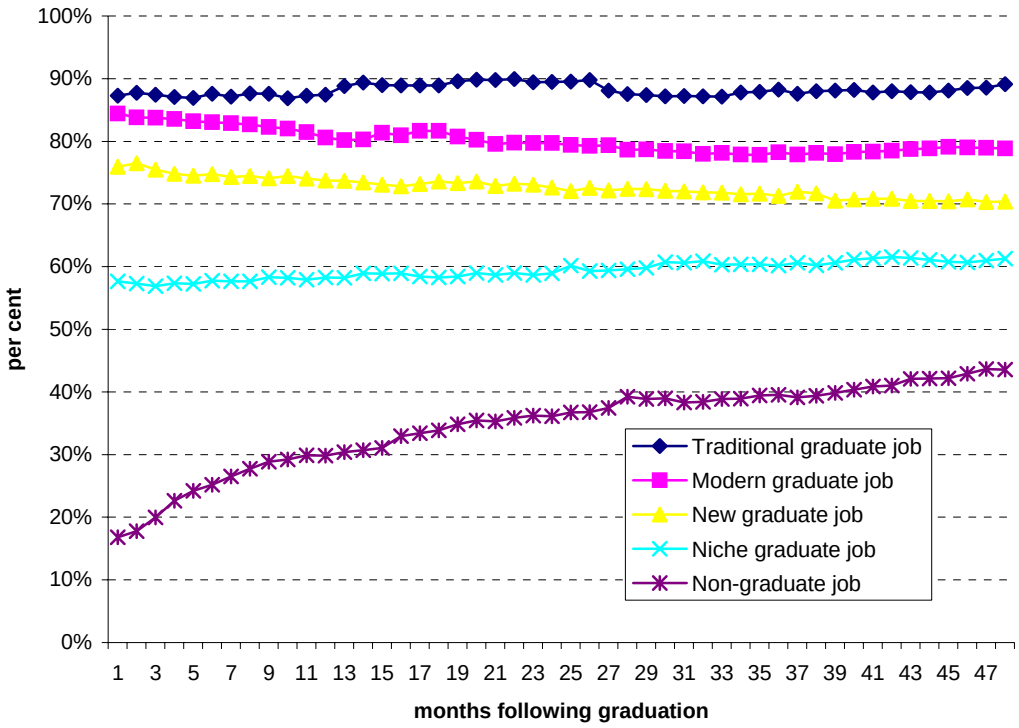
Finally, many of the jobs for which a degree had been required, particularly among those classified as new or *niche* graduate jobs according to SOC (HE), were occupations and roles in organisations that simply did not exist in previous generations, reflecting new skills, knowledge and information management requirements deriving from changing technology, social and political change and industrial and organisational restructuring. These included jobs with titles like *public rights of way officer*, *national events executive*, *process audit manager* and *intranet content officer*. The extent to which such 'new jobs' constituted appropriate employment for graduates and used or built upon the knowledge and skills developed on undergraduate programmes will be discussed below. More comprehensive discussion of the extent to which the changing supply of graduate labour may have been a significant factor in employers' construction of new jobs and in organisational restructuring is being undertaken with reference to analysis of the 1995 cohort (Elias and Purcell forthcoming).

### 3.2 Were respondents using the knowledge acquired on their courses in their employment?

The conclusions drawn above are reinforced by a more detailed examination of the use of graduate knowledge and skills in employment over the first four years after graduation. Figure 3.5 shows use of subject knowledge by SOC (HE) categories, and reveals similarly stable propensities to use such knowledge in the graduate employment SOC (HE) categories and a distinct difference between them and the non-graduate occupations that echo the findings in Figure 3.2. Those in traditional graduate jobs, which are mainly the established professions where undergraduate study constitutes the core of their corpus of knowledge, almost invariably reported that they were required to use their graduate knowledge throughout

their early work histories; those in modern graduate jobs and, at lower levels of probability, those in new and *niche* graduate occupations, also showed relatively stable trends, with those in the modern and new categories showing a slight decline in propensity to be using degree knowledge, possibly related to moves from specialist and technical roles into more generic management jobs. Conversely, while three in five of those in *niche* graduate jobs reported that their subject knowledge was being required, the trend is upward. The shrinking proportion of those graduates who are working in jobs we classified as 'non-graduate' jobs was increasingly likely to consist of graduates reporting that they use their degree-level knowledge in their job.

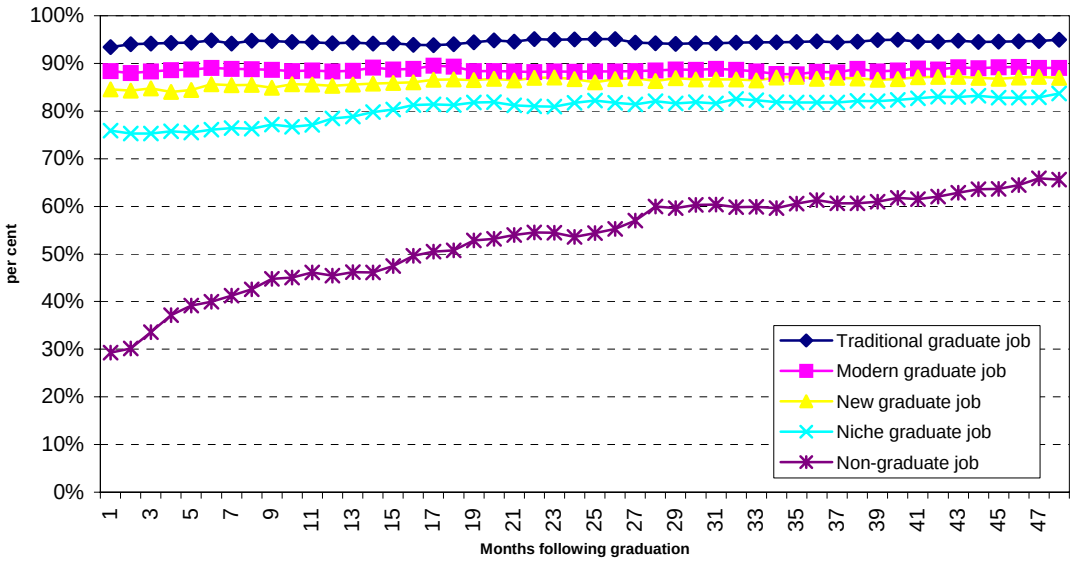
**Figure 3.5: 1999 graduates' use of knowledge in current employment, by SOC (HE) category**




## 3.3 Were they using their graduate skills?

For use of graduate skills, the picture presented by Figure 3.6 is interesting. Those in traditional, modern and new graduate jobs were somewhat more likely to report using them in their current job than had reported using subject knowledge, and those in *niche* graduate jobs were considerably more likely to have reported skills use than to have reported using subject knowledge, to an increasing extent as their careers progressed. Similarly, those in non-graduate jobs were more likely to have reported using skills than subject knowledge, with increasing parallel trends to do so, running counter to the downwards trend out of non-graduate employment discussed in Chapter 2.

**Figure 3.6: 1999 graduates' use of graduate skills in current employment, by SOC (HE) category**




These trends reinforce the picture that both the new and (to a slightly lesser extent) *niche* graduate jobs accessed by the sample required and built upon their undergraduate degrees, whereas non-graduate occupations were less likely to do so, particularly at the earlier career stages, when they constituted a larger proportion of the sample. Over two-thirds of the residual non-graduate job-holders claimed to be using their graduate skills at the point of the survey, although only 37 per cent of them claimed that a degree had been required to obtain the job. In the *Graduate Careers Seven Years On* project, we explored differences and similarities across the graduate occupational spectrum. In this project, we had a particular brief to investigate those in SOC (HE) non-graduate jobs, those on relatively low salaries at the time of the survey (whether or not they were dissatisfied with their career development to date), those who appeared to have had difficulty accessing appropriate employment or who were dissatisfied with their career development. The above analysis of responses provided by members of the 1999 cohort surveyed about whether their degrees, knowledge and skills were required, suggests that further analysis of the jobs done by those in non-graduate, *niche* and new graduate job categories is required.

### 3.4 The relationship between subject/discipline and use of HE skills

It is not surprising that there is a strong relationship between subject studied and use of subject knowledge in employment. The more closely an undergraduate course constitutes preparation for a particular vocation, the more likely it is that the knowledge acquired on it will be directly used in employment - and this turns out to be the case. The different trajectories of those who have studied at different points on the spectrum from directly vocational job-

occupation-focused courses to those fundamentally focused upon intrinsic academic scholarship can be clearly seen in Figures 3.7 and 3.8, presented together for comparison.

**Figure 3.7: 1999 employed graduates 'use of graduate knowledge', by subject studied**

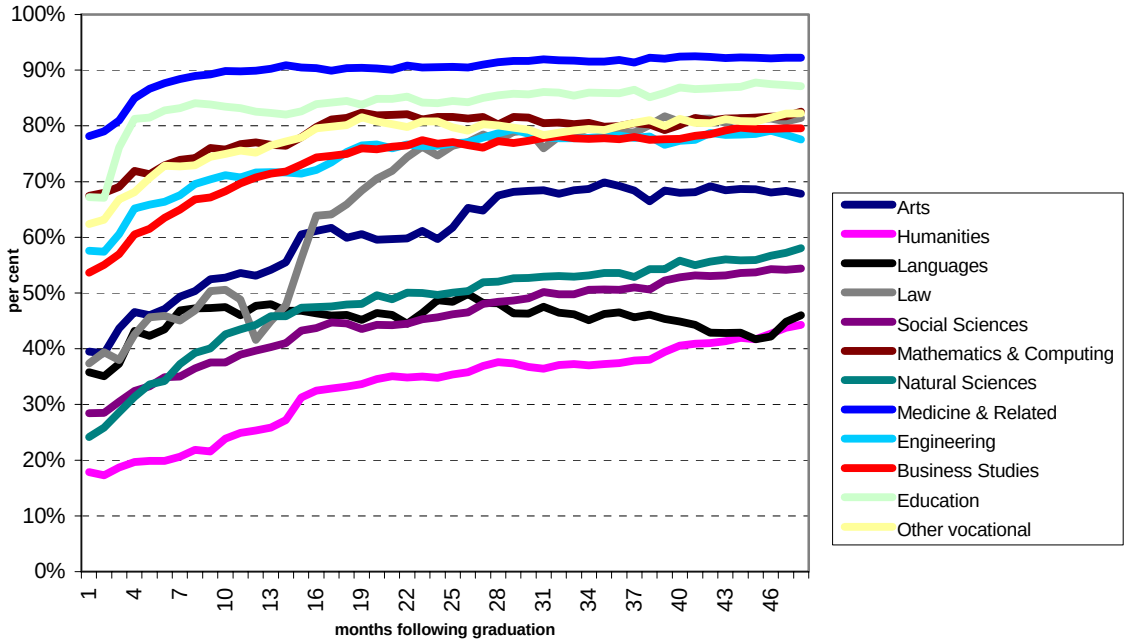
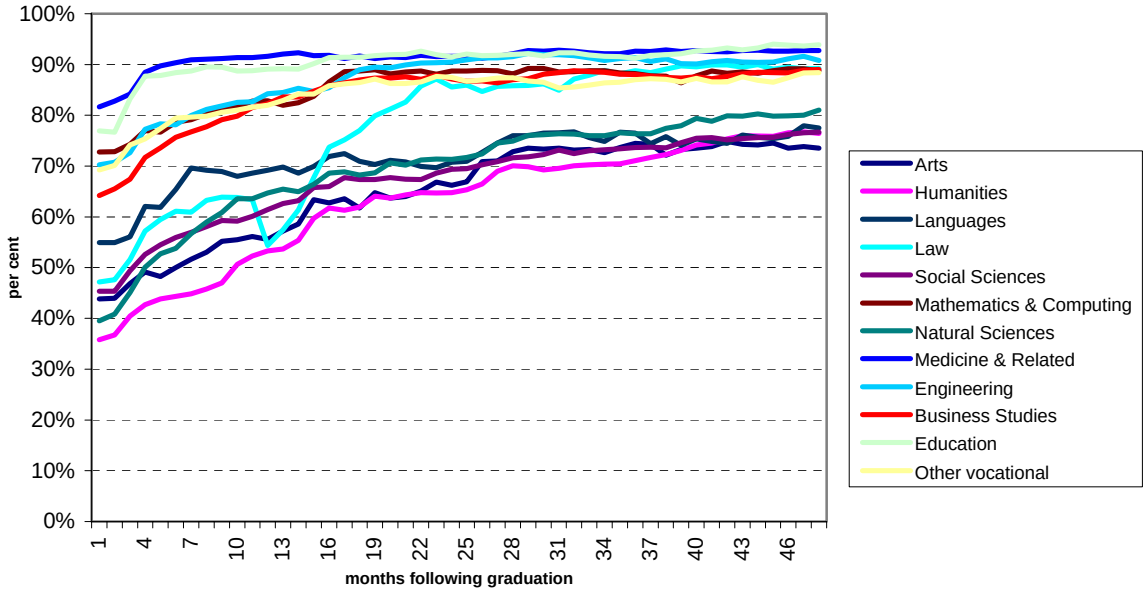



**Figure 3.8: 1999 employed graduates 'use of graduate skills', by subject studied**




The patterns they reveal indicate the greater likelihood that all kinds of graduates tend to be more likely to use the generally less discipline-focused skills developed as undergraduates than the subject knowledge acquired.

Figure 3.9 compares the proportions reporting that a degree was required for their jobs, showing the familiar pattern that those with less vocationally-targeted degrees take longer to access 'degree level' jobs, with very similar collective trajectories exhibited by the two cohorts. The success of business studies graduates in entering jobs for which a degree was required reflects the growth in management, professional and associate professional and technical occupation (Wilson *et al.* 2004); perhaps most significantly, the increasing demand for graduates in service sector senior administration and management.

**Figure 3.9: A comparison of the extent to which 1995 and 1999 graduates' qualifications were required in current job, comparing humanities, medicine and business subjects (3-4 years after graduation)**

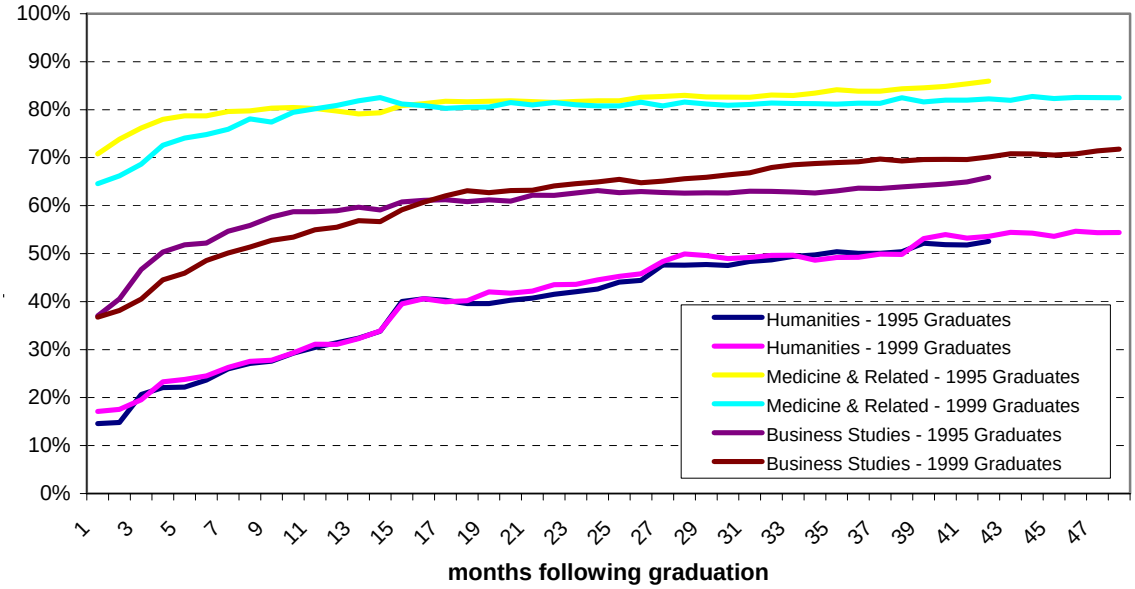
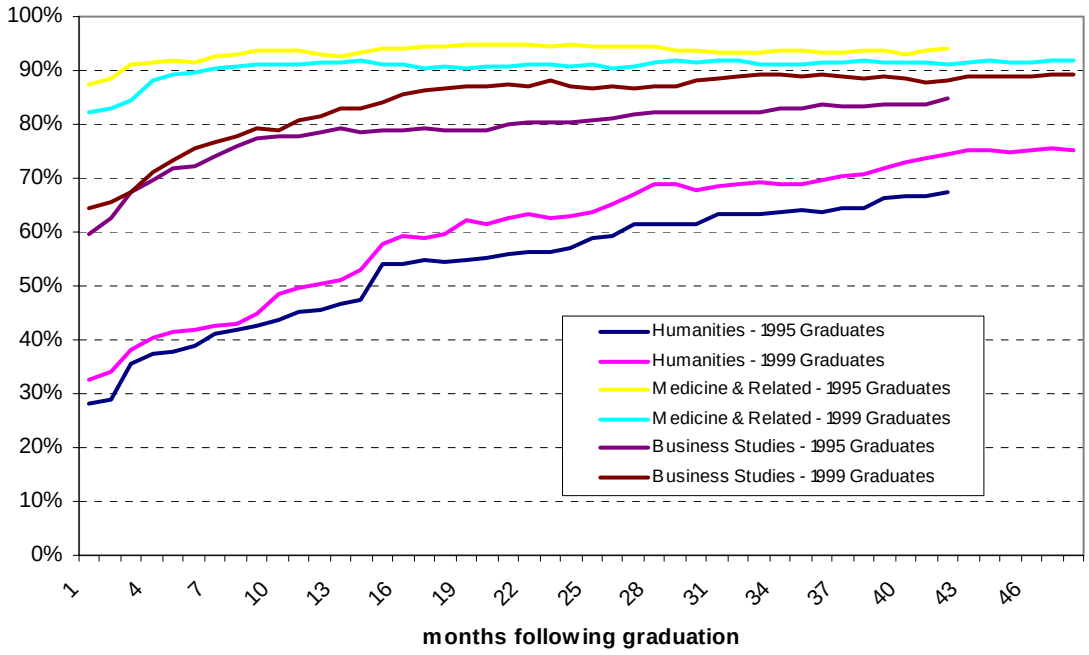



Figure 3.10 shows reported use of graduate skills in current jobs over the researched periods for the 1995 and 1999 cohorts who graduated from three distinct segments of the vocational/non-vocational spectrum: those who graduated in medicine and related subjects, those who did degrees in business studies and those who studied humanities.

**Figure 3.10: A comparison of the extent to which 1995 and 1999 graduates' used the skills developed on their undergraduate courses, comparing humanities, medicine and business subjects (3-4 years after graduation)**

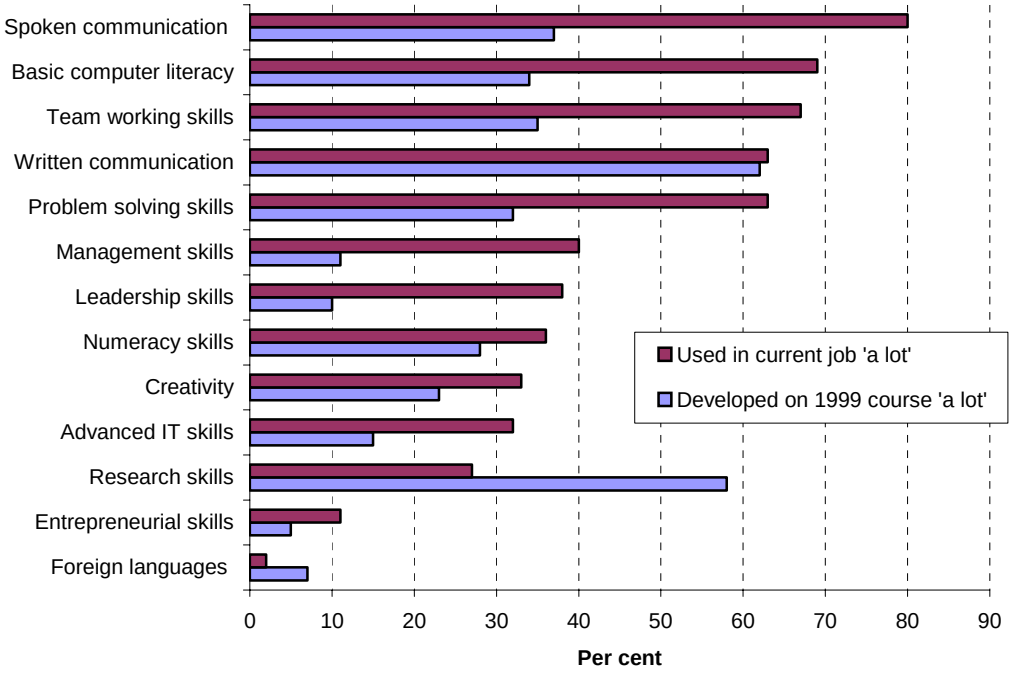



These comparisons illustrate the expected polarisation along the vocational/non-vocational continuum, with apparently slower integration of the less vocational sub-samples into employment that used their skills, but indicates little difference between the use of skills for the vocational sub-sample. The comparative trends in propensity to use undergraduate subject knowledge show similar differences among subjects and between the cohorts. However, contrary to the 'growing glut of under-employed graduates' image portrayed by sectors of the media, it appears that there was a somewhat greater likelihood in the later cohort that the humanities and business studies graduates had been required to use their graduate skills. Does this reflect better use of graduates by employers, higher demand by employers for graduates with their skills, or change in the quality or awareness of their 'transferable' skills on the part of the later cohort? We need to examine graduate skills more closely.

### 3.5 Graduate skills – what are they?

In the survey, respondents were asked to assess the extent to which particular skills had been developed on their undergraduate courses and the extent to which they were required to use these skills in their current job. The proportions of 1999 respondents who reported that these skills had been developed 'a lot' and that said they were required to use them 'a lot; are shown in Figure 3.11.

**Figure 3.11: Comparison of skills developed on undergraduate courses and used in current employment**




The preceding analysis revealed that members of the sample were notably more likely to indicate the use of graduate skills in the course of their work compared to subject knowledge. Degree courses increasingly aim to provide opportunities to develop a range of transferable/generic skills across all disciplines that graduates can take into employment and make use of in their day-to-day work regardless of whether or not their employment is directly related to their subject of study. This issue has received significant attention in recent years as calls are made for improvements to the teaching of employability skills to prepare graduates for the workplace (Mason *et al.* 2003). Our evidence indicates that the vast majority of graduates felt that they were utilising skills acquired on their course in their current employment (regardless of whether the possession of a degree had been a requirement for the post) whether development of these skills had been an explicit component of their undergraduate study. We would not expect the match between skills developed and skills used to be exact, since skills acquisition is a continuous process and graduates built on

existing skills and subsequently developed others as their careers evolved. Spoken communication (and perhaps, for this cohort, basic computer literacy) had, for most, reached sophisticated levels by the time they embarked on higher education: team-working skills, management skills and leadership skills, for those on most courses, are likely to have been developed in subsequent employment rather than as part of their degree programme. How far development of such skills should form part of all undergraduate curricula is currently a controversial issue (c.f. Mason *et al.* 2003). The fact that a third of respondents perceived that problem-solving skills had been developed on their courses, whereas two-thirds were required to use such skills 'a lot' in their current jobs, may have stronger policy implications - although the reverse pattern between skills developed and skills required of 'research skills' may reflect a degree of conceptual or definitional overlap between these categories.

Asked how their undergraduate education was used in their current employment, graduates most often referred to 'academic' skills that they had transferred into the workplace; writing, research, analytical, problem-solving, presentation skills were amongst the most common:

> *'I don't think* [having done a degree] *affects the tasks but I think it does enable people who have a degree to use some of the aspects of the course they have done. Especially in the course I did, there was lots of problem solving and communication skills and I think that is reflected'.*
>
> (012, female social science graduate, field sales executive, ICT, £30k-£33k, niche graduate job)

> *'The skills that I probably use the most are writing* [skills]*. I write a lot of reports and I write speeches for ministers, briefings, written papers, documents for publication. So obviously the essay-type writing skills that I developed during my degree do help that. Also the research skills because that's probably one thing that you don't have at A' level that you really develop while you are at university. Also for my degree, I did a year abroad teaching English and that helps when doing things like presentations and just generally talking to people, presenting ideas'.*
>
> (007, female languages graduate, civil servant, £33k-£36k, new graduate job)

> *'I guess the skills would be things like confidence in delivering presentations and training, because we did a fair amount of presentation work in my degree. Working with a team was very important in geology because you often went out in the field and worked as a team in groups of 4 or 5 trying to solve a problem of why this land form had developed in the way it had. Although it's very different kind of team working that I do now, it's applied over to this job as well. The teamwork is very important in the job I do. I think that's the main thing'.*
>
> (034, female natural science graduate, intranet content officer, public services, £15k-£18k, modern graduate job)

Other respondents indicated a stronger disciplinary link between their studies and their subsequent work, although this was often drawing upon the fundamental and general knowledge and skills inculcated rather than specific course content.

*'One of things, having a mechanical engineering degree, you do some very specific subjects which I think it's fair to say very few I have used in employment, even when I was employed as an engineer. However, some of the more general skills in management and law and communication are useful in whatever company or sector you are working in'.*

(050, male engineering graduate, environmental manager, manufacturing, £24k-£27k, modern graduate job)

*'In terms of the actual work that I did on the 1999 degree …it hasn't got any bearing on what I do now…..The advantage that it has had is that it's a good degree from a reputable university, the way they teach their degrees has obviously helped me understand material and learn stuff quickly. I suppose in that way, the ability to analyse material, natural sciences looking at numbers, analysing numbers…it's those sort of skills that have transferred through to what I do now and I still deal with numbers constantly. Being able to look at a large volume of information and pick out the precise points, the salient points that I need to then act on, that has come through from the science background, definitely. It's not necessarily a prerequisite of the job that you've done a science degree, but certainly it does help and I think the company, when they are looking at graduates, do like to look for preferably science graduates, preferably those that have then gone on to do a postgraduate degree of some sort because of the ability to enhance those transferable skills'.*

(032, male natural science graduate, futures trader, financial services, £33k-£36k, niche graduate job)

Of course, a number of graduates had entered employment that was consistent with their undergraduate studies in a very specific way and consequently reported using the subject knowledge in their work. This was most likely the case for those who had studied on degrees with a vocational bent, in particular business and law, and who had subsequently entered associated occupations.

*'I certainly used it in the first job after graduation which was working for an MP, the very broad understanding of politics I had and how it works and the structures. I used a lot from my degree, I suppose you get beyond a point where… you learn so much from the job that you end up falling back on that after a while - but the skills certainly, being able to write to a high standard, research skill are very important, interpersonal skills, I have to deal with people at quite a high level and the kind of work at university and the seminar presentations and working in small groups all helped me a lot'.*

(019, male interdisciplinary graduate, senior public affairs manager, energy provider, £33k-£36k, modern graduate job)

*'My degree was taxation and revenue law, certainly the tax is relevant because I run the payroll but also within the degree course I did two years of accountancy, which is a big factor. Also financial planning and I use that every day'.*

[Interviewer: So there is quite a significant overlap in what you covered in the program and what roles you having to fulfil now].

*'When I did the degree I didn't envisage working in a school, it's just something that happened. There are things I don't use at all like international taxation for example but a large proportion I am using'.*

(053, mature female law graduate, financial controller, education, £30k-£33k, niche graduate job)

*'It has taught me, first of all, how people learn, that there's more than one way to learn and that different people have different strengths in learning, so I cater for*

> *different styles of learning. It taught me there's different ways of putting the learning over, that it doesn't have to be just chalk and talk. It gave me the confidence to experiment with different types of courses… I learned so much from it you can hardly start really… As I developed with the certificate and then with the degree, I learned a lot about psychology, about body language, about the brain and all of that has influenced the way I act now and the way I train other people'.*
>
> (030, mature female education graduate, training officer, public services, previous salary £18k-£21k, niche graduate job)

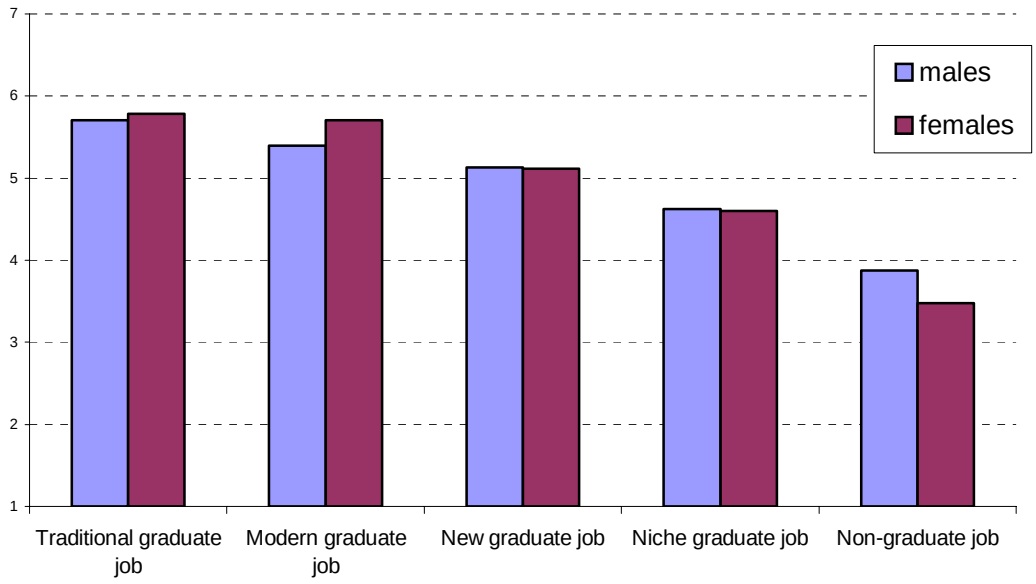
Reflecting the fact that a degree is a longer-term investment for some than for others, we found incidence that whilst some respondents reported that, unsurprisingly, the importance and relevance of degree skills and knowledge had receded over time, for others their specific subject knowledge had become more useful as their careers progress:

> [Interviewer: You said in the questionnaire that your 1999 qualification was required for your current job and that you used the skills and knowledge acquired on your 1999 course…]
>
> *'Yes. As I've moved up within the company what I did in my degree has become more relevant and more important to me. It's almost crucial to what I do. A lot of my work now is around taking the company in the higher education market, so I'll be working with a partner university. Just having the grounding that the educational studies degree provided for me enables me to communicate effectively with academia*'.
>
> [Interviewer: 'So it's the knowledge about education that's important…?']
>
> *'Yes. The knowledge, the structure and a bit how to learn, learning styles…, just to have an awareness of all of that*'.
>
> (083, female education graduate, product development manager, education, £18k-£21k, new graduate job)

### 3.6 What is a graduate job - a job that is appropriate for someone with degree-level skills and knowledge?

One of the striking findings, for both the 1995 and 1999 cohorts, has been the high proportion of survey respondents who, when asked to rate how appropriate their current job was for somebody with their qualifications on a scale of 1-7 where 1 meant completely inappropriate and 7 meant ideal, gravitated to the top end of the scale. Of the 1999 graduate cohort sample, over two thirds rated their current job 5 or higher and one in five rated it as 'ideal'. Only 5 per cent rated it as 'very inappropriate'. Those in traditional and modern graduate jobs were most likely to have felt that their current job was very appropriate and those in non-graduate jobs least likely to have done so.

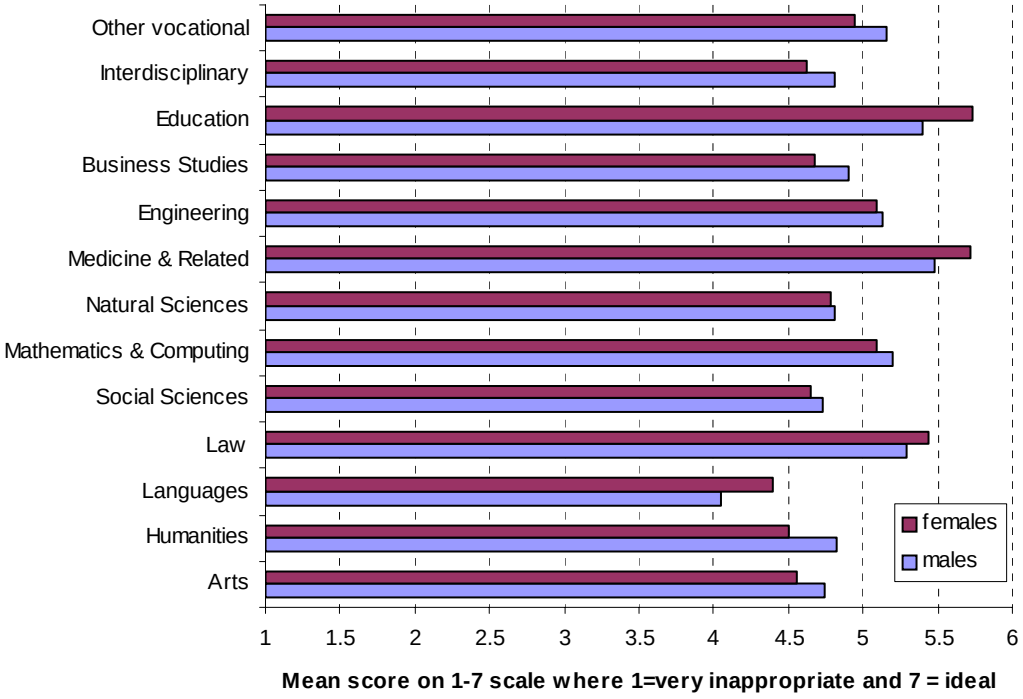
**Figure 3.12: Appropriateness of current job 'for someone with your qualifications' by SOC (HE) and gender?**




**mean score on 1-7 scale where 1= very inappropriate and 7 = ideal**

If we examine the relationship between subject studied and response to this question, we see the same patterns revealed by the earlier analyses: Figure 3.13 shows that graduates who completed vocational degrees assessed their jobs to be more appropriate for people with their skills and qualifications than those who had completed degrees with more open-ended career implications: perhaps unsurprisingly.

**Figure 3.13: Appropriateness of current job 'for someone with your qualifications' by subject and gender?**




## 3.7 Graduate jobs: what did these 1999 graduates *do*?

In addition to the SOC (HE) classification, the *Seven Years On* research team developed a protocol for investigating the intrinsic characteristics of the occupations carried out by graduates, based on analysis of responses from a representative sample drawn from the full spectrum of occupations done by respondents. On the basis of detailed interviews where respondents were asked to describe what they had done in the course of the preceding day's work and the extent to which it was or was not a 'typical day', we concluded that most of the occupations described required exercise of one or more of the following clusters of skills and knowledge: specialist expertise deriving from education, training or experience; strategic or managerial skills; or high level interactive skills. We developed a scale of 1-10 for each of these 'skills clusters' (see Purcell *et al.* 2004) to assess the extent to which graduates in different occupations were or were not required to use these skills. The scale also enables us explore further the question of what a graduate job *is.*

This is particularly pertinent with reference to our brief in this project; to focus on those gradates for whom the returns to higher education appeared to be somewhat problematic; those who either had earnings substantially below the average, or were in non-graduate jobs, or were not very satisfied, or dissatisfied, with their careers to date. Fuller discussion of the

variables associated with low earnings and advantage and disadvantage in the graduate labour market will be provided in Chapters 6 and 7. Here, we simply examine some of the jobs done by respondents selected according to these criteria. First of all, we find low-paid workers in all the SOC (HE) categories and although there is a strong positive relationship between earnings and satisfaction with both current job and career relationship development, different types of graduate have different earnings expectations. Some of the lowest paid graduates were the most highly qualified, using their higher education skills and knowledge most directly, in academic research - as the following traditional graduate job-holder, clearly doing graduate-level work, exemplifies in describing her daily work:

> *'I spend quite a lot of my time working on economic evaluations of randomised-controlled trials, not on the clinical side more on the economic evaluation. A two year randomised trial would involve initial set up and designing of data collection tools, essentially. For example, we have just conducted a study looking at giving oral nutritionary supplements to surgery patients in hospital and seeing if their outcomes are better because they are better nutritionally. To do that, we need to compare all the different healthcare costs or resource use so we would design data collection pro forma to collect the length of stay, what tests people are having, contacts with doctors and when they go home their GP, consultations and all that sort of thing . I'm not the first person who'll design the questionnaire, I'll probably comment on that, but I will design the spreadsheet that will be used as the database for people to record all that in. I would be the first point of contact for problem or queries in relation to the database and making sure it's entered in a systematic and consistent way, so I tend to be in charge of the database and when it's finished I do some quality checks and develop a syntax to go through and multiply the columns to work out total costs and write up a report and do further statistical analysis'.*
>
> (008, female maths and computing graduate, research assistant, education, £18k-£21k, traditional graduate job)

A modern graduate jobholder exemplifies the mixture of specialist, apparently low-level administration and maintenance, coupled with considerable autonomy and responsibility:

> *'At the moment I'm split across several sites but the general role I do is the same. A variety of checking through e-mails and doing the admin kind of work, I find myself doing more and more at the moment. Planning, arranging projects, looking at development aspects of the business I'm working in at the time and a variety of other things in terms of looking after the IT systems so checking through the server systems, doing daily house keeping tasks on those and a bit of helpdesk support.*
>
> [Interviewer: So, the organisation is a consultancy and you work on client sites?]
>
> *That's right.*
>
> [Do you have responsibility for managing any other people or is it just systems management?]
>
> *It's other people as well. If we need extra resources I call in from my company or manage people on site as well from the client'.*
>
> (016, male maths and computing graduate, site manager, ICT, £27k-£30k, modern graduate job)

Another example of a modern graduate job that is highly-competed for and attracts low financial returns at the outset of careers is journalism. The graduate below, doing his 'dream job' described the mixture of specialist technical, organisational and interactive skills called for in the course of his day's work:

> *'The last shift I worked was a Saturday and no two Saturdays are alike. At the moment sport is expanding and doesn't just kick off on a Saturday at three o'clock. I got in at just after twelve o'clock, I had a piece to edit so edited that, printed all the scripts I needed and set up the show which I'm in charge of doing the technicals; we call that driving. So I was driving a live outside broadcast presented by a sports producer who was also commentating on a local* [Division Two] *football match. So straight after two o'clock for the first hour of the show got preview material for that and four other games, some of it live and some is re-recorded, anything that's played in, I play in, any outside sources I drive those in and three o' clock we go in to full match commentary although we do at various intervals sweep around the grounds for updates on the other matches, I'm the one who links all those, I'm feeding information as well to the commentator constantly. We then have half time and we play a series of reports from five live. After the second half commentary at about ten to five we have updates on the other games and we go straight to the rugby. At seven o'clock the shows done and from seven to half past nine I'm recording sport for Sunday and Monday mornings'.*
> (044, male vocational graduate, broadcast journalist, media, £15k-£18k, modern graduate job)

New graduate jobs can essentially be divided into three categories: occupations where the qualifications required for entry to them have changed - as in physiotherapy or electronic engineering; occupations where the job itself has changed significantly, so that increasingly specialist skills and knowledge have been required; for example, personnel, training and industrial relations managers, management accountants, environmental health officers; and new areas of management or public services, where jobs have been changed by technology, social or economic developments - or simply did not exist until recently. Examples include recycling and refuse disposal managers and sports and fitness specialist occupations. Such jobs, like modern graduate jobs, tended to require hybrid skills - specialist and interactive, or strategic/management skills associated with one or the other cluster. The following example shows the range of communication, presentation and management skills required for a relatively low-paid new graduate job in business services:

> *'Today, this morning I was preparing for a presentation which was with clients that happened later in the morning and the presentation was about their PR and marketing strategy for the rest of this year and next year, I spoke to some journalists for one of my other clients - a local bus company - and then typing up some minutes from a meeting I was at last night and then I had an internal meeting about another client with whom we have a meeting tomorrow and prepared an agenda'.*
>
> [Interviewer: So it could be a combination of meetings and briefings and preparing documents in varying degrees?]

*'Yes, and writing press releases and that sort of stuff'.*

[Interviewer: So in terms of the way work is organised do you have responsibility for particular clients and that particular product or account?]

*'Yes, I work on five different accounts and within those accounts we have an account director, we take responsibility for certain parts of it but there are people overseeing our work and checking we're going in the right direction'.*

(005, female business studies graduate, senior account executive, business services, £18k-£21k, new graduate job)

The survey data discussed earlier in this chapter revealed that *niche* graduate job-holders were least likely of the SOC (HE) categories to have required a degree for their current jobs or to have been using the knowledge and skills developed on their undergraduate courses in their current work - although they were closer to the other graduate occupational categories than to the non-graduate job-holders. The types of jobs in this category done by the 1999 graduates in the survey fell into three main categories:

- credentialising professions such as nursing and midwifery, youth and community work; investment accountancy;
- new or growing areas of management expertise such as purchasing manager, leisure manager, or property, housing or land managers; and
- occupations to which graduates have increasingly been recruited where it is not clear whether the intrinsic requirements of the job changed or the increase in graduates led employers to redesign the jobs or merely recruit more highly-qualified candidates - for example, civil service executive officer, building and civil engineering technician.

An example of the daily work of a graduate doing a job which, in other contexts and at other times, would often not have been filled by a graduate provides a good example of this last category; and also shows the mixture of basic administrative work along with considerable responsibility and autonomy. Would this job previously have been done by one relatively inexperienced person?

*'I start at 9 every morning, Monday-Friday. Today I got in and had a couple of enquiries on my desk for conferences that I had to reply to, not in any formal way. Usually you get a fax through saying "Can you do this..? What are the prices?" So I just replied to them. I had an appointment about 10:00 with a client who was coming to look at the hotel with a view to booking it for a conference, so I showed them round the hotel and gave them various overviews of what we could do for them and just really sold it to them, to be honest. Then back into the office, I had a couple more enquiries; the phone is always ringing so you have enquiries coming in - people wanting to book conferences, weddings, dinner, anything along those lines. You are dealing with them, and as you put the phone down, then it rings again and you have a new enquiry to do...just trying to tread water and keep on top of the enquiries that were coming in, so it was quite a busy day today. Then at lunchtime I went to a Chamber of Commerce lunch, which was a networking thing just to meet other people in the area, to see whether they could help us or we could help them with hotel rooms, conference facilities, anything like that. That was a couple of hours. Back to the office, load of stuff on my desk, lots of enquiries coming in, phone just ringing*

*incessantly, just trying to keep on top of that. Then I had a walk-in appointment where they hadn't booked, they just literally turned up at the desk and asked to see somebody to be shown round. I took this chap around to see the various bedrooms, because he was looking to book some bedrooms for an event that's happening at the NEC in March, so I showed him around. Then back in the office and the rest of the afternoon just trying to type proposals to clients, get emails off, answering the phone, just trying to stay on top of everything really. I left about 6:15 this evening, it's generally at 5:30 but I very rarely leave at 5:30, it's not that sort of job. You end up having to stay and see people. That was pretty much the day to day and that's fairly typical'.*

(049, female business studies graduate, conference and banqueting sales manager, hotel and catering, £18k-£21k, new graduate job)

As far as non-graduate employment was concerned, it was clearly the case that many of these respondents were in jobs where they were not required to use their higher education: for example, civil service clerical assistant, bar manager, call centre operative, library assistant and shop assistant. The last described her (clearly non-graduate) daily work:

*'I have special sections that I look after in the shop which is classics and children's. I basically look on the system and see what I sold from my sections the day before, decide what I am going to order in for that day based on what's been sold. Then I saw a rep from one of the children's publishers. The rest of the day I spent tidying up the section, serving customers and putting out new stock'.*

(009, female social science graduate, sales assistant, retail, £12k-£15k, non-graduate job)

*'..I start by setting up the library, turning on the computer, changing the date stamps, getting the money ready for video and DVD rentals. We had a talk yesterday about changing the library and the way it's laid out so we had a discussion. I was based on the desk until twelve thirty answering basic enquires, issuing, discharging and renewing books… Then I parcelled up a few books to send out to different libraries, then we get parcels in and we unpack those for readers who can't find what they're looking for in our library and that was me until five thirty'.*

(021, male humanities graduate, library assistant, public services, £10k-£12k, non-graduate job)

These jobs are qualitatively different to the jobs described by the majority of those in the graduate job SOC (HE) categories and exploration of the survey data reveals that those in non-graduate jobs were significantly less likely to be satisfied with their job quality, the opportunity to use their own initiative or with their promotion prospects. But they are the minority: four years on, less than 5 per cent of those employed in SOC (HE) non-graduate jobs were 'completely dissatisfied' and 23 per cent 'not very satisfied' with these jobs. Investigation of the characteristics of graduates who were dissatisfied with their career development and had failed to obtain jobs that used their skills and knowledge is undertaken in Chapters 7 and 10.

## 3.8 Summary

This chapter has examined evidence from the work histories, survey responses and interviews that provided insight into the extent to which respondents' degrees had been required to enable them to access jobs or were used in the course of their work on a day-to-day basis. We used the SOC (HE) classification to examine the extent to which there has been change in graduate labour market integration patterns between the 1995 and 1999 cohort and found that the latter appear to have been somewhat less likely to have been in traditional graduate jobs, but also less likely to be in non-graduate jobs and most likely to be in new ones. The characteristics of graduates in these categories of job reinforces previous findings that there is a qualitative gap between the 'graduate job' categories and non-graduate jobs in terms of requirement for qualifications and skills, and in the responsibilities and duties inherent in the posts described. We conclude that there is some evidence that credentials are being increasingly required, and qualification levels required have been rising, in some *new graduate* and possibly *modern graduate* occupations, but that the majority of new and *niche* graduate job-holders interviewed appeared to be employed in jobs where they felt they were required to use their higher education, either directly or indirectly - and that it makes sense to label these jobs - often hybrid administrative/technical with a specialist management component - as graduate jobs that required their incumbents to manipulate or manage information, or manage people or processes.

- There was a correlation between 'maturity' of SOC (HE) category, with the longer-established more likely to both require and use degree qualifications and learning; and a qualitative difference between the four graduate job categories and non-graduate jobs.
- Where respondents indicated their degree had been a job requirement for non-graduate work, this could represent credential inflation but may also indicate areas of employment with significant graduate *niches* with well-worn graduate routes into them, or areas where non-graduate work is a necessary stage for entry into an industry or profession.
- Similar patterns of movement into employment where qualifications, skills and knowledge were required over the course of early career were evident for the graduates of 1995 and 1999.
- Whilst the number of graduates employed in non-graduate employment diminished over the four years since graduation, the proportions of those in such employment reporting that a degree was required for their jobs and being required to use their degree skills and knowledge had increased over time. This reflected increasing blurring between graduate and non-graduate jobs; changing skills and knowledge requirements in some occupations; more diverse patterns of occupational access and graduate/non-graduate division of labour; and the emergence of new graduate occupations or occupational *niches.*

- The proportions of graduates in *niche* graduate jobs reporting that their degrees had been required for their jobs and that they were required to use their degree skills and knowledge increased over time, suggesting that graduates in such employment had been increasingly entered graduate-appropriate employment in these occupational areas.
- Over two-thirds of 1999 graduates rated their current jobs as being appropriate for somebody with their qualifications and one in five rated their jobs as 'ideal'. Response was strongly correlated with SOC (HE) category of job, however, with non-graduate job-holders (especially women) substantially less likely to have rated their job as appropriate.
- Those in *niche* graduate jobs were less likely to have rated their jobs as very appropriate than those in the other 'graduate job' categories; but they were closer to these than to the non-graduate category on this dimension.

Although many of the interview respondents were selected on the basis of appearing to be less successfully integrated to the labour market than average - on the basis of occupation, salary, or their subjective evaluation of career development at the time when they completed the survey questionnaire - we found that several had moved on since then and were in more appropriate employment – reflecting the slow (or in some cases, leisurely) integration to career development of many graduates. A minority of graduates clearly remained under-employed, however, and we examine the characteristics associated with labour market success and disenchantment in Chapters 7 and 10.

# CHAPTER 4

## Employment prospects: tracking and comparing the early career paths of graduates

### 4.1 Introduction

In this chapter we explore the issue of graduate employability by looking at the unemployment and career profiles of graduates from the time they completed their degree. Questionnaires for the surveys of 1995 and 1999 graduates asked respondents to provide a dated month-by-month account of their work histories since graduation. The earlier survey collected work histories for a sample of 1995 leavers from the time they left university in July 1995 up until December 1998, some three and a half years later. The second survey collected work histories over a slightly longer period, from July 1999 to a period between February 2003 and April 2004. Of the thirty-eight institutions who participated in the second survey, thirty three had also participated in the earlier enquiry. The format of the career history sections in these postal questionnaires remained virtually unchanged between the two surveys. The matched sample of institutions and consistency in the questionnaires therefore enable comparisons to be made between these two cohorts. As outlined previously, the analyses presented in this chapter are restricted to those leavers from both cohorts who obtained a first degree.

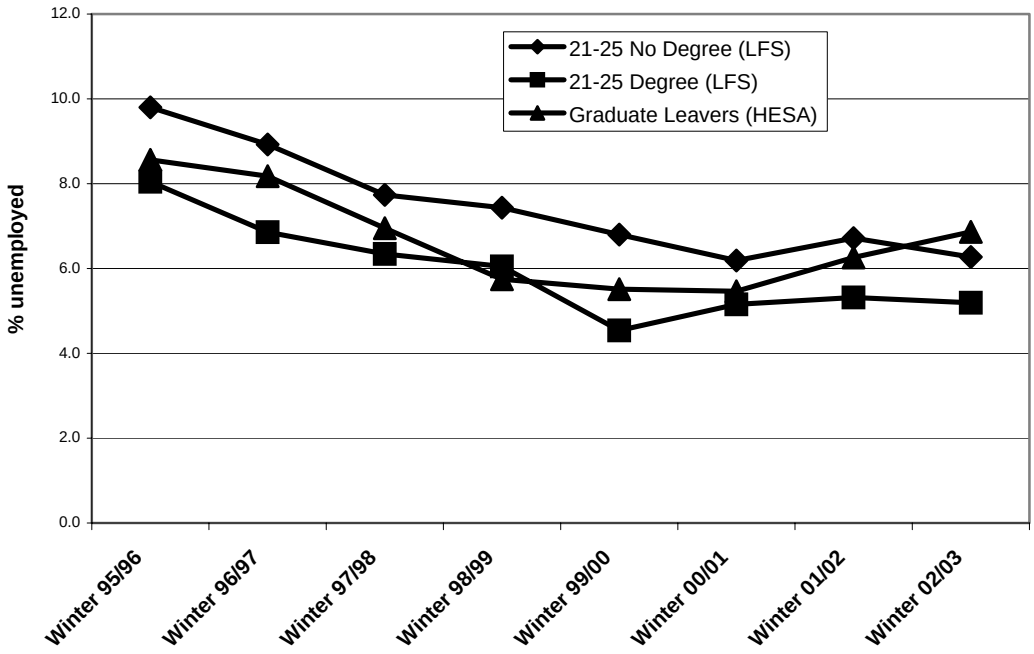
The chapter is set out as follows. The following section provides a general characterisation of the career profiles of graduates from these two cohorts. These profiles consider the movement into unemployment, employment and further full time study. The remainder of the chapter considers the different dimensions of these career profiles in further detail: the incidence and duration of unemployment among different groups of survey respondents and the quality of occupational outcomes, career and progression according to the five-fold SOC (HE) classification of jobs (traditional graduate, modern graduate, new graduate, *niche* graduate and non-graduate jobs). The final section presents the results of multivariate analysis that considers what factors influence an individual's probability of being employed in a non-graduate occupation.

### 4.2 The shape of early career profiles

Before comparing the early career profiles of the cohort of 1995 leavers with those of the 1999 leavers, it is important to consider the broader labour market conditions faced by these two groups of graduates. Specifically, the stage of the business cycle may have had an important influence upon the rate of assimilation of graduates into the labour market. The level of labour market demand may have influenced decisions about whether to enter the labour market or continue with further study, or the extent to which graduates took jobs in occupations that had not traditionally been considered as commensurate with possession of a degree.

Figure 4.1 provides, as background information, the rate of unemployment during the period 1995/6 to 2002/3. This seven year interval largely corresponds to the period covered by the work history profiles of the 1995 and 1999 leavers. Evidence of the experience of unemployment for successive cohorts of graduate leavers is collected from the First Destination Surveys (now referred to as the survey of the Destinations of Leavers from Higher Education [DLHE]). This survey provides a 'snapshot' of the destinations of graduates at approximately 6 months after graduation. It can be seen that unemployment among graduate leavers from Higher Education declined from 9 per cent during Winter 1995/6 to 6 per cent by Winter 2000/1. However, after this point the experience of unemployment among graduate leavers is shown to increase to almost 7 per cent by Winter 2002/3. The same figure also plots unemployment rates derived from the Labour Force Survey for a) those aged 21 to 25 without a first degree and b) those aged 21 to 25 with a first degree. Estimates from the LFS are derived from the winter quarters of this survey so as to align with the timing of the DLHE statistics. These plots reveal the general downward trend in the rate of unemployment in the UK economy over this period. However, in recent years the general decline in the rate of unemployment among 21 to 25 year olds has ceased. The unemployment rate for those with first degrees has increased slightly since 1999/2000. The more difficult labour market circumstances faced by young graduates as measured by the LFS appears consistent with the increased levels of unemployment experienced by graduate leavers in recent years.

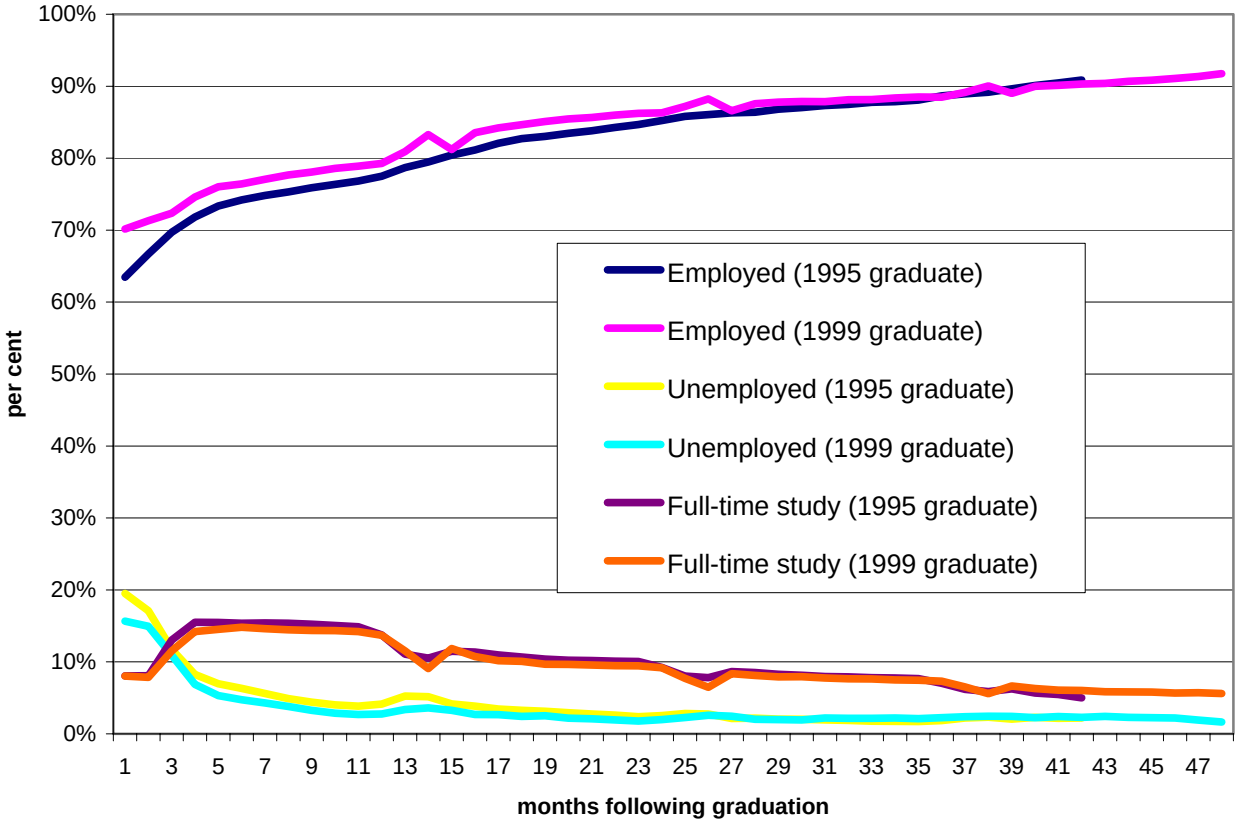
**Figure 4.1: Unemployment Rates in the UK: all persons of working age, 18-24 year olds and graduate leavers**




Source: Labour Force Survey, First Destination Survey

Against this background, Figure 4.2 compares the career profiles of 1995 graduates with the matched sample of 1999 graduates (*i.e.* those students graduating from the 33 institutions included both the survey 1995 and 1999 cohort surveys). It can be seen that among both cohorts of graduates, approximately two thirds of graduates entered employment straight after graduating. The rate of employment immediately after graduation was slightly higher among the 1999 graduates, with 70 per cent entering directly into employment compared to 64 per cent among the 1995 graduates. However, the trajectories of these profiles indicate that the pattern of assimilation into employment was almost identical beyond this point. Three and half years after graduation the rate of employment among the 1995 cohort was 91 per cent, compared to 90 per cent among the 1999 cohort.

**Figure 4.2: Career paths of 1995 and 1999 graduates**




Coinciding with this assimilation into employment, the experience of unemployment declined rapidly after graduation among both cohorts. Among the 1999 graduates, 16 per cent indicated that they were unemployed immediately after graduating, but 18 months after graduation, the rate of unemployment had declined to approximately 2.5 per cent, with the proportion of the cohort unemployed remaining relatively stable after this time. In accordance with the employment profiles, the experience of unemployment among the 1999 graduates during the two years after graduation was slightly lower than that observed for the 1995 graduates. However, such comparison of labour market outcomes between these two groups

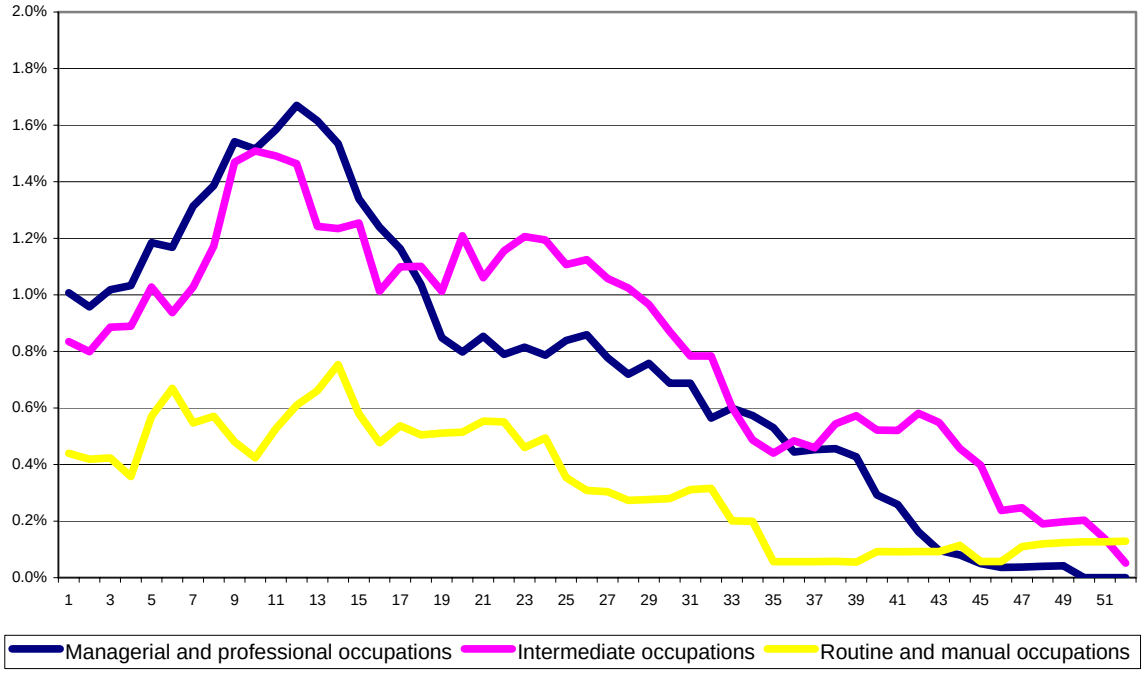
must be considered in the context of broader market conditions as described in Figure 4.1, with the period between 1995 and 1999 characterised by falling levels of unemployment generally.

Finally, participation in further full time study as the main activity after graduating peaked at approximately 14 to 15 per cent for both cohorts between the October after graduation through to the following Summer, as Master's and postgraduate certificate/diploma courses drew to a close. There are no significant differences between the shapes of the profiles of the two cohorts. Participation in further study as the main activity gradually declined as the length of time since graduation increased and survey respondents gradually entered employment, with small step shifts at 12-month intervals during the summer months reflecting the completion of further studies. A more detailed examination of those graduates who went on to gain further qualifications and their reasons for doing so is presented in Chapter 8.

If the propensity of graduates to go travelling after the completion of their studies has increased, this may have affected comparisons between the two cohorts of graduates. While such graduates may work during the course of their travels, such respondents may not have defined themselves as economically active in the work history account of 'non-activity'. Neither survey asked respondents to provide details about any periods that they had spent travelling since graduation. Analysis of the work histories of the 1999 graduates reveals that some respondents did record periods spent travelling but in recording their career histories, such respondents who recorded the nature of their main activity as 'other' did not qualify this option with any additional information. While it is not possible to provide an accurate measure of the proportion of graduates who spend time travelling, we are able to provide some indication of the timing of periods spent travelling and comparisons between selected groups who provided the necessary information.

Figure 4.3 shows the profile of graduates from the 1999 cohort who recorded spells of travelling following the completion of their studies. Comparisons are made between different groups of graduates based upon their social class background. Among all groups of graduates it can be seen that rather than travelling immediately following the completion of their 1999 qualification, the incidence of travelling is highest during the summer in the year after graduation. It was also observed that those graduates from lower social class backgrounds, specifically routine and manual occupations, were less likely to record periods spent travelling than other groups of graduates. .

**Figure 4.3: Incidence of travelling among 1999 graduates in early career, by social class background**




## 4.3 Unemployment in the early careers of those from higher education

In this section we investigate the work history information provided by respondents to examine the unemployment experiences of graduates in more detail. In the career history section of the questionnaire, respondents are requested to provide a dated account of their main activities since completing their course in July 1999, accounting for all their time and ending with the details about the activity they were engaged in at the time of the survey. In terms of the nature of their main activity, respondents could indicate whether they were an employee, self-employed, studying, unemployed or other. In this context, it is important to determine how respondents interpreted 'unemployed'; particularly in terms of whether they were actually seeking work or not.

We are not able to examine this issue in detail for the full period covered by the career history information. However, in Table 4.1 we compare the responses of those who reported in their career histories that they were currently either 'unemployed' or 'other' with the information recorded about their current activity in the main body of the questionnaire. It can be seen that of those who reported that they were currently unemployed in their career history, 71 per cent actually indicated in the main body of the questionnaire that they were unemployed and seeking work and 20 per cent indicated that they were out of the labour force or engaged in some other activity. This analysis therefore reveals that not all respondents who record spells

of unemployment in the career history may have actually been seeking work during such periods. It is difficult to give a precise indication of the extent of this problem due to inconsistencies in the reporting of current events by respondents. We observe that a small number of respondents who indicated in their career histories that they were currently 'unemployed' or 'other' also reported that they were currently employed. On the basis of the evidence, we conclude that approximately three-quarters of those who reported spells of unemployment in their career histories were actually seeking work.

**Table 4.1: Relationship between definition as unemployed and seeking employment or non-employed and recorded current activity**

| | % of those reporting 'unemployed' as last event | % of those reporting 'other' as last event |
|---|---|---|
| Employment | 9 | 17 |
| Postgraduate study | 2 | 3 |
| Unemployed | 71 | 4 |
| Out of Labour Force | 20 | 18 |
| Other | 8 | 13 |
| | n=90 | n=49 |

Note: Columns do not sum to 100% due to multiple response

Table 4.2 provides an overview of respondents from the 1999 cohort who had recorded one or more periods of unemployment since graduating. It can be seen that across all groups of graduates, approximately a quarter had recorded having had at least one spell of unemployment since graduating. While this proportion appears relatively high, it is important to note that these employment spells were of a relatively short duration. Figure 4.4 shows the cumulative duration of unemployment spells among those respondents who indicated that they had experienced at least one spell of unemployment since graduating. The distribution of the duration of unemployment spells among the 1995 and 1999 cohorts were similar, with short spells of unemployment dominating. Cumulative unemployment of less than four months in duration accounts for over half of those who report having had at least one spell of unemployment. Similarly, cumulative unemployment of less than six months accounts for almost 70 per cent of those who report having had at least one spell of unemployment.

While short spells of unemployment following graduation may reflect simply periods of job search activity and assimilation into employment, longer spells of unemployment may be expected to have a more detrimental effect upon subsequent employment prospects. The third column of Table 4.2 therefore focuses upon those respondents from the 1999 cohort who recorded that they had experienced a cumulative duration of 6 months or longer during the four year period following graduation. It can be seen that almost 1 in 10 male graduates experienced six months of unemployment or longer, almost twice the rate observed among female graduates. Among older mature graduates, 11 per cent report experiencing six months of unemployment or longer, compared to just 7 per cent among the younger age

groups. Relatively little variation was observed according to pre-entry qualifications, social class or type of institution. However, there was large variation in terms of subject studied and degree class. Seventeen per cent of Arts graduates reported six months of unemployment or longer, compared to just 3 per cent of those who graduated in Medicine and related subjects. The percentage of graduates with third class degrees who reported experiencing six months of unemployment or longer is three times greater than for those with a first class degree.

**Figure 4.4: Cumulative duration of unemployment among respondents reporting unemployment**

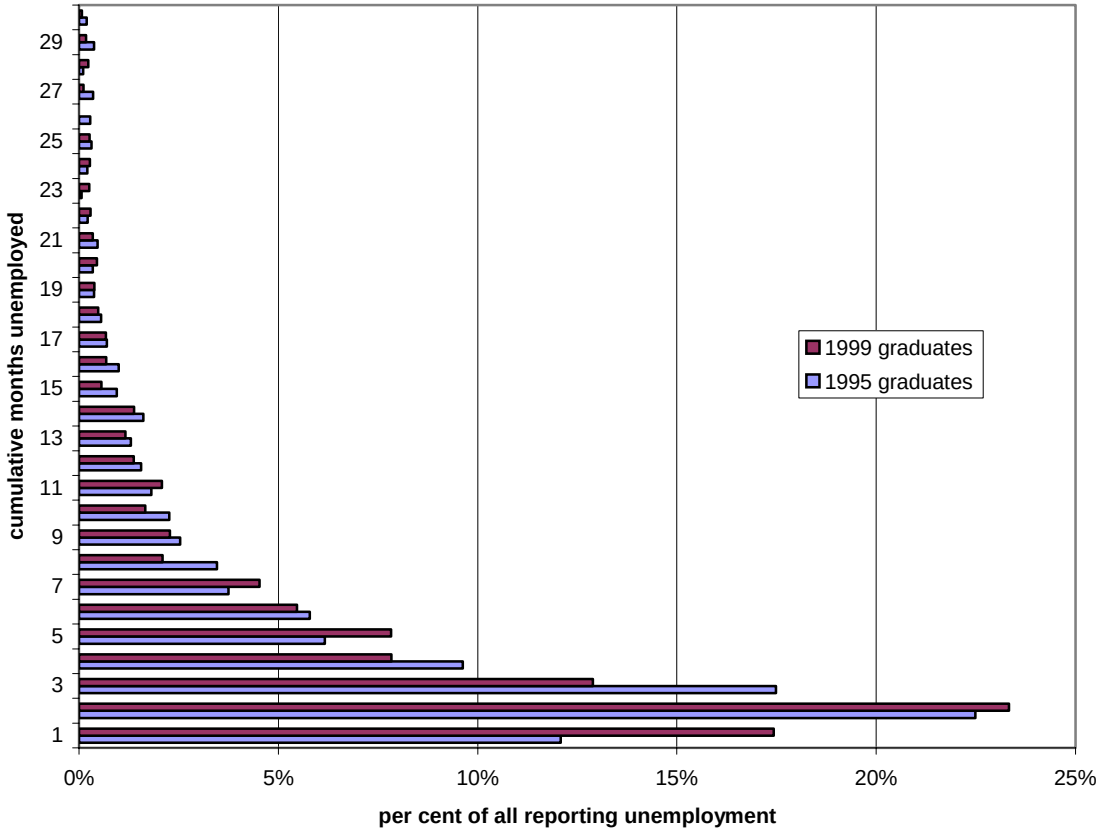


**Table 4.2: Respondents reporting spells of unemployment**

| | | % Reporting a Spell of Unemployment | % Accumulating 6 months or more Unemployment |
|---|---|---|---|
| By Gender | Male | 26% | 9% |
| | Female | 22% | 5% |
| By Age Group | Young graduates | 25% | 7% |
| | Young mature graduates | 15% | 7% |
| | Older mature graduates | 21% | 11% |
| By A-Level Points | 0 to 9 points | 21% | 8% |
| | 10 to 19 points | 24% | 6% |
| | 20 to 29 points | 26% | 6% |
| | 30 points or more | 26% | 6% |
| By Social Class | Managerial and professional occupations | 25% | 6% |
| | Intermediate occupations | 22% | 8% |
| | Small employers and own account workers | 21% | 7% |
| | Lower supervisory and technical occupations | 25% | 6% |
| | Semi-routine and routine occupations | 24% | 9% |
| | Neither parent in paid employment | 37% | 9% |
| | Not determined | 19% | 7% |
| By Subject | Arts | 32% | 17% |
| | Humanities | 27% | 7% |
| | Languages | 28% | 7% |
| | Law | 21% | 4% |
| | Social Sciences | 25% | 7% |
| | Mathematics and Computing | 27% | 9% |
| | Natural Sciences | 29% | 8% |
| | Medicine and Related | 15% | 3% |
| | Engineering | 25% | 10% |
| | Business Studies | 19% | 4% |
| | Education | 16% | 4% |
| | Interdisciplinary | 28% | 9% |
| | Other vocational | 17% | 5% |
| By Degree Class | 1st | 22% | 4% |
| | 2(i) | 23% | 6% |
| | 2(ii) | 26% | 9% |
| | 3rd | 35% | 12% |
| | Pass/Ordinary/Diploma | 18% | 8% |
| By Type of Institution | Old university | 26% | 7% |
| | 1960s university | 26% | 7% |
| | Post 1992 university | 22% | 7% |
| | HE college | 21% | 7% |
| All | | 24% | 7% |
| Population | | 73494 | 73494 |
| Sample | | 8140 | 8140 |

The analysis presented in Table 4.2 has revealed that a number of factors appear to be significantly related to whether graduates reported experiencing six months of unemployment or longer. To consider this issue in more detail, the probability of this is estimated for the 1999 cohort using a statistical technique known as logistic regression. This technique allows us to quantify the *additional* and *independent* effect of a range of characteristics upon an individuals' probability of having accumulated six months of unemployment during the four year period following graduation. The results from this analysis are expressed in terms of the impact of a variable on the relative odds of accumulating such spells of unemployment.

The key results are shown in Figure 4.5 (pre-entry characteristics) and Figure 4.6 (degree characteristics). For each of the variable sets, the results are expressed in terms of the percentage difference in the odds of having accumulated at least six months of unemployment relative to a reference category *and* after having controlled for all other factors. For example, the impact of gender on the odds of having accumulated such spells of unemployment is measured in terms of females compared to males. The coloured bars are used to indicate where a variable is estimated to be significantly different from the reference category at the 5 per cent significance level. Regression results showing the full set of factors controlled for in this model are contained in Appendix III (Table A3.3).

In terms of personal characteristics (Figure 4.5), we estimate that:

- females were almost half as likely to have accumulated at least six months of unemployment;
- the probability of accumulating six months of unemployment or longer following graduation increased with age, with those over the age of 30 at the time of graduation being most at risk;
- those who reported having a disability or long term illness at the time of the survey were more than three times as likely (220 per cent more likely) to report accumulating at least six months of unemployment compared to those with no such conditions;
- those who strongly agreed with the statement that they were 'extremely ambitious' are less likely to have been unemployed for six months or longer;
- in terms of pre-entry qualifications, those with less than 10 A-level points were 50 per cent more likely to have been unemployed for six months or longer than those with 30 or more A-level points. However, after controlling for A-level points, those who had completed degree programmes after having done a HND were half as likely to be unemployed for six months or longer than those who had not obtained their degree via the HND route;
- social class background (results not reported in figure) is not estimated to have had a significant influence on the odds of accumulating at least six months of unemployment.

**Figure 4.5: The impact of personal characteristics on the odds of respondent experiencing 6 months or longer of unemployment following graduation**

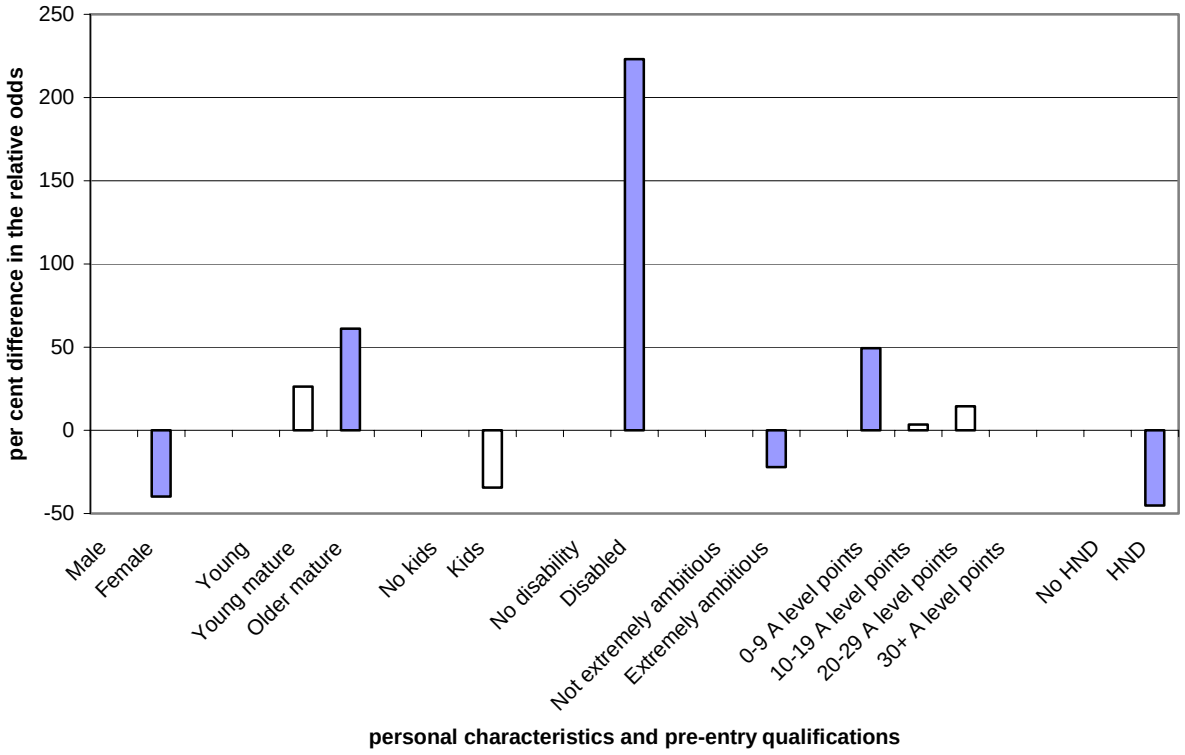
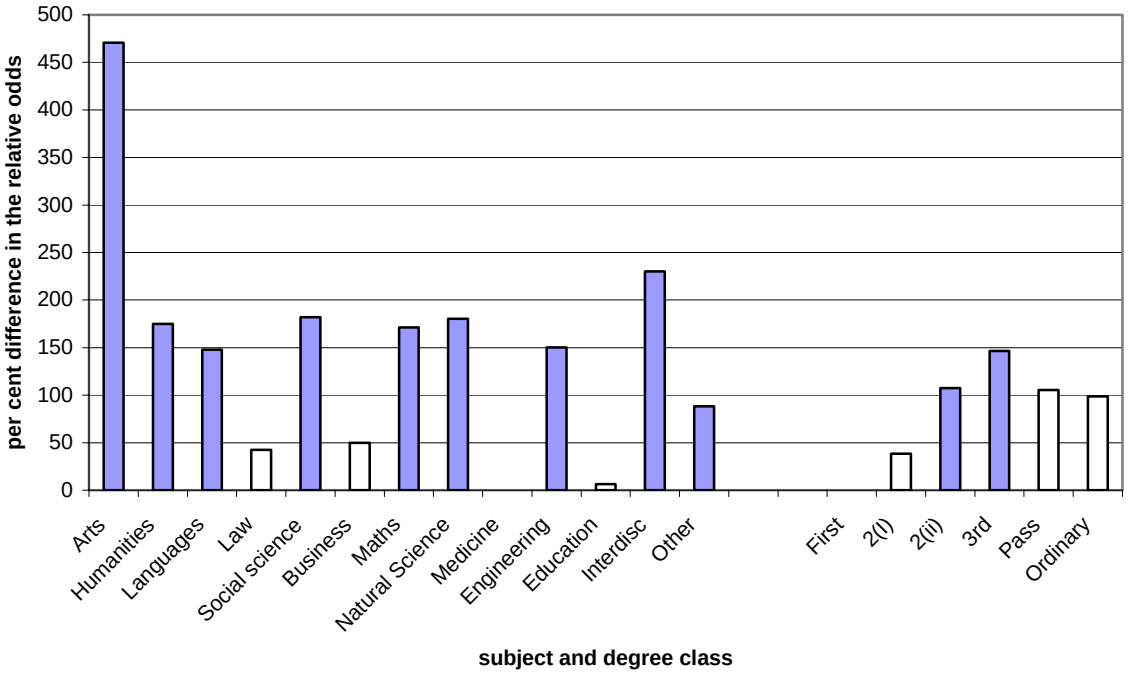



**Figure 4.6: The impact of qualification characteristics on the odds of respondents experiencing 6 months or longer of unemployment following graduation**



In terms of qualification characteristics (Figure 4.6), we estimate that:

- poor performance in a first degree, as indicated by degree class, was associated with an increased probability of being unemployed for six months or longer during the four years following graduation;
- respondents with degrees in education, medicine, law and business exhibit the lowest odds of being unemployed for six months or longer during the four years following graduation;
- respondents with degrees in the arts are almost six times as likely (470 per cent more likely) to have accumulated more than six months of unemployment following graduation compared to those with degrees in medicine and related areas. Little variation is found among the remaining subject areas which all take up an intermediate position on the academic-vocational spectrum.

## 4.4 The evolution of employment and occupations

An understanding of the career paths of graduates requires a classification of the kinds of work that graduates do that reflects both the demand for graduate skills and qualifications, and the extent to which these are used by graduates in their jobs. The discussion in the previous chapter outlined the development of SOC (HE). In this section we utilise this new classification of graduate occupations to characterise the employment profiles of different groups of graduates and to assess differences in early career paths. The breakdown of employment into the five different occupation types provides a way of comparing broad types of jobs held by graduates and shows how the graduates moved between these occupational categories.

Figure 4.7 shows the types of jobs held by 1999 graduate respondents over the 48 months following their graduation in July 1999. To aid comparison with the 1995 cohort, the sample is again restricted to those respondents who graduated from institutions that participated in both surveys. It can be seen that almost half of all those in employment immediately following the completion of their course in 1999 were employed in non-graduate occupations. However, employment in non-graduate occupations fell rapidly following graduation. By four years after graduation, only 15 per cent of employed respondents worked in non-graduate occupations.

During the four years following graduation, the share of employment in non-graduate occupations among the July 1999 cohort declined by approximately 25 percentage points. Figure 4.6 demonstrates that this decline in the share of graduates employed in non-graduate occupations was accompanied by an increase in the share of employment in *each* of the four remaining categories of SOC (HE). The proportion of employed respondents in *traditional graduate* occupations increased by 10 percentage points, from 7 per cent to 17 per cent; of employed graduates in *modern graduate* occupations from 15 per cent to 23 per cent; of

employed graduates in *new graduate* occupations from 14 per to 25 per cent; and of employed graduates in *niche graduate* occupations from 15 per to 21 per cent. The assimilation of 1999 graduates into these four occupational categories was thus relatively even during the first four years following graduation.

**Figure 4.7: The occupational evolution of employment among 1999 graduates**

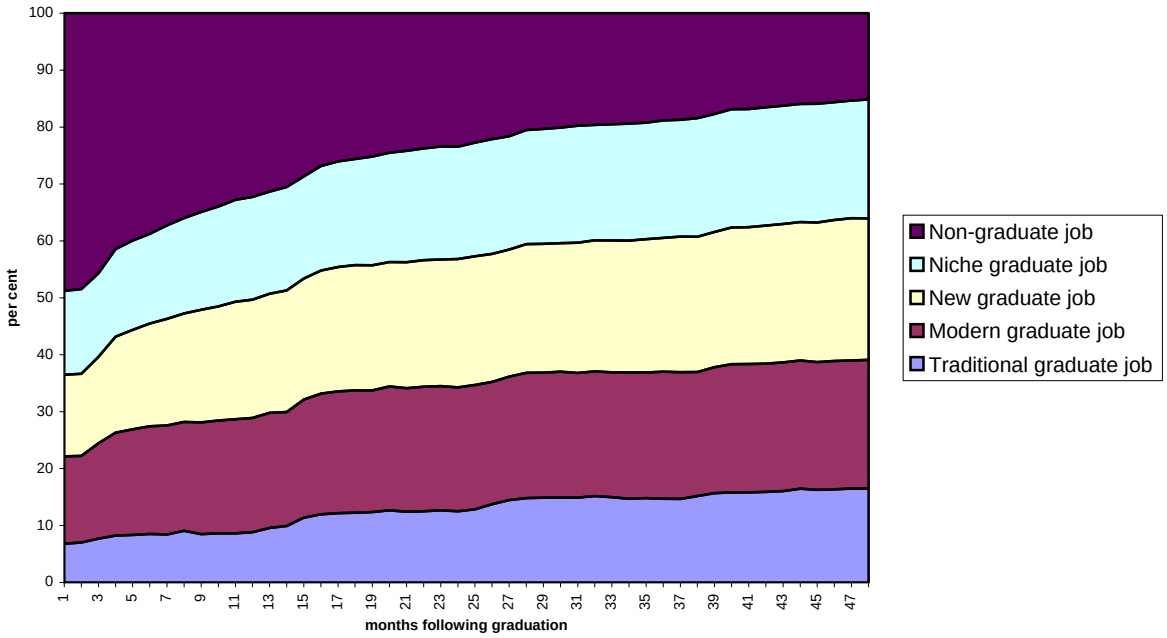
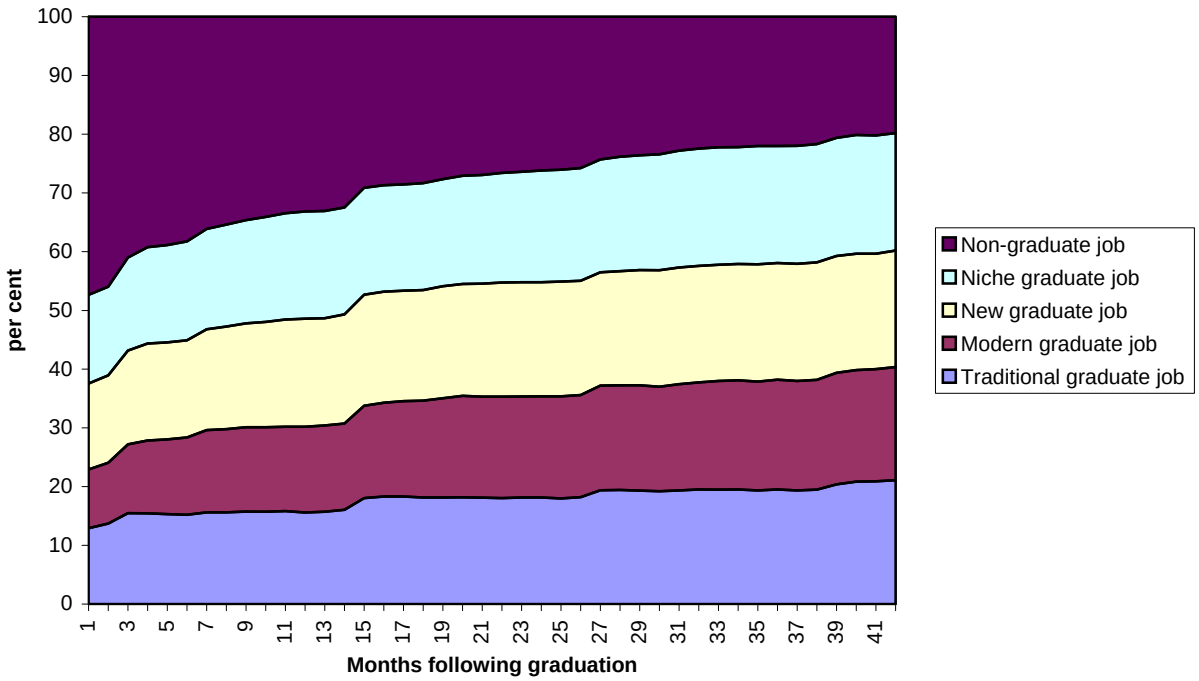
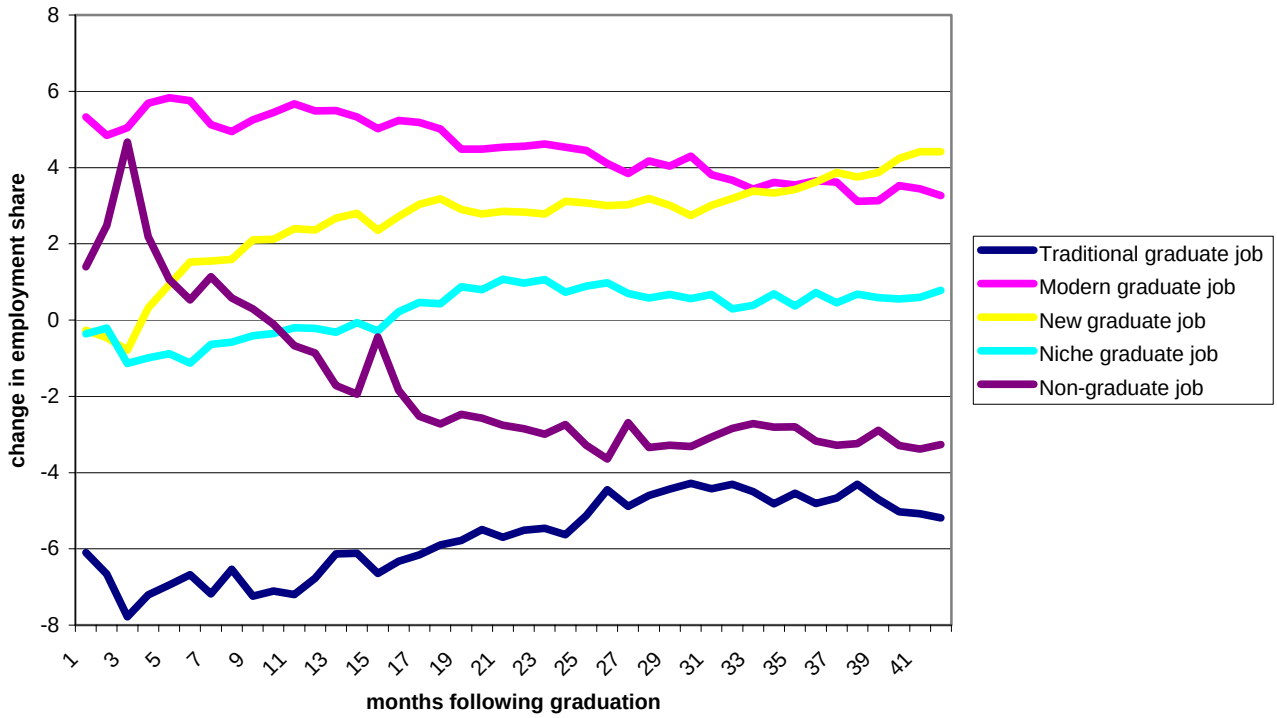



**Figure 4.8: The occupational evolution of employment among 1995 graduates**



The same analysis is repeated in Figure 4.8 for the earlier cohort of graduates. The general pattern of a relative movement away from employment in non-graduate occupations was repeated. To assist in making comparisons, Figure 4.9 shows change in the occupational structure of employment between the two cohorts of graduates. In terms of the share of employment, the proportion of graduates employed in *non-graduate* occupations was higher in the 1999 cohort during the months immediately following graduation. However, beyond 10 months after graduation, employment of the 1999 cohort in non-graduate occupations was less than among the 1995 graduates. Beyond 18 months after graduation, the share of employment in *non-graduate* occupations among the 1999 cohort remained at approximately three per cent lower than that observed among the 1995 graduates. Employment in *traditional graduate* occupations was also lower in the 1999 cohort, particularly during the first 18 months following graduation, beyond which it stabilised at approximately 5 per cent less than among the 1995 graduates.

**Figure 4.9: Changes in the occupational profile of employment: differences between the 1999 and 1995 cohorts (1999 cohort share minus 1995 cohort share)**



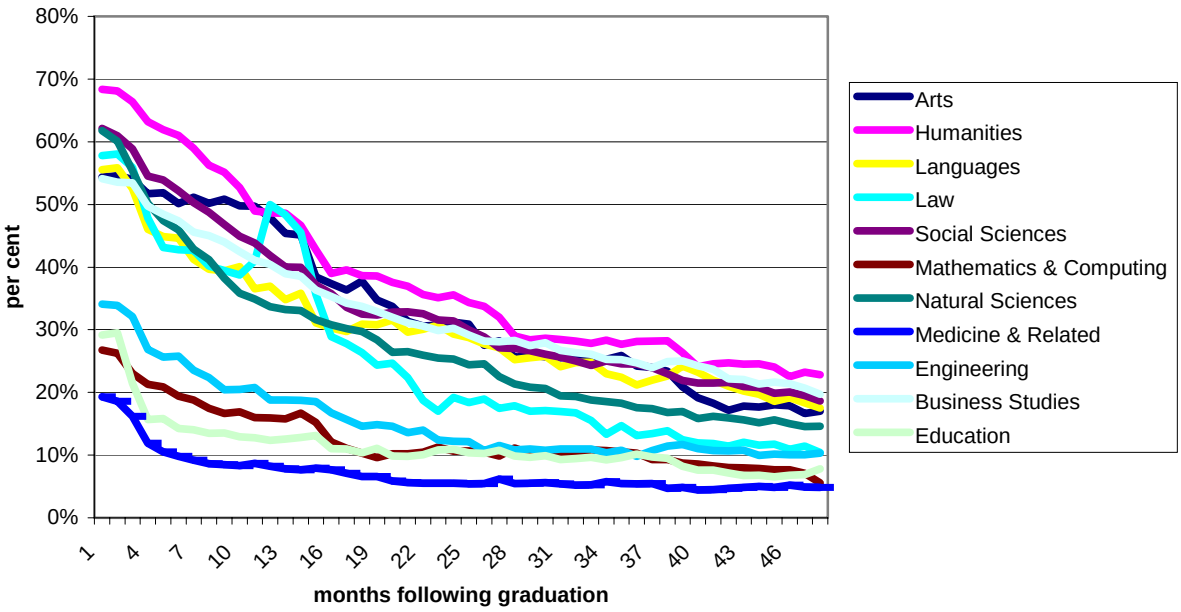

Higher shares of employment in *modern graduate* and *new graduate* occupations offset these lower rates of employment in *non-graduate* and *traditional graduate* occupations. However, while relative share of employment in *new-graduate* occupations increased during the four years following graduation among the 1999 cohort, the initial 5-6 percentage point increase in the share of employment in *modern graduate* occupations observed among this group during the year following graduation declined. A higher proportion of the 1999 cohort worked in

*modern graduate* occupations, particularly in the first 12 months following graduation. The share of employment in *niche graduate* occupations during the four years following graduation was relatively similar for both cohorts of graduates.

## 4.5 Career paths by subject studied

We now present information on the early career paths for different groups of graduates from the 1999 cohort based upon the subject area of the courses they had completed. Respondents were asked to record their main broad disciplinary/subject area to one of 12 categories, including a category for interdisciplinary degrees. Due to the wide variety of subjects that could form an interdisciplinary degree, we exclude this heterogeneous category from subsequent analyses. For the purpose of making comparisons across subject areas, Figure 4.10 presents information on the share of employed graduates who worked in *non-graduate* occupations; those jobs in which it is unlikely that graduates will be making full and good use of their higher education in the course of their employment.

**Figure 4.10: Employment share in non-graduate occupations by subject of degree**




Two broad groups of subject areas can be identified:

- first, those graduates who studied vocationally orientated degrees were less likely to be working in *non-graduate occupations*; for example, among those graduates with degrees in medicine and related subjects and who are in employment, less than 20 per cent initially work in non-graduate occupations after completing their studies and the proportion declined to approximately 5 – 6 per cent in two years of graduation. Other

subject areas characterised by relatively low levels of employment in *non-graduate* occupations include education, engineering, and mathematics and computing;

- in contrast, graduates from the other subject areas had relatively high levels of employment in *non-graduate* occupations, particularly in the first three years following graduation. For example, 68 per cent of employed graduates with degrees in humanities were employed in *non-graduate* occupations following the completion of their studies; more than three times the rate exhibited by graduates from medicine and related disciplines. Four years after graduation, employment in *non-graduate* occupations remained at 23 per cent among this group; more than four times the rate exhibited by graduates from medicine and related disciplines. Among graduates from the remaining subject areas, initial rates of employment in non-graduate occupations are between 54 – 62 per cent. Four years after graduation, rates of employment in non-graduate occupations among such graduates generally remain between 10 – 15 per cent.

The propensity of graduates to gain employment in *non-graduate* occupations thus varied significantly according to subject area studied. We may also expect the share of employment in remaining categories of the SOC (HE) classification to vary according to the subject area studied. To consider these patterns in further detail, we compared the employment profiles of graduates in humanities, business studies and medicine and related: subject/discipline areas at the extremes, and in the middle, of the academic-vocational continuum.

Figure 4.11 shows the types of jobs held by 1999 humanities graduates during the 48 months following graduation, once again, restricting the sample to those respondents who graduated from institutions that participated in both surveys. As noted above, the majority of such graduates were initially employed in *non-graduate* occupations, although the share of such employment declined rapidly after graduation. The decline of employment in *non-graduate* occupations reflected a relatively even increase in the share of employment in each of the remaining SOC (HE) categories. The share of employment in *traditional graduate* occupations, *modern graduate* occupations and *new graduate* occupations each increased by approximately 14 – 15 per cent during the four years following graduation. The increase in the share of employment in *niche graduate* occupations was lower at approximately 9 per cent.

Figure 4.12 compares the evolution of employment by SOC(HE) categories among humanities graduates between the 1999 and 1995 cohorts. It can be seen that the share of employment in *non-graduate* occupations was lower among the 1999 cohort. Beyond 12 months after graduation, employment in *non-graduate* occupations was generally between 7-10 percentage points lower in the 1999 cohort. During the first two years following graduation, the employment share in *traditional graduate* occupations was also lower. However, by 2½ years following graduation, the level of employment in such occupations had

returned to the same level as that of the 1995 cohort. It would thus appear that it may be taking longer for Humanity graduates to enter *traditional graduate* occupations. There is little variation observed in the proportion employed in *niche graduate* occupations between the two cohorts of humanities graduates, while the proportion employed in *modern graduate* occupations is consistently 4-5 percentage points higher among the 1999 cohort. Finally, during the first 12 months following graduation there was little difference between the two cohorts in the proportions employed in *new graduate* occupations. However, beyond 18 months, the 1999 cohort employed in *new graduate* occupations was consistently 5-7 percentage points higher.

**Figure 4.11: Occupational profile of employment among humanities graduates**

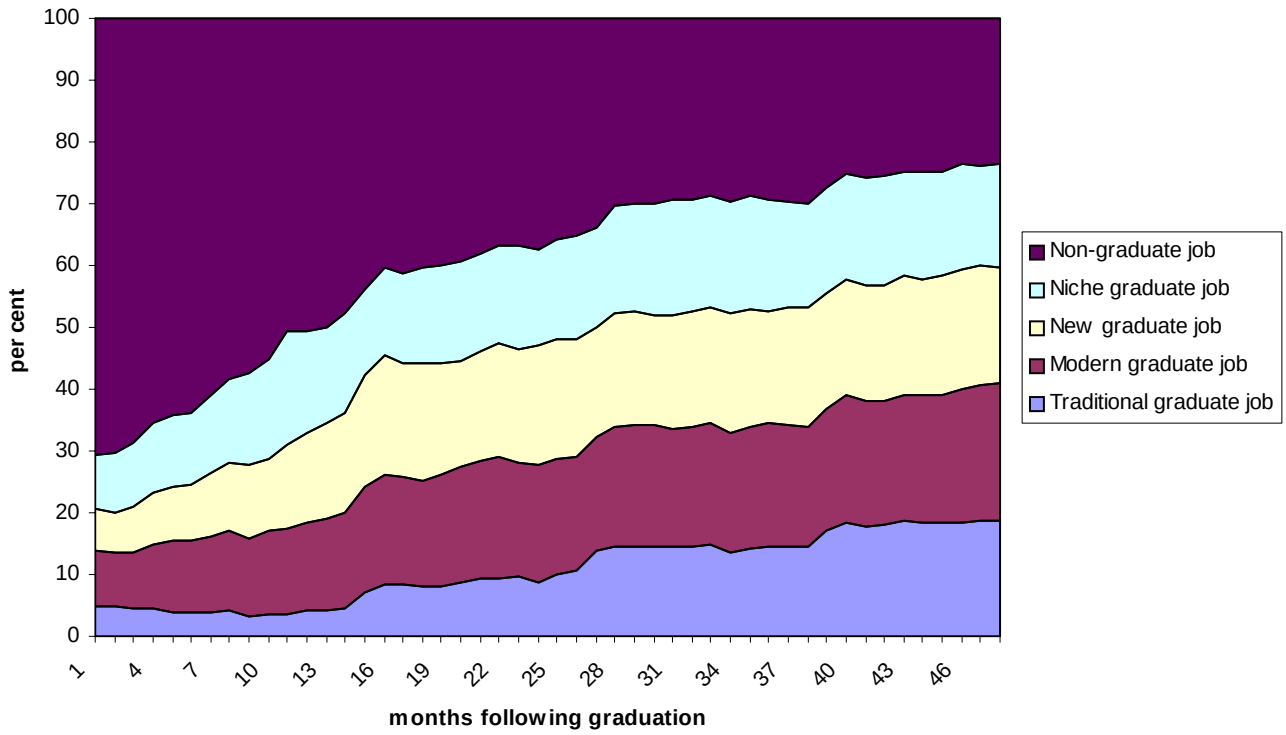


**Figure 4.12: Changes in the occupational profile of humanities graduates: differences between the 1999 and 1995 cohorts (1999 cohort share minus 1995 cohort share)**

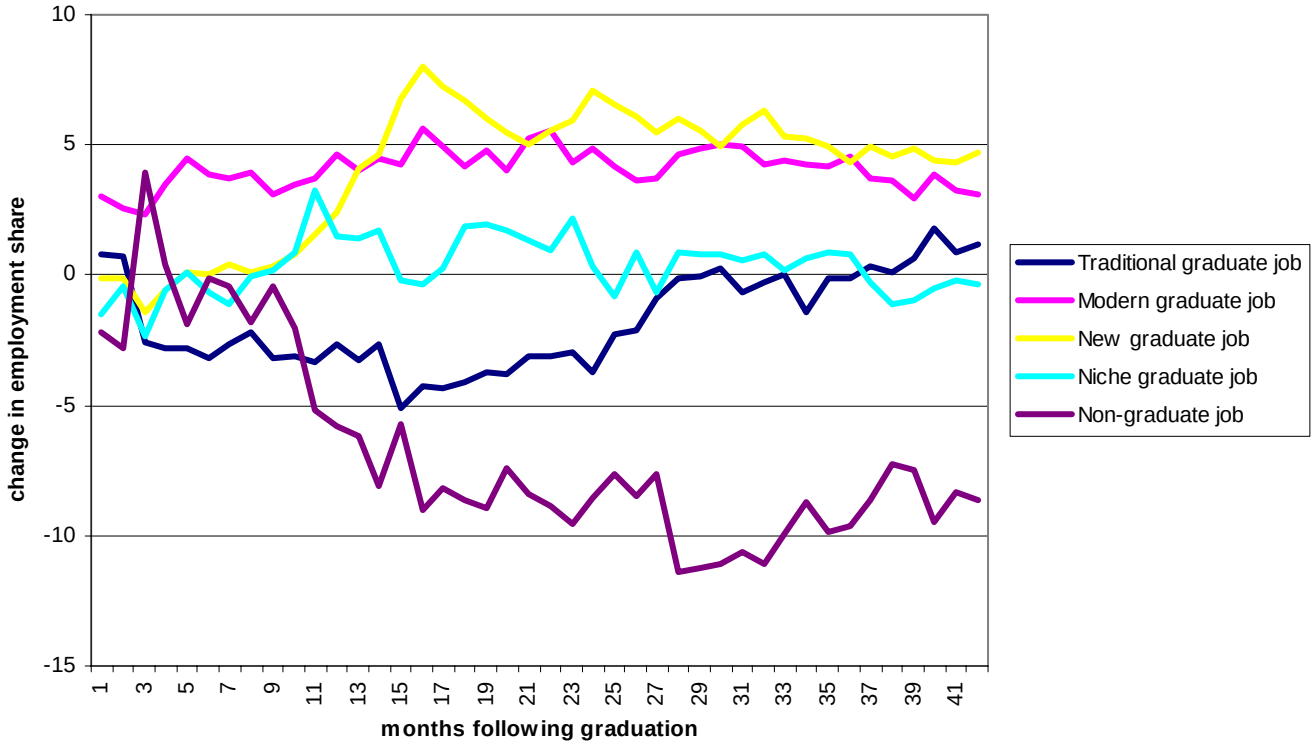



Figure 4.13 shows the types of jobs held by 1999 medicine and related graduates during the 48 months following their graduation. We observe that employment in non-graduate and modern graduate occupations was relatively low among this group, and employment in *traditional, new* and *niche graduate* occupations remained relatively stable over the four years. Comparing the two cohorts of medicine and related graduates, Figure 4.14 shows that the share of employment in *traditional graduate* occupations was approximately 20 per cent lower among the 1999 cohort, offset by an increase in employment in *new* and *niche graduate* occupations. The increase in employment in *new graduate* occupations reflects the higher proportion of graduates entering a variety of therapy related occupations, such as physiotherapists and occupational therapists. The increase in employment in *niche graduate* occupations reflects the higher proportion of graduates entering nursing. The share of employment in *modern* and *non-graduate* occupations has remained relatively unchanged between the two cohorts.

Finally, Figure 4.15 shows the types of jobs held by 1999 business graduates during the 48 months following graduation. We observe that employment in *traditional graduate* occupations is of relatively little importance to this group. Accompanying the decline in the share of graduates employed in non-graduate occupations, we observe a 20 per cent increase in the share of employment in *new graduate* occupations and of nine per cent in

*niche graduate* occupations. Comparing of business graduates in the two cohorts, Figure 4.16 reveals lower proportions of employment in *traditional, modern and niche graduate* occupations in the 1999 cohort, offset by the higher proportion in *new graduate* occupations. This is particularly evident beyond two years after graduation, where the share of graduates employed in new graduate occupations was eight per cent higher in the 1999 cohort.

**Figure 4.13: Occupational profile of employment among medicine graduates**

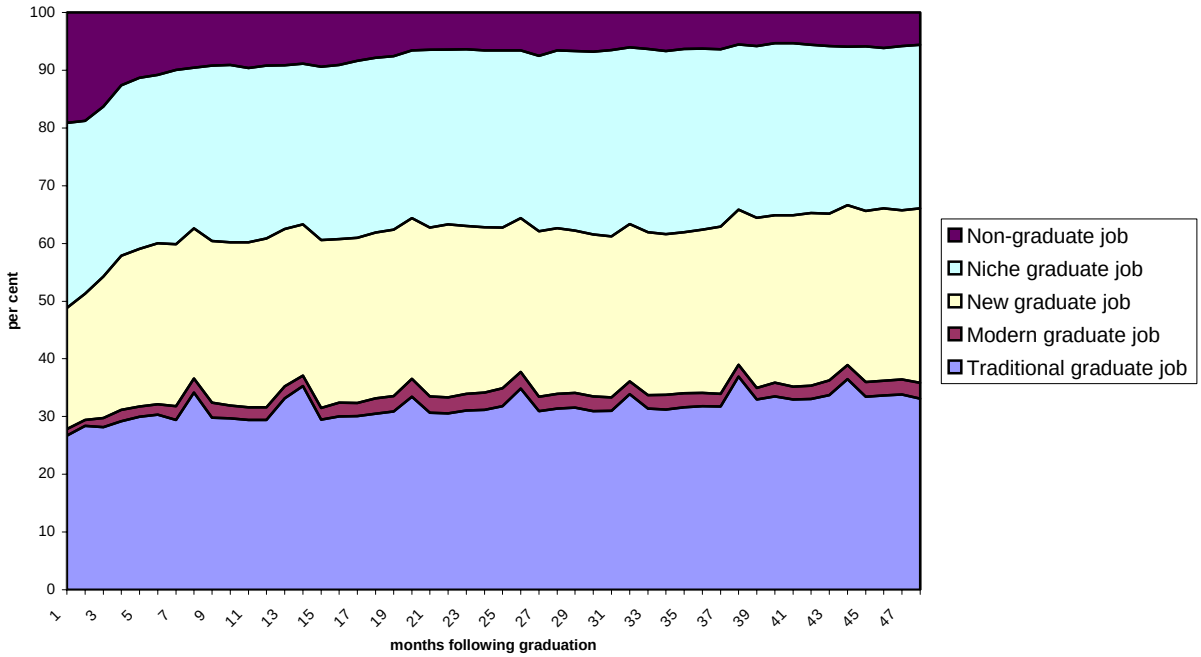



**Figure 4.14: Changes in the occupational profile of medicine graduates: differences between the 1999 and 1995 cohorts (1999 cohort share minus 1995 cohort share)**

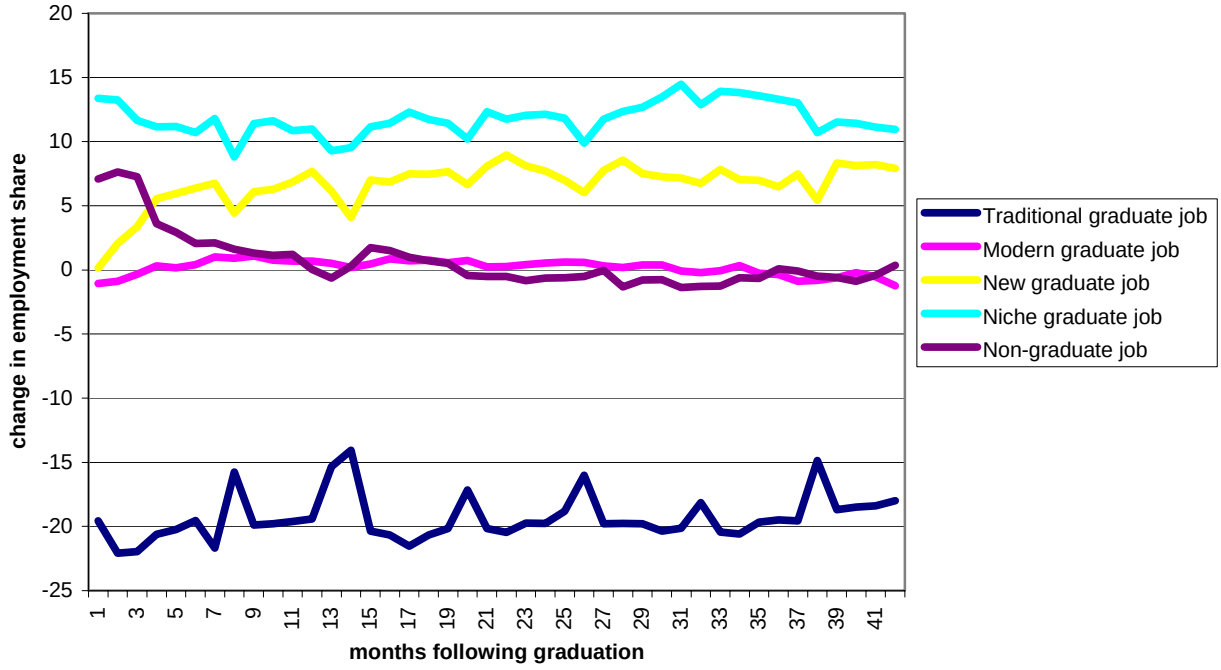


**Figure 4.15: Occupational profile of employment among business graduates**

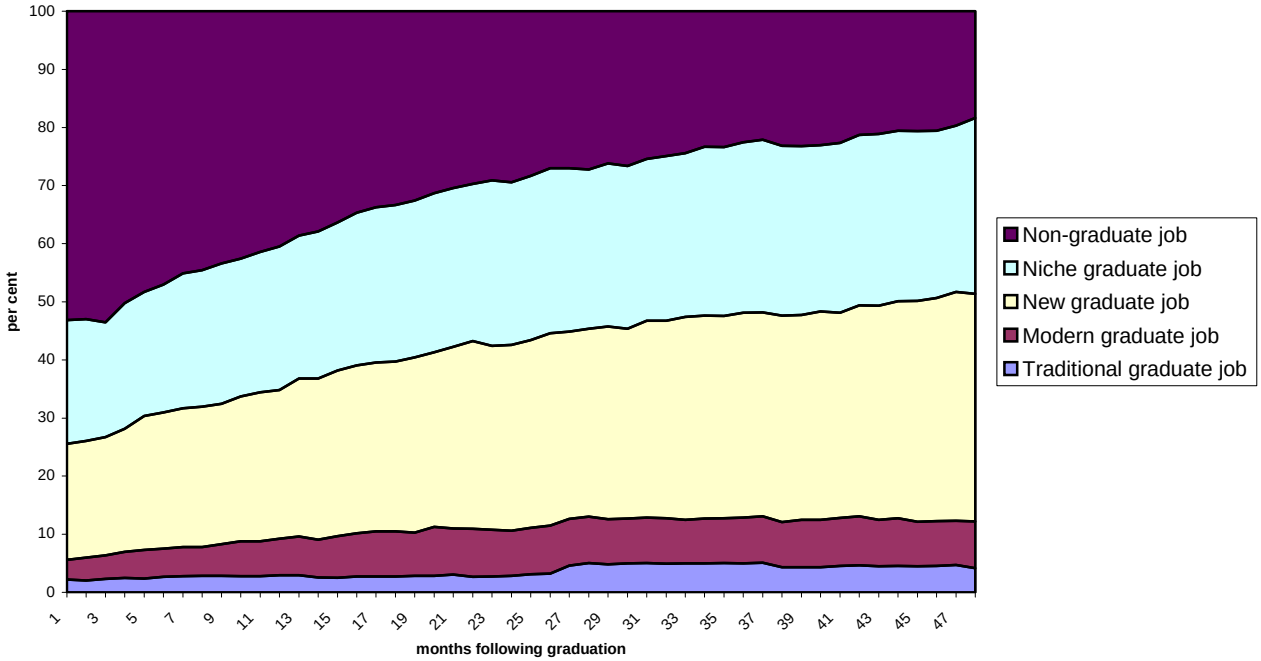
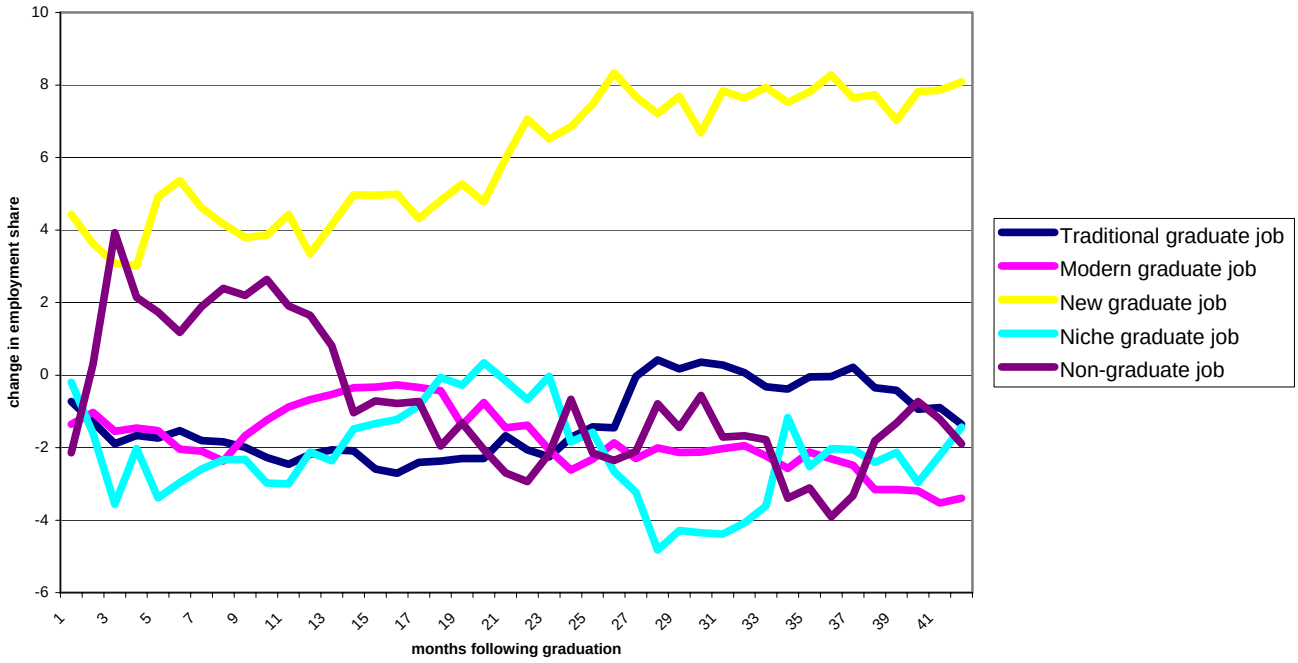



**Figure 4.16: Changes in the occupational profile of business graduates: differences between the 1999 and 1995 cohorts (1999 cohort share minus 1995 cohort share)**

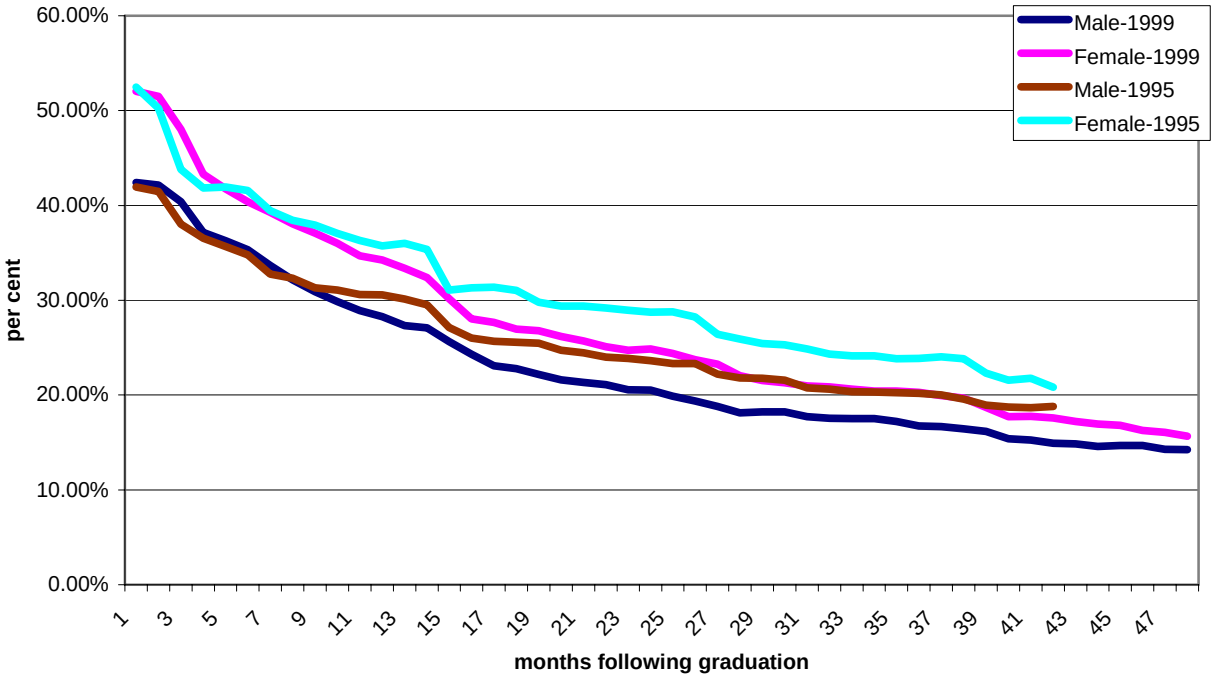



## 4.6 Career paths by gender

In this section we consider the career profiles of graduates by gender. Relatively little difference emerged in the distribution of employment between the four graduate occupation

groups of SOC (HE) by gender. Figure 4.17, therefore, concentrates on male and female graduates employed in *non-graduate* occupations, comparing the 1995 and the 1999 cohorts. In the period immediately following graduation, the share of females *in non-graduate* occupations was approximately 10 per cent higher than the share of males in *non-graduate* occupations, and during the first 10 months following graduation, the trajectories of these employment profiles show little difference between the two cohorts of graduates. For example, at 10 months after graduation, 31 per cent of employed males in the 1995 cohort were working in *non-graduate* occupations, compared with 30 per cent of males from the 1999 cohort. However, among the 1999 cohort both males and females were less likely to be employed in *non-graduate* occupations. Forty two months following graduation (the end of the career history information collected from the 1995 cohort of graduates), the share of employment in *non-graduate* occupations was four per cent lower for both males and females in the 1999 cohort than in the 1995 cohort.

**Figure 4.17: Male and female employment in non-graduate occupations**




## 4.7 Career paths by degree class

Finally, we consider the career profiles of different groups of graduates based on their degree result. As with gender, there was relatively little difference in the distribution of employment between the four 'graduate occupation' groups of SOC (HE) by class of degree. Figure 4.18 presents qualification-level profiles of employed graduates who were working in *non-graduate* occupations, with comparisons of the trajectories being made of the 1995 and the 1999 cohorts. Among both cohorts, poorer performance in terms of degree class is associated with a higher propriety to be employed in *non-graduate* occupations. Among the 1999 cohort, 61 per cent of employed graduates with a third class honours degree were initially employed in non-graduate occupations, compared to 34 per cent of graduates with first class honour degrees. Comparing the two cohorts, we see a more sustained movement away from employment in *non-graduate* occupations among the 1999 cohort, observed most clearly in the case of those with first class honour degrees. At 42 months following graduation the proportion of graduates with first class honour degrees in *non-graduate* occupations was five per cent lower in the 1999 cohort than in the 1995 cohort.

**Figure 4.18: Employment in non-graduate occupations by degree class**

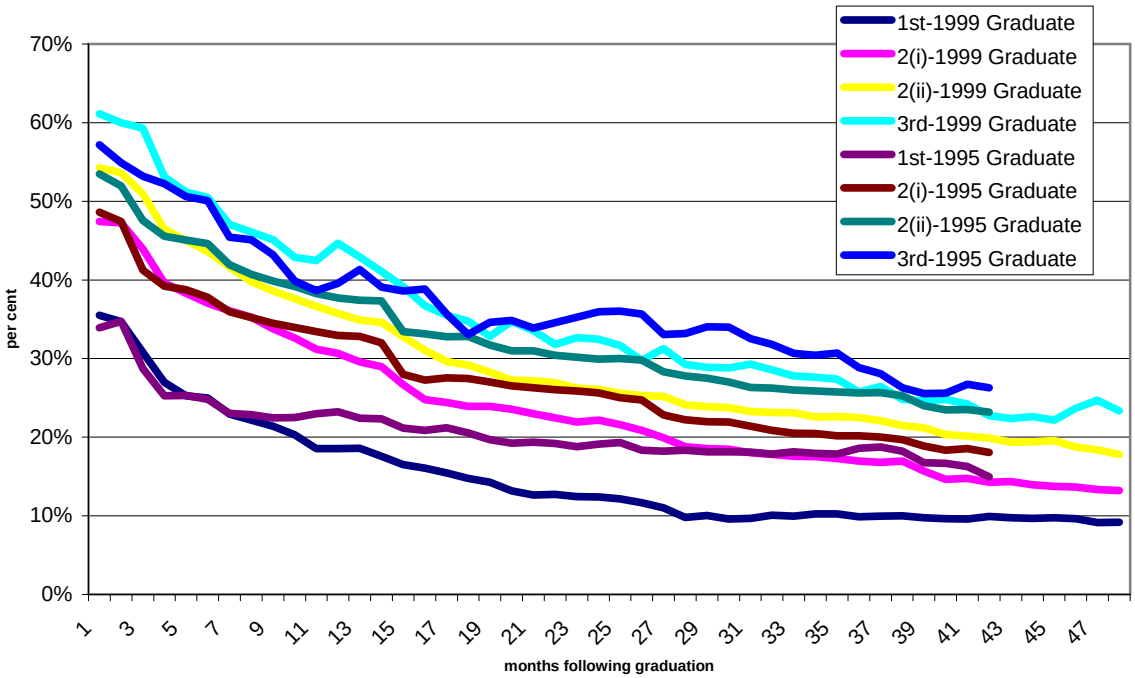



Figure 4.18, shows clearly that those awarded a higher class of degree are less likely to be employed in non-graduate occupations. Non-graduate occupations account for a lower share of employment even after accounting for the lower rate of employment generally among first class graduates as they were also more likely to go on to further study.

Although there was relatively little difference among graduates with lower classes of degrees in terms of the employment in non-graduate occupations immediately following graduation, the exit from non-graduate occupations where graduates had been awarded a 2(i) was more rapid than that of graduates who have been awarded a 2(ii) or lower. Twelve months after graduation, less than a quarter of graduates with 2(i) degrees were employed in non-graduate occupations compared to 32 per cent of graduates with 2(ii) degrees or lower. Four years after graduation, each lower class of degree is associated with a five percentage point increase in the rate of employment in non-graduate occupations, ranging from 8 per cent among first class degree holders to 23 per cent among holders of third class degrees.

## 4.8 Summary

- The early career profiles of 1999 graduates are almost identical to those exhibited by the earlier cohort. However, against a background of falling unemployment generally, the experience of unemployment among the 1999 graduates during the two years after graduation was slightly lower than for the 1995 graduates. The distribution of the duration

of unemployment among the 1995 and 1999 cohorts were similar, with short spells of unemployment dominating.

- The likelihood of experiencing significant spells of unemployment varied by level of degree awarded, with those with lower grades more likely to have experienced significant unemployment. In terms of subject studied, arts graduates were most likely to have experienced significant unemployment while law, business, education and medicine graduates were least likely to have done so.
- Almost half of the *Class of '99* who were in employment immediately following their studies were employed in non-graduate occupations, but subsequent employment in non-graduate occupations fell rapidly and by four years after graduation, only 15 per cent of employed respondents worked in such occupations. During early careers, employment in non-graduate occupations was generally lower for the 1999 graduates than for the 1995 cohort.
- Graduates who studied subjects at the vocational end of the subject/discipline spectrum, such as medicine, education, engineering, and mathematics and computing, were less likely to have obtained employment in *non-graduate occupations* following graduation, while at the other end of the subject spectrum, graduates with degrees in the humanities had relatively high levels of employment in these jobs.
- Female graduates were more likely than males to work in non-graduate jobs in their early careers.
- Graduates with lower degree awards had a higher propensity than others to be employed in non-graduate occupations during their early careers.
- Employment in *traditional* graduate occupations was 4-6 per cent lower among the 1999 graduates than in the earlier cohort. A higher proportion of the 1999 graduates were employed in modern and new graduate jobs.

# CHAPTER 5

## Routes into employment: access to opportunities and the role of networks, work experience, careers guidance and temporary work agencies

### 5.1 Introduction

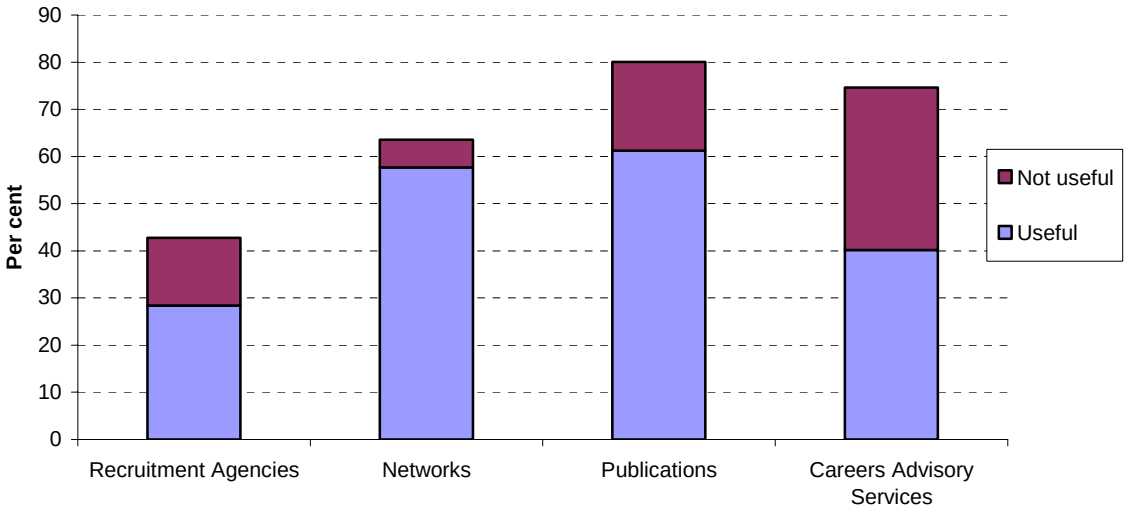
In this chapter we examine the way in which the graduates of 1999 have made use of various sources of information and guidance about employment at any stage before or after graduation and the roles played by intermediaries in the graduate labour market. Once again, comparisons will be made with the earlier cohort of 1995 graduates where appropriate. We discuss the importance of temporary employment in the early stages of graduate careers as one means by which graduates enter the labour market, organisations and occupations. Importantly, we examine the different ways graduates experience the idea of 'career', how they make decisions about employment and the means by which they seek to circumnavigate obstacles faced in the labour market. The survey data will be used to identify broad patterns in the sample but much of the discussion draws upon the qualitative data to investigate what the experiences of the interview sample can tell us about the interaction between individuals and the labour market.

### 5.2 Advice, guidance and intermediaries in the graduate labour market

For graduates entering a complex labour market, careers advice and support has been recognised to be increasingly important (Harris 2001, Purcell and Rowley 2001). In the survey we investigated the extent to which graduates were utilising the variety of sources of information, advice and guidance available to them and the extent to which they considered these to have been useful. Previous research has indicated that in the past, the use and usefulness of advice and guidance has varied according to social class background, age, subject and institution of study and subsequent employment outcomes.

The survey gathered information about a broad variety of sources of information and advice. For most of the analysis that follows, these have been grouped into four broad categories; recruitment agencies, careers advisory services, publications and networks. Careers advisory services include the use of careers services at any university at any time before or after graduation, careers consultants and job centre/careers service. 'Networks' covers lecturers, family and social networks and professional colleagues through work. Publications include newspapers, internet sources and specialist careers publications whether for information on vacancies or information and guidance on careers. Figure 5.1 reveals the extent to which the sample had used these sources of careers information, advice and guidance (and information on vacancies) before and after graduation.

**Figure 5.1: Proportions of graduates who reported using sources of information, advice and guidance and those who consider them to have been of use**




N (weighted) = 77,436
Source: Survey of the Career Paths of 1999 Graduates

In terms of gender, there was little difference in patterns of usage except a marginally higher propensity amongst males to have used recruitment agencies, which may reflect their greater propensity to work in areas where agencies have been becoming an increasingly important route into jobs: for example, ICT technical and professional occupations. Figure 5.1 also outlines the extent to which those who had used these different means of information and advice considered them to have been useful. Unsurprisingly, networks were considered to have been most useful. Most importantly, however, almost half of those who claim to have used careers advisors, the second most commonly used source for information or guidance, claimed that the experience had not been useful. The qualitative evidence suggests a number of deficiencies highlighted by the experiences of the 1999 cohort. While the graduate labour market has evolved considerably in recent years and the range of jobs, professions and industry sectors that graduates are entering has increased as the graduate labour supply has expanded and diversified, careers advice may not have kept apace. This was evident in a number of cases referring to advice both prior to and in higher education:

> *'When I left school and was looking for a university course to apply for I really didn't know what careers the courses would prepare or train me for. Careers advice at school was very poor and we were discouraged from applying to courses that were in competitive industries. At 18, I really didn't know what I wanted to do and found that careers advice was very limited and didn't cover the broad spectrum of jobs available for me to even consider'.*
> (002, female humanities graduate, assistant to IT finance manager, manufacturing, £27k-£30k, non-graduate job)

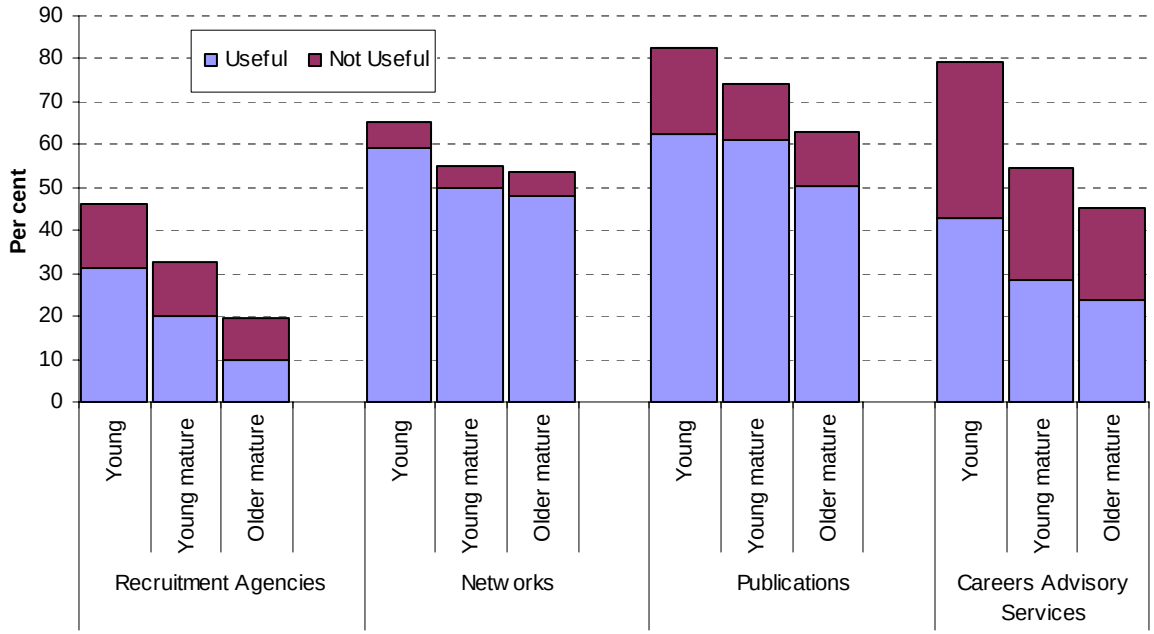
> *'The university careers department should consider a wider range of jobs and not only offer information on those directly related to your degree'*
> (071, female business studies graduate, sports facilities manager, education, £18k-£21k, niche graduate job)

Much high profile research into the graduate labour market focuses predominantly on traditional graduate employment in the professions and with blue-chip graduate recruiters (*e.g.* annual reports of 'graduate salaries' published by the Association of Graduate Recruiters, and, recently, the study of graduate recruitment to AGR member companies by Brown and Hesketh 2004) and as such is likely to reinforce the conception of employment outside of these occupational groups as largely non-graduate. For students and recent graduates alike, careers advisory services are likely to be the primary source of information on other non-traditional occupations, types of organisation and sectors of employment that are increasingly recruiting from the graduate supply, for example, growing levels of graduate employment in small and medium sized enterprises. This stresses the point that as the graduate labour supply has expanded, the graduate labour market, never homogenous, has become increasingly diverse.

But who used different sources of advice and information and why? It is necessary to examine these patterns of use according to institution of study, degree subject studied, gender, class, SOC (HE) category and age. In terms of type of institution, there is little difference in patterns of use of these sources of information and guidance except in the case of careers advisory services. 82 per cent of graduates from an old university claimed to have consulted a careers advisor in some capacity whilst only 68 per cent of graduates from a new university had done so. This is consistent with the findings for 1995 graduates presented in Elias *et al.* (1999; 105). However, in terms of the usefulness, institution of study had little significant effect on the extent to which these sources were considered useful (or not) by those who used them.

Age might be expected to have an impact on job search activity. For the purpose of this analysis, we have divided the respondents into three age groups; young graduates who graduated under the age of 25, young mature who graduated between the ages of 25 and 30 and older mature graduates who graduated over the age of 30. Figure 5.2 shows that young graduates were most likely to have made use of all sources of information and advice. The oldest group were the least likely to have done so. The most notable finding was that whilst approximately 80 per cent of young graduates claimed to have used careers advisors, only 55 per cent of the young mature group had done so. This possibly reflects the greater propensity for this age group to undertake higher education to pursue well-defined career aims. However, Figure 5.2 also indicates that among those that had used careers advisers there was very little difference in the extent to which they found it a useful experience. Young graduates were more likely to have found recruitment agencies useful, 67 per cent having found them to be useful compared to 50 per cent in the oldest category, which is likely to reflect difficulty encountered by older graduates in accessing appropriate employment (Purcell *et al.* 2003).

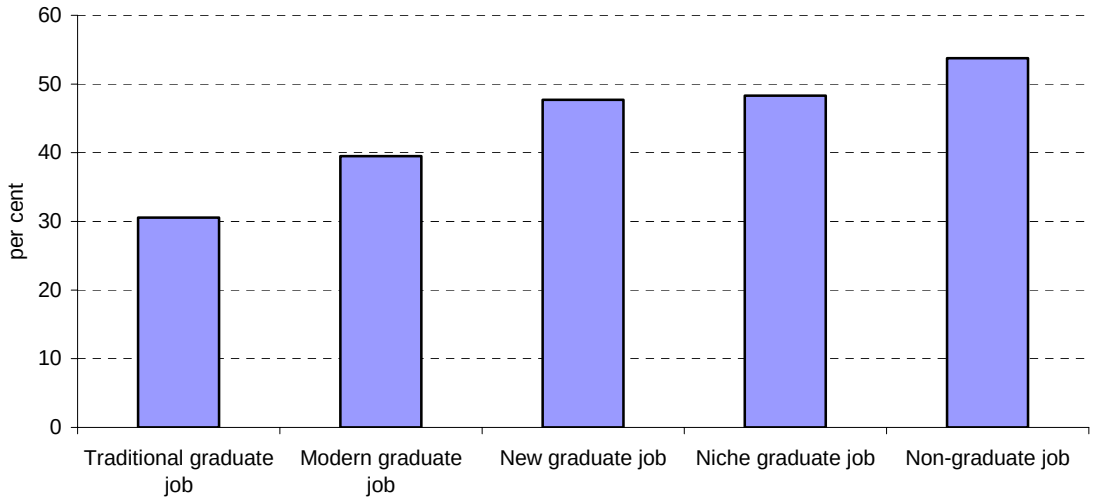
**Figure 5.2: Proportions of graduates who reported using sources of information, advice and guidance and those who consider them to have been of use, according to age group**




N (weighted) = 77,436
Source: IER/ESRU Survey of the Career Paths of 1999 Graduates

Differences in the incidence of use of particular sources of information and/or advice were to be expected according to the type of job graduates were doing (according to SOC (HE)). This was found to be the case particularly for the use of recruitment agencies, as Figure 5.3 shows.

**Figure 5.3: Proportions of graduates who reported having used recruitment agencies, by SOC (HE)**




N (weighted) = 71,661
Source: IER/ESRU Survey of the Career Paths of 1999 Graduates

Those in non-graduate jobs were more likely to have used recruitment agencies than all other groups, a finding that reinforces evidence from recent research on graduate employers who reported using agencies to staff routine posts and to identify potential recruits for permanent graduate-level employment. The relatively high proportions of graduates who had used agencies in the less established graduate occupational areas indicates the degree to which agencies and temporary employment appears to have provided a stepping stone into such employment. The high figure for those in non-graduate employment could be associated with a more exhaustive search for appropriate employment and reflects the growth of agencies in recent years. Those in non-graduate employment also reported greater use of careers advisers and careers publications. Notably, 81 per cent of those in non-graduate jobs sought advice from careers advisory services compared to 74 per cent of those in traditional graduate jobs (*i.e.* those most likely to have a strong link between degree subject and subsequent career path and consequently, less need to explore a range of options through careers advisory services). Research among graduate employers (Mason 2002) has revealed that, particularly in some sectors, there has been increasing use of employment agencies to recruit graduates for both high skill vacancies and low level administrative or personal service jobs - and the patterns revealed by this figure support these findings. Those in non-graduate jobs were most likely to have used agencies and those in traditional graduate jobs least likely, but the gradient between the two suggests that in the areas of new and higher administrative and technical employment that are increasingly requiring and/or recruiting graduates, such use is also significant. These trends also suggest that, as the knowledge and skill levels of jobs rises, employers' propensity to recruit temporary workers (via agencies) to fill them diminishes. There is a considerable literature on this, which suggests that the rule generally holds except in cases of high skill shortages or specialist (e.g. ICT) occupations where firm-specific knowledge is less important than professional or technical expertise (c.f. Lepak and Snell 1999; Purcell *et al*. 2004; Kalleberg 2003; Williamson 1975).

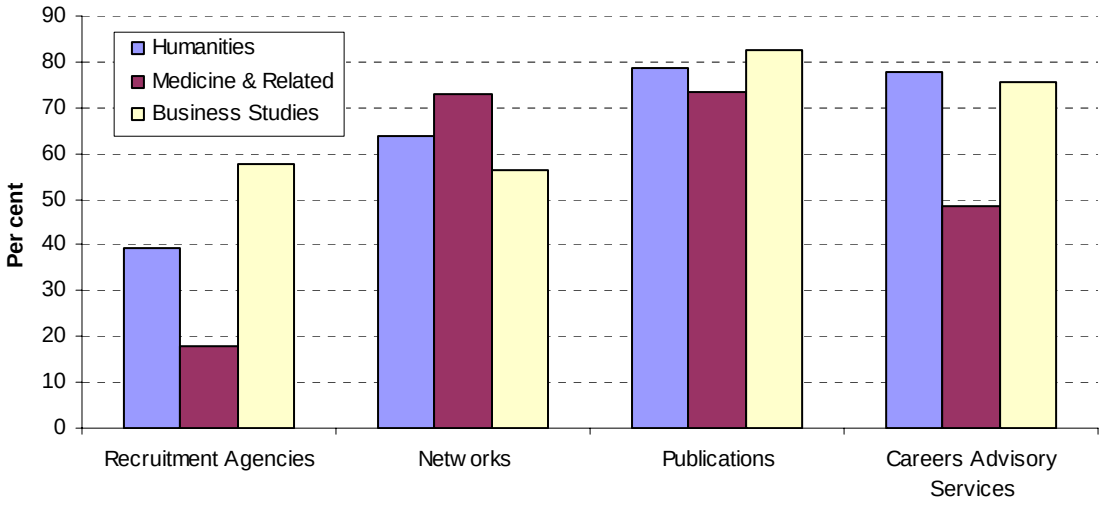
In the light of this it is significant that for all sources except recruitment agencies, those in non-graduate employment were most likely to have rated them as ‘not useful’. As far as the use of careers advisory services was concerned only 43 per cent of those in non-graduate employment had found them useful, although it is not surprising that those who have been less ‘successful’ in the graduate labour market might be expected to give negative accounts of the careers advice they had received.

Analysis according to social class background showed little difference in the use of the various sources of information, advice and guidance across the sample although, perhaps not surprisingly, graduates from a professional and managerial background were most likely to have made use of networks for information and guidance (69 per cent compared to 57 per cent of those from routine or semi-routine backgrounds). These graduates are those most

likely to have parents who were educated to a similarly high level and to have contact with those in the types of employment which they have entered[10]. They were also the group most likely to have made use of careers advisory services, a finding perhaps linked to their greater propensity to have attended an old university and lower propensity to have studied as mature students.

Analysis by subject of study, in Figure 5.4, indicates that use of recruitment agencies was highest amongst business studies (and maths, computing and engineering) graduates, and lowest amongst those graduates who had studied a specific vocational programme (as represented by those with medicine and related degrees). Overall, vocational graduates made least use of careers advisers. Of the three groups we focus on, humanities graduates made greatest use of careers advisory services, reflecting their greater difficulty in establishing an appropriate link from study to the labour market.

**Figure 5.4: Use of sources of information, guidance and advice by selected subject of study**




Social science, natural science, arts, humanities and languages graduates were least likely to have viewed recruitment agencies as having been useful. A similar pattern is evident for respondents' evaluation of careers advisory services. Therefore, those with perhaps the greatest need for guidance and information from careers advisers were most likely to have reported that they were not useful; not a new finding (Purcell and Rowley 2001). Similarly, it would appear that the use of recruitment agencies was a less successful experience for graduates of subjects with 'academic' rather than vocationally specific skills and knowledge. This might indicate that recruitment agencies are less successful in finding appropriate employment for these graduates or are less able to provide them with useful information and advice. Alternatively, it might reflect the fact that they aspire to enter tighter or more difficult

10 'Cultural Capital' (Bourdieu, 1968)

labour markets with less demand for their skills or where there is greater competition for the jobs they seek.

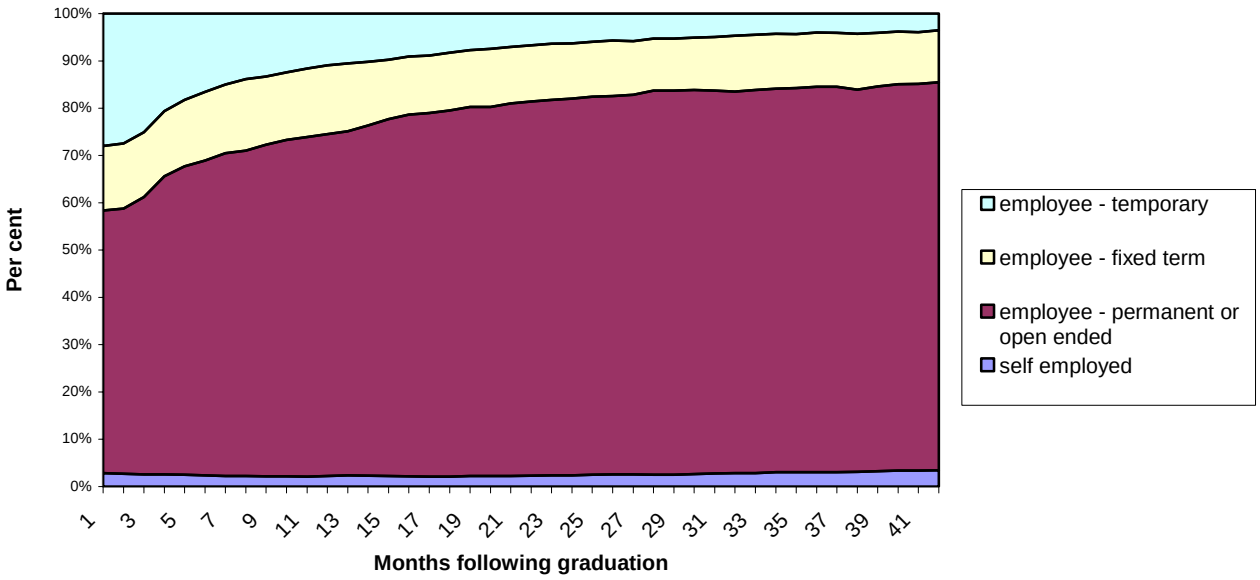
### 5.3 Access to graduate opportunities

As the graduate labour supply has expanded, individuals who are not recruited into traditional graduate training schemes or enter one of the established professions have to find alternative routes into appropriate employment. The qualitative interview data identified key themes raised by the respondents, in particular, the role and importance of temporary employment, recruitment agencies and speculative applications and initiative in obtaining employment. It also highlighted the importance of work placement and work experience during study and the relationship between these and employment after graduation. Having identified these themes, we investigated them further using the survey data.

Entry into the labour market for many graduates is via some form of temporary employment that coincides with a large proportion entering into non-graduate work immediately after graduation. As time passes however, most graduates found permanent work that was more likely to be of a graduate-appropriate level. For most graduates, temporary employment is a transitory phase but for some it appears to have taken a significant period of time to 'settle down' into more stable work. We wondered whether temporary employment was becoming an increasingly frequent early career experience for graduates and compared the 1995 and 1999 cohorts to explore this. Figure 5.5a and 5.5b compare the contractual status of both 1999 and 1995 graduates over the 3.5 years after graduation. They show that approximately 55 per cent of 1999 graduates entered into permanent employment compared to approximately 45 per cent of their 1995 peers. Whilst, after 3.5 years, approximately 80 per cent of 1999 graduates were in permanent posts, marginally less than 70 per cent of the 1995 cohort was in the same position. This difference is accounted for by the significant difference throughout this early career period between the numbers in each group on fixed-term contracts because the comparable proportions of those in other forms of temporary employment and self-employment are remarkably similar. Almost twice the proportion of 1995 graduates entered fixed-term employment directly after graduation than for those from 1999 and this proportion is roughly maintained throughout the period. These differences may be accounted for by different economic conditions in the wider economy during these particular periods which led to greater levels of permanent positions for graduates in the latter period or it may reflect a different occupational mix in the two samples: as the following discussion shows in more detail, different types of contract appear more greatly associated with different types of employment. What both figures highlight however is the continued integration of graduates, even after several years, into more secure (and, most likely, more appropriate) forms of employment; a process which appears to be continuing. It also

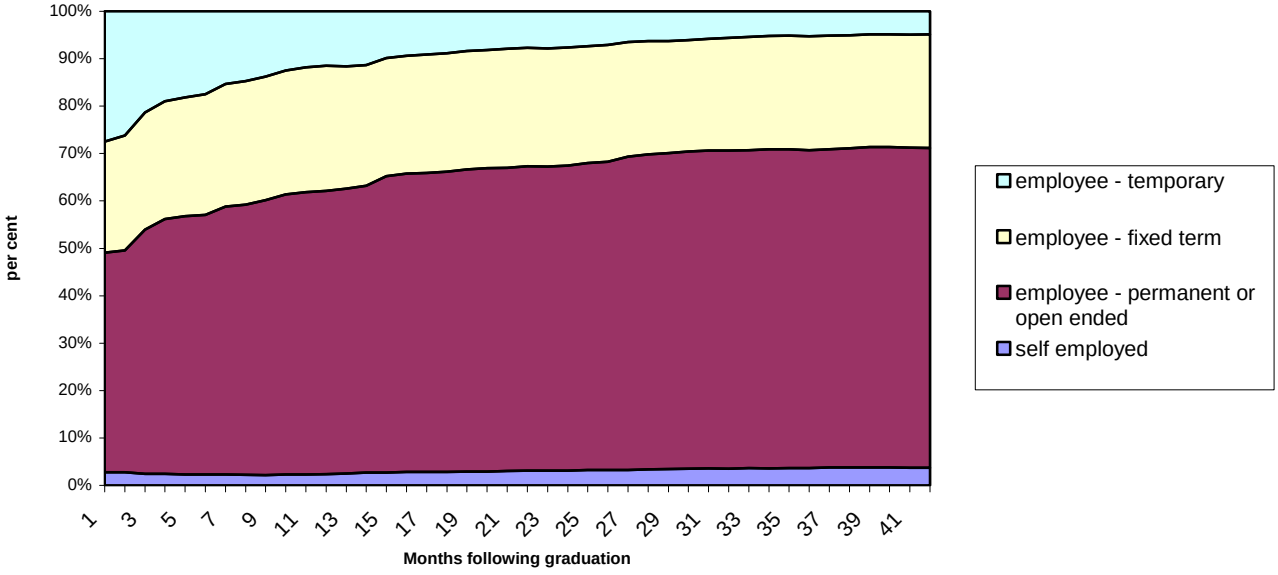
illustrates the importance of different forms of temporary employment in early career for many graduates and the relatively small, constant proportions in self-employment.

**Figure 5.5a: Contractual Status as a proportion of all graduates in sample over early career (1999 Graduates)**




**N (weighted) = 77,436**
**Source: IER/ESRU Survey of the Career Paths of 1999 Graduates**

**Figure 5.5b: Contractual Status as a proportion of all graduates in sample over early career (1995 Graduates)**

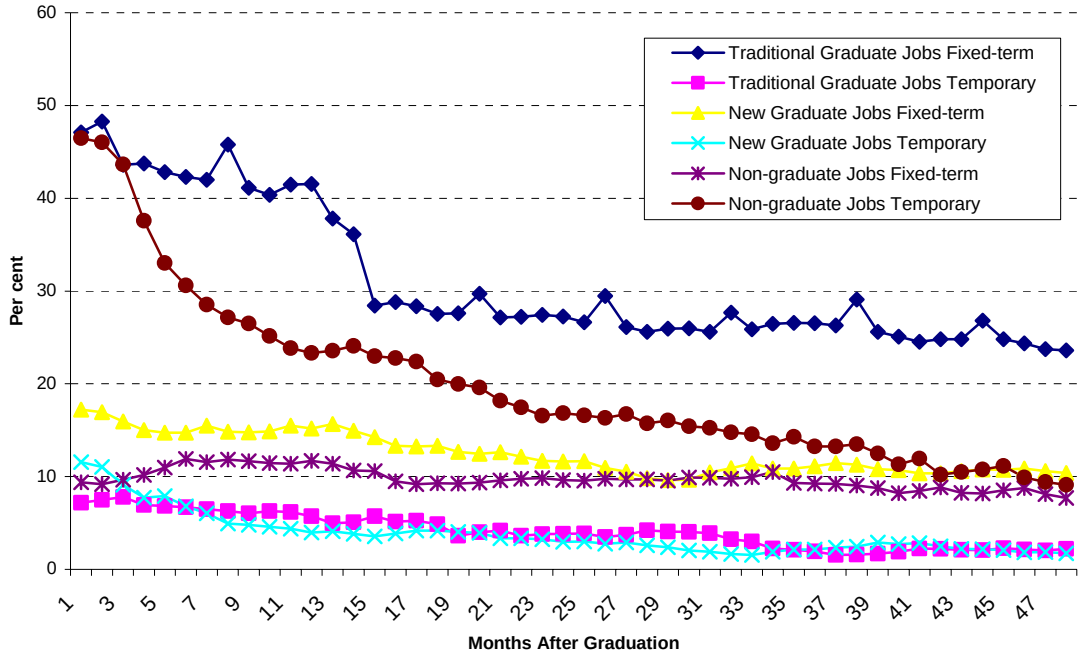



N (weighted) = 60,362
Source: IER/ESRU Survey of the career paths of 1995 Graduates

Figure 5.6 outlines the relative proportions of 1999 graduates in different types of graduate jobs working on a fixed-term or temporary basis over the first four years of the careers. Overall, the proportions of fixed-term and temporary contracts held by those in modern, new

and *niche* graduate jobs were very similar, so we show the trends for new graduates in Figure 5.6 as indicative of these 'middle categories' as compared with those in traditional graduate jobs and non-graduate jobs. Even four years after graduation a significant number of those in traditional graduate jobs were still employed in fixed-term posts compared to non-graduate jobs in which the proportion of fixed-term employees had fallen significantly throughout the period. Comparing temporary employment, those graduates employed in non-graduate jobs after four years, were more likely to be working on a temporary basis compared to those in both the other SOC(HE) groups examined.

**Figure 5.6: Contractual arrangements of employed graduates in traditional, new and non- graduate jobs (SOC (HE)) in period since graduation**




Source: IER/ESRU Survey of the Career Paths of 1999 Graduates

In the past, most temporary employment undertaken by new graduates was primarily for 'stop-gap' earnings whilst the search for 'appropriate' career-related employment could be begun. However, for several of the interview respondents, it appeared that, whether through an agency or direct employment by an organisation, it had been an important route into both careers and specific organisations. This might reflect change in attitudes towards the boundaries between temporary and permanent employment, indicative of wider social change and the increasing conceptualisation of flexibility as a positive factor in all aspects of life (c.f. Purcell 2000). For a number of interviewees, employment undertaken for expediency had developed into organisational careers and, in several instances, initial recruitment in non-graduate positions had led to subsequent movement into permanent, 'graduate-appropriate' roles:

> *'It all happened by chance… I got back here when I got back from travelling, I was actually looking for some other jobs nearer to where I live and I went to a load of employment agencies and they rang my old boss at* [current employer] *for a reference and there was a job going which he offered me, which I came back to do. That was only supposed to be for 2-3 months and it kind of snowballed from there really. Then a permanent job was offered to me which I took'.*
> (002, female humanities graduate, assistant to IT finance manager, manufacturing, £27k-£30k, non-graduate job)

> *'I started working with* [name of employer] *in my year out from university and when I left university I went back* [via an agency placement] *in covering maternity leave for just administration work and then I moved up since then'.*
> (048, male business studies graduate, business improvement coordinator, energy provider, £21k-£24k, new graduate job)

In the above examples, temporary employment was undertaken as the initial entry into the labour market. However, it is not only at the early stages that this appears important. Such work was also used by respondents as a way to accommodate other changes in their subsequent career such as changes of location.

> '*… I took the job completely understanding that it was temporary, because my main aim was to stop commuting every day and that [it] was a foot back in the door… And knowing what the council's like, it's a lot easier to apply from in than from outside. I didn't ask at the interview what the chances of it being made permanent were'.*
> (006, mature, female maths and computing graduate, research analysis officer, public services, £21k-£24k, traditional graduate job)

As equally highly-qualified partners strive to accommodate work/life balance in two careers, this is likely to be an increasing pattern (Purcell and Elias 2004b). Another key role for temporary employment in the careers of graduates is in internal labour markets in the form of secondments. In the public sector in particular, temporary placements appeared to be an important means by which graduates achieved higher positions or changed direction within organisations.

### 5.4 Recruitment agencies

The interviews provided considerable insight into the role of recruitment agencies in the graduate labour market. As the previous section indicated 42 per cent of the survey sample had used recruitment agencies, whether for information on vacancies or careers advice and guidance, indicating that they have become an increasingly significant player in the graduate labour market: and there has been a growth in agencies dealing specifically with graduate employment, as well as those dealing with specific professions and industry sectors. Given the high levels of competition for employment, whether career-related, appropriate employment or employment 'taken for the money', it is unsurprising that graduates used employment agencies at all stages of their careers. Graduates in the early stages of their career seeking to gain a foothold in a particular occupation are often willing to be highly

mobile, so it is not surprising that employment agencies appeared to be important means by which they accessed jobs, directly or indirectly. In 'newer' graduate careers in ICT and business consultancy where greater mobility and portfolio careers can result in greater rewards, agencies played a significant role in a continuous job search on several fronts, for graduates building their career profile or waiting for more appropriate permanent opportunities to arise.

> [Interviewer: How did you get your current job?]
>
> *'Through a recruitment agency… I was just registered with multiple agencies over the last 2½ years because at one stage I was made redundant, and that was how I ended up being self-employed and I stayed registered with many agencies all the time, so I wasn't actually actively seeking when this* [job] *came around'.*
> (073, female languages graduate, operational management consultant, business services, £33k-£36k, traditional graduate job)

## 5.5 Speculative applications

Again, as the graduate supply to the labour market has increased, employers may have been able to become more demanding in selection criteria in terms of credentials and experience but also according to personal attributes and qualities. The qualitative data provided evidence that suggested that graduates are having to become more persistent in securing career objectives especially in competitive occupations. In the interviews with 1999 graduates, the importance of speculative applications was demonstrated particularly in attempts to enter tight labour markets and in changing career direction. One graduate, when asked how she had got her current job against considerable competition, said:

> *'Well it wasn't like an advertisement. Now I get involved in the recruitment, looking at how we go about it now, sometimes we advertise, but you tend to be more successful just through gathering speculative CVs that come in because they tend to be the people that are really keen and enthusiastic and eager to get involved in* [our] *type of work'.*
> (004, female humanities graduate, economic and regeneration consultant, business services, £21k-£24k, traditional graduate job)

## 5.6 Work experience and placements

A well-established finding of studies of early graduate careers is the value of work experience for those who had undertaken a placement as part of their degree or who had undertaken career-related employment at some period during their degree. Elias *et al.* (1999), for example, highlighted the importance of work experience to subsequent employment for the 1995 cohort and this was a recurrent theme in the interviews with the graduates of 1999[11].

[11] The impact of work placements and experience on earnings is examined in Chapter 6.

This was for two key reasons: firstly, that in some cases it led directly into their first jobs after graduation and, for some, it led subsequently to an organisational career. Furthermore, work experience was also considered to be of value in that it provided an important insight into an occupation or working environment before proper entry into the labour market:

> *'The thing that did stand me in good stead was the third year placement and I am very happy that I took a course that had a sandwich on it, because I think if I'd come out of a degree after 3 years having never worked in a hotel, I would have found it a lot harder. I'd made the contacts from the third year, so that helped me out'.*
> (049, female business studies graduate, conference and banqueting sales manager, hotel and catering, £18k-£21k, new graduate job)

Asked what he valued most about his degree, one respondent referred to the work experience he had organised for himself:

> *'I certainly think, in terms of career,* [that] *in my final year I was very pleased that I was able to spend quite a lot of time getting relevant external experience. I think I only had two days of lectures in my final year which left me three days free where I worked for an MP… So certainly in terms of transition from being a student to moving in to the job market, that was absolutely seamless'.*
> (019, male interdisciplinary graduate, senior public affairs manager, energy provider, £33k-£36k, modern graduate job)

The issue of work experience was also raised in interviews where graduates had not undertaken this as part of their degree. As one interviewee put it: '[my] *advice to go back and give to new graduates now in their first year: think about a work placement'.*

Substantiating such accounts, the survey responses indicate a greater propensity among those respondents who had undertaken a work placement integral to their degree or gained career-related work experience during their degree both to enter graduate SOC(HE) categories immediately after graduation and to be in such employment at the point of the survey. Graduates with prior career-related work experience appeared to have more rapid assimilation into graduate-appropriate employment than those with none. Approximately 55 per cent of graduates without such experience entered directly into non-graduate employment immediately after graduation compare to less than 40 per cent of those with such experience, and after 4 years in the labour market 18 per cent of the former remained in non-graduate jobs compared to 12 per cent of the latter. Part of this discrepancy may be explained by degree subject in that those graduates who undertake a work placement were more likely to study vocational or work-related (*i.e.* business studies) degree subjects that lead directly or indirectly into a specific career. Also, graduates who gained career-related work experience that was not integral to their course (often organised by the graduates themselves) may have been more likely to have been career-focused at an earlier stage and so are able to pursue more specific aims directly after graduation than those without specific direction. However, these factors should not detract from the evidence that work experience appears to enhance

access to appropriate employment; reinforcing the findings of Mason *et al.* (2003). The survey also indicated some evidence of a connection between the undertaking of a work placement and the expression of a greater level of appropriateness of current job for someone with their qualifications.

### 5.7 Networks and contacts

As suggested by the survey findings, for many graduates, networks of family, friends, colleagues and other contacts are important sources of information and advice about opportunities in the labour market. The interviews shed further light on the positive and negative role that networks, occupational cliques and contacts play in the graduate labour market. The significance of networks and membership groups in facilitating or obstructing access to career opportunities is not a new finding but in the expanded graduate labour market, it has significant implications for both labour market entry and longer term career trajectories – and is something that those entering this competitive labour market need to be made aware of the need to manage. Recent research on recruitment and selection for 'fast-track' graduate opportunities in companies which have traditionally recruited graduates has illustrated this (Brown and Hesketh *op. cit.*) but the importance of accessing and using networks and building on contacts is of wider relevance. As careers develop the importance of contacts increases but it is evident even relatively early on in the careers of graduates gaining a foothold in a profession or industry sector. For instance, it was reported that in certain occupations, beyond individual incidence of word-of-mouth recommendations, networks were absolutely central to obtaining posts especially in areas where competition for jobs was fierce and endorsement was a means of sifting applicants:

> *'…criteria are not necessarily academically-related, or anything along those lines. In terms of the selection process… it doesn't necessarily go down to what's on your CV or your application form, it can literally come down to whether you get on well with the person that's interviewing you. If they're interviewing 30 people in a day for a job, they will employ the person that they like the best, rather than what's down on paper. For graduates applying for these jobs, this means that it's a lottery. I do know the fact that, especially when the markets are very, very tough for getting jobs and there are not many going… that it's more a case of who you know and not what you know. It sounds very cliché, but unfortunately it's been very, very true over the period I was looking for a job. A lot of the advice that I got was from writing letters to people, saying "Can you suggest anyone I could talk to in terms of trying to get work experience or a foot in the door, to get a chance to show someone what I can do?".*
> (032, male natural science graduate, futures trader, financial services, £33k-£36k, niche graduate job)

### 5.8 Proactive and reactive career development

Increasingly, the routes by which graduates enter the labour market are far more varied than the traditional 'milk round'. Similarly, the interviews indicate that over the early years of their

careers the graduates displayed a variety of approaches to employment and career development. Some graduates described career plans that had been followed with military precision, having decided early in their careers what they wanted to do and how to achieve their ambitions. An example of this is provided by one interviewee who completed a psychology degree in 1999 during which she decided to pursue a career as an educational psychologist. After completing a PGCE immediately after graduating (as was required to be able to develop her career), she worked in two schools to fulfil the requirements for teaching experience to obtain a scarce funded place on a Masters course in educational psychology. During her three years teaching she obtained funding from her LEA to do her own research and contribute to her professional development. She also displayed considerable mobility in order to achieve her ambitions, moving from South Wales to the South West and on to the East Midlands. In response to the question of whether she had planned her career to date, she said:

> *'Yes, I don't know whether I was just lucky in finding out what it was I wanted and could pursue it and there was a path to go down. Some people are still floundering in their thirties as to what it is they want. I was definitely sure… that it fitted everything I wanted out of a career. I think I definitely I have planned my career to do that, I just hope it's not going to be a huge disappointment next year when I finally get a job! There's nothing about the job that I don't like, so it just seemed like the perfect job for me really. I think I was lucky that I found it and I think I was the type of person that wanted to follow a plan so that there was some security, I think. That's why I did it in the end. No, I would definitely say I followed a plan'*.
> (031, female social science graduate, full-time postgraduate student)

One traditional form of graduate career was one in an individual organisation and many graduates still aspired to that. A prime example from the interview sample was a natural science graduate who had joined a large food manufacturer on a graduate training programme immediately after graduation, and been promoted twice and four years on, was a process audit manager, earning over £27000 p.a. She had no plans to leave the organisation as all her developmental needs were being met and routes upwards were attainable in a large internal labour market. Alternatively, the majority of careers in *traditional* graduate jobs have tended to be occupational, rather than organisational, careers, examples of which are teachers, lawyers or academics. However, when sampling for the interview programme, we had actively sought many graduates who had non-traditional careers, who had suffered setbacks or were, at first glance, unsuccessful in the labour market. Consequently, we did not interview many individuals with stereotypical 'graduate' careers such as these for this project. Having said this, a number of such graduates were included in the sample as points of reference - including those who were forging a successful career in an organisation after initial difficulty in the labour market.

A much-vaunted conception of the modern career, especially for the highly-qualified and skilled, is the 'portfolio' career (King 2003, AGR 1995). These 'boundaryless' careers are

prevalent in particular occupational labour markets where highly-skilled workers are able to move frequently between employers, accruing experience and becoming increasingly marketable. They develop outside the confines of one organisation and are characterised by short length of tenure in posts (whether by short-term or fixed-term contracts or simply frequent job change), an emphasis on personal skills development and non-linear progression into higher positions. Even in the early stages of their careers, some of the graduates interviewed indicated that their careers were likely to develop along these lines. One interviewee had very strong ideas about the type of employment she aspired to and the steps needed to achieve that employment in terms of skills development and experience:

> *'My short-term plan is to stay at this job for at least 2 years, and I think that's a fair minimum time to stay with one company and it will give me plenty of chance to learn everything I need to learn, and then ideally assuming I still want a sort of 'career' career, move on to working for a retailer, back in internal strategy or something like that. I'm hoping that the combination of the strategy consulting plus the operational consulting will mean that I am someone that a retailer or a large company wants to employ'*
> (073, female languages graduate, operational management consultant, business services, £33k-£36k, traditional graduate job)

The majority of respondents were faced with the need to build their careers both in and between organisations. The interviews provide valuable insight into the decision-making that takes place regarding careers and work and choices between staying with and leaving jobs. Like others in the interview sample the following extract highlights the 'meandering' nature that many early careers took, where pro-activity often follows an initially reactive response to changing circumstances:

> *'I don't think I've done a particularly good job of planning a career. I think I have just taken opportunities as they've been presented to me and gone with the flow because of other circumstances that were going on in my personal life, whether it was going travelling or needing money, paying off student loans, whatever. At the moment, I am trying to further myself in this organisation, as hard as it actually is, by trying to get some internal training, trying to get some supervisory experience, things like that. As far as planning my career is concerned, I am trying to get as much experience in various different areas as I possibly can while I am working here, so that when I leave I will have a bit more experience behind me to go and work for a different company, maybe in a different environment, doing a different job, I don't know. As far as knowing where I want to be in 5 years time, I have absolutely no idea'.*
> (002, female humanities graduate, assistant to IT finance manager, manufacturing, £27k-£30k, non-graduate job)

A frequent aspect of the careers, mentioned by several respondents, was the incidence of 'falling into' a career. Although none of the following examples were 'high-fliers' all at the point of interview were in jobs which they felt had clear career development potential.

> *'I think after I graduated I wasn't sure what I wanted to do but then I saw a job that looked interesting and… I formulated my career around that. It wasn't an*

> *initial intention, it was just I found the work interesting and [it] developed from there'*
> (034, female natural science graduate, intranet content officer, public services, £15k-£18k, modern graduate job)

> *'Not really, I was a bit of a flounderer to be perfectly honest, I wasn't sure at all, I think what I wanted to do actually was to go into Social Services but that required more training and I wasn't prepared to do another three years doing a social work degree so I kind of fell in to sticking with the business side and getting the job I have now really - and I fell into this literally because I wanted to work for the company and that is why I took this job. So yes, I am a bit vague really, not got a very clear career path'.*
> (010, female business studies graduate, company administrator, financial services, £21k-£24k, non-graduate job)

Despite such undirected entry into the labour market, many graduates without clear career objectives initially have been able to formulate successful careers in their fields; some had subsequently studied for further qualifications and have taken control of their career development. The interviewee above appeared to have developed considerably from the *'flounderer'* she professed to have been. When asked if career development was important to her, she replied:

> *'Yes absolutely. I am quite ambitious. You know, I certainly wouldn't be doing these exams if I wasn't. So, yes, for me that was the whole point of going to university in the first place. You make a decision, you know what is it you want to do with your life and do you want to have a good career and, if you do, what steps are you going to take…? And university was the very first step on that ladder and now I am doing my* [professional qualification course]*as my next step, and after that I will do some more training, whatever I need to do, to definitely be a manager in the next two years and push forward and goes as far as I can. Yes I definitely would say I was quite ambitious in that regard and career is part of that. I mean, it takes up so much of your day, you work from 9- 5 five days a week, you've got to enjoy what you do and also feel that you are good at it and get the most out of it.'*
> (010, female business studies graduate, company administrator, financial services, £21k-£24k, non-graduate job)

However, whereas a number of respondents had been able to create careers out of happenstance, we also interviewed graduates who had made a U-turn in their careers after an earlier false start. For a number of graduates, this change of direction required going back to further study. All graduate surveys provide evidence that a significant minority of graduates turn out to have made unwise choices about their undergraduate courses, sometimes on the basis of limited information, lack of pre-HE career guidance or, simply, reflecting unrealistic or immature aspirations. One of our interviewees, a 1999 marketing graduate, decided a complete career change was required after 6 months in a highly-paid 'new' graduate job and had returned to pursue a career as a civil engineer requiring a considerable period of both study alongside employment:

> *'What I did when I finished university I got a job as an IT recruitment consultant basically through my marketing degree. I was promised all this money and,*

> *because it' was a very highly paid job, people said that would be a good career option. I gave that a go for about 6 months and I absolutely hated it - so I packed it in and just went labouring and bricklaying… until I could work out what I wanted to do. [Then] what happened was,* [the owner of the company where he works]*, he got wise to my qualifications and offered me* [the opportunity] *to do my civil engineering qualification with them. So that's what I did'.*
> (070, male business studies graduate, trainee civil engineer, construction, £15k-£18k, modern graduate job)

Conversely, research on early graduate careers (Purcell *et al.* 1999) identified a category of graduates which they labelled as drifters: those who lacked a career plan and tended to have a rather unguided or passive approach to career development. We found a number of examples of such graduates, some of whom quite explicitly perceived themselves to have been victims of circumstance, fatalistic about the extent to which they could have control over their careers.

## 5.9 Summary

Overall, this chapter has sought to outline the ways in which graduates made decisions about their careers, the sources of information and guidance that they drew upon to approach career decisions and career development. The interviews with a small sub-sample of the overall population, because they had been targeted to focus predominantly (although not exclusively) to explore the experiences of those whose early careers had included difficulties rather than on those who were achieving the glittering prizes of high income and elite occupations), provided detailed supporting evidence for the survey findings. Graduate careers are by no means homogenous and the findings illustrate the extent to which graduates achieved varying degrees of success, approached obstacles in their career development and responded to opportunities in the increasingly diverse graduate labour market.

- Approximately 75 per cent of respondents reported using careers advisory services; 80 per cent had used newspapers, internet sources and other publications; two-thirds had drawn upon personal contacts (– family, professional or academic, summarised as 'networks') and 42 per cent had use recruitment agencies.
- Networks were considered most useful overall, which has alarming implications for equal opportunities. Conversely, although use of careers advisory services was extensive, approximately half of all graduates who had used them had not found them useful.
- Exploring *who* among the graduates use or did not use the different sources of information and advice available to graduates, it was found that those from managerial and professional backgrounds reported making greater use of

networks and careers advisory services than those from lower socio-economic groups.

- The previous finding is likely to be linked to higher usage amongst graduates from old universities. Graduates of new universities reported a lower propensity to have used careers advisory services than those from old universities.
- There were also considerable differences in patterns of use and reported usefulness of the different sources of advice and information according to age of respondent and degree subject, with vocational graduates less likely to have sought information and guidance and those, paradoxically, with greatest need for guidance least likely to have accessed it or found it useful.
- The qualitative data illustrated how recruitment agencies had been an important source of jobs and information about careers for 1999 graduates, especially for those in the newer areas of graduate employment such as ICT and specialist areas of management and business services.
- Agencies had been a route into organisations with career potential, via non-graduate jobs initially, for a significant proportion of interviewees
- 1999 graduates, compared to their 1995 peers, were more likely to be in permanent employment throughout the 3.5 years following graduation but career trajectories and the qualitative interviews highlighted the importance of temporary and fixed-term employment in the early stage of graduate careers.
- The interviews suggested that pro-activity and persistence in pursuing career opportunities tended to have secured desired career goals. They also supported the survey findings that work placement and prior experience were positively correlated with entry into graduate level employment.
- The interview accounts suggest that graduate careers are in no way homogenous and the ways in which graduates achieve varying degrees of success, approach obstacles in their career development and respond to opportunities in the labour market reflects the increasing diversity of characteristics, circumstance, expectations and aspirations of the graduate labour supply.

Perhaps the key messages that come through are the need for greater investment in careers guidance both before and after undergraduate study, and the need to encourage career planning and proactivity among graduate job-seekers. Assimilation into appropriate employment took longer for some graduates than others, but from the evidence of both cohorts studied in the course of this investigation, appropriate and satisfying work appeared to have been obtained by the majority of those entering the labour market in the late 1990s.

# CHAPTER 6

## The earnings of graduates in their early careers

### 6.1 Introduction

This chapter presents results from an analysis of the earnings of graduates who gained their first degrees in July 1999, focusing primarily on those who reported that they were in full-time employment at the time they completed the survey questionnaire[12]. The chapter is presented in two sections. The first section presents a detailed picture of the earnings of these graduates, exploring the relationships between earnings reported three and a half to four years after graduation and a wide variety of factors, including the subject studied for the degree awarded in 1999, the type of institution at which they studied, the nature of their study (full-time, part-time, distance-learning), whether or not they undertook paid work whilst studying and gender.

The second section presents a comparison of the earnings of this group of graduates with information from a similar group who graduated four years earlier[13]. Given the recent expansion of higher education and the increased supply of graduates entering the labour market, this comparison is made to see if we can infer whether or not, over this fairly short period, we can explore the relationship between the supply of and demand for graduates.

In both sections of this chapter multivariate statistical techniques are used to identify the separate impacts of a wide variety of factors which influence the earnings of graduates. Detailed regression results are shown in Appendix III.

### 6.2 The earnings of 1999 graduates in 2003/04

Information on the earnings of graduates was obtained from the following question included in the postal questionnaire:

> **What was your gross annual pay in *your first job after completing your course in 1999* and what is it now in *your current or most recent job*** (gross pay before deductions for tax, national insurance and including any overtime, bonuses, commission, tips)?

Graduates were asked to tick a salary range in one of thirteen boxes, ranging from 'Less than £9,999', '£10,000 to £11,999' etc. to '£50,000 to £59,999' and '£60,000 and over'. In the following analyses we have substituted the mid-point of each range as an estimate of the

12 Questionnaires were returned from February 2003 to April 2004, between 43 and 57 months after gaining a first degree.

13 A study of the earnings of the 1995 graduating cohort was undertaken by Abigail McKnight (Elias *et al.*, 1999).

graduate's gross annual salary. Only a small number of graduates indicated that they had gross annual earnings in the two open-ended categories (5.8 per cent of graduates in full-time employment and who responded to the earnings question ticked 'Less than £9,999' and 0.6 per cent ticked '£60,000 and over'. In the following analyses we have replaced these responses with the values £9,000 per annum and £65,000 per annum respectively, these values being selected as the best approximation to the mean value in these open-ended ranges[14].

Of the 8,571 respondents who reported that they had gained their first degree in 1999, 96 per cent provided details of their gross annual earnings in their current or most recent job. Of the 4 per cent who did not provide earnings information, the non-response rate from those in employment was low. Those not reporting earnings were likely to be engaged in postgraduate study (30 per cent of those not reporting earnings), unemployed (13 per cent of those not reporting earnings), were out of the labour force (31 per cent) or refused to give details (24 per cent). Thus, only one per cent of respondents in employment at the time of the survey did not provide earnings information. Among those who provided earnings information, 89 per cent stated that they were in full-time employment, or were self-employed at the time they completed the survey. Part-time employment was reported by 3 per cent of male graduates who provided earnings information compared with 8 per cent of female graduates.

Table 6.1 shows the mean annual earnings and average weekly hours for male and female graduates who reported earnings, by whether or not they were working full-time or part-time at the time of the survey.

**Table 6.1: Average annual earnings and weekly hours of 1999 graduates in employment in 2003/04, by gender and employment status**

| Employment status at time of survey | Male graduates | | Female graduates | |
|---|---|---|---|---|
| | Average annual earnings | Average weekly hours | Average annual earnings | Average weekly hours |
| Full-time or self-employed | £26,400 | 43.1 | £22,500 | 41.4 |
| Part-time | £15,100 | 24.1 | £14,600 | 23.8 |

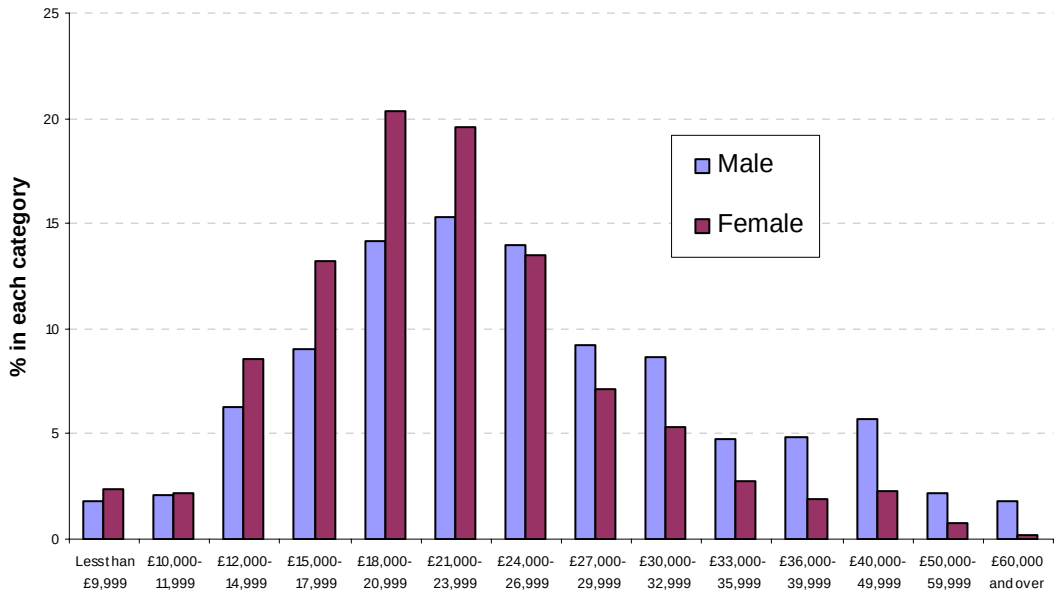
Source: Survey of the Career Paths of 1999 Graduates and Diplomates

14 Estimates were obtained from the Labour Force Surveys for 2001 to 2004, based upon the gross weekly earnings of graduates aged 25 to 28 years in full-time employment.

From these data it is clear that the annual earnings information reported by part-timers is significantly lower than that reported by graduates in full-time employment. However, it is interesting to note that, for a given number of hours, part-timers appear to earn more than full-timers. One possible explanation for this difference may be that those working full-time reported actual hours worked whereas part-timers report contractual hours. The analysis presented in the remainder of this chapter focuses upon those who reported annual earnings and were in full-time employment or self-employment at the time of the survey.

The distribution of annual gross earnings for those who gained a first degree in 1999 and reported that they were in full-time employment or self employment at the time of the survey is shown in figure 6.1.

**Figure 6.1: The distribution of annual gross earnings of 1999 graduates in full-time employment in 2003/04**




Source: Survey of the Career Paths of 1999 Graduates and Diplomates

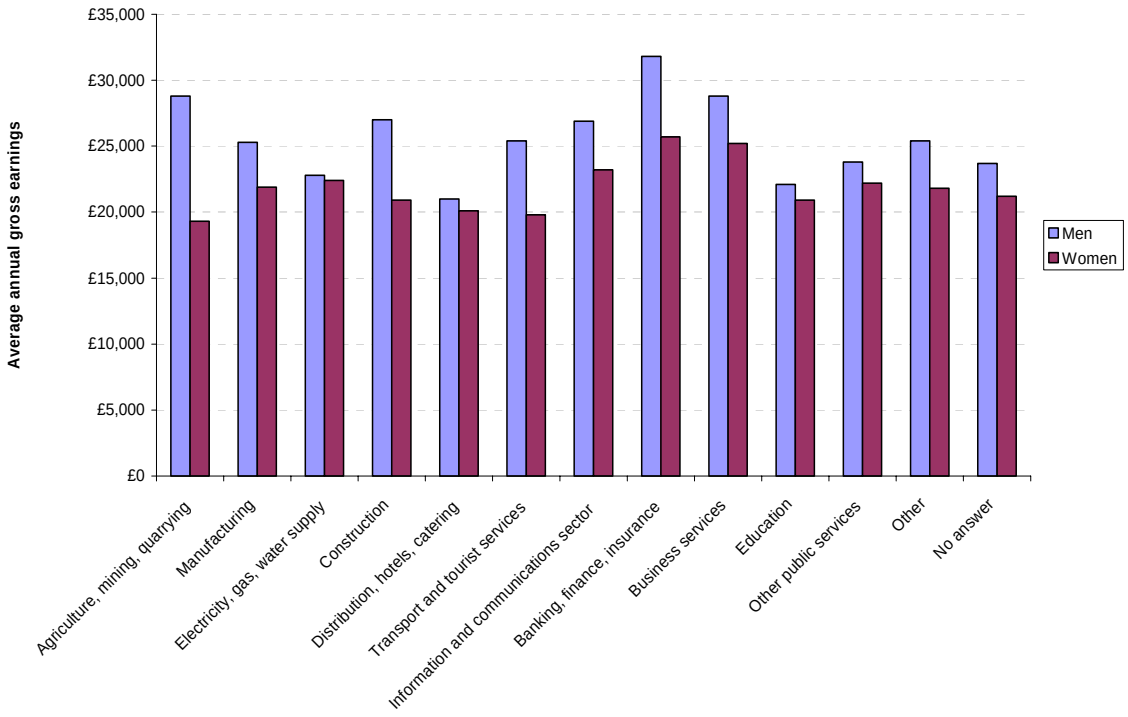
The earnings of women graduates lie mainly in the range of £15,000 to £24,000 per annum. Male graduates have a wider dispersion of earnings at the upper end of the distribution, with significantly more men than women earning £30,000 or more per annum some four years after gaining their first degree.

## 6.3 Earnings and job characteristics

It is useful to classify the range of factors which influence earnings into two groups: those which relate to the nature of the job and those which describe the characteristics of the post holder. Clearly, a strong demarcation between these groupings cannot be maintained – those who perform a particular type of work may be required to have a specific qualification for that job. Thus, the job itself and the characteristics of the job holder are closely related. Nonetheless, the distinction does provide a useful way of analysing information on earnings.

Examining first the correlates of earnings and job characteristics, Figure 6.2 shows the relationship between the sector in which the graduate works and reported annual gross earnings for those in full-time employment.

**Figure 6.2: Average gross annual earnings of 1999 graduates in full-time employment in 2003/04 by sector and gender**



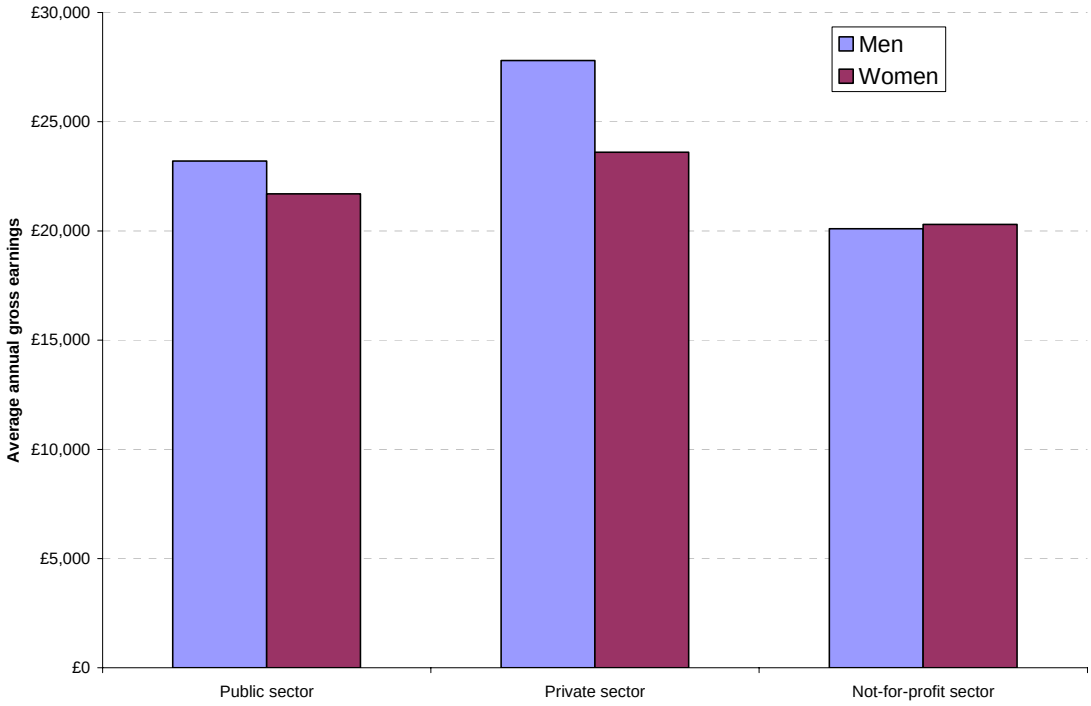

Source: Survey of the Career Paths of 1999 Graduates and Diplomates

For both men and women, the sector with highest annual average earnings was banking, insurance and finance, followed by business services. The lowest paid sectors, in terms of the annual gross earnings of graduates in full-time employment were distribution, hotels and catering, followed closely by the education sector. Interestingly, the higher the gross annual earnings of male graduates in a particular sector, the greater is the gender difference in earnings. In some sectors (e.g. agriculture, construction) the total number of graduates in the sample, or the number of women graduates in the sample and employed in the sector, was

small, hence the gender differences are not statistically reliable. However, a particularly large gender difference between graduates in full-time employment is found in banking, insurance and finance. This sector accounts for 10 per cent of all graduates in full-time employment.

Figure 6.3 continues this sectoral analysis, this time distinguishing between sectors in terms of whether they are public, private or not-for-profit (e.g. charitable bodies). This reveals that there is a strong association between working in the private sector and graduate earnings, particularly for men. Male 1999 graduates working in the private sector earned on average £27,800 in 2003, compared with £20,000 for those working full-time in the not-for-profit sector.

**Figure 6.3: Average gross annual earnings of 1999 graduates in full-time employment in 2003/04 by public/private sector employer and gender**




Source: Survey of the Career Paths of 1999 Graduates and Diplomates

The gender difference in the earnings of graduates in full-time employment is at its greatest in the private sector and virtually non-existent in the not-for-profit sector.

To study the relationship between earnings and the type of work graduates do, we utilised the four-fold classification of graduate jobs (SOC [HE]) developed in our earlier work on the 1995 cohort (Elias and Purcell, 2004a). After classifying the jobs held by graduates at the time of the survey into the categories of SOC (HE), Figure 6.4 shows that annual average gross earnings are lowest in non-graduate jobs (for both men and women earnings average less

than £20,000 per annum in such jobs) and highest for men in traditional and modern graduate jobs, though the differences between the average earnings of men in all four graduate job categories are fairly small. For women the highest paying job category is traditional graduate jobs. Women graduates employed full-time in traditional graduate jobs earned, on average, £25,300 per annum in 2003/04, compared with £22,200 to £23,800 in the other categories of graduate occupations. The gender difference in pay is at a maximum in modern graduate jobs, a range of occupations which are predominantly private sector and which include management at various levels.

**Figure 6.4: Average gross annual earnings of 1999 graduates in full-time employment in 2003/04 by SOC (HE) category and gender**

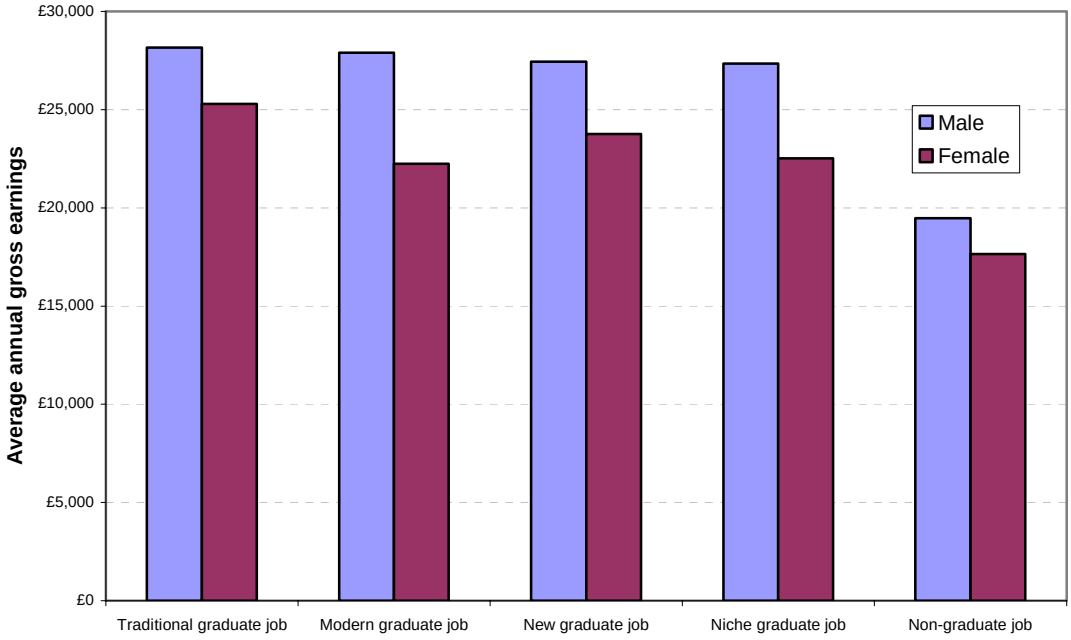
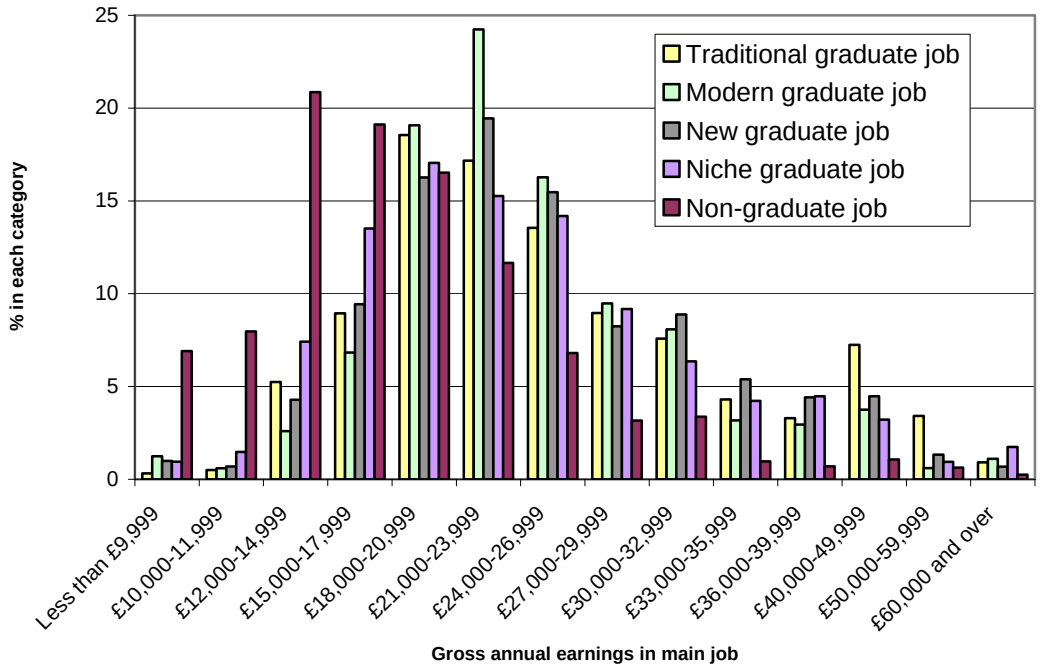


**Figure 6.5: Distribution of gross annual earnings of 1999 graduates in full-time employment in 2003/04 by SOC (HE) category**




Source: Survey of the Career Paths of 1999 Graduates and Diplomates

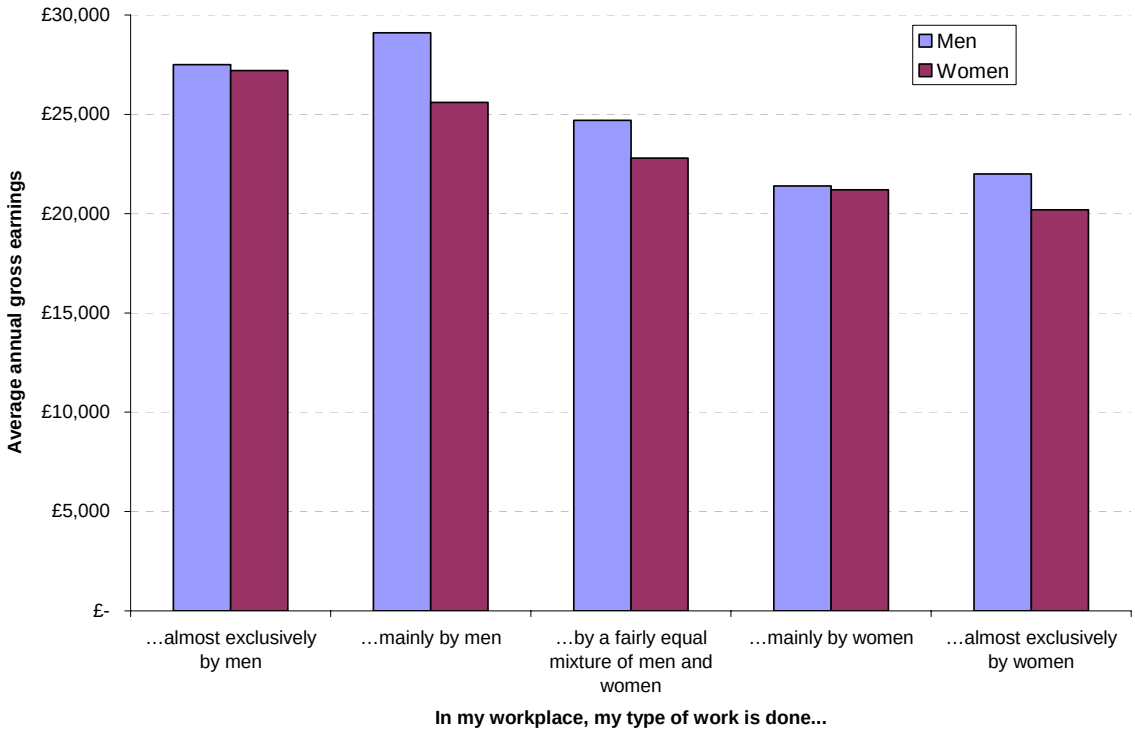
Figure 6.5 reveals the difference in the distribution of annual earnings by the category of SOC (HE) in which the graduate was employed in 2003/04. In this figure the darker bars represent the earnings positions of those in non graduate jobs. It is evident that the earnings of those in such jobs in 2003/04 are skewed heavily over to the left of the distribution. In contrast, traditional graduate jobs are skewed in the opposite direction, with one in five of all graduates in these occupations reporting earnings of £33,000 or more per annum. Those in modern graduate jobs reported annual earnings which were concentrated in the range £21,000 to £23,999. Despite the obvious lower pay associated with non graduate jobs, this does not contribute to the gender difference in graduate earnings. Separate analysis (not shown) indicates that similar proportions (about 15 per cent) of male and female graduates were in such jobs when observed in 2003/04.

In an earlier paper (Elias and Purcell 2004b) we reported on an analysis of the earnings of the 1995 cohort seven years after graduation. A relevant finding generated in this analysis related to the link between gender segmentation and earnings. Women (and men) who worked in workplaces where the type of work they were doing was done predominantly by women were found to earn significantly less than those who worked in workplaces where the type of work they did was done mainly or almost exclusively by men. This was a surprising finding. While it has been widely recognised that women who work in what might be termed

'female occupations'[15] tend to receive lower pay than their counterparts in 'male occupations', we assumed that a significant explanatory variable was the gender stereotyping of low paid work and did not anticipate that similar differences would necessarily be found among those with a university education.

To determine whether or not this relationship was apparent among the 1999 cohort some three and a half to four years after graduation, we repeated the question asked of the 1995 cohort regarding the gender composition of those who did the same type of work at their workplace. Figure 6.6 reveals that this was indeed the case, showing a variation in pay among the 1999 cohort associated with responses to this question about gender segmentation. For both men and women, higher annual earnings were reported for those who worked in workplaces where their kind of work was performed predominantly by men, compared with those in workplaces where their kind of work was performed predominantly by women, by as much as £7,000 to £8,000 per annum. Male graduates tended to work in workplaces where their type of work was done exclusively or mainly by men (46 per cent of male graduates) whereas only 16 per cent of women graduates worked in such a male environment[16].

**Figure 6.6: Average gross annual earnings of 1999 graduates in 2003/04 by occupational workplace segmentation**




Source: Survey of the Career Paths of 1999 Graduates and Diplomates

15 Occupations in which the majority of those employed were women.

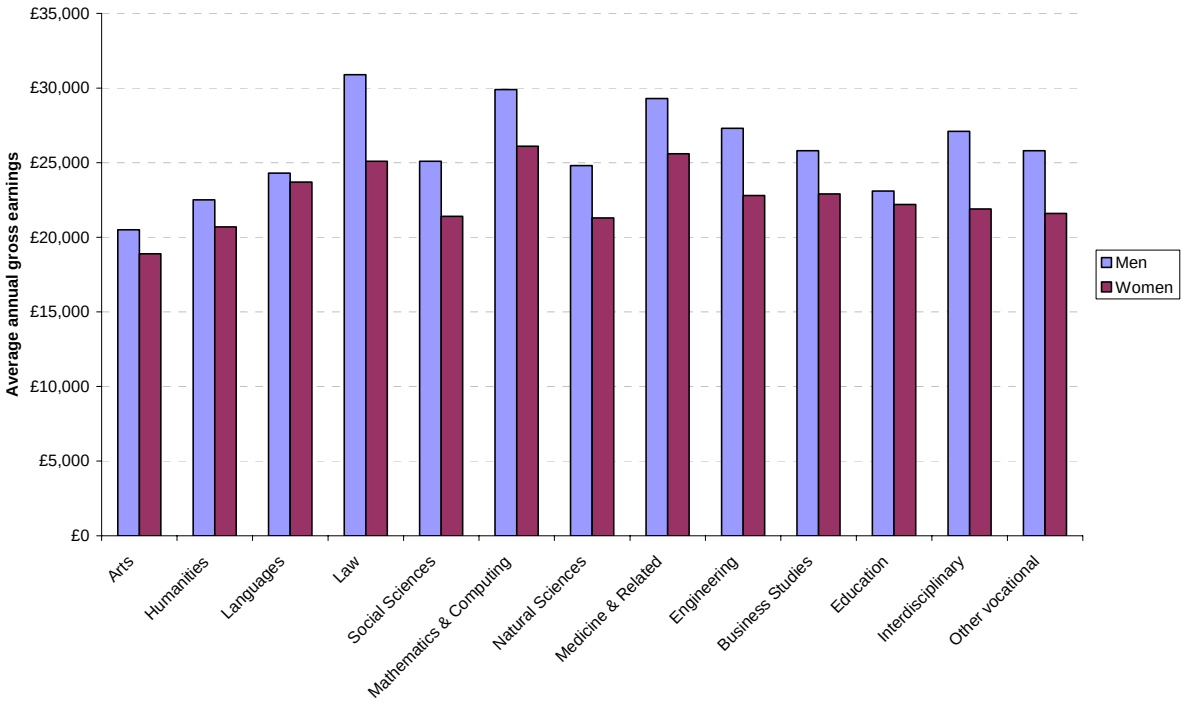
16 Information about the size of various groups among the 1999 graduating cohort can be obtained from an examination of two rightmost columns of appendix table A3.1, which reports the means of these variables for men and women.

## 6.4 Earnings and personal characteristics

In terms of the characteristics of individuals, we show next the relationships between earnings and the subject studied for the 1999 degree, the extent to which the graduate has engaged in further education or undertaken job-related training and the experience of paid work undertaken whilst studying for the 1999 degree.

Figure 6.7 reveals the extent of the variation in annual earnings some four years after gaining a first degree by subject studied. Not surprisingly, we note the higher earnings for both men and women who studied law and medicine and related subjects and the relatively low earnings of those who studied the arts. Gender differences are again evident here, with the greatest gender difference arising for those who studied law at the undergraduate level[17].

**Figure 6.7: Average gross annual earnings of 1999 graduates in 2003/04 by subject of 1999 degree**



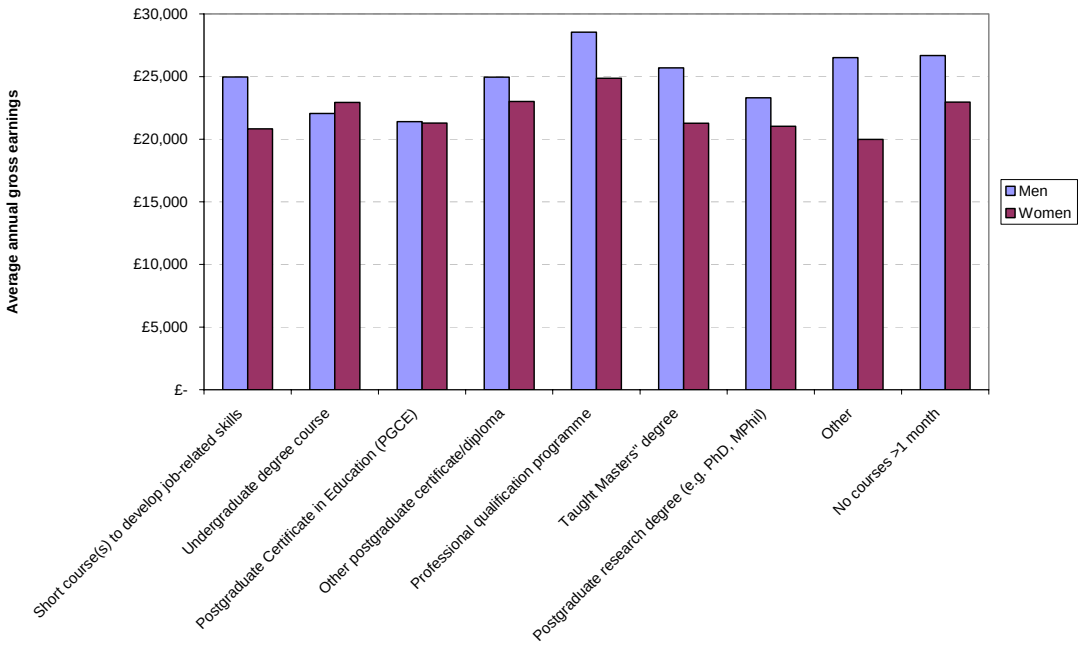

Source: Survey of the Career Paths of 1999 Graduates and Diplomates

We asked the sample of the population of 1999 graduates to indicate whether or not they had undertaken any further course of study on a full-time basis since graduating with their first degree, or whether or not they had undertaken a course of work-related training. Figure 6.8 shows the variation in annual earnings among those working full-time in 1999 according to their responses to these questions.

17 A finding replicated in the major cohort study of law graduates funded by the Law Society (Duff *et al.* 2000).

The two most frequent options were short course to develop job-related skills (14 per cent of male graduates in the sample and 17 per cent of female graduates) and professional qualification programmes such as accountancy, law, *etc*. (18 per cent of both men and women). Unsurprisingly, those who had undertaken the latter had higher average earnings four years after graduation. Postgraduate diplomas and certificate courses had been completed by 11 per cent of men and 22 per cent of women, reflecting, in particular, the continuing higher rates of participation of women graduates on the Postgraduate Certificate in Education (PGCE) courses. Graduates who had undertaken a taught Master's degree or who had followed a postgraduate research option had mean earnings which were lower than the average earnings of those who had not undertaken any further full-time or part-time work-related or career related courses lasting one month or more (51 per cent of male graduates and 41 per cent of female graduates reported that they had undertaken no such courses, with mean earnings of £26,700 and £22,900 respectively), although it must be borne in mind that such graduates are likely to have a delayed start to their working careers as a result of their further study.

**Figure 6.8: Average gross annual earnings of 1999 graduates in 2003/04 by type of further study or training undertaken since 1999**




Source: Survey of the Career Paths of 1999 Graduates and Diplomates

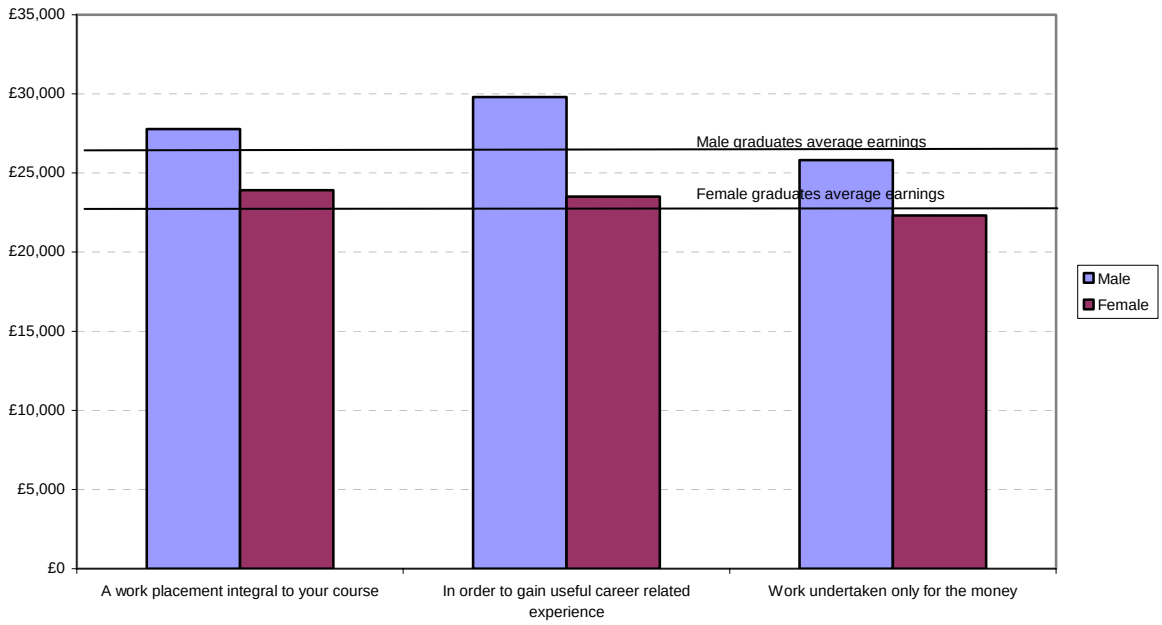
We asked the graduates to state whether or not they had undertaken paid work whilst studying for their 1999 qualification. Working whilst studying, either in vacation time, during term time, or both, may be related to later earnings for a variety of reasons. First, those who

undertook no paid work may have used the time available to engage in activities which enhanced their CVs, or to study more in order to gain a good degree result, thereby gaining access to better jobs. Alternatively, the need to generate income may have detracted from their study, leading to poorer degree results. However, the work undertaken for pay may have complimented study skills and improved their employability – either directly as a purposeful work placement related to their degree programme or indirectly in terms of the work experience they acquired.

Considering first the net effects of working whilst in higher education on earnings, for women we find little difference in the later earnings of those who undertook paid work, either in term-time or vacations, and those who did none at all. For men, those who undertook no paid work whilst studying (9 per cent of male graduates) reported earnings four years later which were slightly lower than the average for all male graduates.

Figure 6.9 shows the relationship between the nature of the paid work that was undertaken during vacations or term-time. Three responses to this question were available: that it was a work placement integral to the course (15 per cent of graduates), that it was undertaken in order to gain useful career related experience (24 per cent of graduates) or that it was undertaken only for the money (89 per cent of graduates). It can be seen that, for women, there is no significant difference in average earnings some four years after gaining their first degree. For men, there is evidence of significantly higher average earnings for those who stated that the paid work was undertaken in order to gain useful career-related experience or that it was a work placement integral to their course.

**Figure 6.9: Average gross annual earnings of 1999 graduates in full-time employment in 2003/04 who had undertaken paid work during vacations or term time whilst studying for their 1999 degree, by nature of paid work undertaken during vacations or term-time**




Source: Survey of the Career Paths of 1999 Graduates and Diplomates

## 6.5 Disentangling the factors

The preceding analysis has revealed that a number of factors appear to be significantly related to the average earnings of graduates in full-time employment some four years after graduation. However, it is difficult to gauge the separate contribution that each factor makes to the variation in annual earnings. To achieve this we make use of regression techniques, modelling the logarithm of annual earnings for each individual as a function of a wide variety of factors which we consider as influences on earnings[18]. The results of this analysis are shown in appendix table A3.1. Considering both the size and significance of the estimated coefficients and the mean values of the factors concerned, we list the following as most important influences on graduate earnings four years after graduation:

- *Sector in which employed* (graduates working in banking and finance earning 13 per cent more than those employed in education or distribution).
- *Gender segmentation at the workplace* (those working in workplaces where their type of work was performed exclusively by women earned 14 per cent less than those working in workplaces where there type of work is done mainly by men).

18 Annual gross earnings are set at the mid-point of the banded earnings interval reported in the surveys. Stewart (1983) has shown that a two step estimation procedure provides slightly more efficient estimates of the coefficients from regression analysis compared with Ordinary Least Squares analysis based upon mid-point interval estimates. This two-step procedure was not adopted here, given the large size of the sample of graduates supplying earnings information and the resulting high degree of precision with which coefficients are reported.

- *Type of work performed (SOC [HE])* (those in non-graduate jobs earned on average 13-19 per cent less than those in graduate jobs – if, in addition, the graduate reported that a degree was required for the job they held in 2003/04, whether or not the job had been classified as a 'graduate job' via SOC (HE), this added a further 6 per cent to annual earnings).
- *Location of job.* (Working in Inner London added 26 per cent to annual earnings – Northern Ireland average earnings were 8 per cent below the rest of the UK).
- *Class of degree obtained in 1999.* (A first class degree added 11 per cent to earnings compared with a lower second).
- *Subject studied.* (Medicine and related subjects stand out as degree subjects leading to significantly higher earnings than the reference subject category [business studies]. Education, and maths and computing as first degrees were also associated with relatively higher earnings three and a half to four years later. Arts and humanities subjects were associated with earnings which were significantly lower than the reference category).
- *Describing oneself as 'Being extremely ambitious'.* (In the presence of all other variables influencing earnings, personal ambition still correlates with higher earnings).
- *Further education and training.* (Professional qualifications taken since gaining a first degree appeared to boost earnings by as much as 5 per cent. Taught Master's degrees and postgraduate research degrees were associated with lower earnings, though this may reflect the fact that those who had taken such degrees had not had sufficient time to realise the potential earnings benefit conferred by such studies).
- *Disability and long term illness.* (While these two categories are not distinguished, there does appear to be a significant negative effect on earnings for the 3 per cent of graduates in full-time employment in 2003/04 who stated that their ability to change their job was affected by such factors).

We find no direct association between social class (as measured by the occupation of the parents when the respondent was 14 years old) and earnings. This does not imply that social class mechanisms are absent from the link between higher education and subsequent careers. It may well be that case that social class effects manifest themselves primarily through the decision to participate in higher education.

## 6.6 Comparing the 1995 cohort with the 1999 cohort

Analyses of the earnings of graduates in their early careers are of interest for a number of reasons. In the preceding section we showed how earnings vary not just with the type of work a graduate does (the nature of the sector they enter, the job they do, etc.), but also with the characteristics of the graduate (*e.g*. the subject they studied, the degree class the attained). While most of these results are unsurprising, they serve as useful indicators of the financial rewards associated with higher education, providing potential guidance indicators to those yet to embark upon their higher education.

The scale of the gender difference in graduate earnings is also of interest given the continuing efforts made to eliminate gender inequalities in the labour market. But information on the earnings of graduates also yields an indicator of the relative balance between the demand for the skills and knowledge provided by higher education and the supply of people educated to this level. All other things being equal, given the rapid expansion of higher education through the 1980s and 1990s, we would expect the graduate earnings premium to decline.

In earlier research (Elias and Purcell, 2004b), we contrasted a national cohort of graduates who gained their first degrees in 1980 with the 1995 graduating cohort, we showed that there has been little appreciable change in the rate of growth of the earnings of graduates during the first six to seven years of their post-graduation careers. However, this does not imply that there was no decline in the graduate earnings premium over this period separating these studies – growth may have taken place from a lower starting salary in real terms for the 1995 graduates. Nonetheless, this finding was not consistent with the view that the move from elite to a mass higher education system has been accompanied by a widespread movement of graduates into lower paid jobs that do not require graduate level skills and knowledge. It is arguable, though, that the decline in the graduate earnings premium is a more recent phenomenon – affecting those who graduated after 1995. The expansion of higher education led to an increased flow of graduate into the labour market throughout the 1990s, but the impact of this flow on the stock of graduates in employment may not have become apparent until the late 1990s[19]. Furthermore, the collapse in confidence in financial and related markets in 2001 may have undermined one of the principal sources of demand for graduates.

In this section we turn our attention to this issue, contrasting the earnings of those who graduated in 1995 with similar information collected from those who gained their degrees from the *same institutions* in 1999. An important aspect of the design of the survey of the early

19 Through the 1980s approximately 80 – 100 thousand graduates were entering employment for the first time each year. During the 1990s this rose significantly to well over 200 thousand graduates per annum. Evidence from the Labour Force Survey shows that, in England, the stock of people in the labour force with qualifications at NVQ levels 4 and 5 rose from 23.3% in 1993, to 25.7% in 1998, then to 27.7% in 2003. This rate of increase will continue, probably for the next 15 to 20 years, simply because the flow of entrants to the labour market is better qualified than the flow of those retiring.

careers of 1999 graduates is that it included a similar sample (in terms of the sampling fractions used) drawn in the same way from the same higher education institutions which were surveyed in 1998/99 (collecting information from their 1995 graduates)[20].

Rather than studying the rate of growth of earnings as was done in the earlier comparison of 1980 graduates with 1995 graduates, here we compare the distributions of earnings between three and a half and four years after graduation for these two groups of graduates. Table 6.2 shows the means and medians of the distributions of the earnings of graduates in full-time employment. For men, the earnings difference between the two cohorts at this early stage in their careers is 19-20 per cent on average. For women the mean and median difference is 22 per cent. Between the end of 1998 and May 2003 (when the majority of 1999 graduates returned their questionnaires), the index of average earnings for the UK economy rose by 25 per cent, suggesting that the rise in graduate earnings has not kept pace with the average for the whole economy.

**Table 6.2: Mean and median average annual gross earnings for 1995 and 1999 graduates in full-time employment 3 ½ years (1995 graduates) or 4 years (1999 graduates) after graduation**

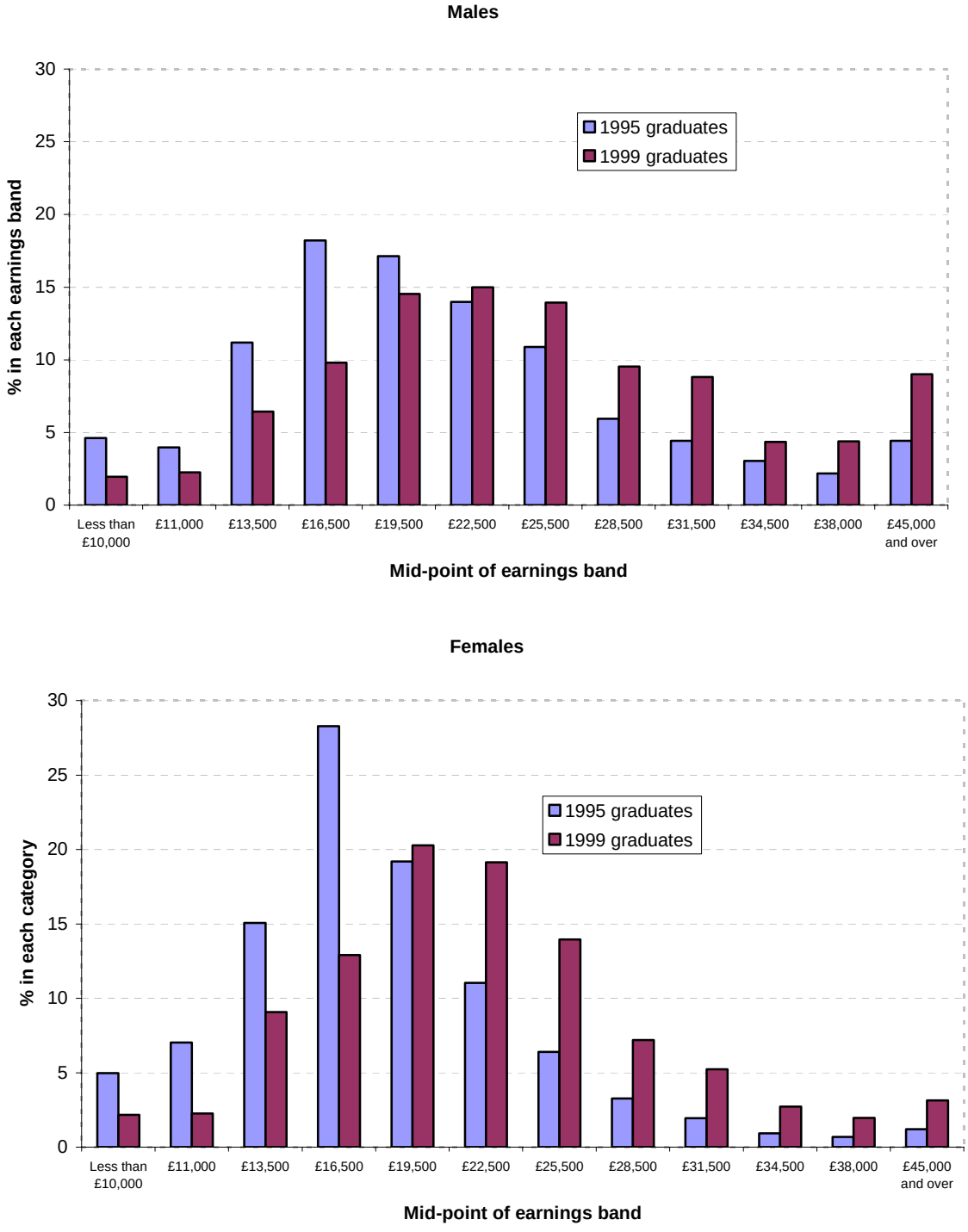
| | 1995 graduates in 1998/99 | | 1999 graduates in 2003/04 | | % growth | |
|---|---|---|---|---|---|---|
| | Mean | Median | Mean | Median | Mean | Median |
| Males | £21,585 | £20,163 | £25,875 | £24,062 | 20 | 19 |
| Females | £18,441 | £17,611 | £22,479 | £21,524 | 22 | 22 |
| Total | £19,813 | £18,515 | £23,754 | £22,301 | 20 | 22 |

Sources: Survey of Early Career Paths of 1995 graduates
Survey of Early Career Paths of 1999 graduates

The information presented in Table 6.2 shows the changes in the average earnings of graduates in full-time employment between 1998/99 and 2003/04. However, these summary statistics could mask significant changes in the distribution of earnings. It may be the case that the distribution has widened over this period, with more graduates with gross annual earnings at the top and bottom end of the distribution. To investigate this possibility, Figure 6.10 shows the distribution of annual gross earnings recorded by the 1995 graduates in 1998/99 (3½ years after graduation), comparing this distribution with the same information collected from 1999 graduates approximately four years after graduation.

[20] 33 of the 38 Higher Education Institutions HEIs in the present survey also participated in the survey of 1995 graduates. The analysis presented in this section is restricted to these 33 HEIs participating in both surveys.

**Figure 6.10: The distribution of gross annual earnings for 1995 and 1999 graduates in full-time employment 3 ½ years (1995 graduates) and 4 years (1999 graduates) after graduation**



This figure shows that, for both men and women, the distributions have shifted significantly to the right at all points in the distribution. There is no indication that there has been any significant widening of the distribution of the earnings of graduates in full-time employment in their early careers between 1998/99 and 2003/04.

To gain a more precise indication of the earnings position of the 1999 graduates compared with the 1995 graduates, we have to take account of a number of additional factors to measure the difference in earnings with more precision. As was shown in the preceding section, earnings vary markedly with a wide variety of influences, including the sectors in which graduates work, the class of degree they obtained and their ages. Differences in the earnings of the two graduating cohorts could simply reflect changing composition rather than any real decline in earnings. Another important factor which needs to be taken into account in this comparison is the variable period of time which has elapsed since the cohorts graduated. Although four years separates these two cohorts in terms of when they obtained their degrees, the dates upon which they recorded their current earnings differ by between four and five years depending upon when the survey questionnaires were completed[21]. For this reason we deflated the earnings of each member of the 1999 cohort using a deflator calculated from the relevant monthly index of average earnings (the month the survey questionnaire was returned). These deflators ranged from 19 to 23 per cent, depending upon the date the 1999 graduate made their survey response.

This variation in the date upon which earnings information was collected could have additional important consequences for the comparison. It has been shown elsewhere (McIntosh, 2002) that the earnings of graduates are strongly related to the amount of employment experienced gained in the first few years after graduating. Because of the longer period that had elapsed before survey contact for the 1999 cohort compared with the 1995 cohort, the later cohort could have gained more work experience since graduating. Alternatively, if the 1999 cohort had spent more time out of the labour force after graduating (*e.g.* more graduates taking a 'gap year' *before* starting to look for work), this could also have a significant effect upon the interpretation of the difference in earnings between the two cohorts. For this reason we introduce an important adjustment into the comparison - a variable representing the cumulative number of months in which the graduate was employed from gaining their first degree to the date upon which they reported their earnings.

21 The 1995 cohort from the original 33 HEIs completed survey questionnaires within a narrow time period, from December 1998 to January 1999. For reasons associated with data protection, the responses from the 1999 cohort spanned a period from February 2003 to April 2004, although three quarters of responses were received during April to June 2003.

The statistical model for which parameter estimates were determined is shown in Appendix Table A3.2, and includes information which is available from both surveys and which is directly comparable: the type of institution attended, the class of degree obtained, whether or not the graduate went on to undertake further full-time or part-time work-related or career-related courses, subject of study, entry qualifications for higher education, age, work limiting disability, method of study, whether or not a degree was required for their current job, size of current organisation, whether or not the current job is in the public or private sector, measures of the motivational drive of the graduate[22], sector in which currently employed, ethnicity, gender and cumulative months employed full-time since graduating[23].

The results show that there is little change between the two cohorts in the nature of the impact these variables have on earnings, with a few exceptions. First, we note that the effect of having a first class degree on later earnings has increased between the two cohorts. In terms of the relationship between subjects of study and earnings, some interesting results are observed. The relative gain from a maths/computing first degree has now declined somewhat, from 14 per cent higher than a social science first degree to 10 per cent higher. Medicine has gained significantly, from 14 per cent higher than social science to 21 per cent higher in the 1999 cohort. Importantly, education has moved from being on a par with a social science degree to 13 per cent higher in the 1999 cohort, reflecting the significant increase in earnings that has taken place in the teaching profession over the last four years. The relative earnings of female graduates in full-time employment remain, on average, 8-9 percentage points lower than the earnings of male graduates, having taken account of the different sectors in which male and female graduates are employed.

To determine whether or not there has been a decline[24] in the earnings of those who graduated in 1999 compared with 1995 graduates, measuring earnings at a point which is three and a half to four years after graduation, we merged the two datasets and tested for differences between them in the presence of the variables shown in Table A3.2. The results are given in Table 6.3 below.

22 This was the response to a question in which the graduate was asked to record on a five point scale the extent of their agreement or disagreement with the statement 'I am extremely ambitious'. The variable used in the regression was coded one for those who strongly agreed with this statement, others were coded zero.

23 This is a more restricted set of variables than were included in the analysis of earnings presented in the preceding section, due to the fact that certain questions were not included in the survey of the career paths of the 1995 graduates. As a result the 'adjusted R squared', a measure of the variation in the dependent variable which associates with variation in the independent or explanatory variables falls from 0.45 to 0.26

.

24 Relative to trends in average earnings between 1995 and 1999.

**Table 6.3: Difference in real annual earnings of 1995 and 1999 graduates in full-time employment 3½ to 4 years after graduation, by gender**

| | Relative difference in real earnings 3-4 years after graduation | Standard error | Significance |
|---|---|---|---|
| 1995 graduate, male | ref. | | |
| 1995 graduate, female | -8.5% | 0.7% | 0.000 |
| 1999 graduate, male | -10.7% | 0.9% | 0.000 |
| 1999 graduate, female | -18.6% | 0.8% | 0.000 |

Note:. 'ref.' denotes the reference category.

Other variables included in the model are: type of higher education institution attended, subject studied, method of study, further qualifications obtained, entry qualifications, age, class of degree obtained, work limiting disability, measures of work motivation, whether or not a degree was required for current job, size of organisation, whether current job is in private, public or voluntary sector, ethnic background, sector of current job and the cumulative number of months employed between gaining first degree and the time of the interview

Sources: Survey of the Career Paths of 1999 Graduates and Diplomates
Survey of the Career Paths of 1995 Graduates and Diplomates

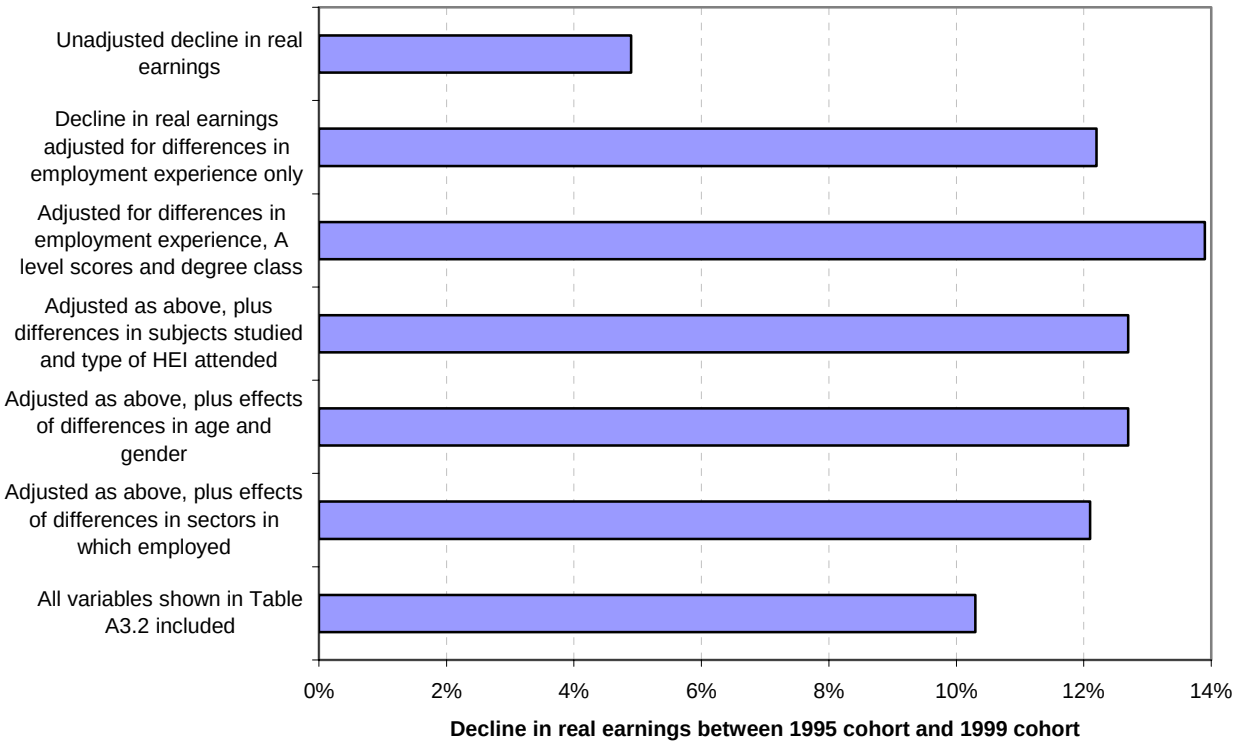
This test confirms that there has been a real decrease in the earnings of men who graduated in 1999, relative to those who graduated in 1995. In other words, at a point in their careers some four years after graduation and having taken account of differences in the characteristics of graduates and their varying experiences of employment, male graduates were on average earning about 11 per cent less in real terms than those who graduated four years earlier. For women who graduated in 1995, we show that they earned about 8 per cent less than their male counterparts in 1998/99. With no improvement in the gender difference in earnings, females who graduated in 1999 were thus earning 19 per cent less on average than their male counterparts who had graduated in 1995.

For males and females combined, the decline in the real earnings of graduates in full-time employment, as measured in this comparison of the 1995 cohort three and a half years after graduation and the 1999 cohort four years or more after graduation, was 10.3 per cent. This is our best estimate of the decline in earnings having taken account of a wide range of factors which could have reduced the earnings of 1999 graduates in their early careers relative to 1995 graduates. However, it is instructive to see just how important these other influences are in understanding the decline in earnings. To do this we break the analysis shown in Table A3.2 down into a series of steps, showing the impact of adjusting for different variables on the extent of the decline in real earnings It is useful and interesting to see if this decline can be attributed to the effects of particular factors. Figure 6.11 shows the results of this analysis. The 'unadjusted' decline in real earnings between the two cohorts is 4.9 per cent. In other words, the real earnings of the 1999 cohort approximately four years after graduation are about 5 per cent lower than the real earnings of the 1995 cohort three and a half years after graduation. When an adjustment is made for the longer employment experience of the 1999 cohort, the difference widens to 12.2 per cent. Including the effect of A-level scores and

degree results causes the difference to widen further, to about 14 per cent. The inclusion of other factors which could account for a difference in earnings (types of subjects studied, type of institution attended, age differences, gender composition of the samples, etc.) reduces the difference down to 10.3 per cent.

It may be the case that there are other factors, not measured by the variables included in this comparative analysis, that are behind this decline in earnings. Equally, it may be the case that some of the assumptions made in this analysis are not particularly robust. In the following section we conduct a sensitivity analysis to see if we can determine how this result may be affected by a number of assumptions we have made.

**Figure 6.11: The effect of different factors on the decline in the real earnings of graduates between the 1995 cohort and the 1999 cohort**




## 6.7 Sensitivity analysis

The preceding analysis indicates that, approximately four years after graduation, the earnings of a nationally representative group of graduates who gained a first degree in 1999 were lower in real terms than the earnings of a similar group who graduated in 1995. The real decline in earnings appears to be in the region of 10 per cent on average. This is a significant decline, not just in statistical terms, but because it has taken place over a relatively short period of time and well before the full impact of expansion of higher education will be felt in

the labour market. It is important, therefore, that this finding should be further scrutinised before conclusions are drawn regarding the changing balance between the supply of and demand for graduates.

A number of key factors and technical assumptions are examined in this section. These are:

- it has been assumed that the responses received from the 1999 cohort are not subject to differential bias compared with responses from the 1995 cohort;
- that the longer time period over which responses were received from the 1999 cohort has had no adverse effect on the results;
- that the specific statistical technique employed (pooling of data from two surveys and the estimation of regression models from the pooled data) is valid;
- that the use of banded earnings data (as opposed to reporting of actual earnings) does not create statistical problems relating to the degree of accuracy with which the estimates of a real decline in earnings are reported.

To examine these assumptions, we have subjected the survey data to a range of statistical tests. We re-specified the regression model in three alternative forms; by dropping observations in the tail ends of the earnings distribution given the uncertainty associated with the value of earnings in the open-ended tail bands of the distribution (variant 1), by dropping all observations received after July 2003 (20 per cent of all observations were received after this date) (variant 2), and by replacing the cumulative experience of employment (measured in months) with what is termed a 'linear spline' – a more flexible approach which allows longer spells of cumulated employment experience to have a different effect upon earnings (variant 3). In Table 6.4 we show how the results change with these three different specifications.

**Table 6.4: Differences in real annual earnings of 1995 and 1999 graduates in full-time employment 3½ to 4 years after graduation, by gender – variant models**

| | Relative difference in real earnings 3½ to 4 years after graduation | | |
|---|---|---|---|
| | **Variant 1** | **Variant 2** | **Variant 3** |
| 1995 graduate, male | ref. | ref. | ref. |
| 1995 graduate, female | -8.5% | -8.1% | -8.1% |
| 1999 graduate, male | -10.7% | -9.1% | -9.1% |
| 1999 graduate, female | -18.6% | -18.1% | -18.1% |

Note:. 'ref.' denotes the reference category.

Other variables included in the model are: type of higher education institution attended, subject studied, method of study, further qualifications obtained, entry qualifications, age, class of degree obtained, work limiting disability, measures of work motivation, whether or not a degree was required for current job, size of organisation, whether current job is in private, public or voluntary sector, ethnic background, sector of current job and the cumulative number of months employed between gaining first degree and the time of the interview

None of the assumptions underlying the analysis appears to have effect upon the main finding. We are reasonably confident, therefore that the results described are analytically robust. In particular, we draw attention to the fact that the same 33 Higher Education Institutions (HEIs) sampled their 1995 and 1999 graduating cohorts by the same survey methods and similar questions. Response rates from the 33 HEIs were similar and response biases (by gender, HEI and class of degree) were similar in each cohort. The statistical technique we employed, known as a pooled regression model, can be tested to determine whether or not it is appropriate to pool earnings observations from two surveys and analyse the pooled observations with one statistical model. When tested, statistical assumptions underlying this approach are not violated.

Finally, in an attempt to identify more precisely among which groups of graduates this real decline in earnings manifests itself, we included a wide range of interaction terms in the statistical model. To illustrate this, consider the two sets of regression results shown in Appendix Table A3.2. These can be regarded as one regression model in which a complete set of interaction terms has been included. For example, all other things being equal, having 24+ UCAS points was associated with earnings some 5 per cent higher for the 1995 graduates and 6 per cent higher for the 1999 graduates. The difference is approximately one standard deviation and is not statistically significant. In this example, an interaction term introduced in a pooled regression (1995 graduates and 1999 graduates, with a variable interacting 24+ UCAS points with the particular cohort) would be statistically insignificant.

Using interaction terms, significant differences between the cohorts are apparent for a number of the variables in the model, particularly the following:

- degree required for current job (decline in impact on earnings);
- cumulative months employed since graduating (decline in impact on earnings);
- working in a large organisation (decline in impact on earnings);
- having studied for law degree (increase in impact on earnings);
- having studied for maths/computing degree (decline in impact on earnings);
- having studied medicine and related degree subjects (increase in impact on earnings);
- having studied for education degree (increase in impact on earnings).

Such interaction terms were included in the pooled regression (variant 4) to see whether or not this new specification would have any impact upon the average decline in earnings measured between the cohorts. The results are shown in Table 6.5 below:

**Table 6.5: Differences in real annual earnings of 1995 and 1999 graduates in full-time employment 3½ to 4 years after graduation, by gender – including interaction terms**

| | Relative difference in real earnings 3½ to 4 years after graduation |
|---|---|
| | **Variant 4** |
| 1995 graduate, male | ref. |
| 1995 graduate, female | -8.0% |
| 1999 graduate, male | -10.8% |
| 1999 graduate, female | -19.5% |

It must be stressed that these results do not indicate that graduate salaries are falling. Other evidence indicates that the increase in earnings associated with a degree remains positive and highly significant. What these results do reveal though is that, relative to the growth of earnings which took place in the rest of the economy between 1998/9 and 2003/04, graduates who gained their degrees in 1999 have not experienced the same real increases in pay as those who graduated in 1995. This might be for a number of reasons. First, it could be the case that there has been an excess demand for graduates over the last few years, and that this has now moderated. Second, it may be that other groups in the economy (intermediate skilled workers for example) are currently experiencing an upsurge in demand which make graduates salaries relatively less attractive. Finally, it may be that the pay of older and more experienced workers has been rising relative to graduates, which would explain why graduate salaries for this young cohort had not risen in line with the national average increase in earnings. We have examined the latter hypothesis by comparing the earnings of workers as recorded in the labour force survey in December 1998 to February 1999 with the earnings recorded in the May to July quarter 2003, contrasting the rate of growth of earnings of all

workers aged 40 years and older with the rate of growth of earnings for those aged under 40 years. We find no evidence that older workers have experienced faster earnings growth in this period compared with younger workers.

### 6.8 Summary

This analysis of the earnings of nationally representative group of graduates, all of whom gained their degrees in July 1999, reveals a number of interesting findings. First, there is evidence of a significant gender gap in the earnings of recent graduates. Some 3 to 4 years after graduation, women graduates working full-time reported earnings which were around 15 per cent lower than those reported by male graduates. In part this reflects a number of factors which are well known, if not well understood. Men work longer hours, they occupy sectors which command higher earnings generally (insurance, business, finance, information technology, etc.) and they tend to work in the private sector rather than the public or not-for-profit sectors. Adjusting for these factors, we find that there remains a significant gender gap in pay. Part of this reflects the impact of gender segmentation at the workplace (women tend to work in workplaces where there kind of work is undertaken by other women, and this has a negative impact upon their earnings. Part (5 per cent) remains unaccounted for by any other factor than gender.

Perhaps the most important result that emerges from this analysis relates to the comparison made with a similar cohort who gained their first degrees in 1995. After making a series of adjustment to account for differences in the timing of data collection, we show that the earnings of the later cohort do not appear to have kept pace with earnings increases more generally in the economy. This may be particular to this cohort, reflecting the circumstances prevailing in 2003/04 – or it may be the first indication that the graduate earnings premium, which in the UK is high by international standards, is starting to reflect a decline in the excess demand for graduate skills and knowledge which has characterised the situation prevailing throughout the 1990s. Only further monitoring of the situation will indicate whether or not this is the case.

# CHAPTER 7

## Who gets the good jobs and who has difficulties? Advantage and disadvantage in the graduate labour market

### 7.1 Introduction

Chapter 3 addressed the question of what is a graduate job and outlined the variety of means by which we can discern the extent of appropriate employment for 1999 graduates. These included the use of the SOC(HE) classification, subjective assessments of the appropriateness of employment amongst the survey respondents or an assessment of the utilisation of degree skills and knowledge in employment. This chapter goes a step beyond this to examine who have obtained the 'good jobs', defined in a number of ways, and who have done less well in the labour market. The previous chapter examined the earnings distribution of 1999 graduates, but this, of course, is only one aspect of a 'good' job and other measures need to be considered.

As discussed previously, as the graduate labour market has expanded so too has the range of degree-awarding institutions, available courses and, subsequently, the diversity of the graduate supply to the labour market. Critics of higher expansion have raised questions about graduate over-supply and associated over-qualification or under-employment among graduate labour market entrants, arguing that the 'promise' of rewarding, challenging graduate employment is still only available to a lucky 'elite' minority. Using a variety of measures to indicate job quality, this chapter assesses who appears to have accessed satisfactory employment and who, four years after graduation, appeared to still be struggling for integration to the labour market at an appropriate level. The chapter is in two halves: first, we consider the survey evidence to indicate who amongst the sample had achieved positively-rated employment, in terms of intrinsic aspects, rewards and potential; second, the interview data is considered, to identify the significance of assets and obstacles in the graduate labour market and what 1999 graduates perceived to be their advantages and disadvantages as their careers have developed (or failed to do so).

We begin by examining those who would appear to have been least successful in the labour market; graduates occupying non-graduate jobs at the time of the survey.

### 7.2 Who was in a non-graduate job fours years after graduation?

In Chapter 4 we considered various dimensions of the assimilation of graduates into the labour market during the early stages of their careers; including their participation in further study, their movement from unemployment into work and the evolution of the types of occupations they had been undertaking. In this chapter, we first consider what factors were

important in determining the probability of a graduate being in a non-graduate occupation four years after the completion of their studies. We have observed that graduates gain employment in a variety of occupations after completing their studies. Many graduates initially entered employment that could not generally be considered to be commensurate with their levels of education and training. For many of these, employment in such occupations was a short-term phenomenon on the way to obtaining employment in occupations that more fully utilised their skills and qualifications. However, a significant minority of the 1999 cohort were employed in non-graduate occupations some four years after completing their studies. It is therefore important to understand what factors were associated with employment in such occupations.

The analysis of career histories presented in Chapter 4 revealed that at four years after graduation, approximately 15 per cent of employed graduates were working in non-graduate occupations [as defined by SOC(HE)]. However, in completing the career history section of the questionnaire, respondents were asked to state the nature of their main activity. In cases where respondents were engaged in more than one activity at the same time, they were asked to decide which activity they regarded as the main one. For example, in the career history section of the questionnaire, a respondent could indicate that their main activity at the time of the survey was *studying*. However, when asked to provide a detailed description of their current situation elsewhere in the survey, such a respondent could indicate that they were both studying and in employment. If the respondents were in work, either as an employee or self-employed, they were then asked to provide further details about this employment even if they did not regard this as their main activity.

The recording of multiple activities has implications in terms of the comparability of occupational information collected from these two areas of the questionnaire. In particular, the main body of the questionnaire records information about part-time jobs that, in some cases, the respondent did not regard as being their main activity. The concentration of such employment in relatively low skilled occupations led to a higher proportion of employed respondents indicating that they were working in non-graduate occupations. Analysis reveals that among employed respondents, 19 per cent indicated that they were employed in a non-graduate occupation at the time of the survey. This is approximately four percentage points higher than reported by respondents when asked about their main activity in the career history section of the questionnaire. However, when selecting those graduates who were in full time employment or were self-employed at the time of the survey, 16 per cent indicated that they were employed in a non-graduate occupation, which is comparable to the figure derived from career histories in Chapter 4.

In Figures 7.1 to 7.3, we present information showing the proportion of employed graduates working in non-graduate occupations approximately four years after graduation according to

subject area studied (Figure 7.1), classification of degree and type of Higher Education institution attended (Figure 7.2) spells of unemployment since graduation and geographical mobility (Figure 7.3). To aid comparisons between the present analysis and that based upon the analysis of career histories, we present information on the proportion of graduates working in non-graduate occupations for (a) all graduates in employment and (b) all graduates in full time employment or who were self-employed.

Figure 7.1 shows that of graduates who studied in medicine and related areas, only approximately 5 per cent were employed in non-graduate occupations at the time of the survey. Non-graduate occupations also account for less than 10 per cent of employment among graduates with degrees in education and engineering. Employment in non-graduate occupations was also relatively low among graduates in law and in mathematics and computing. In contrast, among graduates with arts, humanities, languages, social sciences and business studies degrees in full time employment and the self-employed, non-graduate occupations account for more than 20 per cent of employment.

Clear gradients emerge in the proportions of graduates employed in non-graduate occupations according to academic performance at degree level and in terms of the type of HEI attended (Figure 7.2). At the time of the survey, more than one in four graduates with a third class degree was employed in a non-graduate occupation. This incidence is approximately twice the level exhibited by graduates who obtain first class degrees. In terms of type of institution attended, approximately one in seven of graduates in full time employment who had attended either an old university or a 1960s university were employed in non-graduate occupations at the time of the survey, whereas almost one in five who attended one of the new post-1992 universities were in such jobs.

**Figure 7.1: Proportion of employed graduates working in non-graduate occupations approximately 4 years after graduation: by subject studied**

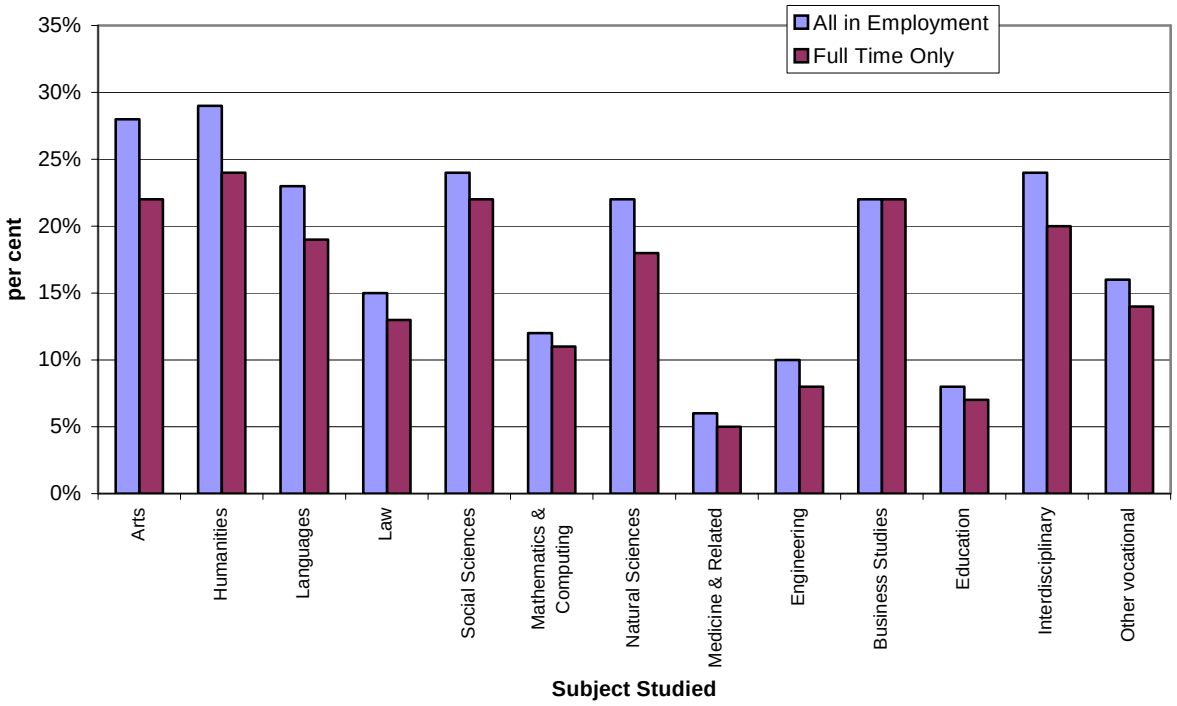



**Figure 7.2: Proportion of employed graduates working in non-graduate occupations approximately 4 years after graduation: by HE type and degree classification**

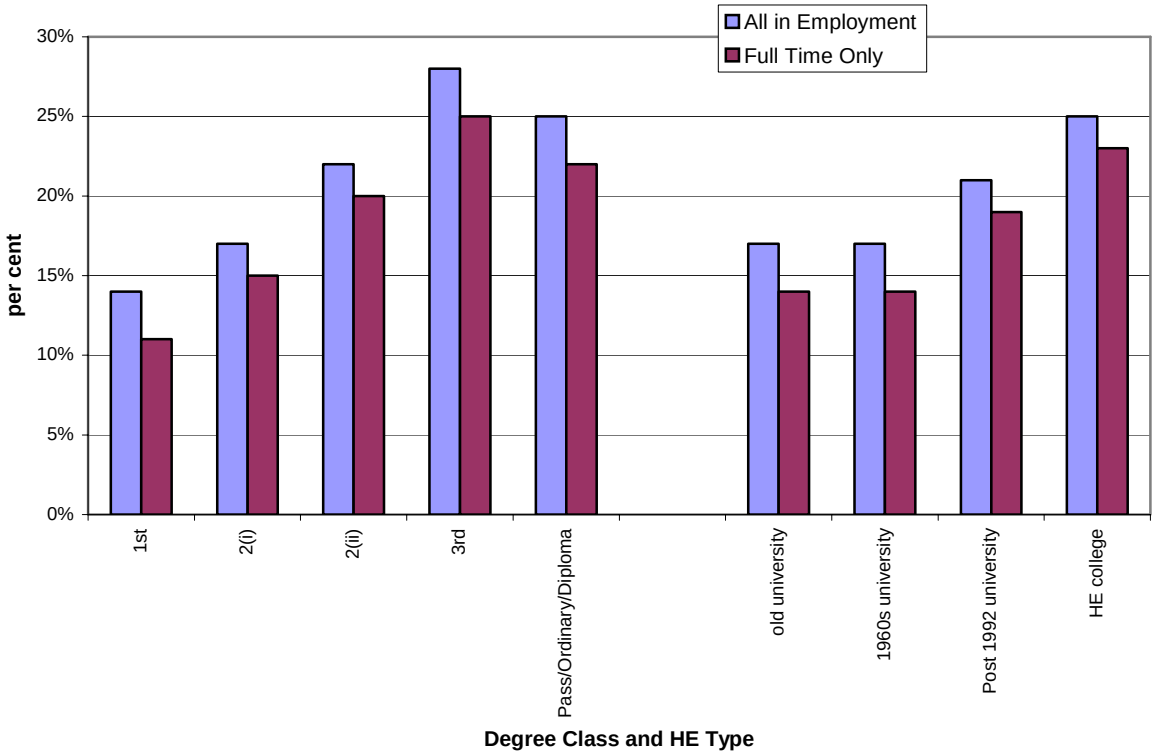
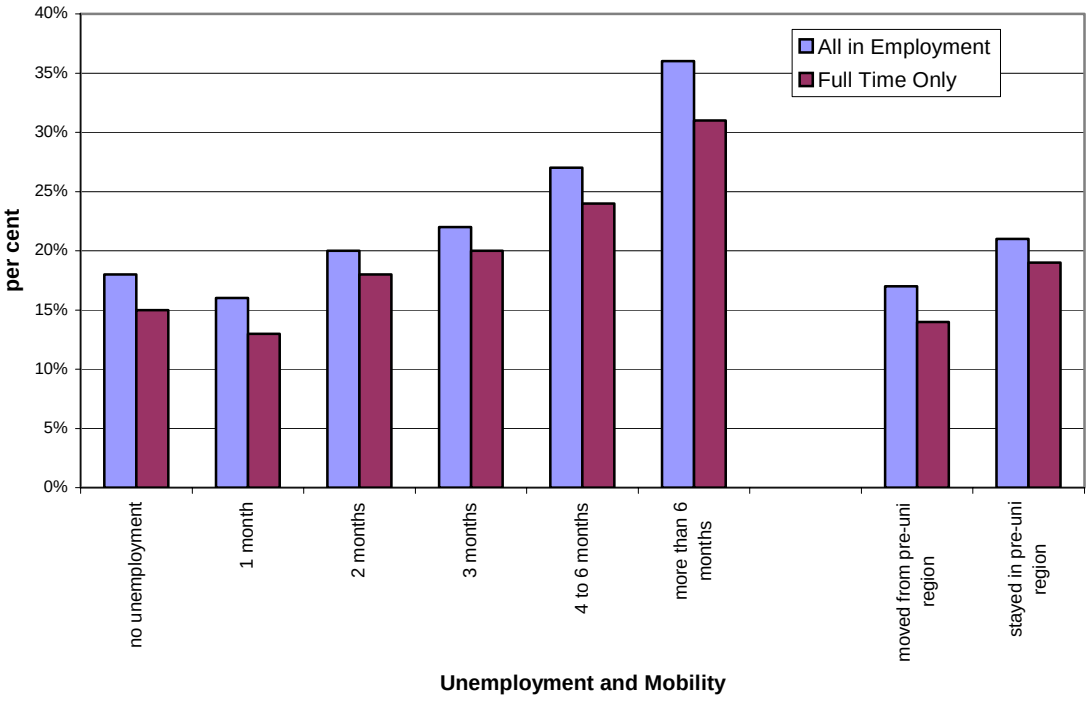


**Figure 7.3: Proportion of employed graduates working in non-graduate occupations approximately 4 years after graduation: by duration of unemployment and geographical mobility**




A clear gradient in terms of the proportion of graduates employed in non-graduate occupations also emerges in terms of the duration of unemployment accumulated during the period since respondents completed their studies in 1999 (Figure 7.3). Among those in full time employment at the time of the survey, almost a third of those who had accumulated more than six months of unemployment since completing their studies were employed in non-graduate occupations; twice the proportion observed among those who had not experienced unemployment since graduating in 1999. Finally, we distinguish between those graduates who were currently employed in the same region as where they lived before attending university and those graduates who currently worked in a different region to the one where they lived immediately before attending university. We observe that the proportion of graduates employed in non-graduate occupations is approximately five percentage points higher among those graduates who had remained in or returned to the region where they lived immediately before studying for their 1999 qualification.

The analysis presented in Figures 7.1 to 7.3 revealed that factors such as subject studied, educational attainment and type of Higher Education Institute (HEI) were associated with significant variations in the proportions of graduates from the 1999 cohort employed in non-graduate occupations. However, the separate contribution that each factor made to these differences in occupational composition of graduate employment is not clear from this analysis. For example, can the differences we observe across different types of HEI be explained by differences in the personal characteristics and levels of educational attainment

of those who enter these institutions? Or is it the case that, after controlling for the characteristics of university entrants, the type of institution has a *separate* and *additional* influence on the probability of being employed in a non-graduate occupation four years after graduation?

To consider such issues, we estimate the probability of a respondent from the 1999 cohort being in a non-graduate occupation at the time of the survey, using the technique of logistic regression. This allows us to quantify the *additional* and *independent* effect of a range of characteristics upon an individual's probability that they will be in a non-graduate occupation approximately four years following the completion of their studies. This is the technique used in the earlier analysis of unemployment presented in Chapter 4. The observations are restricted to respondents who were in employment at the time they completed the questionnaire. The key results are shown in Figures 7.4 to 7.7. For each of the variable sets, the results are expressed in terms of the percentage difference in the odds of being employed in a *non-graduate* occupation relative to a reference category *and* after having controlled for all other factors. The coloured bars are used to indicate where a variable is estimated to be significantly different from the reference category at the 5 per cent significance level.

In terms of personal characteristics (Figure 7.4), we estimate that:

- females were approximately a fifth more likely than males to be employed in a non-graduate occupation;
- no clear relationship emerges between age and the risk of being employed in a non-graduate occupation;
- social class background is not estimated to have a significant influence on the odds of being employed in a non-graduate occupation (results not shown);
- those respondents who report that they have a long term illness or disability were more than twice as likely (126 per cent more likely) to be employed in a non-graduate occupation as those with no such restriction;
- those respondents who agreed strongly with the statement that they were extremely ambitious were a third less likely to be employed in a non-graduate occupation compared to other employed respondents.

In terms of subject studied (Figure 7.5), we estimate that;

- those graduates who studied degrees in medicine and related subjects, education, engineering and law were least likely to be employed in a non-graduate occupation approximately four years after graduation;
- those with degrees in humanities and languages were most likely to be employed in non-graduate occupations, with those graduates who held degrees in these subject being over nine times as likely (800 per cent more likely) to be employed in non-graduate jobs.

In terms of educational attainment and institutional type (Figure 7.6), we estimate that:

- pre-entry qualifications were shown to have had a significant effect on the odds of being in a non-graduate job four years after graduation, with those graduates possessing higher A-level points being less likely to be employed in non-graduate occupations. Those with less than 10 A-level points were almost two thirds more likely (64 per cent more likely) to be employed in non-graduate occupations compared to those with 31 or more A-level points;
- respondents from pre-1992 institutions were least likely to be employed in non-graduate occupations. Those from post 1992 institutions were a third more likely (37 per cent more likely) to be employed in a non-graduate occupation than those from old universities;
- those graduating from HE colleges were at the most risk of being employed in non-graduate occupations;
- a clear gradient emerges in terms of the effect of degree class on the probability of being in a non-graduate job four years after graduation, with those graduates who had a third class degree being 50 per cent more likely to be employed in a non-graduate occupation.

In terms of the remaining characteristics controlled for in our model (Figure 7.7), we estimate that:

- those respondents who undertook a work placement integral to their course or had undertaken work to gain useful career related experience while studying, were approximately a third less likely to report being employed in a non-graduate occupation at the time of the survey;
- those respondents who at the time of the survey worked in the region in which they had lived immediately before studying for their 1999 qualification were a fifth more likely to be employed in a non-graduate occupation;
- respondents who had accumulated longer spells of unemployment following their studies were more likely to be employed in non-graduate occupations approximately four years after graduation. Those respondents who had accumulated more than six months of unemployment during the four years following graduation were more than twice as likely (123 per cent more likely) to be employed in a non-graduate occupation at the time of the survey;
- finally, those respondents who indicated that the debts that they had incurred as a student had limited their career options after completing their course were 37 per cent more likely to be employed in a non-graduate occupation than those respondents who had not incurred any repayable debts. Those respondents who indicated that their options had not been limited by their debts did not experience an increased risk of being employed in a non-graduate job. We return to the issue of repayable debt and its influence on labour market outcomes in Chapter 9.

**Figure 7.4: Probability of being employed in a non-graduate job approximately four years after graduation: influence of personal characteristics**

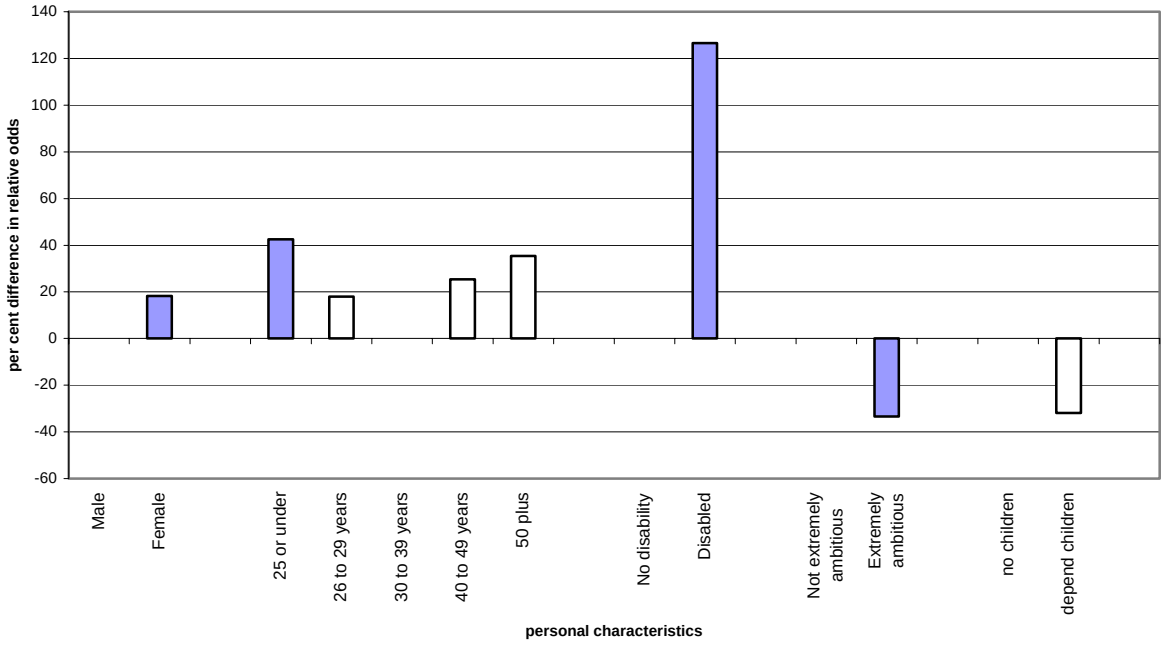



**Figure 7.5: Probability of being employed in a non-graduate job approximately four years after graduation: influence of subject studied**

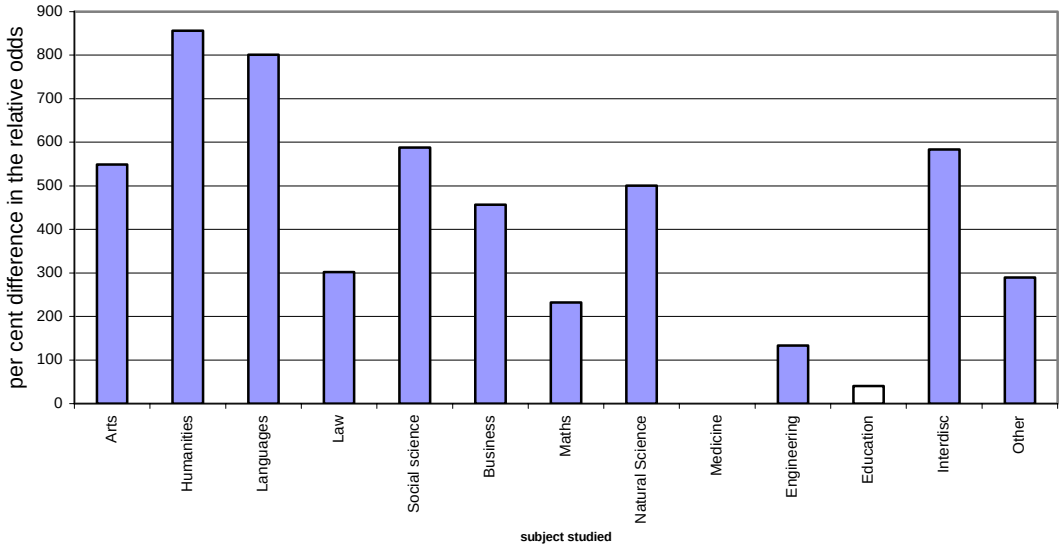


**Figure 7.6: Probability of being employed in a non-graduate job approximately four years after graduation: qualifications and HE type**

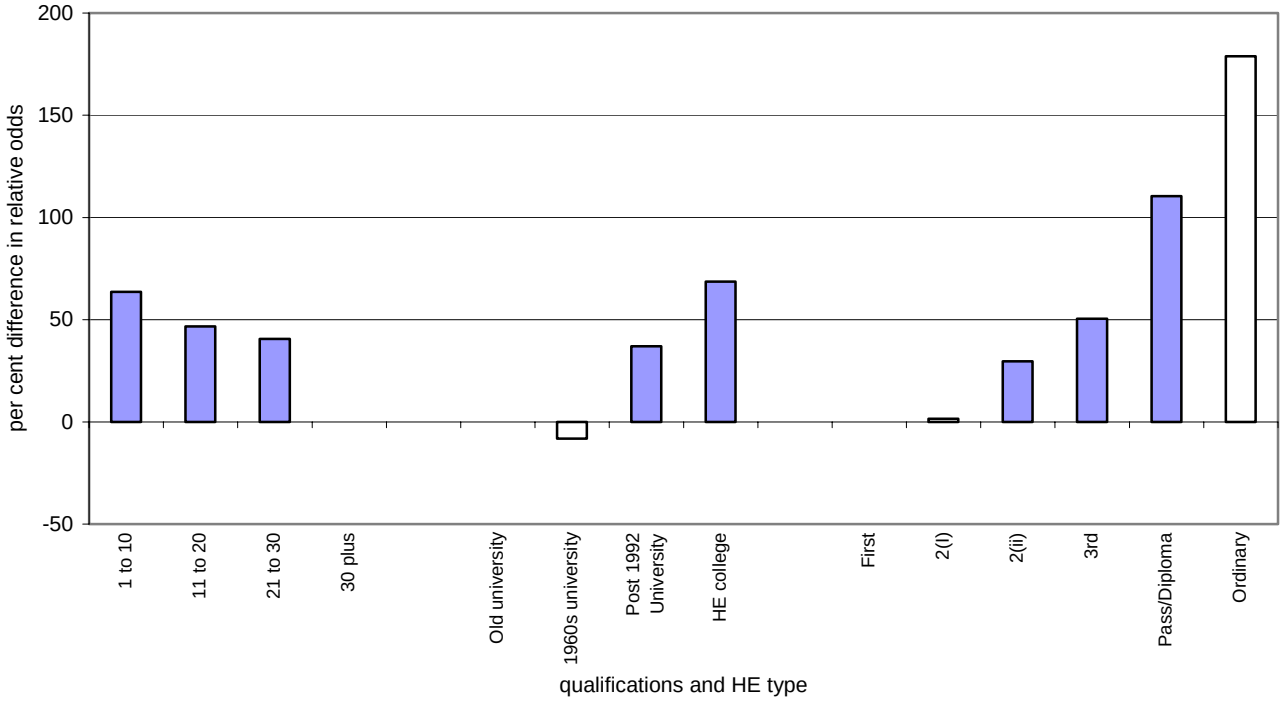
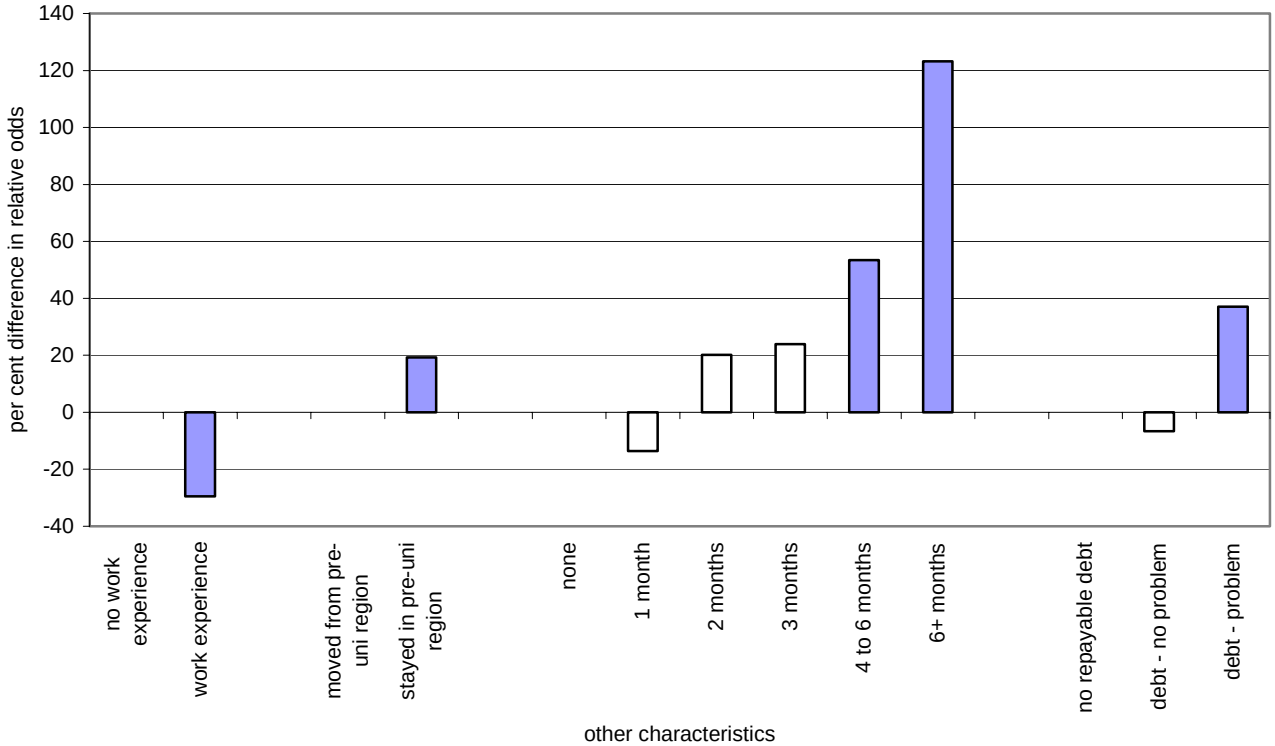



**Figure 7.7: Probability of being employed in a non-graduate job approximately four years after graduation: work experience, mobility, unemployment and student debt**



## 7.3 An alternative measure of job quality

We next examine in more detail, the nature of the jobs held by respondents at the time of the survey. Two aspects of their current employment are of interest. First, we examine the *quality* of the employment relationship. For this purpose we make use of an index of positive job characteristics developed and constructed for the research connected with the 1998 survey of 1995 graduates. In both the present survey of 1999 graduates and the earlier survey of 1995 graduates the respondents were asked to state whether or not the job they held at the time of the survey provided any of the following attractive features:

- **competitive salary**
- **continual skills development**
- **interesting and challenging work**
- socially useful work
- **long term security**
- opportunities for an international career
- opportunities to reach managerial levels
- **progressive and dynamic organisations**
- **working with people you enjoy socialising with**

The six characteristics shown in bold type above were deemed to be generally-applicable positive job attributes. An index was constructed from these six factors by assigning the value 'one' to each factor and summing across all six.

## 7.4 Comparisons of the job quality index between the 1995 and 1999 cohorts

We note that there was a small inconsistency in the format in which these questions were asked, with the survey of 1995 graduates also providing the option for respondents to provide details of any other positive aspect of their job that could not be classified to one of these categories. For the original analysis of the survey of 1995 graduates, those respondents who failed to tick any of the first nine, but provided details of a positive aspect of their job in response to the 'Other' category, scored one point on this constructed index. For the purpose of making comparisons between the two cohorts, the index for the 1995 graduates has been re-constructed to exclude this treatment of the 'Other' category. However, it is acknowledged that simply the presence of the 'Other' category in the survey of 1995 graduates may have influenced the degree to which respondents utilised the remaining categories of job quality. Furthermore, to achieve the highest levels of consistency, any comparisons made against the 1995 cohort of graduates are based upon the matched sample of 1999 graduates (i.e. those students graduating from the 33 institutions that participated in both surveys).

**Figure 7.8: Index of job quality: comparing the 1995 and 1999 cohorts**

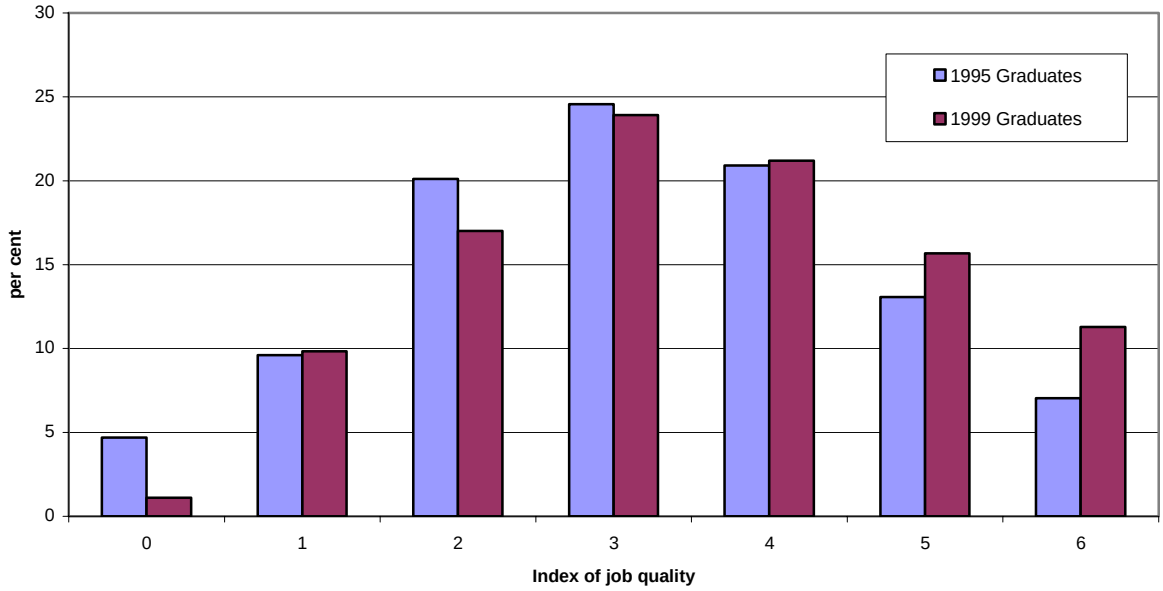



Figure 7.8 shows the distribution of this derived index constructed from responses to these questions in the current enquiry, contrasting responses for the two cohorts of graduates. It can be seen that the overall shapes of these two distributions are fairly similar, with about one quarter of the graduates from each cohort listing four positive features about their current jobs. However, there is some indication that graduates from the 1999 cohort were more likely to report that their job did provide the positive features included in the index of job quality. Among the 1995 cohort, approximately 5 per cent of employed graduates indicated that their job did not provide any positive features compared to 1 per cent among the 1999 cohort. Supporting this picture of more positive evaluation of jobs by the later cohort, 27 per cent of graduates in the 1999 cohort indicated that their jobs provided at least five positive features compared to 20 per cent of graduates among the earlier cohort.

These observations appear to be consistent with the analysis in Chapter 4. Figure 4.7 revealed that the share of employed graduates in non-graduate occupations was approximately three per cent lower among the 1999 cohort. However, we need to be cautious in making comparisons between the two cohorts. In the survey of 1995 graduates, respondents were asked about their current employment characteristics approximately 3½ years after graduation and the survey of 1999 graduates relates to the circumstances of respondents four years after graduation. As we observe in the analysis of career profiles in Chapter 4, the steady decline observed in the proportion of graduates employed in non-graduate occupations continues to decline beyond 36 months after graduation. The higher levels of job quality among the 1999 cohort implied by Figure 7.8 may simply be indicative of

the continued movement into employment that is more commensurate with the skills of recent graduates.

Changes in the composition of graduate employment between the two cohorts may therefore contribute to the higher job quality indices derived for the 1999 cohort. To abstract from such differences in the composition of employment, Figure 7.9 and 7.10 presents cross cohort comparisons of the job quality index for graduates working in selected categories of the SOC (HE) classification. Figure 7.9 compares the distribution of the job quality index for those employed in traditional graduate occupations, while Figure 7.10 compares the distribution of the job quality index for those employed in non-graduate occupations. In terms of the job quality index scores of those employed in traditional graduate occupations (Figure 7.9), it can be seen that graduates from the 1999 cohort reported a higher number of positive features about their current jobs than graduates in the earlier cohort. It is observed that 56 per cent of graduates in the 1999 cohort indicated that their jobs provided at least four positive features that contributed to the index of job quality. This is compared to just 39 per cent of graduates among the earlier cohort.

In terms of non-graduate occupations (Figure 7.10), the overall shapes of these two distributions are fairly similar. As we would expect from graduates employed in non-graduate occupations, the distribution of the job quality index scores is lower than that observed among those employed in traditional graduate occupations. The modal response among graduates employed in non-graduate occupations in both cohorts was to indicate that their jobs provided two positive features that contribute to the index of job quality. The most significant difference between the two cohorts of graduates is the lower proportion of graduates in the 1999 cohort who indicated that their jobs yielded no positive features. Most of this difference is offset by the higher proportion of graduates employed in non-graduate occupations in the 1999 cohort who indicated that their jobs provided a single positive characteristic that contributed to the index of job quality.

Comparisons of the job quality index between the two cohorts of graduates were also repeated for the remaining categories of the SOC (HE) classification. The generally higher levels of positive job attributes reported by the 1999 cohort of graduates emerged to some degree across all of the occupational categories. The higher levels of positive job attributes among the 1999 cohort cannot therefore be solely attributed to changes in the types of jobs held by graduates. In Figure 7.11 we consider whether there are differences in which of the positive attributes are being identified by the 2 cohorts. Again, we observed that graduates from the 1999 cohort were more likely to identify positive aspects associated with their jobs across all dimensions of the job quality index. Despite evidence of a decline in the real earnings of graduates between 1995 and 1999 graduates, no decline was observed in the

proportion of graduates indicating that their job provided a competitive salary. However, if judgements regarding 'competitiveness' are made in relation to other *graduate* salaries as opposed to *all* salaries, then changes in the real earnings of graduates may not be expected to influence perceptions of salary.

**Figure 7.9: Index of job quality: comparing the 1995 and 1999 cohorts for those in traditional graduate jobs**

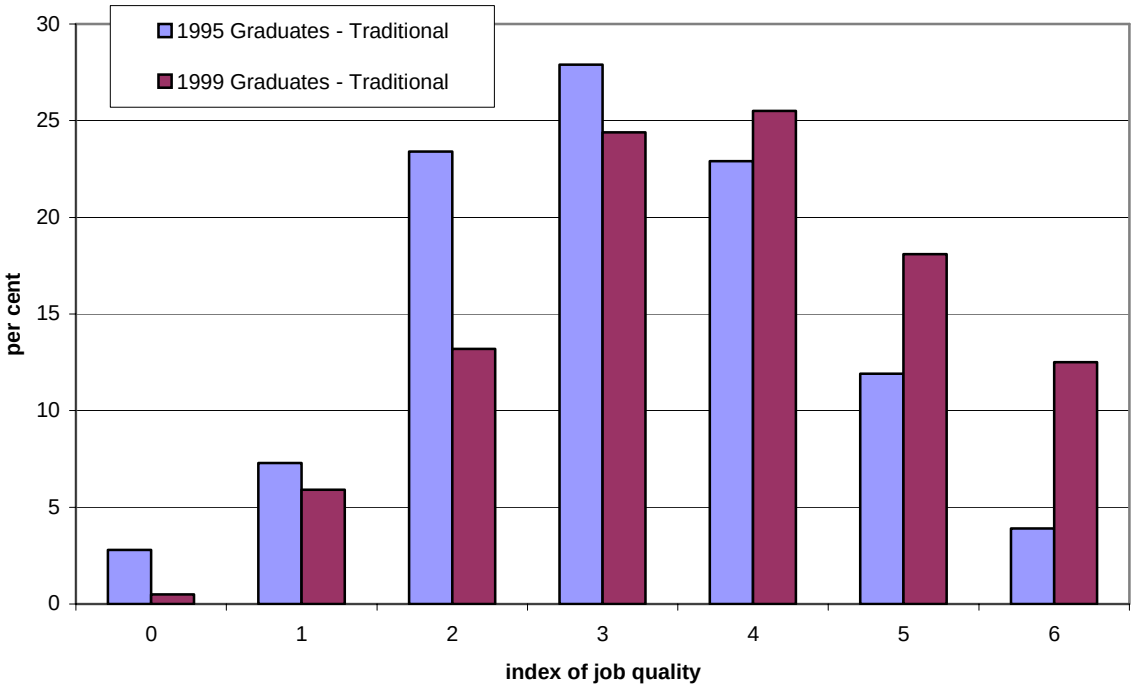


**Figure 7.10: Index of job quality: comparing the 1995 and 1999 cohorts for those in non-graduate jobs**

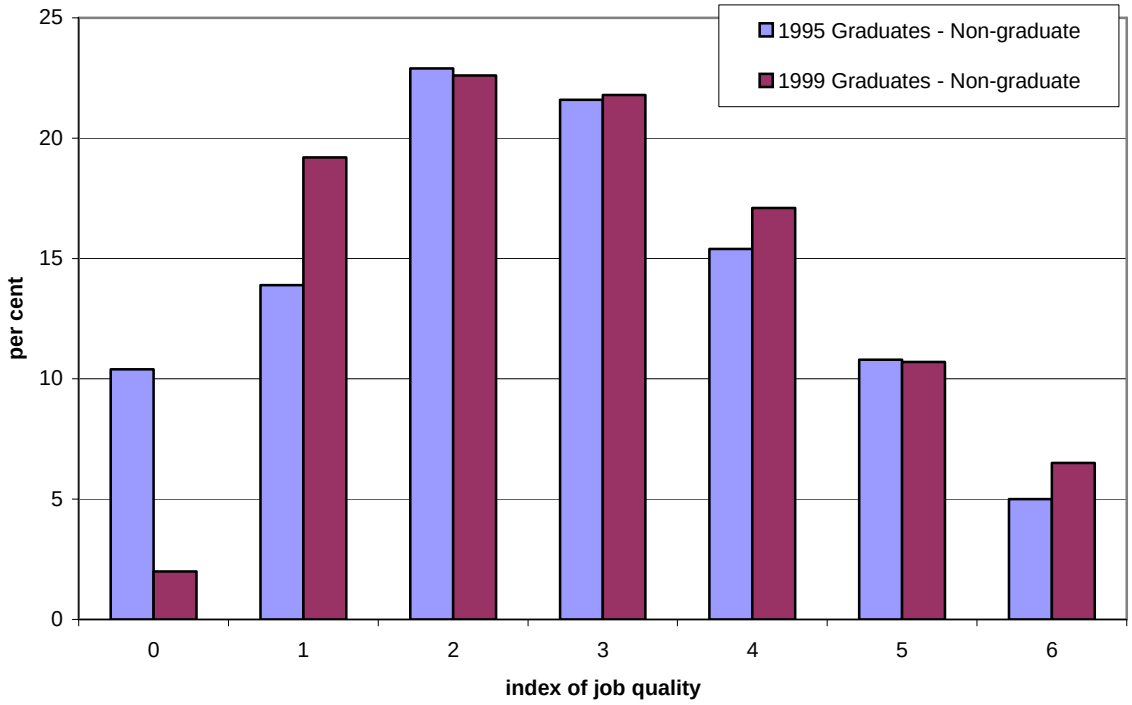
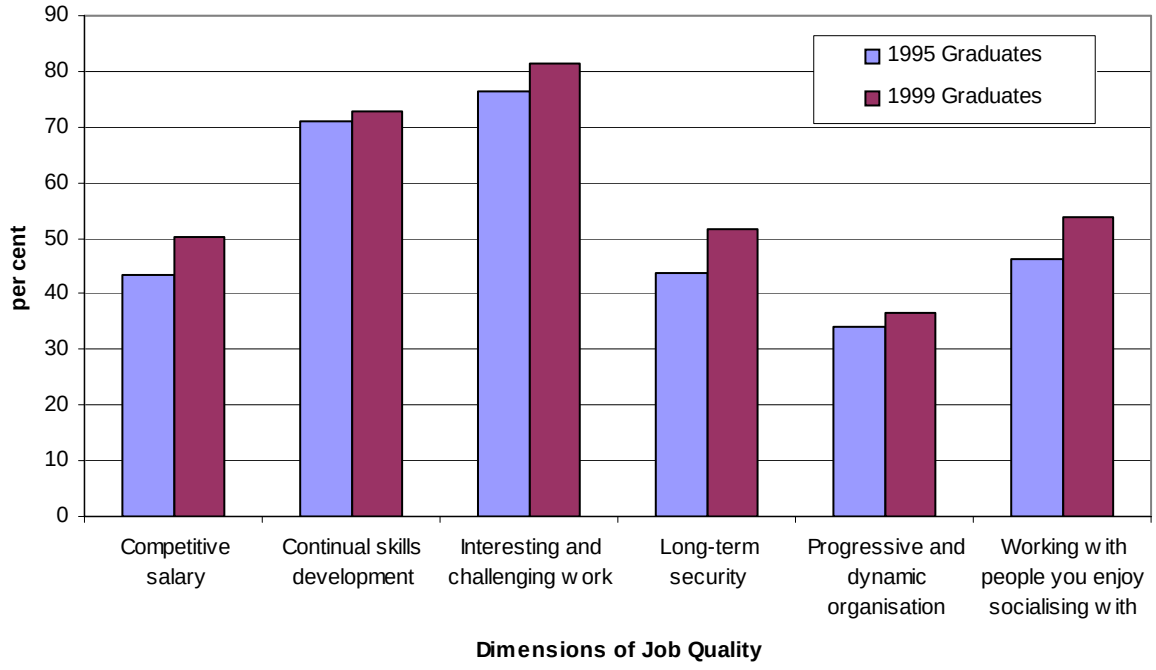



**Figure 7.11: Dimensions of the index of job quality: comparing the 1995 and 1999 cohorts**



## 7.5 Who gets the good quality jobs?

The previous analysis of job quality indicated that a majority of respondents could identify positive attributes of their current employment. Even among those employed in non-graduate occupations over half indicated that their job provided three or more positive features as defined in the index of job quality. In this section we consider how the index of job quality varies according to the different characteristics of graduates in our sample. We no longer make comparisons with respondents from the 1995 cohort, enabling us to use information drawn from additional HEIs included in the present enquiry but, by definition, the analysis is restricted to those respondents in employment at the time of the survey.

Table 7.1 presents the index of job quality for different groups of survey respondents in our sample. Two measures have been derived from this index; the average value of the index as represented by the mean and the percentage of respondents who reported that their current job had five or six positive attributes that contribute to the index of job quality. Across all groups, respondents identified, on average, 3½ positive job quality criteria as represented by an average value for the job quality index of 3.5. Across all groups, approximately one in four respondents indicate that their job had five or more of these positive attributes. In terms of comparisons between different groups of respondents based upon average scores of the job quality index, it can be seen that:

- men gave a higher score to their current employment than did women;
- respondents from the older mature age group gave a lower score to their current employment compared to younger age groups;
- relatively little difference in job quality scores is observed in terms of social class background of respondents;
- higher levels of academic performance at A-level were associated with higher job quality scores. Those with less than 10 points at A-level had a job quality score of 3.3 compared to a score of 3.7 among those who attained 30 points or more. Similarly
- in terms of subject studied, graduates with degrees in the arts, education and social sciences reported the lowest number of positive attributes that contributed to the index of job quality. Those graduates with degrees in law and maths and computing gave the highest scores for quality;
- unlike academic performance at A-level, relatively little difference was observed in the average values of the job quality index by classification of degree. Those with first class degrees had an average job quality score of 3.5, compared to an average score of 3.4 among those who attained a third class degree;
- finally, we observe wider variations in the average job quality score in terms of the type of HEI attended. Those graduates who attended an old university gave an average score of 3.6 compared to 3.4 among those who graduated from post-1992 universities and 3.2 among those who graduated from a higher education college.

**Table 7.1: Comparisons of the index of job quality**

| | Job Index Score | 5 or 6 Attributes (%) |
|---|---|---|
| **Gender** | | |
| Male | 3.6 | 29% |
| Female | 3.4 | 25% |
| **Age group** | | |
| Standard | 3.5 | 29% |
| Young mature | 3.4 | 26% |
| Older mature | 3.0 | 15% |
| **Social Class** | | |
| Managerial and professional occupations | 3.5 | 29% |
| Intermediate occupations | 3.5 | 31% |
| Small employers and own account workers | 3.4 | 25% |
| Lower supervisory and technical occupations | 3.3 | 21% |
| Semi-routine and routine occupations | 3.3 | 22% |
| Neither parent in paid employment | 3.4 | 29% |
| Not determined | 3.4 | 26% |
| **A-level points** | | |
| 0 to 9 points | 3.3 | 24% |
| 10 to 19 points | 3.5 | 27% |
| 20 to 29 points | 3.5 | 28% |
| 30 points or more | 3.7 | 33% |
| **Subject Studied** | | |
| Arts | 3.1 | 18% |
| Humanities | 3.4 | 24% |
| Languages | 3.4 | 25% |
| Law | 3.7 | 33% |
| Social Sciences | 3.3 | 24% |
| Mathematics and Computing | 3.7 | 33% |
| Natural Sciences | 3.5 | 27% |
| Medicine and Related | 3.6 | 27% |
| Engineering | 3.6 | 29% |
| Business Studies | 3.5 | 29% |
| Education | 3.3 | 21% |
| Other vocational | 3.6 | 29% |
| **Degree Class** | | |
| 1st | 3.5 | 28% |
| 2(i) | 3.5 | 27% |
| 2(ii) | 3.4 | 26% |
| 3rd | 3.4 | 24% |
| Pass/Ordinary/Diploma | 3.5 | 27% |
| **Type of University** | | |
| Old university | 3.6 | 29% |
| 1960s university | 3.5 | 28% |
| Post 1992 university | 3.4 | 26% |
| HE college | 3.2 | 21% |
| | | |
| Average Score | 3.5 | 27% |
| Population | 75480 | |
| Unweighted Sample | 8264 | |

## 7.6 Disentangling the factors

Earlier in this chapter we considered the characteristics that were associated with respondents being employed in a non-graduate occupation approximately four years after graduation. The index of job quality based upon the identification by respondents of positive attributes associated with their jobs provides an alternative method of exploring the factors associated with respondents gaining employment in 'good quality' jobs. The descriptive analysis presented in Table 7.1 revealed that factors such as gender, age, educational attainment and type of HEI were associated with variations in the size of the index of job quality. However, what is not clear from this analysis is the separate contribution that each factor makes to the observed variations in self-reported job quality.

To achieve this, we estimate the probability of a respondent indicating that their job at the time of the survey provided 5 or 6 of the positive attributes that contributed to the index of job quality using the technique of logistic regression. This technique allows us to quantify the *additional* and *independent* effect of a range of characteristics upon an individual's probability that they will be employed in a job that can be regarded as of *high quality* in terms of their own assessment of the positive attributes provided by their job. The sample of observations was restricted to all those respondents who were in employment at the time they completed the questionnaire. The key results are shown in Figures 7.12 to 7.14. For each of the variable sets, the results are expressed in terms of the percentage difference in the odds of being employed in a *high quality* job relative to a reference category *and* after having controlled for all other factors. The coloured bars are used to indicate where a variable is estimated to be significantly different from the reference category at the 5 per cent significance level.

In terms of personal characteristics (Figure 7.12), we estimate that:

- younger graduates gave a higher assessment of the positive attributes provided by their jobs, with those under the age of 30 being almost two thirds more likely to be in a *high quality* job compared to those over the age of 50;
- those respondents with a long term illness or disability gave a lower assessment of the positive attributes provided by their jobs, with such respondents being half as likely to be in a *high quality* job;
- those respondents who strongly agreed with the statement that they are extremely ambitious were more likely to be in a *high quality* job compared to other respondents;

**Figure 7.12: Probability of being employed in a high quality job approximately four years after graduation: influence of personal characteristics**

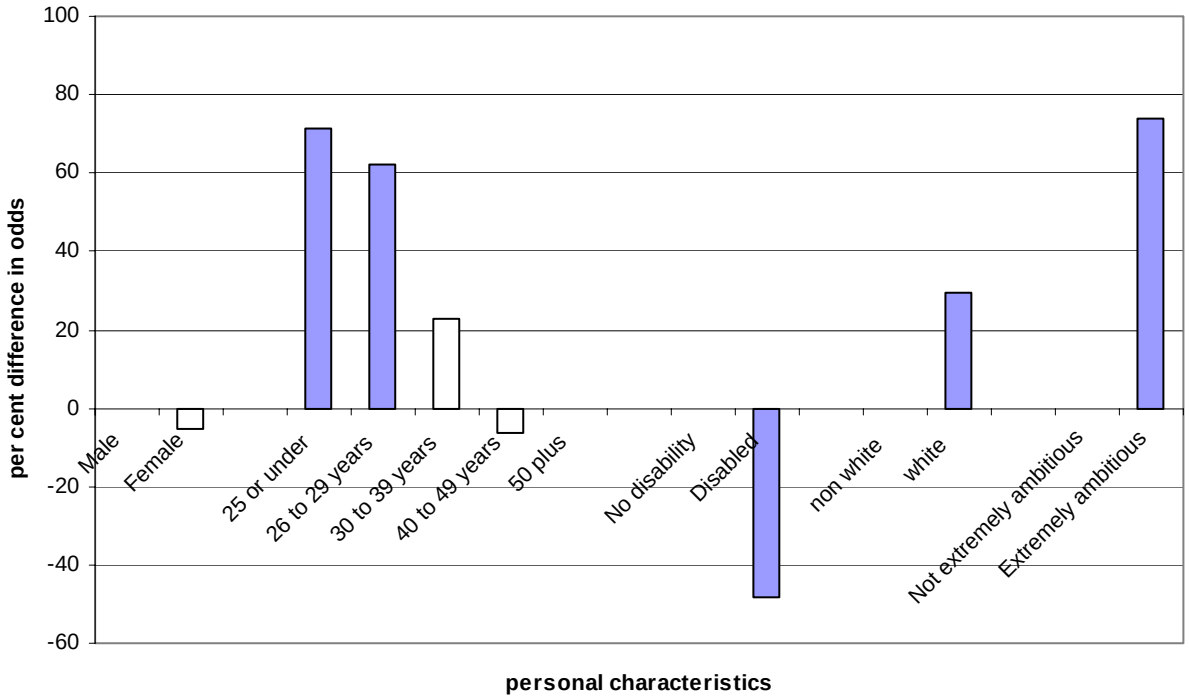



**Figure 7.13: Probability of being employed in a high quality job approximately four years after graduation: influence of subject studied**

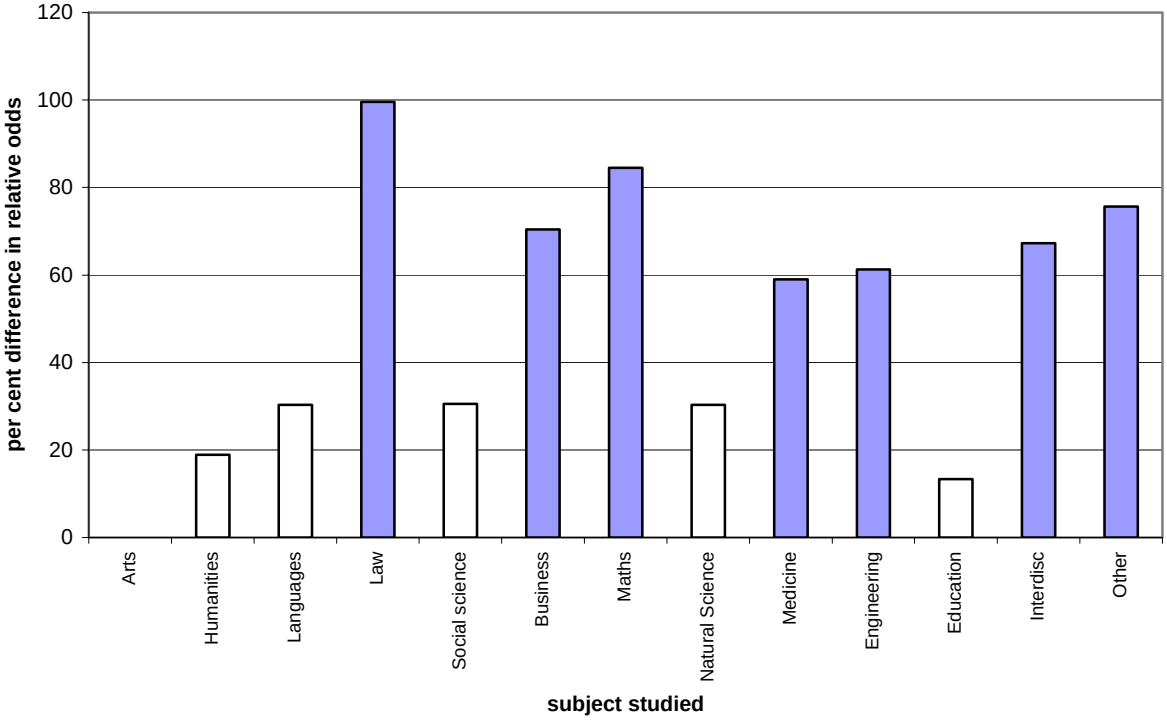
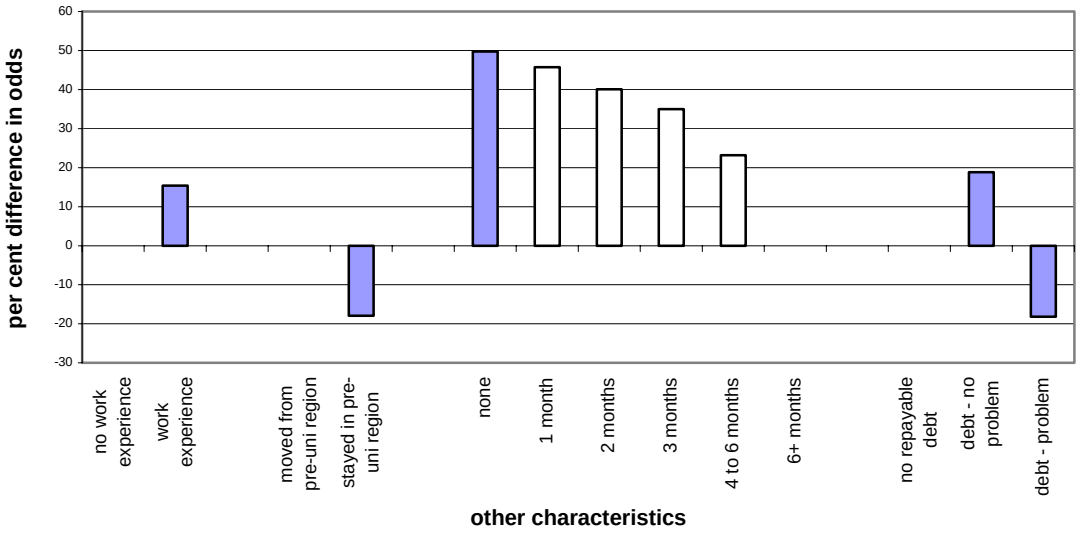


**Figure 7.14: Probability of being employed in a high quality job approximately four years after graduation: influence of labour market experience, mobility, unemployment and student debt**




In terms of subject studied (Figure 7.13) and labour market experience (Figure 7.14), we estimate that:

- graduates with degrees in the subject areas of business, maths and computing, engineering, and medicine and related subjects were most likely to be employed in *high quality* jobs.
- graduates with degrees in arts-based subjects and education were least likely to have reported being employed in jobs with 5 or 6 positive attributes;
- respondents who had undertaken a work placement integral to their course or undertaken work to gain useful career related experience while studying were 15 per cent more likely to have been employed in *high quality* jobs, as defined by the job quality index;
- respondents who at the time of the survey worked in the same region in which they had lived immediately before studying their 1999 qualification were almost 20 per cent less likely to be employed in jobs in *high quality* jobs;
- the probability of being employed in *high quality* jobs at the time of the survey decreased according to duration of unemployment since completion of studies.

Full results of the statistical analysis are presented in Appendix III (Table A3.5). The analysis of employment outcomes in terms of the index of job quality is interesting from the perspective of what factors were *not* associated with respondents' assessments of whether their job was associated with at least 5 positive attributes. In particular, no significant relationships were identified in terms of pre-entry educational attainment, degree class or type of HEI attended. It should also be noted that the definition of *high quality* with reference to the

job quality index score taking a value of 5 or 6 is subjective. Compared to the analysis of who was employed in a non-graduate occupation, an individual's own assessment of the positive attributes provided by their employment shows less variation across observable factors that can be controlled for in a statistical model compared to other measures of labour market outcomes.

### 7.7 Obstacles and difficulties in the labour market

The above analysis provides us with an overview of the factors associated with the attainment of 'good' jobs. The interviews provided a further opportunity to assess some of the factors associated with failure to attain appropriate graduate-level employment. In particular, they allow us to contextualise this search for a 'good' job in, for example, personal circumstances and ambitions. The following section examines some of the intervening factors associated with this job search and the ways in which they can impact on outcomes at the level of the individual.

As indicated above, the survey reported that women were notably more likely than men to have been in non-graduate employment at the time of the survey. The interviews yielded further evidence of some of the difficulties women faced in the attainment of desired employment. As noted in previous studies (*e.g.* Purcell and Elias 2004b), gender was most commonly considered to be an issue in traditionally-male sectors or occupations. For example, several respondents referred to a range of gender issues which they perceived to have impacted negatively on their career development or directly influenced decisions about whether to leave or stay in organisations or industry sectors. Even for those that had been relatively successful there was an acknowledgement that being a women necessitated a particular 'way of working' in order to fit in:

> *'I never felt that being female held me back, promotion-wise. I never felt held back in any way but I had to be prepared to live the way I lived. If I had stuck my heels in and said "I'm not going wherever you want to send me, I want to stay here and live in my house and go home every night…* [it might have done]"*.*
> (056, female humanities graduate, full-time postgraduate student at the time of the survey, previously working as an archaeological site supervisor)

Perhaps connected to gender, the issue of parenthood was raised as a distinct disadvantage for one particular graduate, a single mother, limiting options and opportunities:

> *'I feel having a child is one of the biggest [*disadvantages]. *I never realised it until six years down the line but it closes a lot of doors. These people want you to do things at a drop of a hat, work long hours and you can't do that if you have a child… It stops you applying for certain things because you know that for certain jobs you don't leave at five o'clock, you'll be there until ten o'clock and you can't do that if you're a single parent, so it does close doors before you even begin'.*
> (055, female maths and computing graduate, principal administrative officer, public services, £27k-£30k, non-graduate job)

However, it is not only in the case of dependent children where external responsibilities limit opportunities in the labour market and act as obstacles in the achievement of appropriate employment. This was apparent in the case of a male respondent who acted as a carer for his mother, which had limited his range of opportunities in the labour market, leading him to value flexibility more highly than pay and promotion prospects in his evaluation of his current job.

The interviews also indicated difficulties for one respondent that could be attributed to ethnicity. The following extracts recounts this particular interviewee's experiences in obtaining a position as a solicitor after the completion of his professional studies suggesting that either 'social closure' in the profession or more direct discrimination may have been partly to explain for a lengthy job search:

> *'I was quite lucky* [to get my current job] *really because I applied to over a hundred firms and only had one interview from those applications'.*
>
> [Interviewer: Was that simply because of the level of competition, there were so many people looking…?]
>
> *'Partly that and I wanted to go in to specific fields like crime… I had a good degree from a good university and I was at a good law school, so I don't know why. It could possibly be because of prejudice but that's just speculating, it could have been for a number of reasons but that probably was one of them'.*
>
> [Interviewer: Prejudice in what sense?]
>
> *'Well they saw my name, and saw I was black and… the legal profession probably isn't the most open profession and there aren't that many black solicitors around. It could have been for any reason but I did put a ridiculous amount of applications in… It's very difficult but it's about who you know and not what you know, they prefer people who are recommended to them'.*
>
> (067, male law graduate, solicitor, business services, £21k-£24k, traditional graduate job)

However, we also found incidence of positive endorsement of particular employers in the way issues of diversity were handled. Whilst analysis of the survey data indicated that, for example, age was not significantly associated with propensity to be employed in a non-graduate job, the interviews indicated that amongst mature graduates there was still a perception that their age counted against them in a number of ways, ranging from a perception that they lacked certain skills compared to younger graduates (*e.g.* ICT), a sense that employers were less willing to invest in older graduates or through discriminatory practices in recruitment.

A recurrent theme in responses to questions about obstacles in career development was the perceived level of competition for graduate jobs. Some referred to such competition in a general sense and connected it to a surplus in the supply of graduate labour:

> *'I had higher expectations of leaving uni, maybe being more fast-tracked. But it does not seem to happen that way anymore. There are so many people out there with degrees that I think the whole system has changed so that when you leave uni it is not quite the same as it used to be when graduates were very highly in demand. I think there is now a slight.. saturation really. Everybody seems to have a degree… I was quite disenchanted with my degree when I left, you know it didn't open the doors I thought it would open, despite the fact that I did have a good degree… I do believe that it has helped, of course it has, you know if I can walk in and say I have got a degree, I have got a much better chance than someone who is walking in without one. That is realistic, I just think things change certainly between me starting my degree in 1996 and finishing it in 1999, you know over those years there things were definitely changing in the education world and certainly the perceptions of how much a degree was worth changed …'.*
>
> (010, female business studies graduate, company administrator, financial services, £21k-£24k, non-graduate job)

In relation to this, many graduates talked of a revision of expectations of the type of career and opportunities that would be available to them post-graduation. Even for those who had achieved places on a fast-track graduate programme immediately after completing their studies this was to be no guarantee of a 'good' job. One graduate felt that despite having gone through a fast-track graduate scheme, after only four years in the organisation her career had stalled and she felt forced to leave the organisation for further development and progression. This suggests that even employers with such schemes may not be making best use of their graduate intake.

Degree class is inevitably part of the criteria used by employers to 'sift' applicants and many of those with lower degrees mentioned this as a disadvantage and attributed rejection by employers to their achieved grade. However, a negative impact was not inevitable and some interviewees felt that their degree class had not been a factor in their subsequent labour market experiences.

Overall, the above factors represent what could be conceived as 'absolute' obstacles in career development in that they are not subject to change (although they may be more or less relevant in different circumstances). However, there are also 'relative' obstacles that are not immutable and that individuals have at least some control over. The graduate labour market is not homogenous and supply and demand for graduates in particular subjects areas and with different skills and knowledge depends on sector and location. In terms of sector, there was implicit understanding from a number of interviewees that a chosen or desired sector of employment may offer limited opportunities and high levels of competition for entry level jobs. Others found the regional labour market in which they operated to be a considerable obstacle to their career development. This raises issues of mobility in early career and the fact that many graduates find themselves making difficult decisions about changing location, often several times, in their early career in order to establish themselves in an occupation or simply to find appropriate work. This appeared to be a particular problem in isolated geographical

regions, especially when this was combined with a perceived over-supply of suitably-qualified graduates for particular occupations.

### 7.8 Advantage and disadvantage in the graduate labour market

In the context of an increasingly competitive market for graduate-level jobs where equally-qualified individuals contest limited job opportunities, what did the 1999 graduates consider gave them competitive advantage? We put this question to interview respondents in order to better assess what graduates felt were characteristics that would likely be viewed desirable by employers in order to obtain the type of employment they wanted. Similarly, they were asked what they considered to be their disadvantages.

In terms of advantages, there was evidence to suggest that, unsurprisingly, their undergraduate experiences and qualifications were beginning to recede in importance as careers developed:

> *'I don't think the education thing is as important as it was with my first job. That was important then because they didn't really know much of me, other than I'd done a degree. The thing that did stand me in good stead was the third year placement and I am very happy that I took a course that had a sandwich* [year in industry] *on it, because I think if I'd come out of a degree after three years having never worked in a hotel, I would have found it a lot harder. I'd made the contacts from the third year, so that helped me out. The education I suppose just shows I have a certain level of intelligence. I would say that most people that come out with a degree must have a certain level of intelligence to have got through it. It probably shows that, but now I think it's down to the experience I've got and whether I've been successful in a role or not will determine how I get on, whether I get another job that's better, or a pay rise, etc'.*
>
> (049, female business studies graduate, conference and banqueting sales manager, hotel and catering, £18k-£21k, new graduate job)

Many responses referred to personal attributes which they considered themselves to possess; for example, reliability, having high standards, being organised, possessing an attention to detail, or diligence. Other responses reflected the generic or transferable skills such as team-working, problem-solving, ability to learn and communication skills identified as 'key' in much of the literature on the employability of graduates.

> *'I am an intelligent person. I can think logically about things, I can think things through, follow tasks through, solve issues without having to constantly ask people what to do, or looking for second opinions. I am reasonably good communicator, I get on pretty well with pretty much everyone'.*
>
> (028, male social science graduate, administrator, public services, less than £10k, non-graduate job)

Of course, a significant number of interviews focused purely on achievements and experience in the labour market, whether in terms of the work itself, the organisations for which they had worked or the specialist skills and knowledge which they had developed.

These interviews were explicitly taking place in the context of a study of graduate careers that the respondents were aware of and few indicated, in the first instance, that the possession of a degree was an advantage assuming that for most opportunities that they might pursue they would be competing with fellow graduates. However, a follow-up question asked if they considered their institution of study and degree to be, or have been, advantages, disadvantages or neither at this stage of their careers. Unsurprisingly, those who had attended an old university were likely to view their institution of study as having been an advantage, most often in terms of general profile and (perceived) reputation. However, others referred to more definite reasons in terms, for example, of the quality of the teaching and reputation of a specific department, especially for entry into a particular occupation. Some, however, felt that their institution lacked profile or, for those in certain professions (e.g. dentistry), the place where they had studied wasn't perceived as relevant. In particular, those graduates from new universities were most likely to be ambivalent about the advantage or otherwise associated with their institution of study. In terms of whether their degree had been an advantage or otherwise, some graduates responded on the basis of possession of a degree *per se* whilst others focused on the subject and content of their course and the skills it developed.

In terms of disadvantages, respondents raised a similar range of issues regarding personal attributes. However, focusing purely on educational and employment factors, some graduates were concerned that, on the one hand, they had not enough varied experience in the labour market, whilst, on the other, there were those who were concerned about being seen as lacking direction and commitment if there experience was too varied. Thus, respondents were well aware of the fact that it was incumbent on them to be proactive and to manage their career development, particularly at the stage they had now reached, where good degrees needed to be supplemented by 'good work experience' and the stigma of disappointing degree results was diminishing in relation to subsequent employment performance.

It is important to address the issue of the wide range of expectations and options available to members of the sample. Not all expected or aspired to high-flying or highly-paid traditional graduate jobs. Perhaps the best illustration of this is a mature male graduate who lived in a high-unemployment region. As a male skilled manual worker, he had been made redundant four times and in his late forties, did a couple of 'A' levels, went to his local new university and achieved a good degree. When interviewed, he was 52 years old and working in public service employment as a Clerical Officer – unequivocally a non-graduate job. He was not dissatisfied with this; the job provided him with security and stable earnings, interesting but not challenging work, the flexibility he required as a carer, and the opportunity for training and development should he wish to develop his career further. It is hard not to conclude that his story is an example of the positive effects of widening access to HE, despite the fact that he

has all the classic attributes associated with the propensity to be in non-graduate employment revealed in earlier sections of this chapter.

## 7.9 Summary

Graduates were employed in a wide range of occupations. However, it is important to understand factors that are associated with being employed in non-graduate occupations as such occupations cannot generally be considered to be commensurate with possession of a HE qualification. We identify a number of factors associated with an increased likelihood of being employed in a non-graduate occupation.

- In terms of personal characteristics, females were approximately a fifth more likely than males to be employed in a non-graduate occupation. Those who reported that they had a long term illness or disability were more than twice as likely to be employed in a non-graduate occupation as those with no such restriction. Those graduates who had moved away from the region in which they lived immediately before studying for their 1999 qualification were also less likely to be employed in a non-graduate occupation.
- In terms of subject studied, graduates with degrees in medicine and related subjects, education, engineering and law were least likely to be employed in non-graduate occupations and those with degrees in humanities and languages most likely.
- Educational attainment at A-level, the type of HEI attended and degree performance were all important determinants of the likelihood of being in a non-graduate job. These findings suggest that employers take into account not only performance of individuals at degree level, but also previous academic achievement and the type of institution where they studied. Our evidence also indicates that respondents who had undertaken a work placement integral to their course, or had undertaken work to gain useful career-related experience while studying, were also less likely to be employed in a non-graduate occupation;
- As far as subjective assessment of job quality was concerned, the 1999 cohort reported generally higher levels of positive job attributes compared to the 1995 graduates. Despite the evidence of a decline in the real earnings of graduates between 1995 and 1999 graduates discussed in chapter six, no decline was observed in the proportion of graduates indicating that their job provided a competitive salary. It is concluded that the different expectations held by members of the diverse graduate labour supply and alternative options available to them need to be taken account of in evaluating labour market outcomes.

# CHAPTER 8

## Seeking a degree of advantage

### 8.1 Introduction

This chapter addresses the issue of postgraduate education, training and continuing professional development. It draws upon both the quantitative and qualitative data to outline the incidence of different forms of postgraduate study and on-the-job training amongst the sample. It also addresses why different forms of subsequent training and education were undertaken for various groups, and what the costs and benefits of attaining more credentials had been to their subsequent career development. Finally, in the light of interest in lifelong learning and continuous professional development, the chapter ends by examining some of the attitudes of graduates to future requirements for education and training and its importance for their particular career aspirations.

### 8.2 The incidence of further training and education since 1999

Overall, 57 per cent of the entire sample reported that they had taken or were taking further work-related or career-related courses[25] since graduating in July 1999. This included 52 per cent of men and 62 per cent of women. Figure 8.1 compares patterns of postgraduate education and training for the 1999 cohort with that of 1995 surveyed at a similar point after graduation[26] in 1998-99[27]. The figure shows that in broad terms the incidence of different types of postgraduate education and training is fairly similar between the cohorts indicating that perhaps little has changed in the demand for further credentials (from employers and graduates alike). Only in the case of professional qualifications and, to a lesser extent, short work-related courses has there been a perceptible rise in incidence amongst the 1999 graduates compared to their 1995 counterparts.

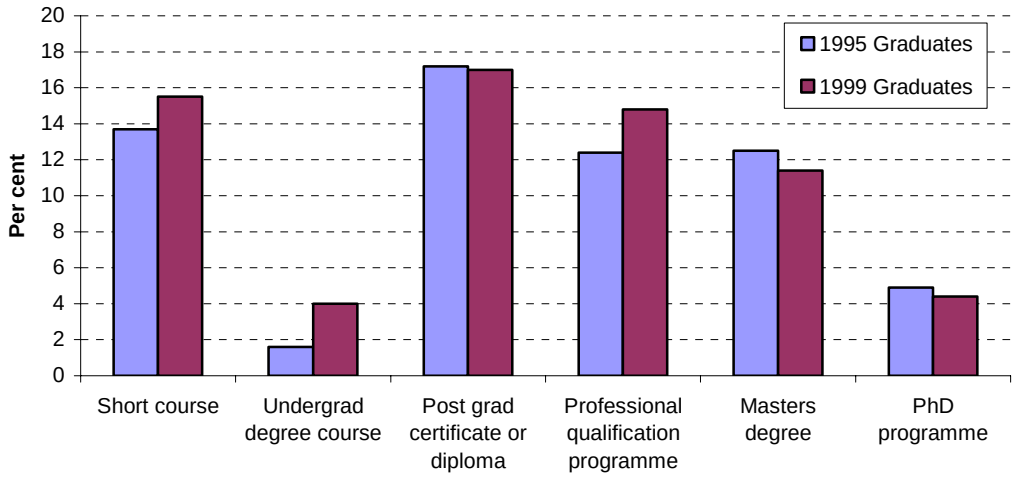
For the 1999 graduates there was little significant gender difference in the propensity to have gone on to postgraduate education other than that women were notably more likely to have undertaken a PGCE and were marginally more likely to have taken postgraduate certificates or diplomas. Men were more likely to have completed Masters' degrees or undertaken professional accreditation courses.

25 Lasting one month or more on a full- or part-time basis.

26 The 1999 cohort were surveyed on average four years after graduation compared to approximately 3.5 years for the 1995 cohort.

27 Elias *et al.* (1999)

**Figure 8.1: Postgraduate study and training, 1995 and 1999 graduates**

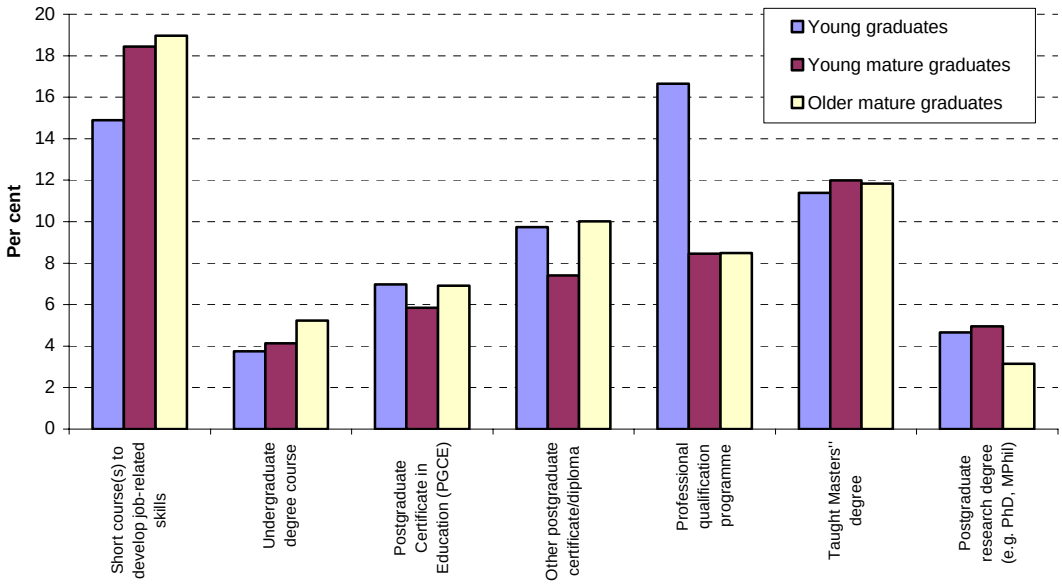



Sources: IER/ESRU Survey of the Career Paths of 1999/1995 Graduates

Age upon graduation was a significant variable in the experience of postgraduate education or training as Figure 8.2 shows. Most significantly, young graduates (those who graduated before the age of 25) were much more likely to have undertaken a professional qualification. This is most probably linked to the fact that for a number of younger graduates a degree is the first stage in qualification for a particular profession; the minimum entry requirement to the occupation and the attainment of further credentials (*e.g.* legal occupations). Older graduates are likely to be motivated to undertaken a first degree for different reasons[28] and where these reasons are employment-related they may be to achieve a higher position or to change direction in an already established career. These older age groups were significantly more likely to have taken short courses that may be consistent with development taking place in established career structures.

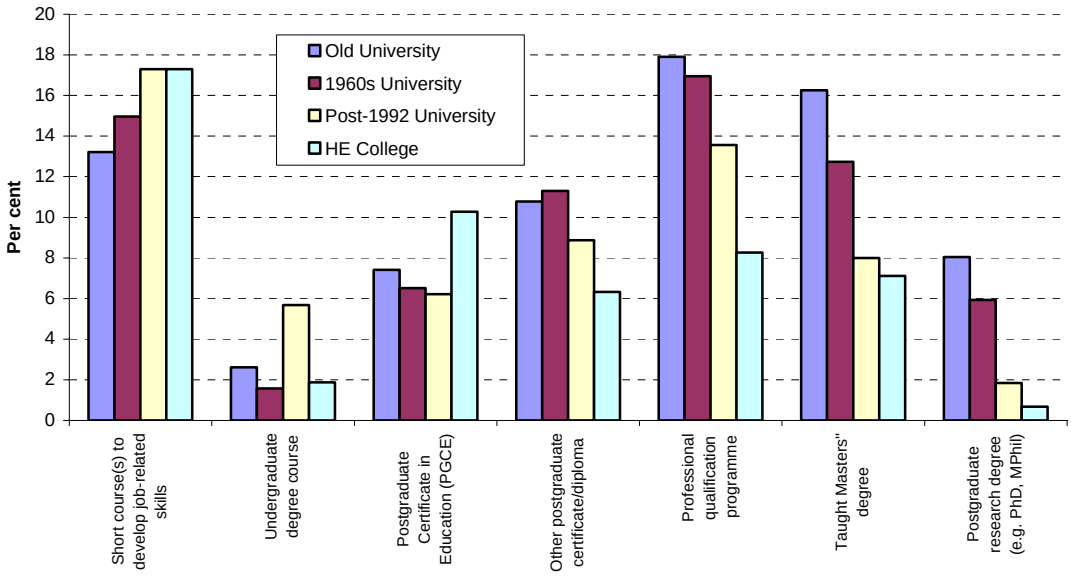
28 Purcell *et al*. (2003)

**Figure 8.2: Incidence of further work-related and course-related training and education since July 1999, as a proportion of all respondents, according to age group**




If we examine the incidence of postgraduate study or training according to the type of institution attended then a number of differences are evident (Figure 8.3). Firstly, those who attended either an old or 1960s university were significantly more likely to have gone on to do a taught Masters course. Those who had attended a HE college were significantly more likely than other graduates to have gone on to study for a PGCE but less likely to have undertaken a professional qualification both of which appear to be an indication of the types of work that graduates from these colleges are entering. Graduates from post-1992 universities were notably less likely than those from old/1960s universities to have gone on to do a research degree or a taught Masters (at least by the four year point). However, in qualification/training with work-related/vocational objectives (*i.e.* short courses, postgraduate diploma/certificates and professional qualifications) graduates from post-1992 universities were equally or more likely to have done so. This may reflect the greater likelihood of graduates from these institutions entering into modern, new or *niche* occupations in management, engineering and ICT where further study and training, rather than a Masters, may be required for chartered status and professional membership.

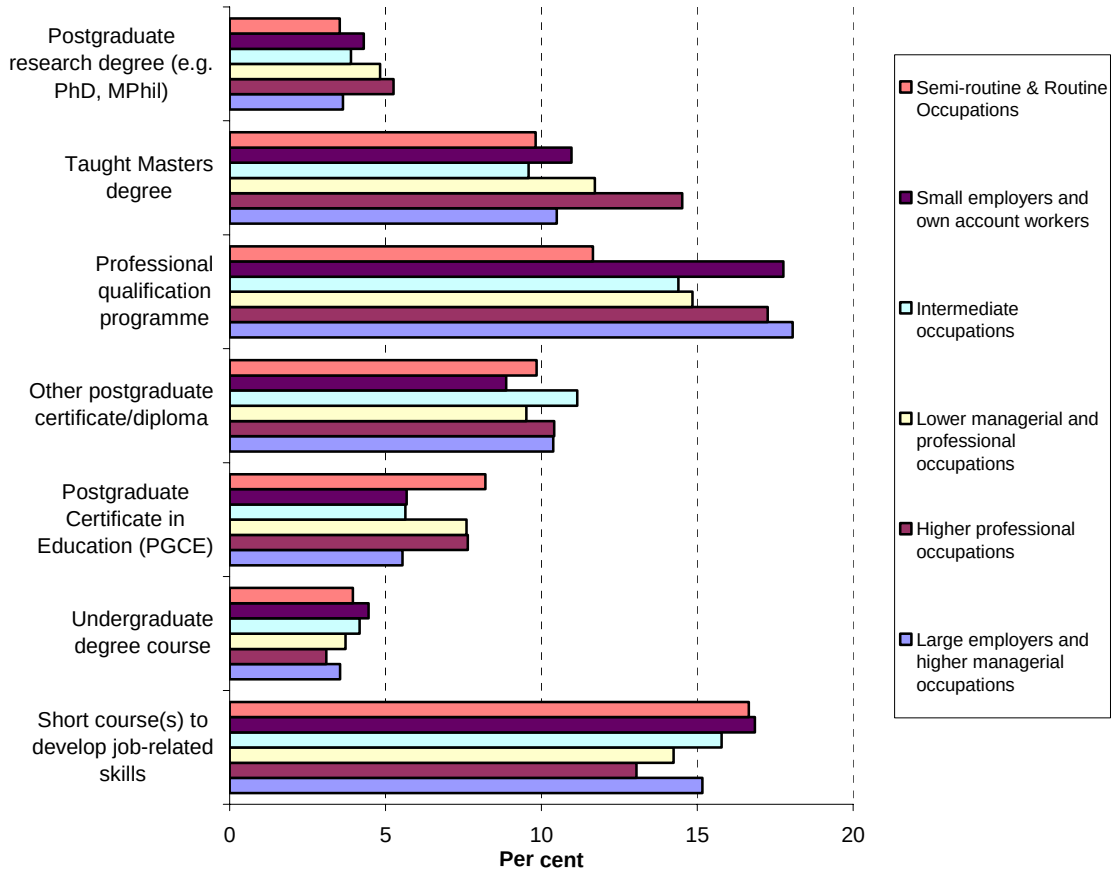
**Figure 8.3: Incidence of further work-related and course-related training and education since July 1999, as a proportion of all respondents, according to type of institution attended**




N (weighted) = 83,393
Source: IER/ESRU Survey of the career paths of 1999Graduates

Figure 8.4 shows little discernible pattern in propensity to undertake postgraduate training and education in the period since graduation in relation to social class background. Further, it appears that the social background of respondents had little significant impact on the *type* of education or training undertaken. In the case of postgraduate education *(i.e.* that which is less likely to be funded by an employer), this is contrary to assumptions that those from less privileged backgrounds might be more likely to be unable or unwilling to fund additional education of this type.

**Figure 8.4: Incidence of further work-related and course-related training and education since July 1999, as a proportion of all respondents, according to age group, by social class background**



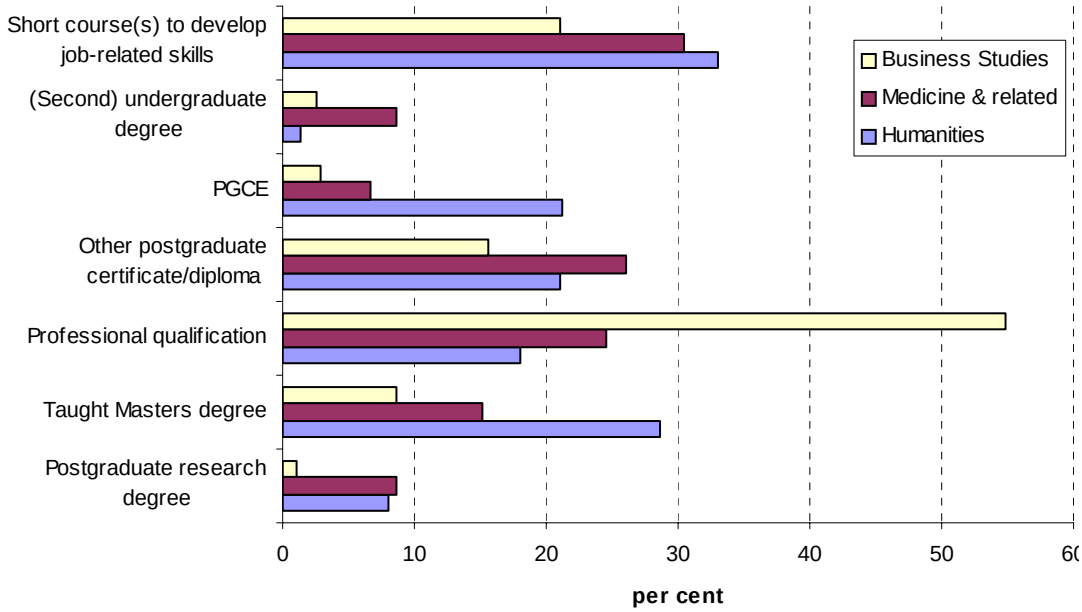

Source: IER/ESRU Survey of the Career Paths of 1999 Graduates

Figure 8.5 shows the incidence of postgraduate education and training according to selected subjects of study; humanities, business studies and medicine and related[29]. It reveals a number of patterns. Firstly, business studies graduates are significantly more likely than those in other groups to have gained a professional qualification. This is likely to be linked to their propensity to go into new and *niche* areas of graduate employment in general or specialist managerial or professional positions connected to their undergraduate study (such as marketing, accountancy or human resources) where entry into higher-level positions requires membership of professional bodies. This is in contrast to the lesser likelihood of business studies graduates undertaking any form of postgraduate 'academic' education. We also see the greater likelihood of humanities graduates (in common with arts and language graduates) to have undertaken a PGCE teacher training qualification. Furthermore, humanities graduates are significantly more likely to have studied for a Masters' degree than those who have done either vocationally-specific or general vocational degrees. This could be linked to a greater need amongst such graduates to attain further credentials in order to

29 These three subject areas were chosen as representing different points on the 'academic-vocational' spectrum.

gain appropriate employment or that a humanities degree is, for some, a precursor to a more specific further qualification necessary for entry to a particular occupation or job.

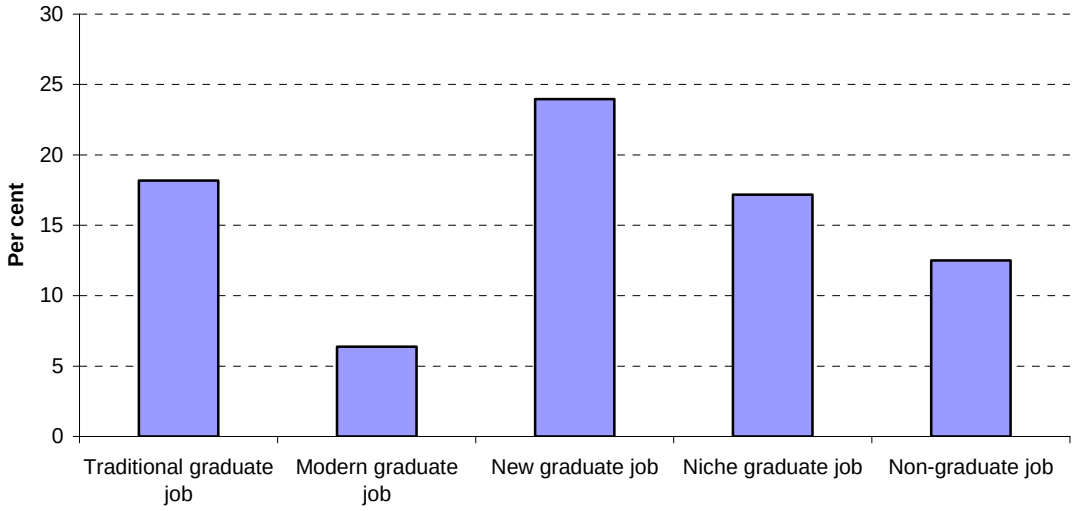
**Figure 8.5: Proportions of 1999 graduates reporting having taken further work-related courses since July 1999, selected subjects**




The findings were as expected when analysis was conducted of the incidence of postgraduate training and education according to the SOC (HE) classification of respondents' current job. For example, the higher propensity of those in traditional graduate jobs to have done PGCE courses (alongside those in modern jobs) and research degrees is obviously associated with their employment in academia and education.

Figure 8.6 shows that those in new graduate jobs were significantly more likely to have undertaken a professional qualification. This is perhaps associated with the large number of management specialists and other professionals (*e.g.* marketing, accountancy and human resources) where progression is often associated with membership of a professional body through the attainment of professional credentials.

**Figure 8.6: Proportions of respondents reporting having taken professional qualifications since July 1999, by SOC (HE)**




Source: IER/ESRU Survey of the Career Paths of 1999 Graduates

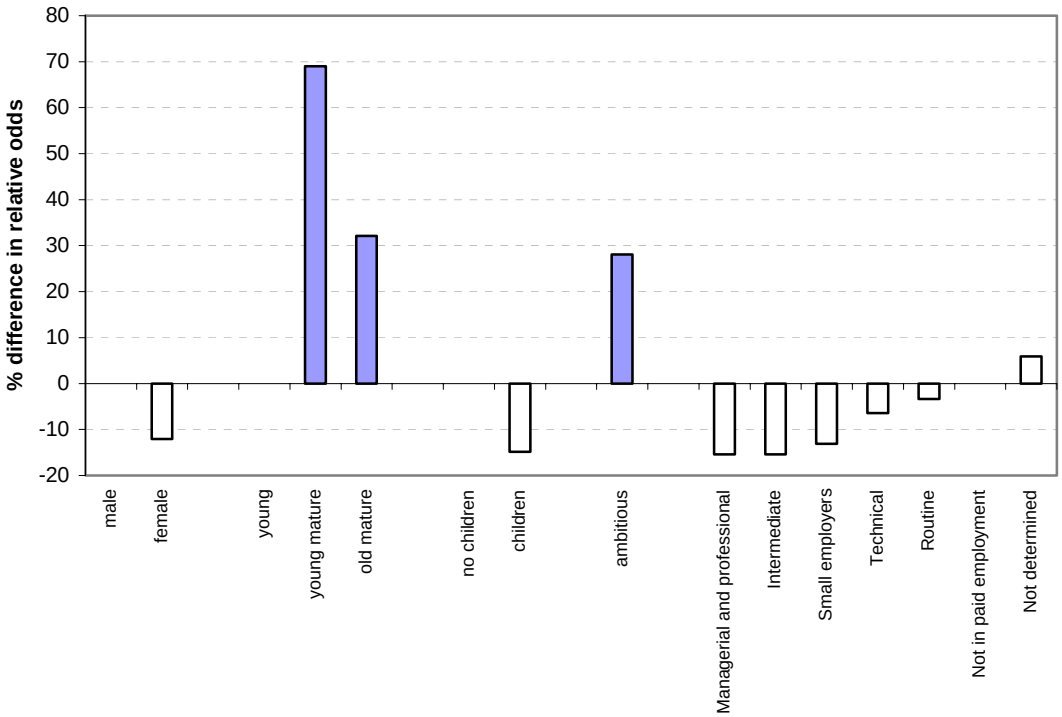
One of the key HE growth areas has been the expansion in numbers completing taught Master's degree courses. How far does demand for such courses reflect the increasing demand for more specialist skills and knowledge or advanced scholarship, or credential inflation reflecting moving goalposts in the competition for 'the best' jobs and positional advantage (Brown 1999; Ainley 1999)? To conclude this section, and to clarify some of the above discussion, we can examine the probability of a graduate going on to study for a Masters degree[30] during the period covered by the survey as estimated using logistic regression[31].

The results of this analysis, presented in figures 8.7a-d, are expressed in terms of the impact of the given variables on the relative odds of having studied for a Masters' degree.

30 A Masters degree was chosen as a 'proxy' for postgraduate study that was at least 6 months' long and was likely to be self-funded (as opposed to employer paid).

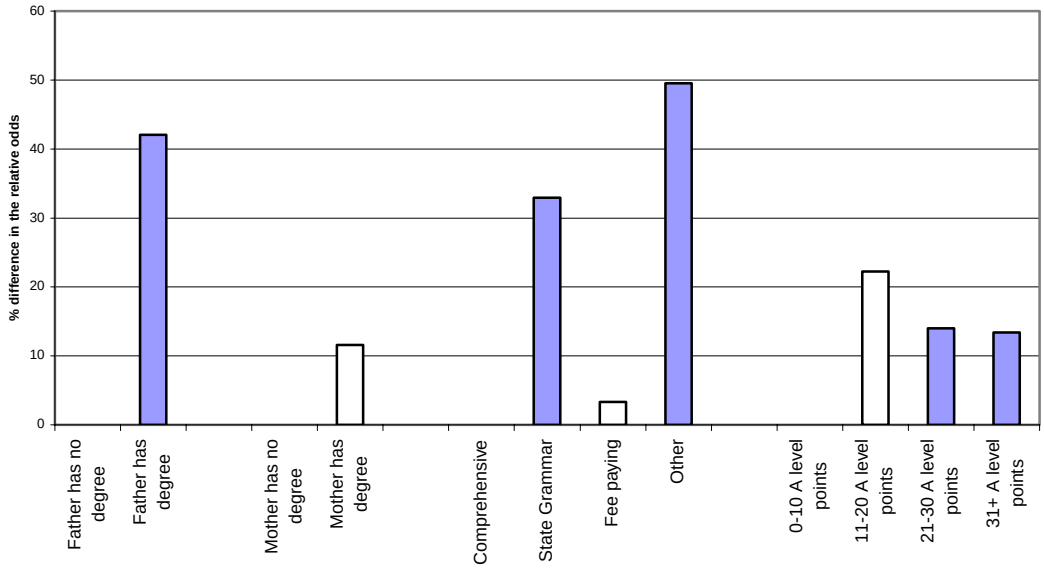
31 As explained in Chapter 4.

**Figure 8.7a: The impact of personal characteristics on the odds of undertaking a taught Master's degree**



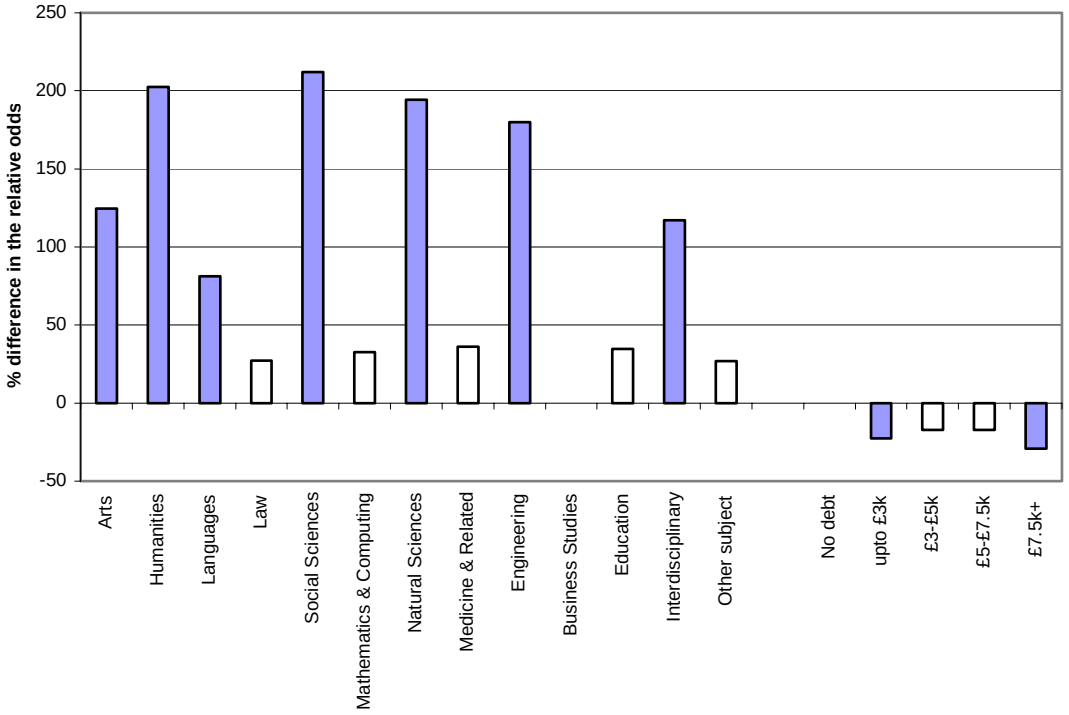

N (weighted) = 83,393
Source: IER/ESRU Survey of the Career Paths of 1999 Graduates

**Figure 8.7b: The impact of pre-entry education on odds of undertaking a taught Master's degree**



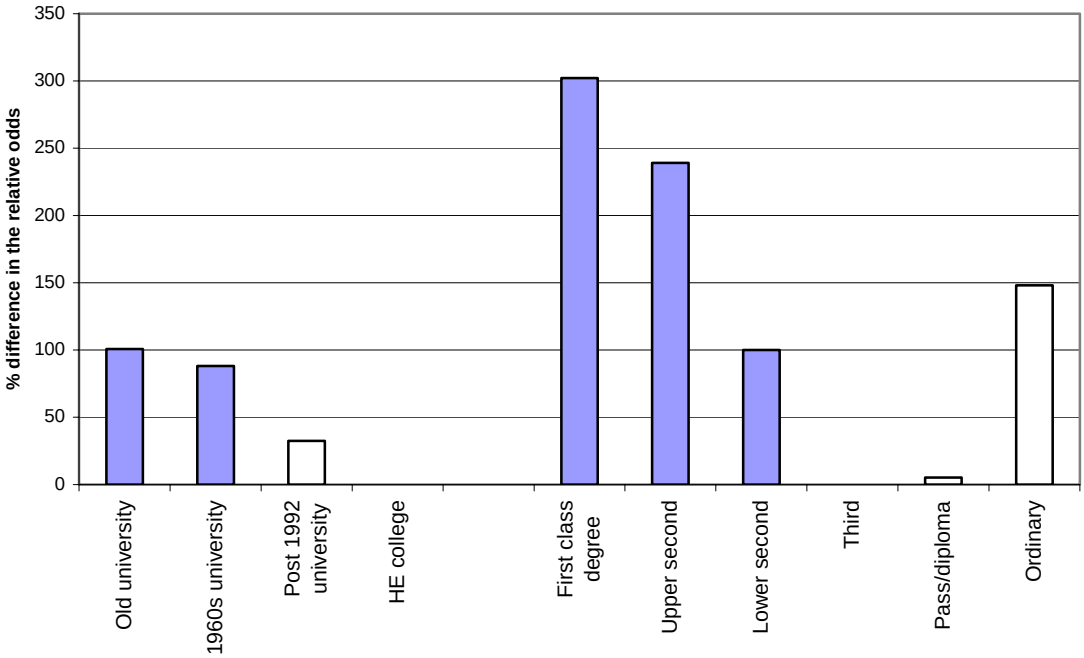

N (weighted) = 83,393
Source: IER/ESRU Survey of the Career Paths of 1999 Graduates

**Figure 8.7c: The impact of subject studied and levels of repayable debt on the odds of undertaking a taught Master's degree**




N (weighted) = 83,393
Source: IER/ESRU Survey of the Career Paths of 1999 Graduates

**Figure 8.7d: The impact of HE type and degree class on the odds of undertaking a taught Master's degree**




N (weighted) = 83,393
Source: IER/ESRU Survey of the Career Paths of 1999 Graduates

In summary, the characteristics associated with having gone on to study for a Masters' degree[32] are:

- Being a mature or young mature graduate
- Indicating that you are 'extremely ambitious'
- Having a father who has a degree
- Having attended grammar school
- Being a graduate in (particularly) humanities, social science, natural science or engineering
- Having left university with no debt
- Having attended old/1960s universities
- Having better degree result

Key factors *not* associated with a higher probability of studying for a Masters' degree are:

- Social class
- Mother having a degree
- A levels results
- Gender (negative but not significant)

Most importantly, and reiterating a point previously made, it would appear that social class background does not significantly impact on the probability of having gone on to study for a Masters degree for the graduates of 1999. This is despite the fact that being both 'debt-free' on graduation and having attended an old/1960s university are positively correlated with having done so. Such characteristics are most likely to be found amongst those from 'higher' social class backgrounds.

### 8.3 Reasons for postgraduate training and education since 1999

The previous section outlined broad patterns in the incidence of various forms of postgraduate education and training amongst the sample and according to particular sub-groups. From this it is possible to make assumptions about why such patterns were evident. However, for more a more detailed investigation into the motivation and reasons for graduates undertaking particular forms of further education we asked in the survey whether, if they had indicated taking any of the different forms of further study or training, the decision had been linked to a number of specified reasons. Whilst it is not possible to examine the different reasons given for undertaking different forms of postgraduate study or training (for the reasons that respondents may have undertaken more than one type of further training and given several reasons for doing so) it is possible to examine why different groups of

[32] Where the variable is estimated to be significantly different from the reference category at the 5 per cent level.

graduates seek to attain further credentials in a general sense drawing on both the quantitative and qualitative data.

Firstly, a number of themes were identified from the qualitative interviews. Understandably, in many cases, postgraduate study was seen as a means to an end in that the attainment of further credentials was necessary for entry into a particular occupational field or progression within an organisation. In several cases, across diverse occupational groups, the requirements for appointment included some form of higher qualification. Similarly, once in organisational or occupational labour markets, continued professional development can be important, to rise in organisational/occupational hierarchies or simply in order to undertake the full range of tasks associated with a post as in some form of 'apprenticeship'. We also found instances where further study and training had been undertaken to allow the individual to 'step up' within a particular field or organisation out of 'non-graduate' work into an position that is more likely to have required a degree for entry and in which greater use will be made of graduate-level skills. For example, a business studies graduate working as a legal secretary was two years into a four year course to qualify as a legal executive. Whether for entry into an occupation or organisational and professional progression, there was often a strong emphasis on chartered status within a profession and membership of professional bodies:

> *'What I am aiming for now is the charter-ship… It is very important to gain charter-ship because a lot of job adverts now will say, not only do you need a Masters qualification, or some kind of qualification in library information science, but they will say chartered status would be good to have, or handy to have. It would help with your application if you had that. 20 years ago, you didn't even need a degree to get into the profession; you just started from the bottom. Now you need all these qualifications, it's quite bizarre'.*
>
> (034, female natural science graduate, intranet content officer, public services, £15k-£18k, modern graduate job)

The above example indicates a theme well-established in recent discussion of the graduate careers and labour market; increasing credentialism. This may be evident in cases where degrees are being required for posts that do not require or make use of degree-level skills and knowledge (for example, Brynin 2002; Brown *et al.* 2001) or positions where a degree may have traditionally been the entry requirement but which now requires postgraduate credentials. This appeared to be the case in the accounts of a number of interviewees. Another example where the requirement for entry into a profession was said to have risen, was provided by a law graduate working as a land agent where 'social closure' appeared to be practiced by the professional body in the field:

> *'I would say that now all the land agents working for our firm have all got at least an undergraduate degree but traditionally it wasn't necessary, it all changed - I don't know how many years ago - when the Royal Institute of Chartered Surveyors made it a stipulation that it wasn't enough just to have a sort of a diploma and that you needed a proper degree in order for to be accredited'.*
>
> (038, male law graduate, assistant land agent, business services, £12k-£14k, niche graduate job)

Whether this is connected to an increasing supply of highly qualified applicants for these positions is a contentious issue and it could be argued that in the case of the above examples it may be connected to changing skills or knowledge requirements for the jobs necessitating changes in the level of qualifications needed by incumbents. However, there was also evidence from the interviews of the reverse happening in certain occupations: where entry requirements into a position were being or had been reduced.

In terms of access to occupations, another example from the interview sample indicated how postgraduate education was part of the protracted nature of integration into the labour market for some graduates, even those with a very clearly defined approach to career development. Her account of the requirements for her chosen occupation again highlights the 'changing goalposts' that graduates sometimes face in achieving desired employment:

> *'Yes, you have to have done the MSc in educational psychology, which is currently what I am doing. There are ways, I think, around it. In the next 5 years I think they are going to change it so that you don't have to have been a teacher first and you can go straight into it after your degree, but at the moment it is still that you have to be a teacher for two years at least, and then do your MSc in ed psych. I think you get chartered status a year later, I think I have to practice for one year with supervision and then I am allowed chartered status after that, so I will be independent at that point'.*
>
> (031, female social science graduate, full-time postgraduate student)

The above example is perhaps one end of the spectrum in terms of the individual decision to undertake further study: those with a clearly defined objective to be achieved by professional development. For others, the decision to undertake further study was more likely based on a desire to postpone making decisions about their career or an uncertainty about what direction they wanted to take their careers. When asked why she had gone on to do a Masters' after finishing her first degree, one respondent (who was now nearing completion of her PhD) said:

> *'I suppose honestly, first of all I didn't really know what else to do. There wasn't a particular career I was drawn towards and I thought that when I went to university I would come out knowing that I wanted to be X or Y'.*
>
> (003, female arts graduate, currently full-time PhD student)

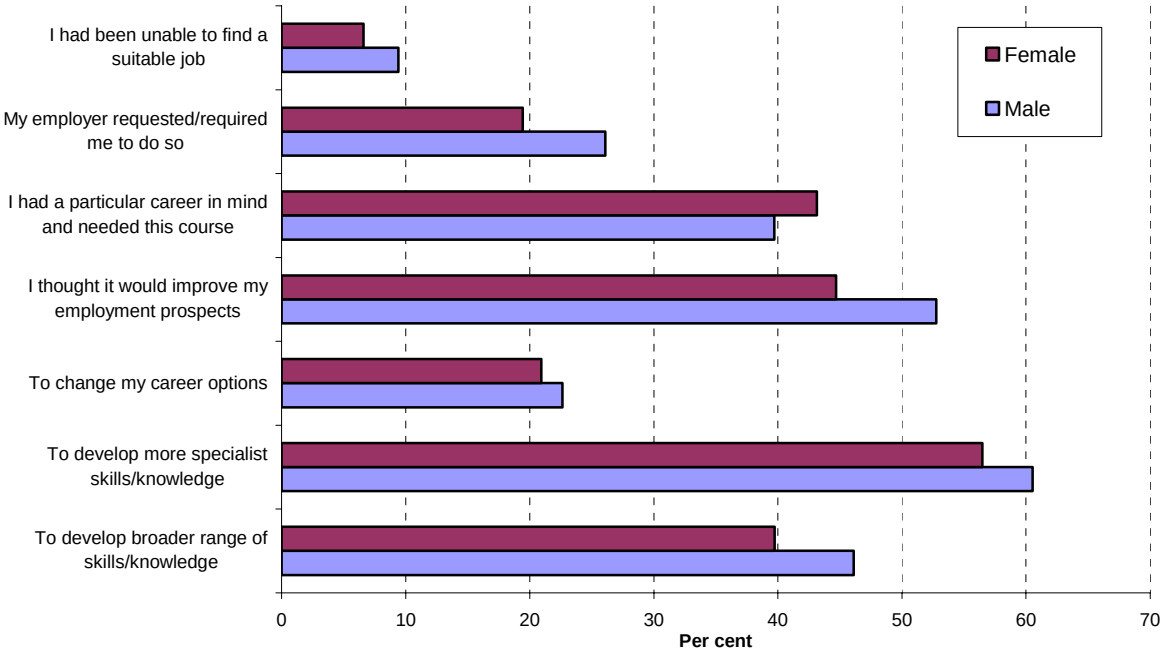
Another example highlights how postgraduate study, while being an aim in itself, can also allow the individual time to clarify general career aims in to something more specific:

> *'The original decision came basically because I didn't really know what I wanted to do after leaving* [name of institution]*. I had an idea that I wanted to go and do something with geology, which is what my degree was in. I thought the best way to enhance the prospect of me being able to do something on those lines, was to go and do the Masters degree, which is what I ended up doing in mining finance. Beyond postgraduate education, I didn't really know where I wanted to go'.*
>
> (032, male natural science graduate, futures trader, financial services, £33k-£36k, niche graduate job)

Equally, however, the incidence of further study or training may simply be an indication of the respondent going back to 'square one'; a desire to re-orientate their careers in completely different direction by returning to full- or part-time education. People make mistakes when choosing courses at the age of 17 or 18, particularly if they do not have access to well-informed and wise guidance. This was the case for two respondents who had recently begun another undergraduate degree in completely different fields than their 1999 qualification. Firstly, a marketing graduate who decided to pursue a career as a civil engineer and was taking a part-time degree to this end and a business studies graduate had retuned to study for a degree in garden design in order to become a landscape gardener.

Returning to the survey data, it is possible to examine the reasons given by different groups of graduates in the sample for returning to study or undertaking some form of professional development. Comparing male and female responses in their motivation for embarking on further study or training, there is little difference in patterns (Figure 8.8) although women were more likely to have indicated that they had a particular career in mind when deciding on a particular course. In all other cases, men were slightly more likely to have indicated these as reasons.

**Figure 8.8: Reasons for further study/training, by gender**




N (weighted) = 47,745
Source: IER/ESRU Survey of the Career Paths of 1999 Graduates

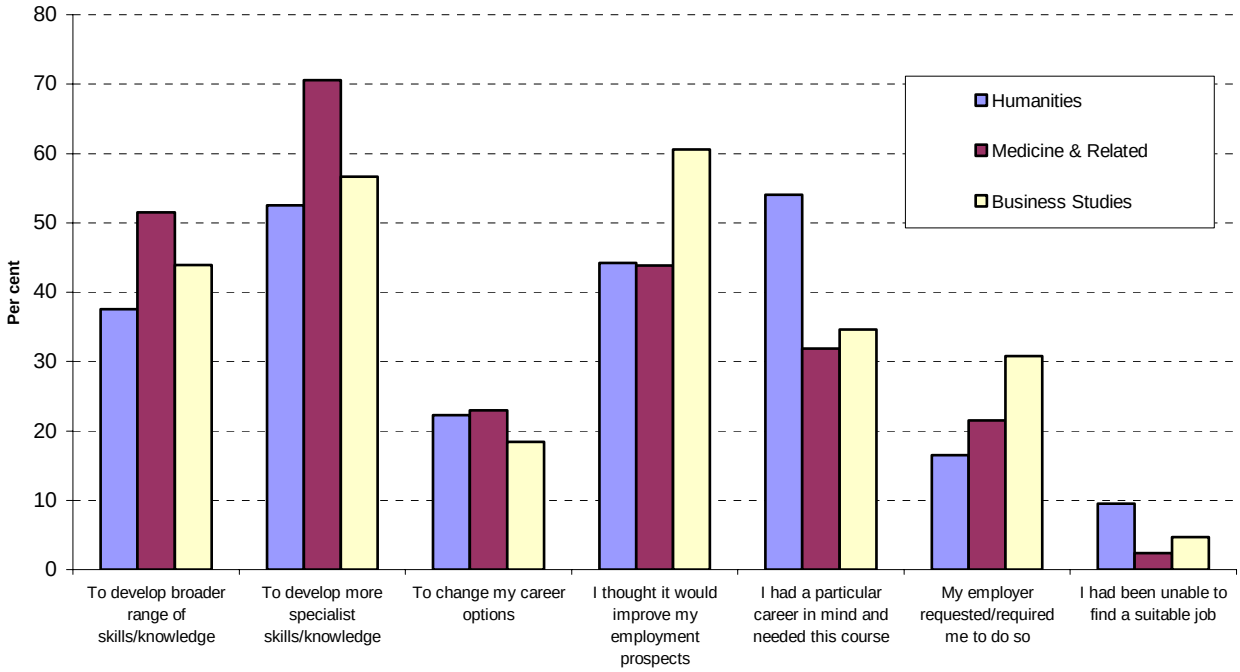
Differences in motivation according to age group might have been expected on the basis of prior research findings and this was the case, most notably that young graduates were more likely to have indicated having a particular career in mind that needed a particular course.

Again, this appears likely to refer to the fact that older graduates were more likely to have entered higher education initially within the context of an established career and/or with a clear instrumental approach to their undergraduate study (or alternatively for non-career reasons). Young graduates were also more likely to have been required to undertake study or training by their employers that may be associated with the establishment of professional credentials in the early stages of their careers. Older graduates on the other hand appeared more likely to have experienced further study in terms of the attainment of broader or more specific skills and knowledge consistent with their much greater propensity to have been involved in short courses to develop job-related skills.

Little difference was evident in motivation for further study according to the type of institution attended for the respondents' first degree. Those from old universities were most likely to have had a particular career in mind that required completion of a particular course (49 per cent) compared to the other groups (all between 40 and 35 per cent). There was little evidence of difference in the motivations between those from different social class backgrounds towards different forms of study or training.

However, analysis by subject of study indicates some more interesting differences as shown in Figure 8.9 (again, selecting only those graduates from humanities, business studies and medicine and related subjects). Graduates in medicine and related subjects were more likely to cite the objective of obtaining both broader and more specialist knowledge as reasons for further study. Changing career options was cited equally across subjects. Humanities graduates were most likely to report requiring credentials in order to pursue a particular path (partly linked to their greater propensity to enter the teaching profession). They were also more likely to indicate failure to obtain a suitable job. Again, linked to the types of occupations and sectors they are most likely to enter into (and the type of further study undertaken), business graduates were more likely to indicate employer request and the improvement of employment prospects, both most likely to be the case in structured professional/organisational labour markets as previously discussed.

**Figure 8.9: Reasons for further study/training, by selected subject of study**




N (weighted) = 47,748
Source: IER/ESRU Survey of the Career Paths of 1999 Graduates

If we examine reasons for undertaking further study or training according to the types of jobs the graduates of 1999 are doing, there were significant differences according to SOC (HE) classification. Those in traditional graduate jobs were significantly more likely than all other groups to have undertaken further education in order to pursue a particular career path (*e.g.* legal, educational, academic or medical careers) but were least likely to have indicated the development of either more specialist or a wider range of skills and knowledge. Those in new and *niche* graduate jobs were most likely to have indicated that they had been required/requested by their employer, which is consistent with the number of managerial or engineering occupations in these groups. Those in non-graduate jobs were those most likely to have indicated that further education had been a response to being unable to find a suitable job. Consistent with this, they were also, alongside those in new and, to a lesser extent, *niche* jobs, most likely to report that they thought it would improve their career prospects.

## 8.4 Was it worth it? An assessment of the benefits of further education and training

An examination of the reasons given by the sample for having undertaken further education and training since their graduation does not tell us the outcomes associated with having completed such study. Analysis of the survey data relating to the impact of postgraduate education and study on earnings is presented in Chapter 6 and on the attainment of appropriate employment in Chapter 7. However, the interviews do provide an opportunity to investigate this to some extent. A subjective post-facto assessment made by some of the interview subjects of the impact of postgraduate study/training on their subsequent careers (or an assessment of the impact on future career of a current course of study/training) unsurprisingly indicated that it had been, or would be, of benefit. A number of interview respondents, in response to the question - in order to get the kind of employment you want, what do you consider to be your advantages? - indicated their possession of higher qualifications or professional membership for a variety of reasons. These included the importance of membership of a professional 'community', the reputation of the institution attended and the importance of possessing additional credentials to differentiate themselves in the market place.

> *'I think* [my degree] *obviously gave me a qualification at degree level to get me into this job opportunity, but now I have it the fact that it* [Masters' degree] *has given me that edge now on my CV and it has given me a qualification that is very relevant to what I do. Geography* [first degree subject] *gave me perhaps that breadth of skills and undertaking my Masters, I think it's quite specialist and it affirms my decision to progress within the economic development and regeneration field'.*
>
> (004, female humanities graduate, economic and regeneration consultant, business services, £21k-£24k, traditional graduate job)

However, at this early stage of their career paths, there was also recognition that whilst qualifications were beneficial, or even essential, it did not necessarily make up for lack of experience.

> *'I know a degree is a great thing and I hold a lot of pride in my degree and my Master's degree but if I could just get more experience'*
>
> (043, male interdisciplinary graduate, development officer, not-for-profit, current salary not known, modern graduate job)

### 8.5 Further training and education – future needs and aspirations

To conclude this chapter we take a brief look at whether respondents expect to undertake additional education and training in future and how this fits alongside their career aspirations and expectations. In the survey, respondents were asked whether they planned to undertake further full- or part-time study over the next five years. Ten per cent of the sample reported that they intended to undertake further full-time study whilst 38 per cent reported that they expected to study part-time for further qualifications in the same period. In the interviews we asked respondents whether they felt that they needed further education and training in their current jobs in order to develop their careers in a desired direction. The most common response was that further study would most likely take the form of on-the-job training in more specialist areas or management skills required to move up within the organisation. Such education/training would be provided by, and take place inside, the organisation in the context of structured professional development:

> *'I think the training will be based more around* [on the job] *management training and learning management skills rather than technical skills for the job'.*
> (005, female business studies graduate, senior account executive, business services, £18k-£21k, new graduate job)

In cases where this was not the case and further *education* was anticipated or actually being undertaken this was likely to be because of a desire for, or anticipation of, a career change whether building on existing experience or to enable them to start afresh. Further credentials were also seen as a means by which to insulate themselves from future changes in circumstance within their current profession or job:

> *'Within the last one and a half years to two years I have thought about teaching. The fact that I have the masters in IT and the two thirds of my initial degree in information management gave me a good theoretical background - I never wanted to go on to programming or be sat in front of a computer all day, I like the interaction with people. The one thing about this line of work I'm in at the moment is that it is reliant on European funding and there's always the chance it could be pulled at any time and that my position might not renewed in two years - so moving in to teaching is a job for life with security: it pays a good pension and there are good prospects'.*
> (043, male interdisciplinary graduate, community development IT specialist, not-for-profit, current salary not known, modern graduate job)

Overall, the interviews suggested that across the sample many held a strong recognition of the importance of continuous professional development and an acceptance of the need for ongoing training and education to further their careers. When asked whether they envisaged requiring further education or training to develop their careers, respondents said:

> *'I think that* [the need for further training] *will depend on what area I go in to after my initial training. At the very minute I can't see anything that I need to do at the moment but I think along the way they very much offer you extra training and I think if that arises I will be able to get that'.*

(035, male business studies graduate. Business management trainee, financial services, £21k-£23k, non-graduate job)

Some respondents commented that further career-related education was unlikely to be necessary but they did not rule out returning to study for reasons of personal interest and development.

## 8.6 Summary

- 57 per cent of the sample reported having taken some form of career-related training or education since graduation
- A comparison of postgraduate education and training undertaken by the 1995 and 1999 graduates 3.5 and 4 years after graduation respectively, showed similar broad patterns of the uptake of further education and training.
- There was little gender difference in the propensity to undertake different forms of postgraduate training or education, apart from the fact that a higher proportion of women reported taking PGCEs
- Different patterns of propensity to undertake various forms of postgraduate training or education were, however, evident - according to age, SOC (HE) category of current job, undergraduate institution of study and subject of study. There was no significant difference according to social class background, even in the likelihood of respondents having undertaken a Masters degree since graduation.
- The probability of a graduate having undertaken a Masters degree since graduation in 1999 was positively linked to, amongst other factors, having graduated under the age of thirty, having a degree in humanities, social science, natural science or engineering, having left university with no debt and having attended a pre-1992 university.
- Those graduates who had undertaken postgraduate education and training had done so for a variety of reasons, including to fulfil entry requirements for a particular occupation or achieve progression within an occupation or organisation (sometimes out of non-graduate employment), as a means of putting off career decisions and to 'buy time' and in order to 're-orientate' their career in a different direction and to widen their career options.
- There was broad similarity between men and women across the sample in the reasons given for undertaking further education and training, although women were slightly more likely to indicate specific career objectives and men more likely to indicate a desire to improve employment prospects more generally.
- There were differences in individual motivation to undertake further education and training according to the age of respondent, subject of study and current

occupation but there was little difference in motivation according to type of institution attended at undergraduate level.

- Almost half of all survey respondents expected that they would study full- or part-time for further qualifications in the next five years. The qualitative data suggested that the majority recognised the need for further training and education and continuous professional development to achieve longer-term career goals.

# CHAPTER 9

## The financial legacy: student indebtedness and the impact of debt on early career development and outcomes

### 9.1 Introduction

This chapter considers levels of student indebtedness among graduates from the 1999 cohort and considers how this debt affected labour market outcomes subsequent to graduation. Section 1 provides a brief overview of the changing nature of student support, drawing on results from the 2002/3 Student Income and Expenditure Survey (SIES). Section 2 provides an overview of the level of student indebtedness derived from the present survey of 1999 graduates, the sources of debt and the extent to which it had been repaid. Section 3 then presents results from the career history survey to show how debt influenced the early careers of graduates, both in terms of employment outcomes and further participation in full time education. Section 4 considers which groups of survey respondents were most likely to report that their career options since completing their studies had been affected by their debts.

### 9.2 The changing nature of student support[33]

Since the introduction of student loans in 1990 following the 1990 Education (Student Loans) Act, there have been significant changes in the sources and availability of student financial support to undertake a higher education course. The 1998 Teacher and Higher Education Act introduced further changes to student financial support. The main provisions of the Act were as follows:

- the introduction of means-tested contributions towards tuition fees;
- the phasing out of means-tested mandatory awards (grants for living costs);
- the introduction of support for living costs solely via loans which were partly income assessed; and
- a different method of repaying loans was introduced.

From 1998/9, new entrants had to contribute towards the costs of their tuition, initially set a maximum of £1,000 per annum, and these fees were to be means tested. Students entering higher education in 1999/2000 (together with those who started the previous year) were to receive support for living costs solely through student loans that had been introduced in 1990. The repayments on these loans were linked more directly to students' income once they graduated, with students having to repay their loans when their income reached £10,000.

33 This section draws upon description and analysis contained within Callender and Wilkinson (2003), *2002/3 Student Income and Expenditure Survey*. Department for Education and Skills, Research Report RR487.

1998/99 was therefore the beginning of the transitional period in which mandatory grants were replaced completely by means tested student loans.

The 2002/03 Student Income and Expenditure survey collected detailed information on the income, expenditure and debt of students drawn from an achieved sample of 1,250 students attending 49 institutions of higher education in England and Wales.

The sample was restricted to full time, single, childless undergraduate students who were under the age of 25 at the time they started their course. The results from this survey were compared with those of a similar enquiry conducted in 1998/9. In the SIES, debt is calculated by subtracting any savings students anticipate as having at the end of the academic year from the total borrowings they expect to have at the end of the academic year.

Table 9.1 shows changes in the anticipated real levels of debt among final year students between 1998/99 and 2002/03. The SIES demonstrates that the 1998 reforms of student funding have had a significant effect on the level of student debt on graduation. The percentage of students anticipating that they would leave university with debts is shown to increase by 11 percentage points between 1998/99 and 2002/03. Furthermore, the average total level of anticipated debt is shown to have been 2 ½ times greater in 2002/03 compared to 1998/99. The SIES also demonstrates how the composition of these debts have changed, with an increase in the real value of student loans accounting for 85 per cent of the real value of total borrowing between 1998/99 and 2003/03.

**Table 9.1: Changes in the real value of final year students' debt, savings and borrowings between 1998/99 and 2002/03**

| | 1998/9 at 1998/9 levels (£) | 1998/99 at 2002/03 levels (£) | 2002/03 at 2002/03 levels (£) | Real Difference (£) | Percentage Change % |
|---|---|---|---|---|---|
| Percentage with debt (%) | 81 | | 92 | 11 | * |
| Commercial credit | 96 | 106 | 350 | 244 | 4 |
| Overdraft | 893 | 982 | 997 | 15 | 10 |
| Arrears | 13 | 14 | 14 | 0 | 0 |
| Informal loans from family and friends | 37 | 41 | 33 | -8 | 0 |
| Outstanding Student Loan | 2,998 | 3,298 | 8,052 | 4,754 | 85 |
| Outstanding Student Hardship Loan | 0 | 0 | 65 | 66 | 1 |
| Total borrowings | 4,036 | 4,440 | 9,512 | 5,071 | 100 |
| Savings at end of final year | 886 | 975 | 846 | 129 | -13 |
| Total Debt | 3,150 | 3,465 | 8,666 | 5,201 | 150 |

Source: 2002/3 Student Income and Expenditure Survey

The findings from the SIES therefore highlight the impact of the reforms of student funding and how they have contributed to the changing levels and nature of debt over this period. The present enquiry collected information on student indebtedness from the 1999 cohort at the time of graduation. These graduates were subject to different mechanisms of student support arrangements compared to the current cohort. Caution should therefore be exercised in considering the applicability of these findings to present and future cohorts of graduates. It is not clear how the level and composition of debt will change among future cohorts of graduates, particularly in light of the reintroduction of grants for lower income students and variable tuition fees of up to £3,000 per year.

### 9.3 Levels, sources and repayment of student debt

Respondents to the survey were asked '*at the point when you completed your studies in 1999, how much repayable debt (in total) did you owe?'* Table 9.2 presents an overview of responses to this question according to the age of the survey respondent. We utilise the three-fold classification of age group as defined by the age of the respondent at the time of the survey. The 'young' age group refers to those respondents who were less than 25 years old at the time of graduation. The 'young mature' age group refers to those respondents who were between 25 and 29 years old at the time of graduation. The 'older mature' age group refers to those respondents who were 30 years or older when they graduated.

From Table 9.2 it can be seen that 77 per cent of all respondents reported that they had some kind of repayable debt upon the completion of their studies during 1999. However, it was also the case that only 51 per cent of the 'older mature' respondents reported having some form of repayable debt after completing their studies. Among the 'young' age group, 81 per cent reported having some form of repayable debt after completing their studies – an identical figure to that reported in the SIES in Table 9.1. Among those respondents with debt, the mean total amount of repayable debt is estimated to be £6,205, with the median level lower, at £5,500. While the youngest group of respondents were most likely to have repayable debt, we observe that the two older groups of respondents incurred the highest levels of debt. We observe that both 'young mature' and 'older mature' respondents accumulated, on average, approximately £1,500 more debt than that incurred by the 'young' age group.

Among all respondents with debt, debts from the Student Loans Company accounted for 66 per cent of all repayable debts, debts from other creditors accounted for 28 per cent and debts from family and friends accounted for 5 per cent. The scale of debt accumulated from different sources was relatively uniform across the different age groups, with the most significant difference in terms of the lower proportion of debt among older respondents to the Student Loans Company. Among the 'young' age group of respondents, debts from the

Student Loans Company accounted for 67 per cent of all repayable debts, compared to 60 per cent of those of the 'older mature' age group.

**Table 9.2: Student indebtedness by age group**

| | Young | Young mature | Older mature | All |
|---|---|---|---|---|
| Percentage with repayable debt | 81% | 68% | 51% | 77% |
| | | | | |
| Of those respondents with debt: | | | | |
| Repayable debt to student loans company (£ mean) | 3,970 | 4,723 | 4,488 | 4,094 |
| Repayable debt to other creditors (£ mean) | 1,590 | 2,188 | 2,261 | 1,714 |
| Repayable debt to family and friends (£ mean) | 305 | 469 | 482 | 338 |
| Repayable debt to others (£ mean) | 42 | 59 | 200 | 59 |
| | | | | |
| Total repayable debt (£ mean) | 5,907 | 7,440 | 7,431 | 6,205 |
| Total repayable debt (£ median) | 5,000 | 6,000 | 6,000 | 5,500 |
| | | | | |
| Of all respondents: | | | | |
| Repayable debt to student loans company (£ mean) | 3,219 | 3,617 | 2,447 | 3,150 |
| Repayable debt to other creditors (£ mean) | 1,289 | 1,676 | 1,233 | 1,319 |
| Repayable debt to family and friends (£ mean) | 248 | 359 | 263 | 260 |
| Repayable debt to others (£ mean) | 34 | 45 | 109 | 45 |
| | | | | |
| Total repayable debt (£ mean) | 4,790 | 5,697 | 4,051 | 4,774 |
| Total repayable debt (£ median) | 4,200 | 5,000 | 2,000 | 4,000 |
| | | | | |
| Population | 57,660 | 7,382 | 10,329 | 75,371 |
| Sample | 6,441 | 768 | 1,099 | 8,360 |

To aid comparisons with the SIES, the lower half of Table 9.2 reports the average level of debt among all 1999 respondents. Direct comparisons with the SIES are problematic due to differences in the samples of students surveyed and inconsistencies in the definition of debt used. We focus upon the youngest 1999 age group because the SIES sample was restricted to students who were under the age of 25 at the time they started their course. In terms of the level of debt, the average level of repayable debt among all respondents to the present survey was estimated to be £4,790. This figure is approximately £750 higher than the level of total borrowings and £1,640 higher than the average level of total debt recorded by the SIES. The present survey did not ask respondents about their levels of savings on the completion of their studies and we are therefore not able to make such an adjustment for savings in the present analysis. In terms of the composition of repayable debt among the 'young' age group, 67 per cent was classified as repayable debt to the student loans company. Again this is comparable to the SIES, where 74 per cent of total borrowings were attributed to outstanding student loans.

Table 9.2 indicated that the financial circumstances of these three age groups differed, as indicated in terms of the percentages with repayable debt, the levels of repayable debt and

composition of this debt. However, the present study only asked respondents to indicate how much repayable debt they had at the time they had completed their studies and not whether this debt was actually incurred during the course of their studies. We would suspect that the older groups of respondents would be a more heterogeneous group of respondents in terms of their reasons for entering higher education and their subsequent labour market outcomes. We may also expect such respondents to have accumulated repayable debt for reasons other than pursuing a course of higher education reflecting their later stages in the life course. To avoid making spurious comparisons, our analysis in the remainder of this chapter focuses on the 'young' age group of respondents.

Table 9.3 presents estimates of the levels of student indebtedness by gender, social class and subject of degree. Variations by gender are small, with male respondents on average indicating that they had accumulated approximately £330 more repayable debt by the end of their course than females. The composition of this repayable debt is shown not to vary by gender. In terms of social class, respondents from a 'small employers/own account workers' occupational background were the least likely to report that they had repayable debt at the end of their studies. In terms of the amount of repayable debt, respondents from a 'managerial and professional occupation' background reported having the lowest levels of repayable debt, while those respondents from 'lower supervisory and technical occupations' reported having the highest levels of repayable debt. However, the difference in the level of repayable debt between these two groups was less than £150. As with gender, no obvious pattern emerges in terms of the composition of repayable debt by social class.

Finally, Table 9.3 presents estimates of student indebtedness by subject area studied. It is observed both in terms of the proportion of respondents indicating that they had repayable debt at the end of their studies and the levels of repayable debt, there was wider variation between subject categories than by gender and social class. Students with degrees in arts (88 per cent) were most likely to report that they had repayable debt at the end of their studies. Those with degrees in mathematics and computing, medicine and related, and business studies were least likely to report that they had repayable debt at the end of their studies (78 per cent). In terms of the average levels of repayable debt, the highest were observed among those respondents with degrees in the arts (£5204), law (£5389) and education (£5371), while the lowest were observed among natural science (£4309) and engineering graduates (£4497). Finally, we observe that the relative contribution of loans from the Student Loans Company was highest among those subject areas where the level of total debt is estimated to be lowest. This is exemplified by the case of law graduates, where only 56 per cent of repayable debt was attributed to student loans, while 34 per cent was to other creditors, credit cards, bank overdrafts, etc. We suspect that this finding can simply be attributed to student loans being a preferred source of financial support compared to other creditors.

**Table 9.3: Student indebtedness by gender, social class and subject studied: young age group**

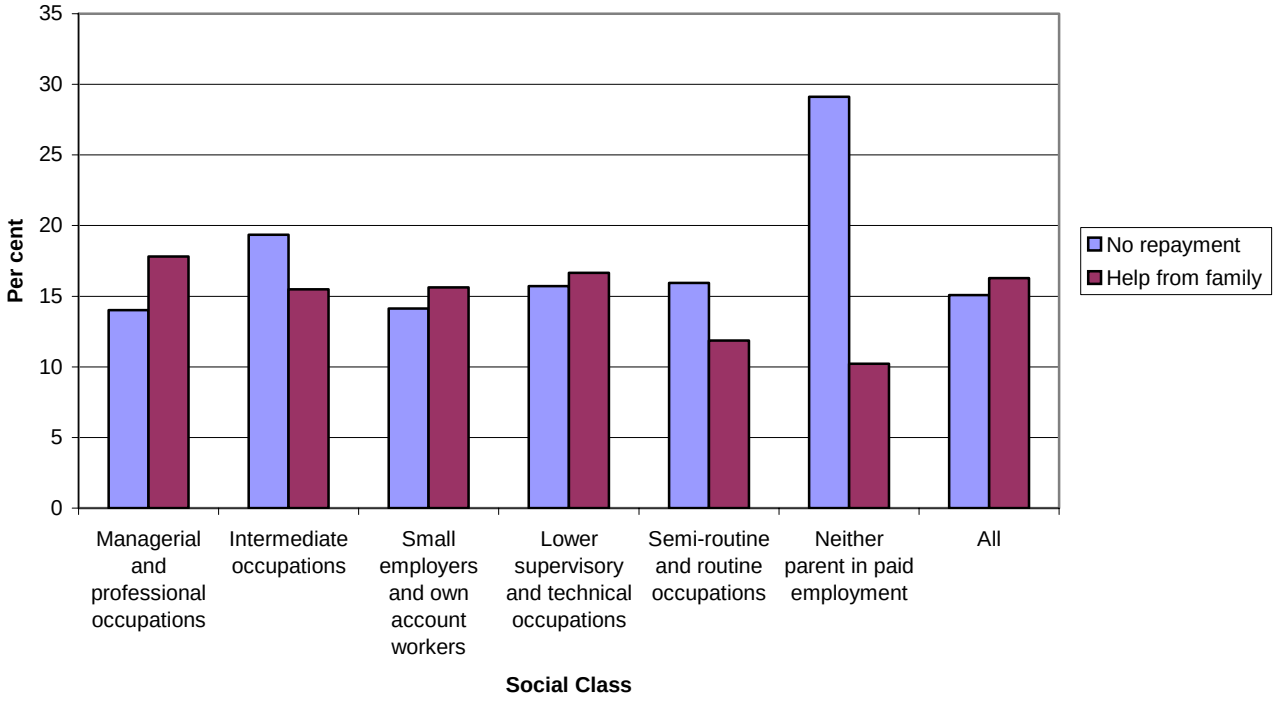
| | % with debt | Total repayable debt (£) | Sources of repayable debt | | | |
|---|---|---|---|---|---|---|
| | | | Student loans | Other creditors | Family and friends | Other |
| *Gender* | | | | | | |
| Male | 83 | 4,965 | 68% | 26% | 6% | 1% |
| Female | 80 | 4,639 | 67% | 28% | 5% | 1% |
| | | | | | | |
| *Social Class* | | | | | | |
| Managerial and professional occupations | 83 | 4,795 | 67% | 27% | 5% | 1% |
| Intermediate occupations | 82 | 4,834 | 71% | 24% | 4% | 1% |
| Small employers and own account workers | 79 | 4,804 | 65% | 28% | 6% | 0% |
| Lower supervisory and technical occupations | 82 | 4,941 | 63% | 33% | 3% | 2% |
| Semi-routine and routine occupations | 82 | 4,927 | 68% | 26% | 5% | 0% |
| Neither parent in paid employment | 81 | 4,887 | 73% | 21% | 6% | 0% |
| Not determined | 71 | 4,319 | 65% | 27% | 6% | 2% |
| | | | | | | |
| *Subject* | | | | | | |
| Arts | 88 | 5,204 | 68% | 26% | 5% | 2% |
| Humanities | 80 | 4,678 | 67% | 28% | 5% | 0% |
| Languages | 81 | 4,876 | 69% | 26% | 4% | 0% |
| Law | 82 | 5,389 | 56% | 34% | 4% | 6% |
| Social Sciences | 81 | 4,903 | 65% | 28% | 7% | 0% |
| Mathematics and Computing | 78 | 4,528 | 67% | 27% | 5% | 0% |
| Natural Sciences | 80 | 4,309 | 72% | 24% | 4% | 1% |
| Medicine and Related | 78 | 4,731 | 67% | 27% | 6% | 1% |
| Engineering | 83 | 4,497 | 72% | 24% | 5% | 0% |
| Business Studies | 78 | 4,674 | 66% | 28% | 6% | 0% |
| Education | 81 | 5,371 | 60% | 33% | 6% | 0% |
| Interdisciplinary | 83 | 4,935 | 71% | 24% | 5% | 0% |
| Other vocational | 86 | 4,950 | 67% | 27% | 6% | 0% |
| | | | | | | |
| Total | 81 | 4,790 | 67% | 27% | 5% | 1% |
| | | | | | | |
| Population | 57,660 | 46,755 | | | | |
| Sample | 6,441 | 5,400 | | | | |

The questionnaire collected information on the repayment of student debt, encompassing both the level of repayment and whether the respondents had received any help with the repayment of their debts. Approximately four years after graduation, 17 per cent of respondents who had repayable debt had repaid this debt in full. However, further analysis revealed that the level of debt among such respondents was just 60 per cent of the average level at £3,601. Sixty seven per cent of respondents indicated that they had repaid part of their debt. In contrast, the average level of repayable debt among this group of respondents

was £6,813 at the time of graduation. Finally, 15 per cent of respondents indicated that they had yet to repay any of their debts. The average level of repayable debt among this group of respondents was estimated to be £6,423 at the time of graduation.

Figure 9.1 shows how patterns of repayment vary by social class and whether the respondents received any assistance from their families to help them repay their debt. Variations in the level of repayment did not vary significantly by social class, with the exception of those respondents who indicated that neither of their parents was in paid employment when they were 14 years old. Among this relatively small group of respondents, 29 per cent indicated that they had not repaid any of their debt since completing their studies. Levels of repayment were observed to be highest among those from managerial and professional background and whose parents were small employers or self employed. In these groups, less than 15 per cent indicated that they had not repaid any of their debt.

**Figure 9.1: Repayment of student debt and assistance from families: young age group**




The questionnaire asked respondents with repayable debt whether they had received any help with the repayment of their debt. Approximately 3 per cent of respondents indicated that they had received help from employers with the repayment of their debt. Some variation was observed depending upon subject area, with 7.1 per cent of graduates in maths and computing who had repayable debt indicating that they had received help from their employers with the repayment of their debt. A more common source of assistance with the repayment of debt was from a partner or family member, with 16 per cent of respondents with

repayable debt indicating that they had received help from this source. Figure 9.1 also shows how such assistance with the repayment of debt varied by social class. It can be seen that those respondents whose parents were either not in employment (10 per cent) or who were employed in semi-routine or routine occupations (12 per cent) when they were aged 14 were least likely to indicate that their partner or family had helped them to repay their debt. In contrast, those whose parents were employed in managerial or professional occupations when they were aged 14 were most likely to indicate that they had received assistance in the repayment of their debt (18 per cent).

## 9.4 Who undertook paid employment while studying and the effect on degree performance

Survey respondents were asked to indicate whether, during the time that they were studying for their 1999 qualification, they had undertaken paid employment. Respondents were also able to indicate whether any such work was undertaken during the vacations or during term time. In considering term-time work, we again focus upon the youngest age group of respondents. Amongst this group, the survey revealed that 92 per cent had undertaken paid work while studying for their 1999 qualification. Across all groups of respondents, 85 per cent indicated that they undertook paid work during the vacations while 47 per cent undertook paid work during the term time. Further analysis indicates that 7 per cent of respondents only undertook paid work during term, 49 per cent only undertook paid work during the vacation and 44 per cent undertook paid work during both during the term time and vacations during the time they were studying for their 1999 qualification. Among all those who undertook paid employment, 92 per cent indicated that this work was only undertaken for the money.

Figure 9.2 shows how the incidence of paid work varies by social class background. In terms of all types of paid work undertaken while studying, there was no significant variation in the incidence of paid work according to social class background. This overall picture however obscures more interesting variations in the incidence of paid work when we differentiate between work undertaken during the term time and work undertaken during vacations. The incidence of term time working was more prevalent among respondents from lower social class backgrounds. For example, the incidence of term time working among respondents whose parents were employed in routine or semi-routine occupations was 14 per cent higher than among those whose parents were employed in managerial or professional occupations. The highest incidence of term time working was observed among those from a non-working background, although it should be noted that this group of respondents comprised a relatively small proportion of our sample.

The incidence of paid work while studying is explored further in Figure 9.3, which distinguishes between those respondents who only undertook paid work during term, those

who only undertook paid work during the vacation and those who undertook paid work during both during the term time and vacations while they were studying for their 1999 qualification. Both term time only work and term-time plus during vacations working were more prevalent among respondents from lower social class backgrounds. In contrast, a clear gradient emerged in terms of social class background in the incidence of respondents who only undertook paid employment during the vacations. While 32 per cent of respondents from non-working parental backgrounds only undertook paid work during the vacation, this figure increased to 53 per cent among respondents whose parents worked in managerial and professional occupations.

**Figure 9.2: Social class background and the incidence of paid work while studying**

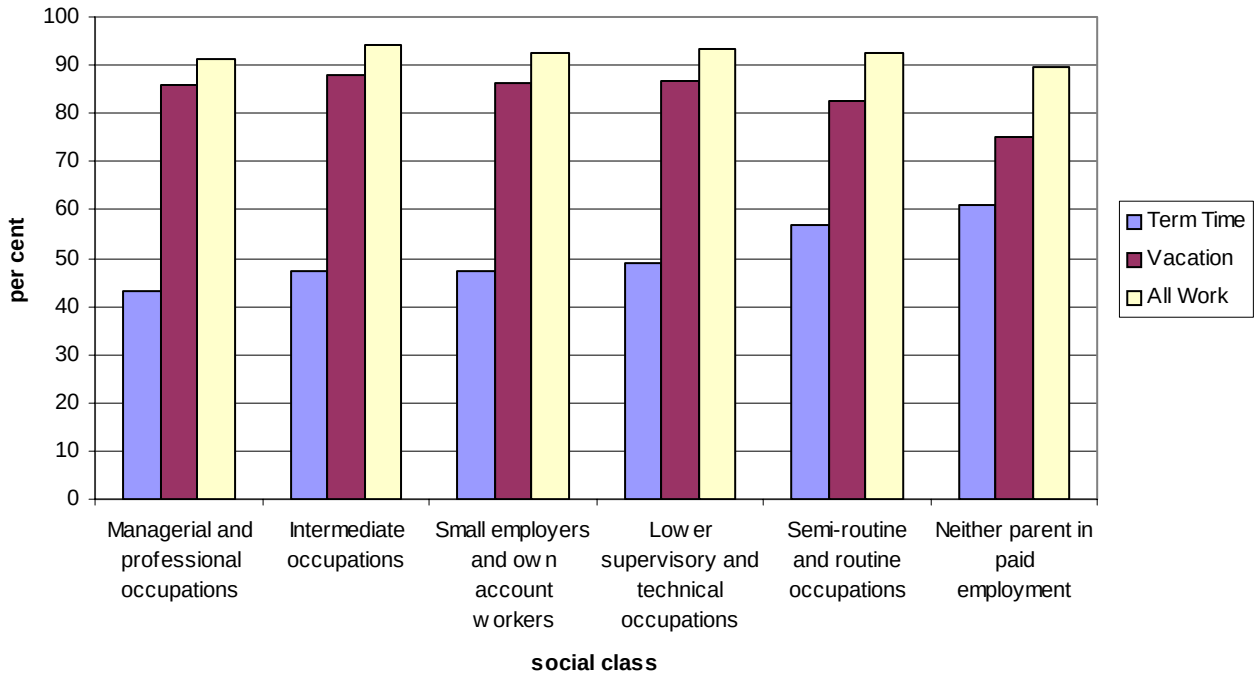
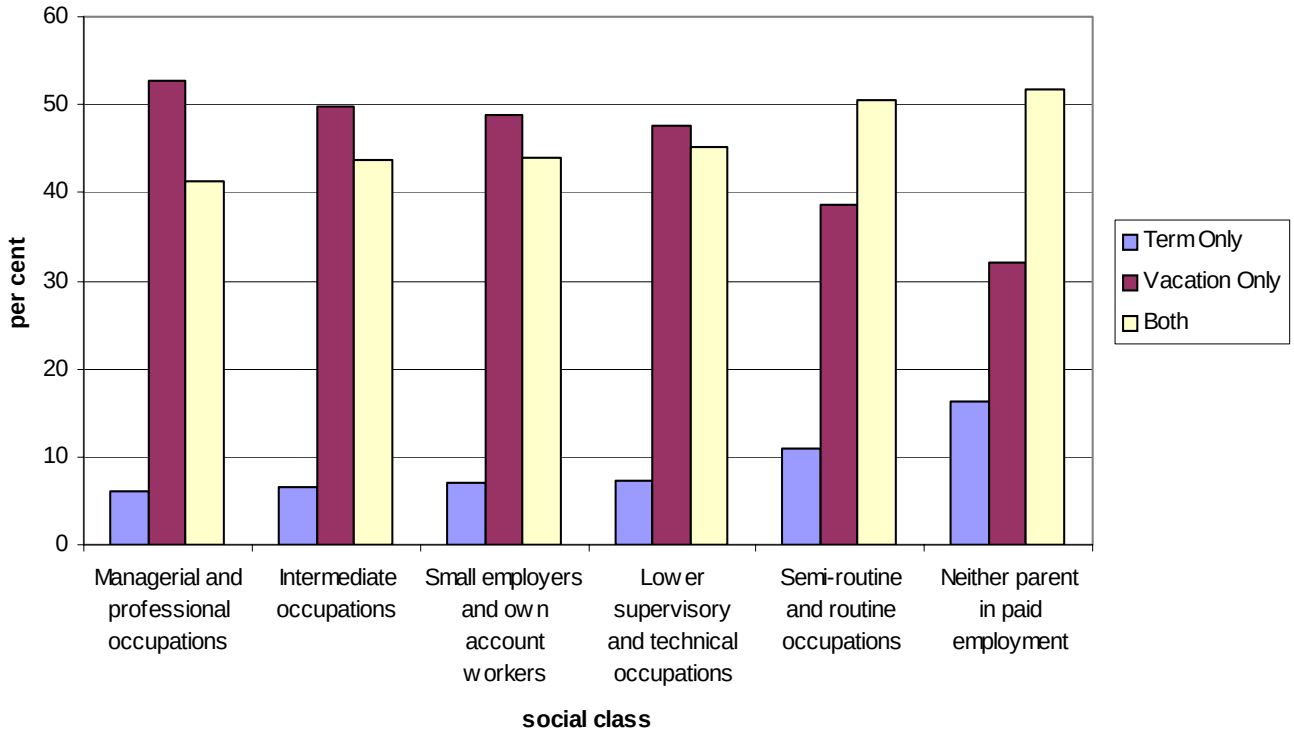
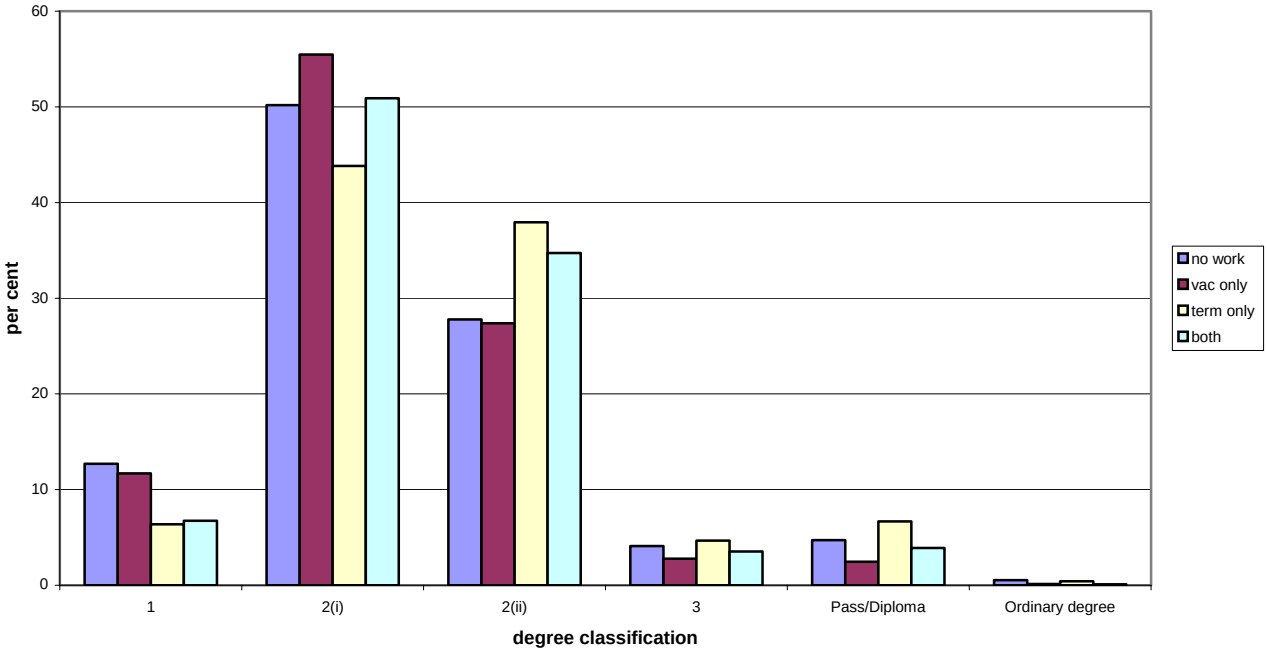


**Figure 9.3: Social class background and the incidence of paid work while studying: term only, vacation only, both**




In Figure 9.4 we consider the effect of undertaking paid employment on academic performance. For the purpose of this analysis, we distinguish between four groups of survey respondents on the basis of whether they undertook paid employment while studying for their 1999 qualification; those who did not work, those who worked only during the vacation, those who worked only during term time and those who worked both during term time and the vacation. As above, the analysis is restricted to the youngest age group of survey respondents. Figure 9.4 indicates that undertaking paid employment while studying was associated with poorer levels of academic performance, although this was dependent upon when the work was undertaken. The level of academic performance for those who undertook paid work only during the vacations was almost identical to that achieved by respondents who did not undertake any paid work during the time they were studying for their 1999 qualification. However, levels of academic performance among those who undertook paid work only during the term time, or both during the term time and during the vacations, was lower than for the other two groups of respondents. In particular, we observe that the proportion of respondents attaining a first class degree is twice as high among those who did not undertake any paid employment during term time (12-13 per cent compared to 6-7 per cent). In contrast, the proportion of respondents obtaining a lower second class degree is approximately 7-10 percentage points higher among those respondents who undertook paid work during term time.

**Figure 9.4: The effect of undertaking paid work during undergraduate course on degree performance**




Performance at degree level is likely to be influenced by a variety of factors in addition to whether a respondent undertook any paid work during the course of their studies. To identify the separate and additional influence of term time working upon degree performance, we utilised multivariate statistical techniques. Degree performance was measured by distinguishing between those respondents who gained a first or an upper second class degree (or 'good' degree) and those who gained lower classifications of degree. We then utilised a logistic regression to estimate what factors influence the probability of respondents gaining a 'good' degree as opposed to lower levels of academic performance at degree level.

The full results of this model are presented in Table A3.7 in Appendix III. A strong positive relationship was estimated to exist between educational attainment at A-level and degree performance. Compared to those respondents with fewer than 10 A-level points, those with 20-29 A-level points were estimated to be more than twice as likely to gain a 'good' degree. Those with more than 30 A-level points were estimated to be more than three times as likely to gain a 'good' degree than the reference category. Among other results that were estimated to be statistically significant, we observed being a female, regarding oneself as being extremely ambitious and having a father with a degree were positively associated with degree performance. Regarding undertaking paid work while studying, those who worked during term time were estimated to be approximately a third less likely to gain a 'good' degree compared to those who undertook no paid work during the course of their studies.

## 9.5 The impact of debts upon early careers

Respondents to the questionnaire who indicated that they had repayable debt were subsequently asked whether these debts had affected their options since completing their studies. For those respondents who indicated that their options had been limited in some way, they could indicate either that:

- they had wished to go on to postgraduate study but they did not want to add to their debts;
- they had to turn down an attractive, but low paid job because they wanted to repay their debts;
- they had to accept a well paid job that they did not really want in order to repay their debts; or
- they had been effected in some other way.

We suspect that those respondents with higher levels of repayable debt would be more likely to indicate that these debts had affected their options after graduation. Therefore, in Table 9.4 we present responses to these questions according to quartile groups based upon a respondent's level of repayable debt. The quartile ranges for these groups are shown at the top of Table 9.4. It can be seen that 75 per cent of respondents with repayable debt indicated that this debt did not affect their options after completing their course. However, while 89 per cent of respondents with less than £3,000 of repayable debt (the quarter of respondents with the lowest levels of debt) indicate that this did not affect their options, this figure falls to 55 per cent among respondents with more than £7,500 of repayable debt (the quarter of respondents with the highest levels of debt). Of those 25 per cent of respondents with repayable debt who indicated that their options were affected by their debt, approximately half indicate that they would have liked to have gone on to postgraduate study but did not want to add further to their debts. Once again, the proportion of respondents being put off by further post-graduate study increases with the level of repayable debt. One in five respondents with repayable debt of more than £7,500 indicate that their debt had put them off undertaking postgraduate study. An example from the interviews was a law graduate who had been discouraged from finishing his professional training by the level of debt he had upon graduation. He had subsequently left the legal profession:

> *'I could have gone on to do the legal practise course but it was so expensive at the time, and with the university debts and what have you I didn't really want to spend that kind of money or take out another loan for it. You know, it was one of those things that you can do a couple of years down the line, you don't have to do it straight away, so I thought I will leave it for a bit and perhaps go and gain some experience, work, whether it be legal or non-legal, but whatever work and save up for it'.*

(039, male law graduate, bar manager, hotel and catering, previous salary £15k-£18k, non-graduate job)

A smaller proportion of respondents indicated that their debts affected their choice of jobs. The survey recorded whether respondents had to either turn down an attractive but low paid job in order to repay debts or whether they had to accept a well paid job that they did not really want in order to repay their debts. Table 9.4 again demonstrates that the importance of these issues increases with the level of repable debt. However, text responses provided on the questionnaire by those who responded 'in some other way' and examples from the telephone interviews indicate that a potentially more important mechanism is the incidence with which respondents felt compelled to take the first job available job offer in order to repay their debts. One interviewee, when asked to what extent he considered himself to have planned his career, said:

> *'I planned it really well when I was in my degree and when I just came out. I got my result and the plan was still there and I applied for jobs and that's where any idealistic views you've got go out the window. Any plans you've got, you're so much in debt you'll take anything and that was the case… I wouldn't say it's stopped me getting the job I want but with the debt behind you, you haven't got time to weigh up your options, you're waiting on a job offer and you have no choice but to take that job. It's the lack of choice'.*

(058, male business studies graduate, care home assistant manager, previous salary £12k-£15k, non-graduate job)

**Table 9.4: Debts and options after graduation: young age group**

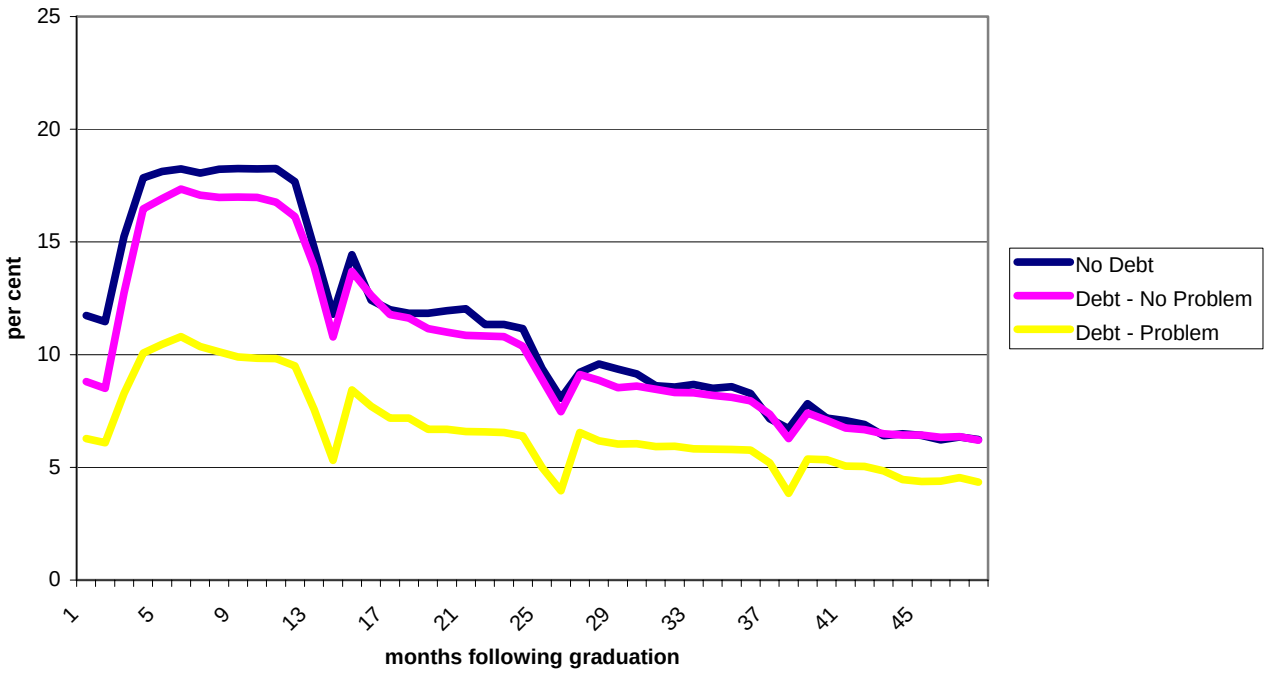
| | Total Repayable Debt | | | | All with debt |
|---|---|---|---|---|---|
| | First quartile <£3,000 | Second quartile £3-5,000 | Third quartiles £5-7,500 | Fourth quartile £7,500+ | |
| Options were not limited | 89% | 83% | 71% | 55% | 75% |
| Would have like to have undertaken postgraduate study | 5% | 8% | 15% | 21% | 12% |
| Turned down low paid but attractive to repay debts | 1% | 2% | 4% | 7% | 3% |
| Had to accept well paid but unattractive job in order to repay debts | 1% | 2% | 4% | 9% | 4% |
| Limited in some other way | 3% | 6% | 11% | 19% | 9% |
| Population | 12869 | 10764 | 11960 | 11163 | 46755 |
| Sample | 1481 | 1228 | 1313 | 1178 | 5200 |

In Figures 9.5 and 9.6 we examine the effects of debt upon early career choices by utilising the career history information collected by the survey. For the purpose of these charts, we divide respondents into three groups. The first group refers to those respondents who graduated without incurring any repayable debt and accounts for approximately 23 per cent of the total population. The second group refers to those respondents who graduated with debt, but indicated that this debt did not affect their options. This group accounts for 57 per cent of the total population. Finally, we distinguish a third group who graduated with repayable debt and who indicated that this debt had affected their options in some respect. This last group

accounts for 20 per cent of the total population. As above, the analyses of career profiles is restricted to the young age group of graduates, i.e. those respondents who were less than 25 years old at the time of graduation.

In Figure 9.5 we consider the profile of respondents who went on to further full time education during the four years following the completion of their studies. It can clearly be seen that participation in further full time study was lower among those respondents who indicated that their debts had affected their options after graduation. During the 12 months following graduation, participation in full time study was approximately 8 per cent lower among this group than among those respondents who reported having no repayable debt. The analysis of career histories therefore supports the analysis presented in Table 9.6 where we observed that 12 per cent of respondents with repayable debt indicated that they would have liked to have undertaken postgraduate study but chose not to because they did not wish to add to their debts. During the 12 months following graduation, participation in full time study was approximately two per cent lower among those with debt but who did not feel that this had affected their options, compared to those respondents who reported having no repayable debt.

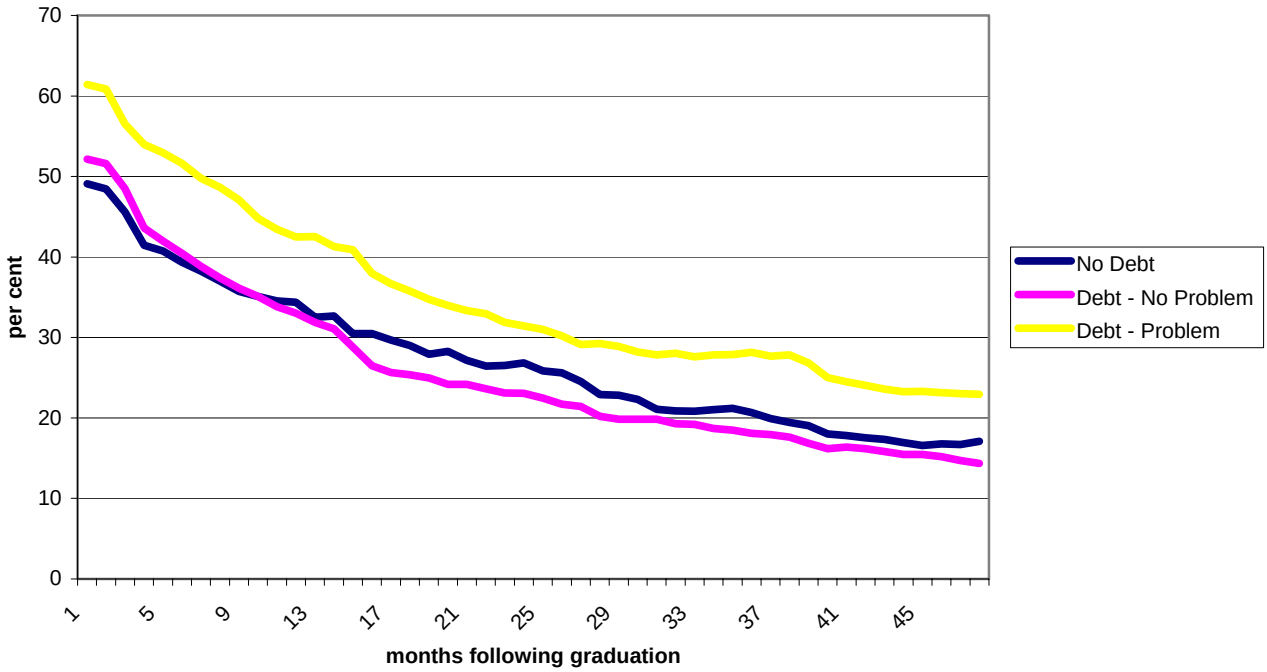
**Figure 9.5: Debts and participation in further study**




In Figure 9.6 we compare the occupational composition of employment of these three groups of graduates. Specifically, we are interested in examining whether those respondents who

indicated that their options were affected by their debt were actually more likely to be employed in occupations that were not commensurate with their level of education. To consider this issue, we examined the profile of employment in non-graduate occupations as derived from the SOC (HE) classification of occupations that was introduced in Chapter 3. Specifically, we focus upon the proportion of employed graduates who were working in non-graduate occupations.

**Figure 9.6: Debts and employment in non-graduate occupations**




It can be seen in Figure 9.6 that immediately following graduation, 49 per cent of employed respondents without repayable debt worked in non-graduate occupations, 52 per cent of those graduates with debt who felt that this debt had not affected their options and 61 per cent of those graduates with debt who felt that this debt had affected their options. By 12 months after graduation, the share of employment in non-graduate occupations declined to between 33 and 34 per cent for those both without debt and for those with debt who felt that this debt had not affected their options. However, among those respondents who felt that their options had been affected by their debt, 42 per cent were employed in non-graduate occupations. At the end of the period covered by the career histories, the share of employment in non-graduate occupations declined to 14 per cent for those both without debt and 17 per cent for those with debt who felt that this debt had not affected their options. However, among those respondents who felt that their options had been affected by their debt, 23 per cent were employed in non-graduate occupations. Therefore, we observe a

persistently higher level of employment in non-graduate occupations for the respondents who indicated that their options following graduation had been in some way affected by their debts.

When re-producing Figures 9.5 and 9.6 for different groups of respondents based upon their absolute levels of debts (groups for each debt quartile plus a group for no debt), we observe no difference in the shape of the profiles for either participation in further study or employment in non-graduate occupations (results not presented here). Therefore, it is not the absolute level of debt *per se* that is associated with subsequent career profiles; rather, whether the choices of an individual are affected by this debt. This would seem to be a plausible result. For example, while size of debt may be an important part of whether an individual's choices are affected by this debt, this may be less so for graduates from disciplines associated with a relatively quick assimilation into employment into traditional graduate occupations which provide relatively high earnings. The mechanisms through which debt may affect an individual's choices are therefore likely to be complex and not uniform across different groups of respondents.

To highlight this we can explore the attitudes to indebtedness and its impact on subsequent career as evidenced in the interviews. As is outlined in Chapter 10 with reference to an assessment of the value of higher education, debt was more often than not seen as a 'necessary evil' and interview respondents appeared pragmatic about repayment and its effect. Asked whether he considered his time in higher education had been a good investment, one interviewee said:

> *'Definitely a very positive experience. It has left me in a lot of debt, but I am very happy that I did it'.*
>
> (041, male language graduate, crime reduction officer, public services, previous salary £15k-£18k, traditional graduate job)

However, there was some bitterness about being 'forced' into its accumulation, in the example below, on the basis of the idea that public returns to higher education were being acquired through personal investment:

> '[Does] *having the student loans* [bother me]? *Not on a day-to-day basis, but yes. I feel that I am giving back to the country now in terms of my input to the economy and things like that, but then I feel that this is an additional burden on me that is a bit unfair. The government prefers to hand out money to people that, in my opinion, don't make enough effort to get jobs and things. They are not willing to support students who, I think, are much more deserving'.*
>
> (083, female education graduate, product development manager, education, £18k-£21k, new graduate job)

The combination of substantial debt and lack of success in the labour market inevitably lead some respondents to a more critical assessment of the value of higher education than they had originally undertaken:

> [Interviewer: Do you regard the years you spent in higher education as a good investment? Here you are with a student debt at the end of it, was it worth it?]
>
> *'No'.*
>
> [Interviewer: So if you were taking the decision again, would you still do a higher education course?]
>
> *'I would, but I would think a lot more carefully about what course I went into and what was going to be the outcome'.*

(009, female social science graduate, sales assistant, retail, £12k-£15k, non-graduate job)

As the survey findings above indicated, one reason why people feel the burden of debt acutely, whether it has impacted upon their decisions about employment or further study, is in the way it can restrict other opportunities:

> *'I'm getting on a bit. It didn't leave me very well off financially so I'm twenty six years old with no stability or security and no hope of affording a house'.*

(056, female humanities graduate, full-time postgraduate student)

This highlights a very important point raised in a number of interviews in that whilst debt may not necessarily be experienced as a significant burden on a day-to-day basis for all, it does have a significant impact in the way that it underpins decision-making about career and personal life. In response to the question of whether they had experienced any obstacles in their career development, one graduate said:

> *'…I'm paying I don't know how much a month on graduate student loans, so that would be an issue there. It still does effect every kind of long-term decision I make, you know, either change of jobs or travelling or something like that, because I do have debts, quite big debts from university'.*

(040, male humanities graduate, editor, publishing, previous salary £15k-£18k, modern graduate job)

We next consider the issue of employment in non-graduate occupations in more detail by examining career profiles for these three groups of graduates by area of subject studied. This analysis is important because compositional effects may be driving the result present in Figure 9.3. For example, the analysis in Chapter 4 revealed that graduates from the arts and humanities were more likely to be employed in non-graduate occupations. If these graduates are also more likely to indicate that their debts had influenced their options following graduation, then compositional effects could lead to spurious relationship between employment in non-graduate occupations and those reporting that their debts had limited their options.

In Figures 9.7 to 9.10 we examine whether those graduates from specific subject areas who indicate that their options were affected by their debt were actually more likely to be employed in non-graduate occupations during the four years following the completion of their studies. Among graduates of education and medicine (Figure 9.7), among that those graduates who indicated that their repayable debt had affected their options, the share of employment in non-graduate occupations is relatively high during the first 18 months following graduation. Among graduates from the arts and humanities (Figure 9.8), we also observe that the share of employment in non-graduate occupations was consistently 8 to 10 percentage points higher during the first three years following graduation compared to those respondents who either had no debt or indicated that their debt had not affected their options in any way. Among social science graduates (Figure 9.9) and science graduates (Figure 9.10), we also observe that the share employment in non-graduate occupations was consistently 5 to 10 percentage points higher among those who said that their debt had affected their options compared to the other groups.

**Figure 9.7: Debts and employment in non-graduate occupations: medicine, education and other vocational graduates**

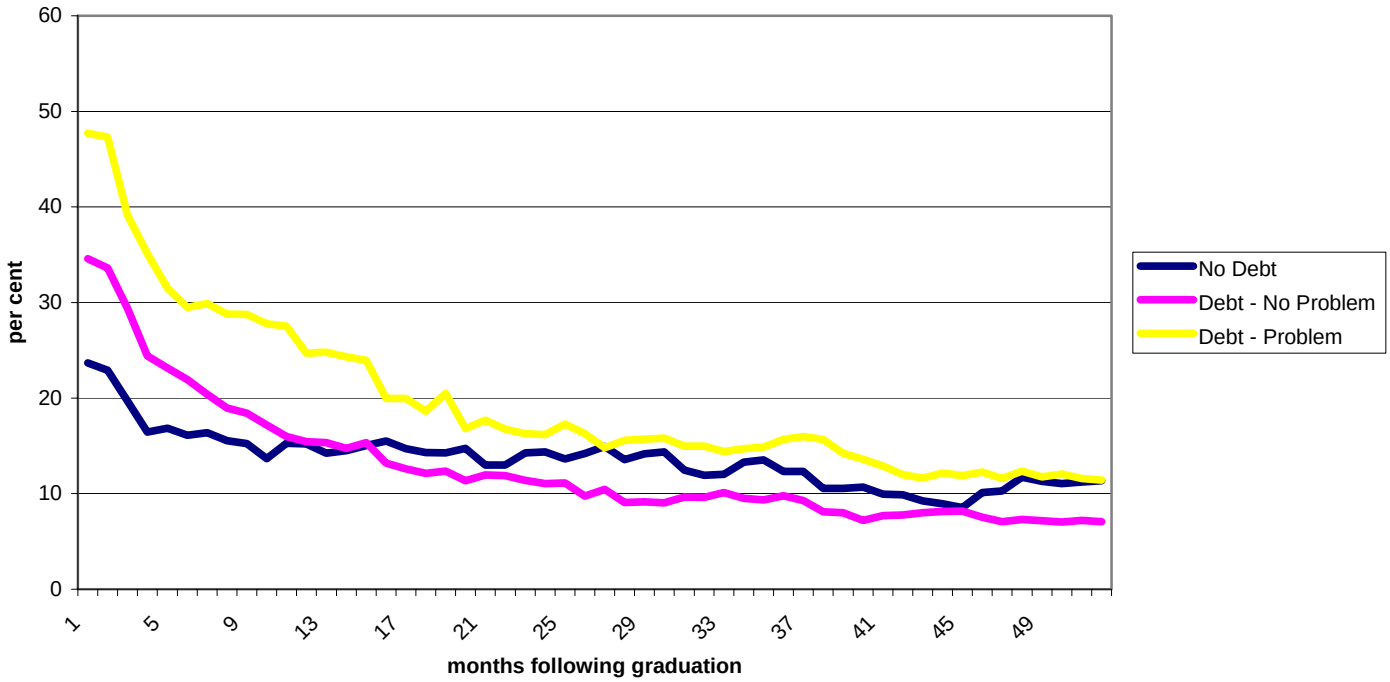


**Figure 9.8: Debts and employment in non-graduate occupations: arts and humanities graduates**

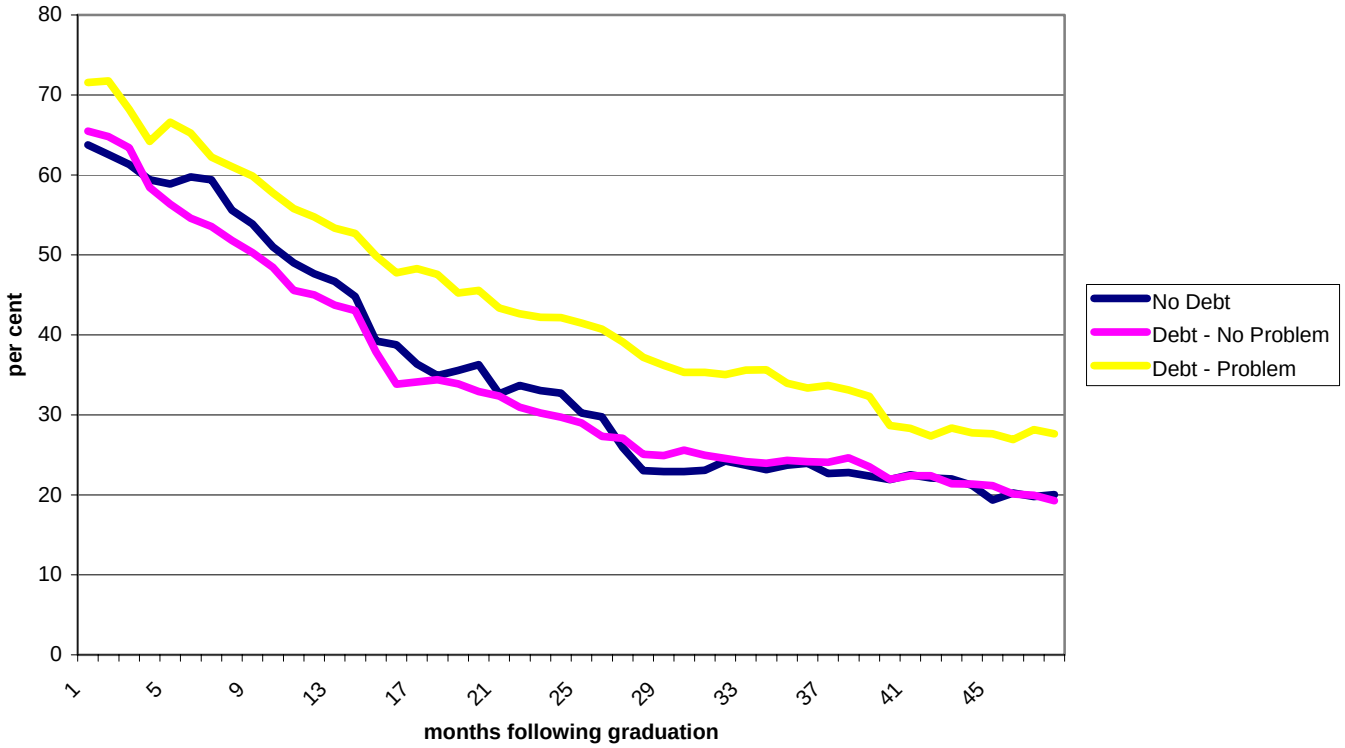



**Figure 9.9: Debts and employment in non-graduate occupations: social science and business studies graduates**

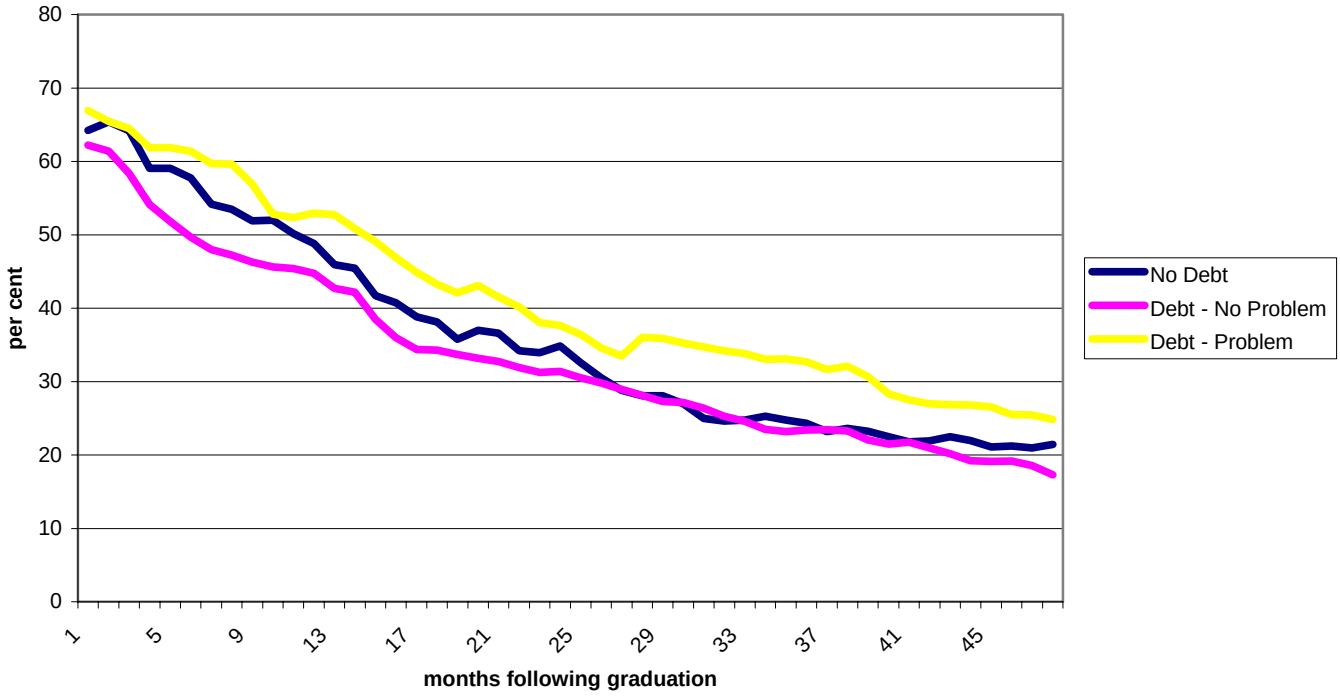
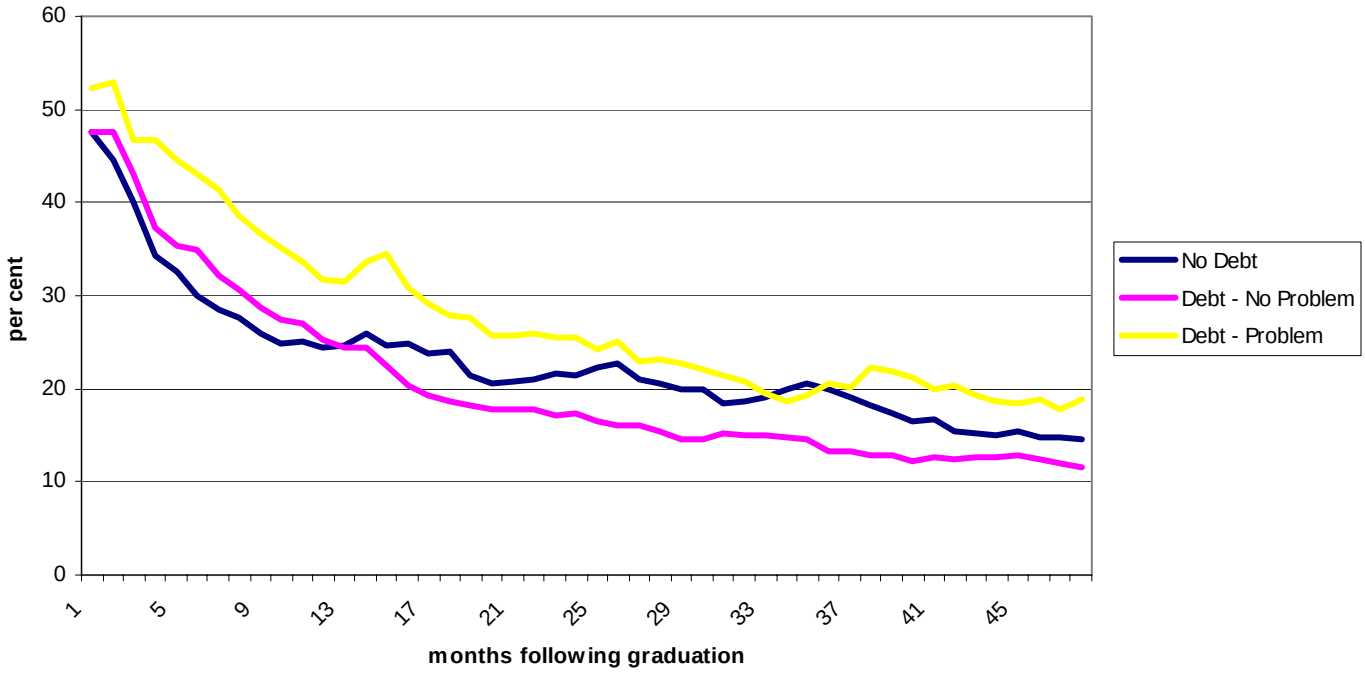


**Figure 9.10: Debts and employment in non-graduate occupations: science graduates**




We conclude therefore that among young graduates from a variety of disciplines, those who indicated that their debts had affected their options were more likely to be employed in non-graduate occupations following the completion of their studies. Among such graduates from education, medicine and other vocational disciplines, this higher rate of employment in non-graduate occupations appears to be a short-term phenomenon. For other disciplines, particularly among graduates from the arts and humanities, employment in non-graduate occupations for those who are affected by their debt remained relatively high throughout the four years following graduation. This group accounts for approximately 20 per cent of young graduates. In contrast, those graduates who indicated that their repayable debts did not effect their options had career history profiles that are similar to those graduates who reported having no repayable debt.

## 9.6 Who reported that their career options were limited by debt?

The issue therefore now turns to identifying what factors are associated with debts limiting career options. The earlier analysis presented in Table 9.6 indicated that the level of debt appeared to be an important contributory factor in terms of whether respondents had stated that their options were being limited in some way by their debt. However, does the type of debt effect also effect whether an individual reports that their debts effected their options upon the completion of their course? To consider this issue and whether other characteristics are also associated with career options being limited by debt, the probability of a graduate

reporting that debts have affected their options is estimated for the 1999 cohort using a statistical technique known as logistical regression. This technique allows us to quantify the *additional* and *independent* effect of a range of characteristics upon individuals' probability that they report that debts incurred as student affected their options after completing their course. As with the preceding discussion, we restrict this analysis to the youngest group of graduates, i.e. those respondents who were less than 25 years old at the time of graduation. By definition, the analysis is also restricted to those respondents who had repayable debt at the point when they completed their studies.

The results from this analysis are expressed in terms of the impact of a variable on the relative odds of reporting that debt had limited career options. The key results are shown in Figure 9.11 (personal characteristics) and Figure 9.12 (debt characteristics). For each of the variable sets, the results are expressed in terms of the percentage difference in the odds of reporting that debt had limited career options relative to a reference category *and* after having controlled for all other factors. For example, the impact of gender on the odds of reporting that debt had limited career options is measured in terms of females compared to males. The coloured bars are used to indicate where a variable is estimated to be significantly different from the reference category at the 5 per cent significance level. Regression results showing the full set of factors controlled for in this model is contained in Table A3.8 in the Appendix.

In terms of personal characteristics (Figure 9.11), we estimate that:

- females were 40 per cent more likely than males to indicate that their debts had affected their career options in some way;
- those reporting having a disability or long term illness at the time of the survey were almost 60 per cent more likely than those with no such disability or illness to have reported that their debts had affected their career options in some way;
- those respondents who agreed strongly with the statement that they did not expect to gain their main fulfilment from work were almost 40 per cent more likely to indicate that their debts had effected their options in some way;
- those with poorer degree results were more likely to report that their debts had affected their career options in some way. Those respondents with a third class degree were estimated to be more than twice as likely (113 per cent more likely) as those who had gained a first to report that their debts had limited their career options compared to;
- no statistically significant effects could be attributed to the social class background of respondents upon the probability of reporting that debts had limited career options (not shown);

- finally, in terms of subject studied, those graduating with degrees in maths, medicine and related subjects and business were least likely to indicate that their debts had limited their career options (not shown).

In terms of debt characteristics (Figure 9.12) we estimate that:

- in terms of repayable debts to the Student Loans Company and other creditors such as banks and credit cards, those respondents with higher levels of debt were more likely to report that their debts had limited their career options;
- the effect of a given level of debt to the Student Loans Company upon the probability of an individual reporting that their debts had limited their career options was less than the effect of a similar level of debt to other creditors;
- the effect of repayable debts to family and friends upon the probability of reporting that options had been limited did not depend upon the level of this debt. However, the presence of this debt, regardless of its level, had a relatively strong influence on the probability of reporting that career options had been limited by debts.

**Figure 9.11: Effect of personal characteristics on reporting that debt had limited career options**

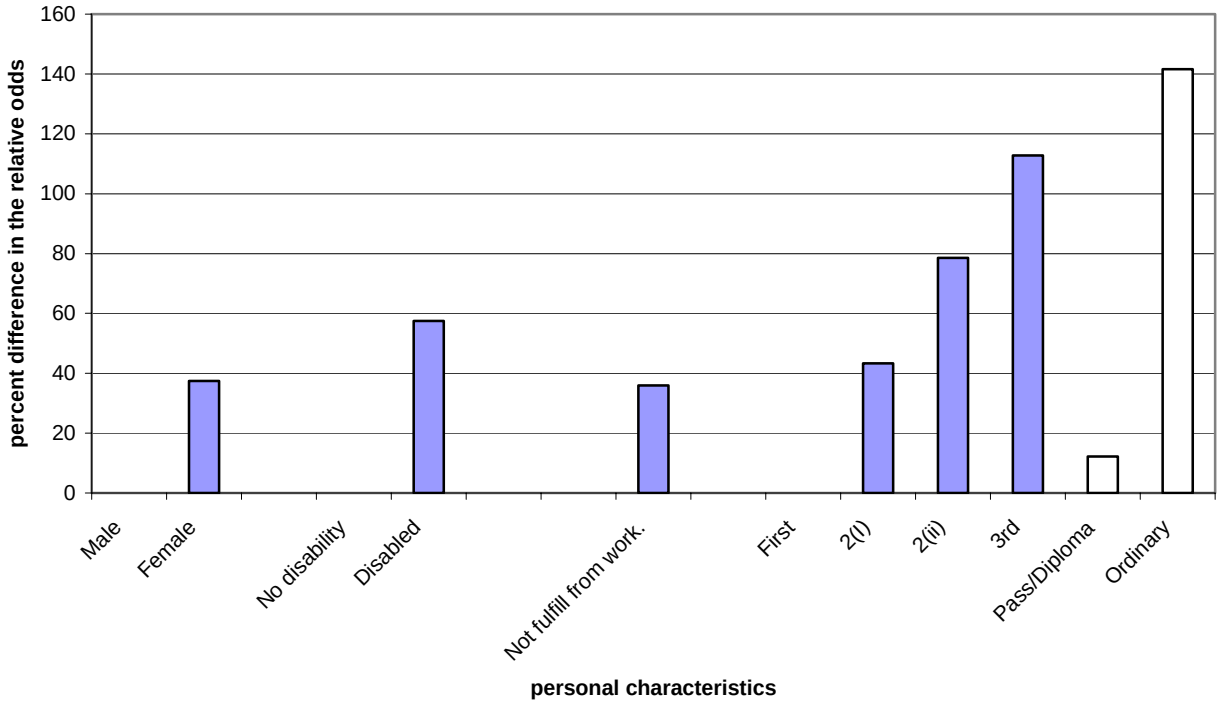
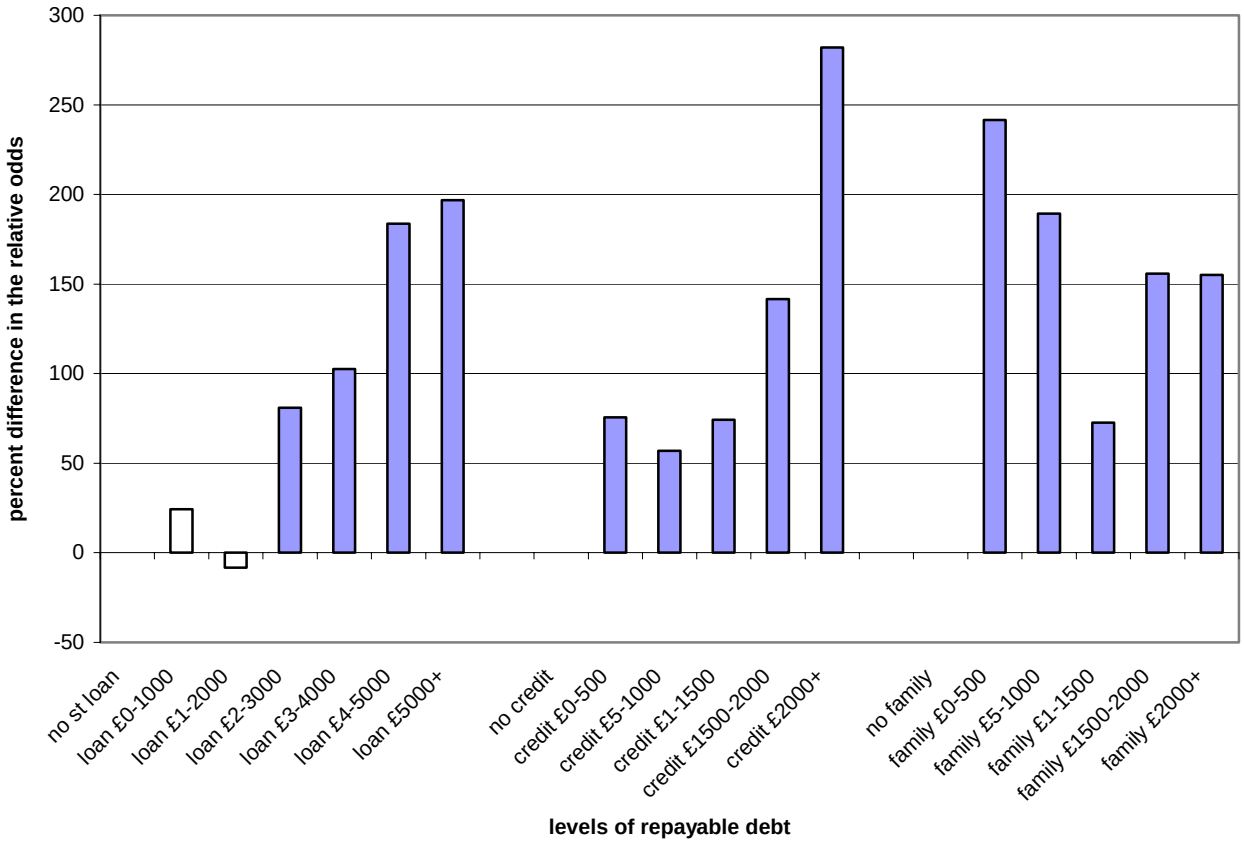



**Figure 9.12: Effect of level of debt on reporting that debt had limited career options**



The above analysis has revealed that those young graduates with repayable debt who gained poorer degree results were more likely to report that their debts had affected their career options in some way. This result highlights a potential problem in interpreting the response to this question. Some respondents may have been inclined to attribute their poorer labour market outcomes to limitations arising from their repayable debt instead of to their own academic performance or other personal characteristics that may have been correlated with poorer employment outcomes. This argument is also relevant to the decision as to whether to continue in full time education, with those who might have found it more difficult to be accepted on a postgraduate course, or to undertake one, preferring to rationalise this decision in terms of debt-induced restriction.

To test these hypotheses, we focused upon the career paths of graduates who had gained an upper second class honours degree, also referred to as a 2(i). We did so because of the relatively large number of graduates who gain such a qualification and because such a qualification would not be expected to inhibit the recipient from continuing with further study if they so wished. As with the preceding analyses, we confined our analysis to graduates who were less than 25 years old at the time of graduation.

In terms of participation in further study (Figure 9.13), we observed that among those graduates who obtained a 2(i) degree, levels of participation in further study were lowest among those respondents who reported that their debts had affected their options after completing their studies. During the first 12 months following graduation, participation in further study was approximately 7-8 per cent points lower among those respondents who reported that their debts had affected their options after completing their studies. The scale of this differential is similar to that observed among all young graduates presented in Figure 9.1. This differential was therefore not being driven by the poorer academic performance of respondents who reported that their options had been limited by their debts.

In terms of the share of employment in non-graduate occupations (Figure 9.14), we observe that among those graduates who obtained a 2(i) degree, the share of employment in non-graduate occupations was highest among those respondents who had reported that their debts had affected their options after completing their studies. During the first three years following graduation, the share of employment in non-graduate occupations was approximately 10 percentage points higher among those graduates who indicated that debts had limited their career options. However, the size of this differential does appear to narrow beyond three years after graduation.

**Figure 9.13: Debts and participation in further study among 2(i) graduates**

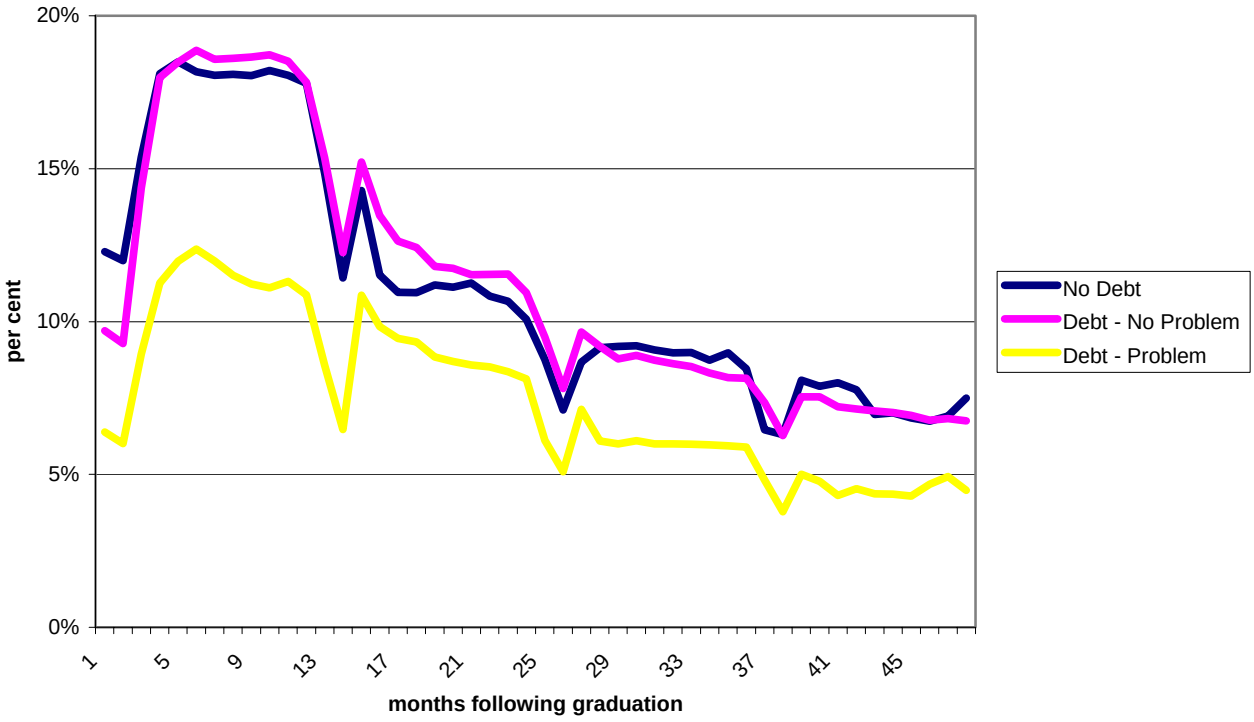
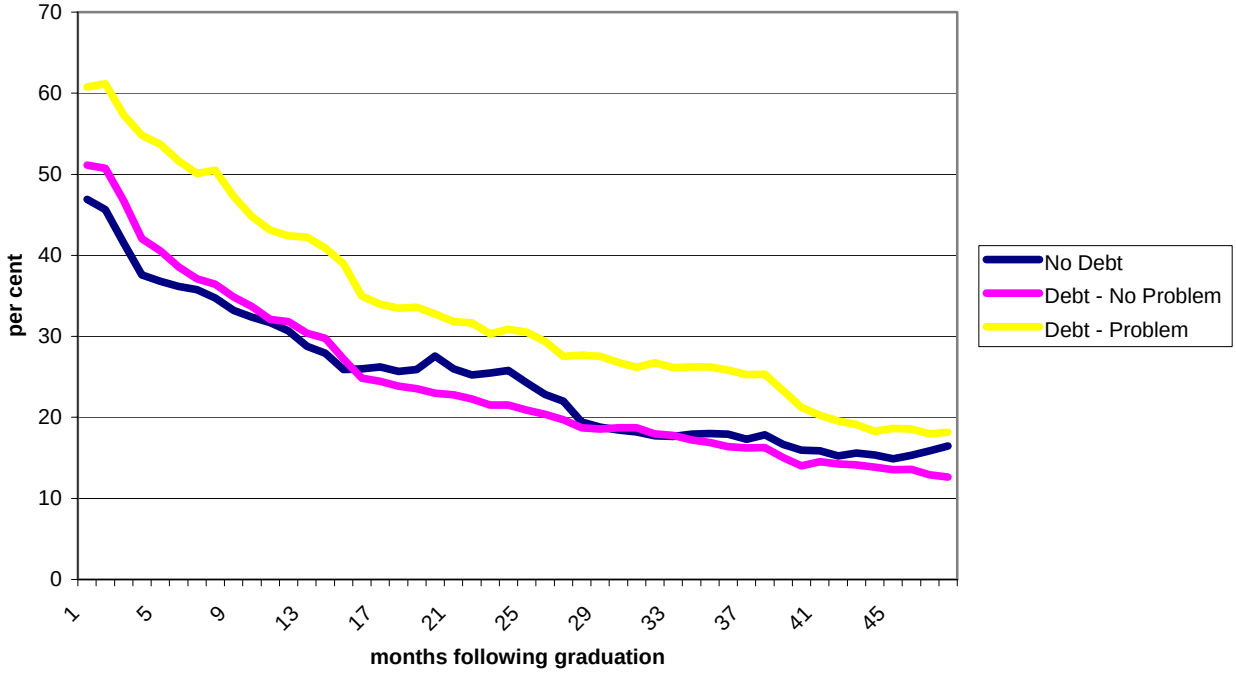



**Figure 9.14: Debts and employment in non graduate occupations among 2(i) graduates**



## 9.7 Summary

- The 2002-3 survey collected information from the 1999 cohort on student indebtedness at the time of graduation. Given continuing changes in the mechanisms of student support, these findings should be treated with caution, in terms of their applicability of these findings to present and future cohorts of graduates. Nonetheless, 77 per cent of the respondents reported that they had some kind of repayable debt upon the completion of their studies during 1999. Among those with debt, the mean total amount of repayable debt was estimated to be £6,205, with the median level of repayable debt estimated to be lower at £5,500. Debts from the Student Loans Company accounted for 66 per cent of all repayable debts.

- Students with degrees in arts were most likely to report that they had repayable debt at the end of their studies and had the highest levels of debt. Those with degrees in mathematics and computing, medicine and related, and business studies were least likely to report that they had repayable debt at the end of their studies.

- The survey revealed that 92 per cent of respondents had undertaken paid work while studying for their 1999 qualification. Across all groups of respondents, 85 per cent indicated that they undertook paid work during the vacations while 47 per cent had undertaken paid work during the term time. The incidence of term time working was more prevalent among respondents from lower social class backgrounds;

- Undertaking paid employment while studying was associated with poorer levels of academic performance, although this was dependent upon when the work was undertaken. Those who worked during term time were estimated to be approximately a third less likely to gain a 'good' degree (First or Upper Second Class Honours) compared to those who undertook no paid work during the course of their studies. Working during the vacation was not estimated to have a detrimental effect upon degree performance;

- 25 per cent of those with repayable debts indicated that their choices following graduation had been limited in some way by their debts. Among this group of respondents we observe lower levels of participation in further full time study. We also observe a persistently higher level of employment in non-graduate occupations among this group compared to those who had either no debt or those who indicated that their debts had not effected their options;

- We observe no difference in participation in further study or employment in non-graduate occupations by level of debt. Therefore, it is not the absolute level of debt *per se* that is associated with subsequent career profiles but how graduates are effected by this debt. The mechanisms through which debt may affect an individual's choices are complex and not uniform across different groups of respondents.

- We observe no difference in participation in further study or employment in non-graduate occupations by level of debt. Therefore, it is not the absolute level of debt *per se* that is associated with subsequent career profiles but how graduates are affected by this debt. The mechanisms through which debt may affect an individual's choices are complex and not uniform across different groups of respondents.

# CHAPTER 10

## Was it worth it?

### 10.1 Introduction

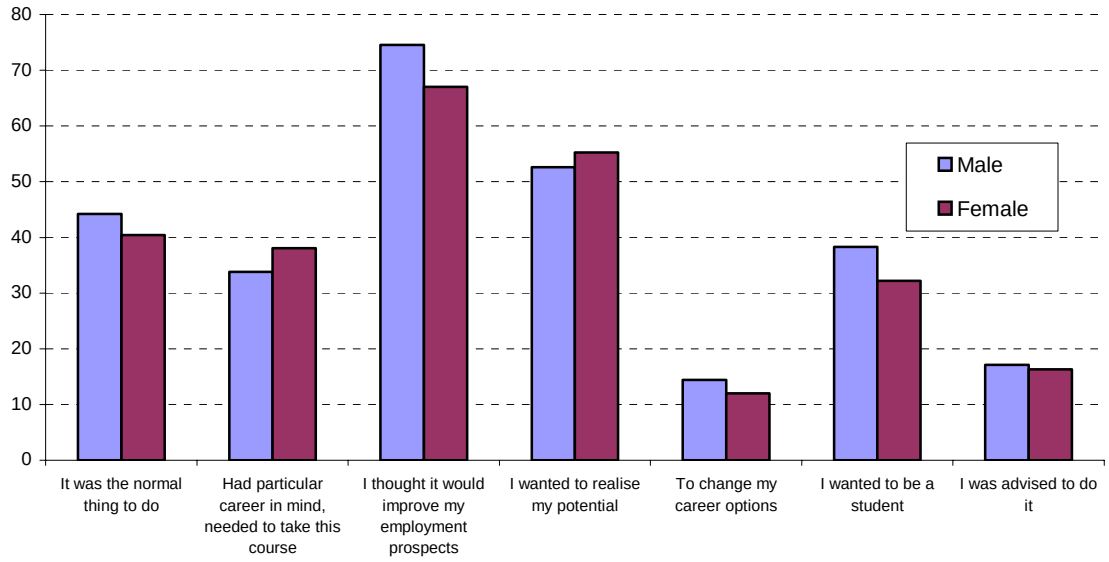
The public returns to higher education are difficult to measure and there are good reasons why much of the justification for and evaluation of HE expansion has focused on private returns in the form of labour market advantage and the 'graduate premium'. However, higher education has always been about more than gaining economic advantage. Furthermore, given the aim of attracting a more diverse undergraduate population onto degree programmes it is axiomatic that the diversity of graduate expectations and aspirations has also become broader. Students have always entered higher education with a wide variety of views about what they expected and hoped to get out of the experience. Focusing solely on earnings and even the appropriateness of the jobs graduates obtain misses at least part of the picture. Graduates with differing expectations of higher education are likely to have different benchmarks by which to assess whether the experience was worthwhile and whether it represented a good investment of their time and, in many cases, significant financial input and opportunity costs. Chapters 6 and 7 discussed the impact of higher education on earnings and labour market outcomes for the 1999 cohort, which are key considerations for assessing the value of a degree for difference groups of graduates. This chapter, however, focuses on the wider evidence from the survey and interviews to investigate this question in a broader sense, in order to reflect the respondents' range of motives for undertaking undergraduate study, expectations of career development and earnings and subjective evaluations of their HE experiences and outcomes.

### 10.2 Why embark on higher education?

As a starting point we examine responses to the question: Why did you embark on higher education? Figure 10.1 emphasises that whilst the majority of the sample embarked on higher education believing that their qualification and experience would improve their employment prospects, over half also saw higher education as an opportunity to achieve their potential and the interviews revealed the importance of intrinsic course-related reasons for many graduates. There are small but perhaps significant gender differences in motivation, with women marginally more motivated by the opportunity to realise potential or to pursue particular career aims. Unsurprisingly, the ages of respondents and subjects of study were significantly related to the reasons given for embarking on higher education. Not surprisingly, social class background appeared influential in terms of motivations to study. Those from ‘higher’ class groups were more likely to indicate it as the normal thing to do and a desire to be a student. However, the propensity to have indicated that motivation included the desire to

improve employment prospects, realise potential and pursue a particular career appeared relatively uniform across the sample. Type of institution attended also appeared significant, but this clearly reflects the different social class and age profiles of different HEIs. Those from old and 1960s universities were notably more likely to indicate higher education as 'the normal thing to do' and a desire to be a student. Those from new universities and HE colleges were more likely to have aspired to change career options, and those from old universities were notably less likely to indicate having a particular career in mind, especially in comparison with graduates of HE colleges.

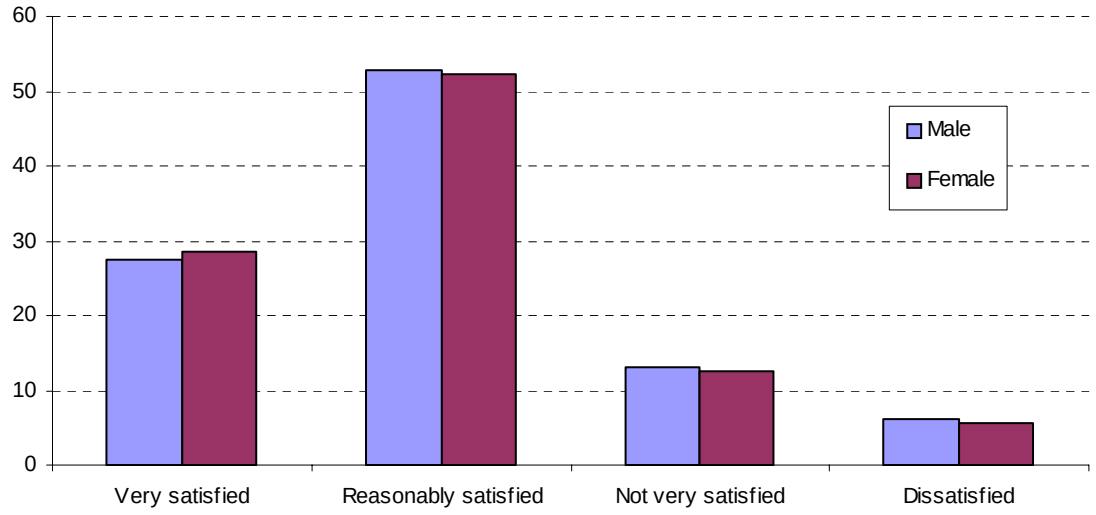
**Figure 10.1: Reasons for embarking on higher education, by gender**




## 10.3 Would they do it again?

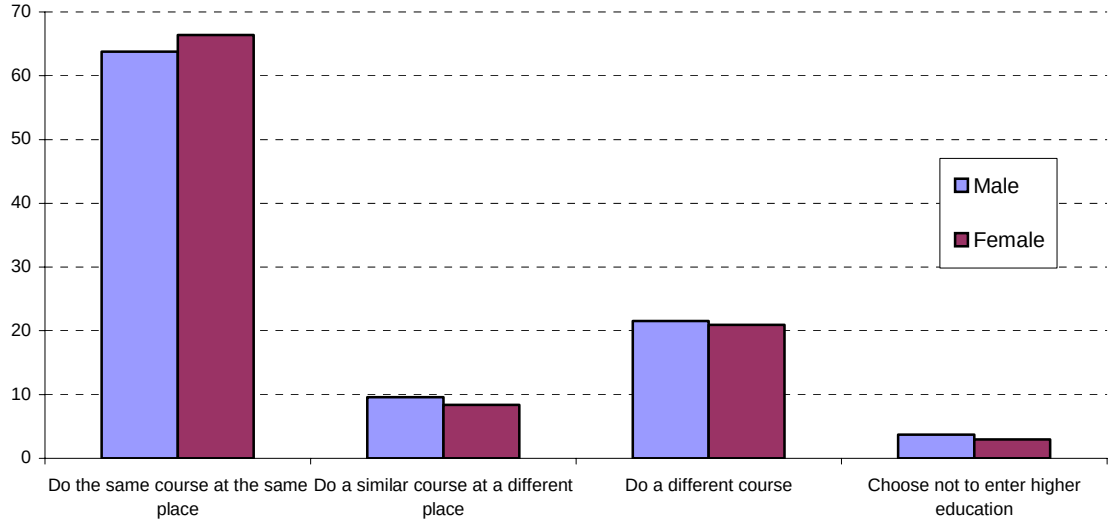
It is clear from the trends revealed by analysis of this cohort's early career experiences, and those of the 1995 cohort, that a significant proportion of graduates take time to access employment which makes full use of their higher education and the potential developed by it. In the interview programme, we disproportionately sampled those at this 'stickier' end of the graduate labour market. Conducting the interviews revealed that some respondents are more able than others, by dint of personal circumstances and personality, to take advantage of opportunities available to graduates. Evidence of pro-activity and energy in researching opportunities was invariably correlated with labour market success – and many of those who currently had low earnings had made choices predicated upon longer-term interests, non-pecuniary orientations or simply, the recognition that their chosen field of employment did not offer high earnings. The obstacles encountered by particular sub-groups were discussed fully in Chapter 7, but we have not revealed evidence of significant numbers of overeducated individuals hampered by lack of career development opportunities and, the vast majority of respondents reported being reasonably satisfied or very satisfied with their career so far (as shown in Figure 10.2).

**Figure 10.2: Satisfaction with career so far, by gender**




The other telling evidence which suggests overall satisfaction amongst the 1999 graduates in terms of their higher education and subsequent labour market outcomes was that most, with hindsight, would make the same choices if considering embarking upon a degree programme. Figure 10.3 shows that over two-thirds claimed that they would do exactly the same again: the same course at the same institution. Most of the remainder would still opt for higher education, but would do a similar course at a different institution or a different course altogether – most often, it appears, one which was more vocational or provided the opportunity for work experience.

**Figure 10.3: Extent to which respondents would, with hindsight, do degree again, by gender**




Only a minority of approximately 3.5 per cent would choose not to have entered higher education at all and, whilst focusing now on what is a small and unrepresentative proportion

of the graduate labour supply, it is useful to examine their characteristics and assess how far these and their experiences of HE or the labour market have policy implications. Means of entry to higher education (*e.g.* UCAS first/reserve choice, clearing) was not significantly related to the likelihood that a respondent would choose, with hindsight, not to enter higher education, although a marginally higher proportion who entered through clearing reported that they would choose to do a different course (although means of entry was not connected to subsequent career satisfaction).

Those who said that, with hindsight, they would not enter higher education again, were:

- more likely to have had debts and have options affected by them;
- more likely to be male;
- more likely to have 2.2 or lower degree (59 per cent compared with 38 per cent of sample);
- more likely to come from lower socio-economic background (23 per cent were in NSSEC groups 5 and 6 compared to 15 per cent of sample);
- more likely to have attended a post-1992 university;
- less likely to have studied vocational subjects: more likely to have studied humanities or business studies; and
- less likely to have studied part-time or sandwich degree.

Table 10.1 examines the distribution of reasons given by disaffected graduates for embarking on higher education compared to those of the graduate sample as a whole. It shows, amongst these disaffected graduates, greater instrumentality and higher expectations that HE would improve their job prospects, but also less likelihood that they had a particular career in mind at the outset. There are very significantly lower responses for improving potential and wanting to be a student suggesting, perhaps, lower enthusiasm for higher education *as a process*.

**Table 10.1: Reasons for embarking on HE, comparing disaffected respondents with total graduate sample**

| Reasons | **Disaffected respondents %** | **All graduates %** |
|---|---|---|
| It was the normal thing to do | 34 | 42 |
| I had a particular career in mind | 21 | 37 |
| I thought it would improve my job prospects | 78 | 71 |
| I wanted to realise my potential | 37 | 55 |
| To change my career options | 13 | 13 |
| I wanted to be a student | 17 | 36 |
| I was advised to do it | 22 | 17 |
| n (Weighted) | 2862 | 76,997 |

As far as outcomes at the time of the survey were concerned, it is not surprising that these were related to their negative views of their HE experience. Such respondents were twice as

likely to have been unemployed and significantly less likely to be in full time employment related to their long term career plans (38 per cent compared to 67 per cent overall). As far as regional location was concerned, they were half as likely to live in Inner London at the time of the survey and significantly more likely to be in the regions where there has historically been a relatively narrower range of graduate jobs: Wales, Yorkshire, the North of England, Northern Ireland and Scotland. A significantly higher proportion were employed in SOC(HE) non-graduate occupations than of those who were more positive about their HE experience (45 per cent, compared with only 16 per cent of those who would do the same course again). Table 10.2 compares the responses of disaffected graduates with sample responses on key aspects.

**Table 10.2 Key aspects of current occupations, comparing disaffected respondents with the total graduate sample**

| | Disaffected respondents % | All graduates % |
|---|---|---|
| likely to be in a job where degree was required | 28 | 61 |
| likely to be using degree knowledge | 39 | 47 |
| likely to be using degree skills | 61 | 75 |
| likely to be in non-graduate job | 42 | 17 |
| likely to have low job quality rating | 64 | 36 |
| satisfied with current job | 36 | 14 |
| to perceive they were in appropriate job *viz.* qualifications | 60 | 21 |
| n (Weighted) | 2862 | 76,997 |

A small minority of interviewees who expressed dissatisfaction with their careers were, unsurprisingly, inclined to blame their 'valueless' education. Along with this, there tended to be a significant element of fatalism about their lack of opportunities and their inability to escape from what they perceived as essentially 'non-graduate' work.

> *'… whilst working for two or three different insurance companies [my] money never really went up and when I mentioned about the degree they said it was up to me, you go and do the degree but it won't count for anything in this job. So I chopped and changed… but [promotion] never materialised and after spending three or four years in insurance I just had enough and I thought I'd rather not work for such little money… I was so frustrated and fed up it got to the point where I was having problems with stress… Everywhere I went they said "your qualifications don't count for anything here"'.*
>
> [Interviewer: So you see the time you spent doing your degree as a waste of time…?]
>
> *'Yes. If I could get those years back I certainly wouldn't do it again'.*
> (058, male business studies graduate, care home assistant manager, previous salary £12k-£15k, non-graduate job)

Another interviewee, who had undertaken higher education in order to move out of what she considered non-graduate work and had been unsuccessful in obtaining employment in her

disciplinary field, felt the degree had been of no value in terms of her career and therefore considered it to have been a waste of time and money:

> *'I would have still ended up in the position I'm in now if I would have carried on working full-time…. I applied for over two hundred jobs, I felt this degree was a total waste of time; I was a self-funding student, which was a waste of money. I'm still paying for it now, I'm a single parent and to be honest it was the biggest waste of time and money that I've ever spent'.*
>
> [Interviewer: Did you enjoy it at all?]
>
> *'I did but it was hard work, bringing up a child on your own, working part-time to support going to university full-time and paying for it all yourself isn't fun and everyone tells you if you do a degree the world will be your oyster, you'll earn loads of money. No'.*
>
> [Interviewer: It had no value in terms of your own development and feelings about yourself?]
>
> *'It proved to myself that I could do it but other than that I'm still paying for it'.*
>
> (055, female maths and computing graduate, principal administrative officer, public services, £27k-£30k, non-graduate job)

More detailed exploration is needed to investigate the causes of dissatisfaction with higher education in relation to subsequent labour market experience, but the interview programme provided some insight into this. It was clear that many disaffected graduates had embarked on their courses with lack of a clear direction and unrealistic views about the options that would be available to them on graduation. They had subsequently tended to be passive in their response to obstacles, seeing themselves as victims rather than people with the capacity to initiate change. Again, this reinforces the finding reported elsewhere in this report that for some graduates, more effective careers guidance is needed in order to help them set and realise appropriate career goals. It is however important to bear in mind that some candidates had been resistant to advice and, sometimes as a result of obstacles encountered but sometimes simply through lack of motivation, had failed to take advantage of opportunities offered by their institutions and communities.

### 10.4 Career satisfaction – measures of success

As many of the previous quotes suggest, career satisfaction is, for many, inextricably linked to the value individuals place upon their degree and the extent to which they consider it to have been a good investment. Figure 10.2 showed that just over 80% of sample members were either very or reasonably satisfied with their careers to date. But what are the benchmarks by which these graduates measure satisfaction? It is clear from the range of responses provided that the majority of graduates do not measure the value of their degrees purely in terms of economic returns. Graduate labour market competition, and subsequent achievement of satisfaction, is not simply a flat 'first-to-the-line' race based solely on salary or the pursuit of positional advantage or prestige, but a range of options where different entrants seek trade-

offs among a range of rewards and values (*e.g.* flexibility, work-life balance, job satisfaction, social utility).

We examined the extent to which respondents felt that their current employment was appropriate for someone with their skills and qualifications and also, how satisfied they were with their current job overall. Seventy-one per cent of graduates in employment at the time of the survey scored their 5 or more on a scale of 1-7 (where was not satisfied at all and 7 was completely satisfied) that asked them: 'all things considered', to rate their jobs. Eighty-three per cent were satisfied or very satisfied with the way their careers had developed so far. Those from education and medicine (and related) degrees indicated marginally greater satisfaction, probably based on their greater likelihood of having settled into an established career path more quickly than graduates from less vocationally-specific degrees.

Overall, therefore, it appears that the 1999 graduates are largely satisfied with their current jobs and, in the main, as discussed in Chapter 3, at the time of the survey most were in work that they regarded as appropriate for someone with their qualifications. Circumstances change rapidly over the course of early career and so to follow up the question of career satisfaction and to explore variables associated with these assessments, we asked in the interviews whether satisfaction with career development had changed since completing the questionnaire. Early graduate careers are characterised by high rates of occupational mobility and many of those we interviewed had changed jobs between completion of the questionnaire and being interviewed[34]. Career satisfaction is, of course, composed of many factors including levels of satisfaction with various aspects of current jobs, work-life balance and speed of progress made so far. There were, of course, cases where graduates expressed career satisfaction according to conventional 'measures' of achievement to date; salary, responsibility, job satisfaction, competence and comparison with peers. On the other hand, several reported being satisfied with their careers but not necessarily on the basis of what had already been achieved but because of achieving a position with clear development opportunities:

> *'Yes, bearing in mind the situation I was in, in that I was being very specific in what I was looking for and that the market I was trying to get into was the worst it has been in a very, very long time, I am more than happy with the way I have developed. I can see myself developing over the next 3 years in terms of a career path. Despite the hurdles that have been put there, I am more than happy with where I have got to at the current time. Hopefully that will continue over the next 3-4 years'.*
>
> (032, male natural science graduate, futures trader, financial services, £33k-£36k, niche graduate job)

Importantly, however, some respondents drew attention to the importance of wider values. One interviewee reported taking his current, very low-paid job because of his values. In assessing his career to date, he said:

[34] This is why earnings are sometimes unknown for current jobs, or given for previous jobs.

*'I am 31 now and I am probably earning about as much as I could have if I had just left university and gone straight into working for a bank or something. I would have been earning that then, 12 years ago, as opposed to earning it now when I am 31. So just from that point of view, financially I have probably done a lot worse than I could have. In terms of job satisfaction and general satisfaction with the rest of my life outside of work as well then I would say that I probably couldn't have done much better. I guess I think in terms of the potential that people saw in me when I was at school, I haven't done what they might have expected me to do… I'd been working in various things, like debt collection, insurance and that kind of stuff and I was really just sick of doing that kind of thing. I wanted to work for an organisation that was actually setting out to help people, rather than just take money off them… The thing I like about [this job] most is the variety, the fact that I find some of the work challenging as well. I don't go to work everyday thinking "oh God, I'm just going to do the same things all over again". I always feel like I am learning something all the time… There's rarely a week goes by without me learning something that I didn't know about a programme or an idea about how to organise things, or even stuff about the drug and alcohol field… Some of the work is stuffing envelopes and is dreary, but a lot of it can be a challenge, for instance, speaking in front of quite a large group'.*

(028, male social science graduate, administrator, public services, less than £10k, non-graduate job)

## 10.5 The value of undergraduate education

In the interviews, a closing question put to all respondents was: 'With the benefit of hindsight, what do you value most about your undergraduate education?' The responses can be grouped into a number of broad categories: instrumental advantages, which indicated the extent to which graduates perceived that their degree had provided labour market advantage, or skills development; intrinsic benefits, where respondents were enthusiastic about university as an 'academic' experience, stressing the values of what they learned and the process of learning; and informal values, where the focus was on university as a 'social' experience, friendships and opportunity for self-development. We address each of these in turn.

*Labour market advantage*

When asked what they valued about their undergraduate education, many respondents referred to the fact that their qualification had enabled them to obtain their current job or that it had enabled them to embark on a particular career path. This ranged from those who valued the very achievement of a degree, regardless of subject, to those who specifically mentioned their subject and skills acquired on their programme of study. For some it was less the experience of higher education that was valued than its end product - the attainment of a credential. For others, the content of the degree or the process of studying had been very important, although the main value was the career opportunities it had led to:

*'I think the fact that I've got an events management degree, I wouldn't say it's unique now but at the time when I was just starting out, it was a very new thing and it was quite good to have, because not a lot of people had them.. I think that it stood out a little bit, because I'd been working in events-specific areas, from another degree. If I am applying for an events role within a company, somebody that's got an events management degree, I would imagine, stand out quite a bit more from somebody that's got a business degree. I value the name of the degree because I think when employers are looking at it; it's not something they might expect to see'.*

(033, female business studies graduate, national events executive, not-for-profit, £21k-£24k, new graduate job)

Others commented not on the degree itself but on the labour market advantages associated with the institution they had attended for reasons of reputation, its academic approach or the opportunity for extra-curricular activity. One particular aspect of their degree itself that several respondents referred to in terms of labour market advantage was their work experience, whether as a sandwich element of their programme of study or degree-related vacation work.

*'It was doing a sandwich degree course, getting the opportunity of working in industry whilst learning. I came out with skills that some people graduating at the same time didn't have.'*

(050, male engineering graduate, environmental manager, manufacturing, £24k-£27k, modern graduate job)

Other graduates valued their degree for instrumental reasons but which closely related to their personal circumstances. For example, several of the interviewees who had studied as mature graduates commented that they valued the fact that their degree had enabled them to change careers, to progress out of non-graduate work or start again after a career break.

*Skills development*

Linked to their subsequent experience in the labour market, a number of respondents referred to the skills acquired on their degrees that they have subsequently used in the workplace. There was an explicit or implicit implication that whilst careers progress, possession of a degree becomes less relevant than experience, skills development during a programme of study was seen to have laid the foundations for subsequent development and often proved to be of greater value than specific subject knowledge:

*'It was the skills that it taught me. It wasn't the fact that I can tell you things about French novelists or anything like that, it is the fact that I learnt how to argue, to think clearly and properly which is something … well, maybe I had picked up at school, but I think that was what was really refined when I was at university…'*

(073, female languages graduate, operational management consultant, business services, £33k-£36k)

*'I think it's more the analytical skills that you build up and the logical thinking and the approach, perhaps more so than some complicated calculus or whatever… the skills rather than the material, if you like'.*

(008, female maths and computing graduate, research assistant, education, £18k-£21k)

*University as a learning experience*

Alternatively, there were those who valued the 'pure' academic experience of studying for a degree. This may or may not have been work-related, but their evaluation referred to the actual experience of studying, on an intellectual level, as the most valued element:

*'Although it hasn't helped me to get where I am now in my job, I wanted the time to study art for three years and I enjoyed that so much'.*
(042, female arts graduate, typesetter/designer/illustrator, publishers, £10k-£12k, new graduate job)

*'I think my own personal development while I was there, both academically and socially…. the fact that I'd seen higher education at that particular time as something beyond me. I'd seen students as different people to me. In actual fact I found that that I was a good student and I was a good scholar'.*
(065, mature male humanities graduate, learning mentor, education, £18k-£21k, non-graduate job)

*Personal and social development*

Not surprisingly, many respondents mentioned the *rite de passage* and social aspects of being a student and many confessed that looking back, the things they valued most about the experience of university were activities outside the confines of lectures and tutorials. Connected to this, for many, university was viewed as predominantly as a time of self development, *'broadening horizons'* and *'growing up'* within what one interviewee referred to as a '*safe*' environment. Amongst others, respondents referred to the attainment of greater confidence, independence, autonomy, motivation, self discipline and self reliance. Importantly, given the fact that many students will be deterred from studying away from home because of the increasing individual cost of attending university, a number of graduates particularly valued being away from the parental home and their local community:

*'It was probably the ability to get away from your home, having a new experience in terms of living with other people, managing yourself, sort of putting yourself in the environment where you had got to have the discipline to get on with what you have got to do. There is no one there to push you to do it. The specific things relating to the law degree that I learnt, now they're 99% irrelevant, most of what you learn in doing a job, you learn on the job not prior to it, so what I value most about it is probably the life-changing side of things … disciplining yourself to do what needs to be done, preparing yourself for the outside world.'*
(039, male law graduate, bar manager, hotel and catering, previous salary £15k-£18k, non-graduate job)

### 10.6 Was the time you spent in HE a good investment?

Unless mentioned spontaneously in the answer to the question about what respondents valued most about their undergraduate experience, the question was followed up with: "Do you consider the time you spent in higher education was a good investment?" The value question is a considerably broader question than whether higher education was a good investment for them, especially in the light of recent increases in the personal cost of attaining a degree. Despite the costs, however, the majority of the interview sample viewed the time spent doing a degree as a good investment – and this was a sub-sample that over-represented graduates who had not yet entered, or did not intend to enter what might be considered to be traditional graduate career tracks. However, as with responses about what they valued most, different respondents had different *rationales* for arriving at their conclusions and, importantly, many positive responses were qualified. Many respondents were unequivocal in their belief that it had been a good investment, particularly those who it could be argued had been successful in their subsequent careers.

> *'Oh definitely, some courses really benefit people in their careers and this was one of them'.*
> (006, mature, female maths and computing graduate, research analysis officer, public services, £21k-£24k, traditional graduate job)

Others were more circumspect and felt that such an assessment, only several years into their careers, might be premature:

> *'I think so. Perhaps you could phone back in forty years time'.*
> (021, male humanities graduate, library assistant, public services, £10k-£12k, non-graduate job)

Individual perceptions and rationalisation about the positive and negative effects of higher education vary over time. Several cases from the interview sample highlight the way in which positive views are related to outcomes and it is not surprising that as career satisfaction increases, so does the positive assessment of whether it was all worth it. After 3-4 years into the labour market we found evidence of this.

> *'Had you asked me* [if HE had been a good investment] *maybe a year and a half ago, I probably would have said no, but now my views are changing because I can actually see a career path and finally that I am on that graduate programme, I am training, being supported by a multi-national company that are interested in* [their employees'] *development. Now my view is different to what it was a year and a half ago.'*
> (085, male business studies graduate, assistant trainee engineer, construction, £18k-£21k, modern graduate job)

Similarly, others reported that in career terms their higher education had yet to positively impact on their employment to date however even those with more negative assessments in

labour market terms often qualified these opinions by referring to the value place on the personal development that had been achieved as a result of their university education:

> *'It depends what you mean by an investment. If you mean financially, then I would say no because I am still in debt from being at university and I am not in a financial position where I am earning a lot of money. I am not making any more money now than I would have if I hadn't gone to university and I am in a hell of a lot more debt than I probably would have been if I hadn't. But in terms of developing character and confidence and things like that, I think it was worthwhile yes. It was a good investment in those terms, but financially I would have to say no'.*
> (028, male social science graduate, administrator, public services, less than £10k, non-graduate job)

As previously discussed, several respondents hinted at the learning process that early careers undoubtedly bring and referred to 'false starts' or lessons learnt with varying degrees of pragmatism. Some of these cases also suggested that respondents may have adjusted their expectations when faced with the realities of the labour market and their own aptitudes and preferences. Consequently, they had revised their opinion of whether their undergraduate education had been worth it. However, in the main, even those who had suffered setbacks in their career development were largely positive about their experience.

## 10.7 Summary

- Most 1999 graduates embarked on higher education believing that their qualification and experience would improve their employment prospects but over half also saw higher education as an opportunity to achieve their potential.
- Only a minority of approximately 3.5 per cent of graduates would choose, with hindsight, not to have entered higher education. Members of this minority were more likely to be male, to have achieved a lower degree grade, to have come from a lower socio-economic group, to have attended a new university and to have had their career options affected by student debt. They also reported higher expectations that going to university would improve their job prospects, but less likelihood of having had a particular career in mind when choosing to enter higher education.
- Over 80 per cent of graduates surveyed reported being either reasonably or very satisfied with their career to date but the majority of graduates did not measure the value of their degrees (and career satisfaction) purely in terms of economic returns. Similarly, the interview respondents gave a wide range of responses when asked what they valued most about their undergraduate experience. Four broad themes were discernible; labour market advantage, skills development, academic and intellectual stimulation and achievement, and social and personal development.

- When asked directly whether they considered that their undergraduate education had been a good investment, the vast majority of interviewees considered answered enthusiastically that it had been: some citing subsequent labour market success and access to employment or further education and training; others stressing the opportunity for personal development. Many stressed that they considered the non-pecuniary benefits to have been more important than financial or directly employment-related variables. However, given the close relationship between higher education and early career success, the perception of the 'worth' of holding a degree tended to be closely related to the degree to which they were satisfied with their career development.

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## Appendix I: An overview of the 1999 HND/DipHE sub-sample

This appendix provides a brief overview of those survey respondents who had completed a HND in 1999, comparing where appropriate with the overall graduate sample examined in this report. Most importantly it makes comparisons in employment outcomes four years after the completion of their studies between those had subsequently gone onto to obtain an undergraduate degree and those who had not. It is worth noting that the survey also obtained responses from 293 HE completers from 1999 who had obtained a DipHE. On further analysis, it was found that 53 per cent of these respondents had completed a course of study in medicine and related subjects and the majority of those in employment were working in nursing or related areas of healthcare or social care. For these reasons, it was decided that comparative analysis would yield little of value given the specificity and homogeneity of the sample. This appendix focuses, therefore, on HND completers from 1999.

In total, the sample included 254 respondents who had completed a HND in 1999, of which 60 per cent were males[35]. This sample was similar in age distribution to the graduate sample (85 per cent young graduates, 4 per cent young mature and 11 per cent older mature). Predominantly, HND respondents had completed programmes of study in maths and computing and business studies as shown in Table A1.1

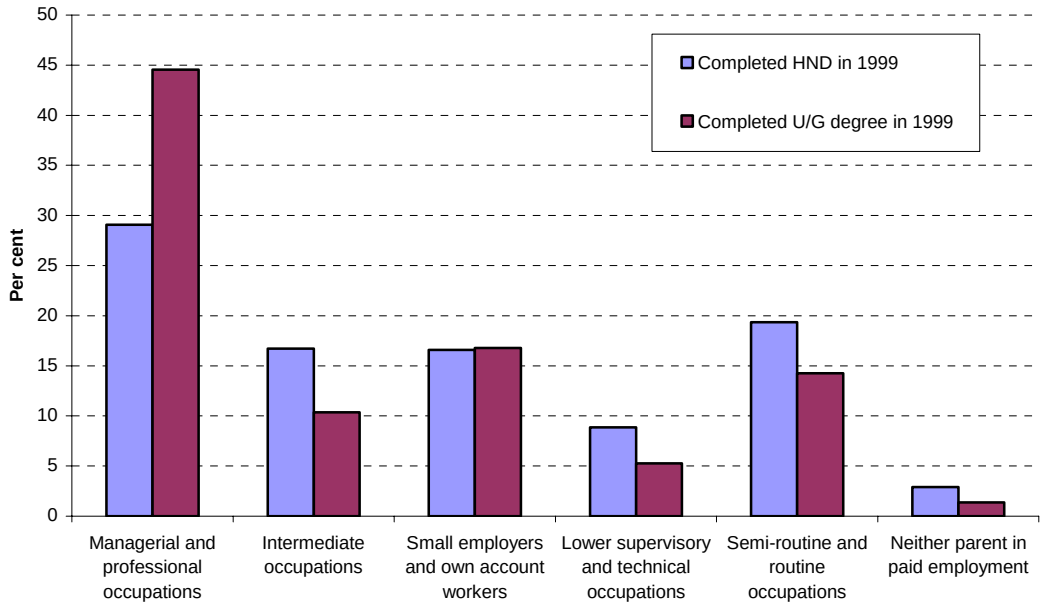
**Table A1.1: Subject of study of 1999 HND Completers**

| | Per cent |
|---|---|
| Arts | 3.7 |
| Law | 2.7 |
| Social Sciences | 2.1 |
| Mathematics and Computing | 24.4 |
| Natural Sciences | 4.5 |
| Medicine and Related | 2.4 |
| Engineering | 7.5 |
| Business Studies | 33.8 |
| Education | 5.6 |
| Interdisciplinary | 3.9 |
| Other vocational | 9.2 |

Differences between the social class backgrounds of the HND sample and the comparable graduate sample from 1999 in Figure A1.1 show the lower propensity of those from managerial and professional backgrounds to complete HNDs.

[35] All subsequent figures refer to the weighted proportions

**Figure A1.1: Social class background of 1999 HE completers comparing HND and undergraduate degree**




This is reinforced by the educational history data. HND completers were less likely to have attended a fee paying school (5 per cent compared to 15 per cent of graduates). Not surprisingly, there were also significant differences in attainment prior to entering higher education; 76 per cent of the HND sample entered with the less than 10 A-level points (or equivalent) compared to 35 per cent of graduates[36]. Forty four per cent of the HND sample entered higher education with non-standard qualifications compared to 19 per cent of those who attained a degree in 1999. 98 per cent of HND completers reported attending a post-1992 university or HE college.

In this sample of HND completers 46 per cent reported having achieved an undergraduate degree in the four years since completion of their initial study in 1999. It can be assumed that the majority of these will have completed the extra years' study required to obtain a degree immediately after having achieved their HND. It is acknowledged that those who had gone on to obtain an undergraduate degree after completion of a HND in 1999 have had, on average, one year less in the labour market compared to those who completed their studies in 1999. This is likely to have impacted on their career outcomes. For this reason and because of small sample sizes it was not consider appropriate to examine pay in this analysis. Furthermore, employment outcomes also reflect the subject bias in the HND sample and the way in which this is further skewed when we examine who amongst them went on to complete their degree. For example, those who studied business studies made up one-third of all HND students in the sample and they make up half of all those HND holders who subsequently completed a degree.

[36] This group (those with less than 10 A-level points) also includes those respondents who entered higher education with non-standard qualifications such as GNVQ, foundation and access courses or BTEC.

Table A1.2 shows the occupational distribution of the sub-samples according to SOC (HE). It shows that all HND completers, whether or not they had subsequently attained an undergraduate degree, were twice as likely to be working in a non-graduate job compared to all those who completed an undergraduate degree in 1999. Those who obtained a HND and not gone on to study for a degree were half as likely as the other groups to be working in a traditional graduate job.

**Table A1.2: SOC (HE) Category of current job, comparing qualification achieved**

| | HND | HND, subsequently degree | Undergraduate Degree |
|---|---|---|---|
| Traditional Graduate Job | 9.8 | 18.6 | 19.0 |
| Modern Graduate job | 10.3 | 4.0 | 20.0 |
| New Graduate Job | 17.5 | 10.2 | 21.5 |
| Niche Graduate job | 23.1 | 26.7 | 20.6 |
| Non-graduate Job | 39.3 | 40.6 | 19.0 |

The 1999 undergraduate degree sub-sample, of course, includes graduates who entered undergraduate programmes via the HND route. It nevertheless appears that in terms of the likelihood of being in graduate-level employment after four years, completion of a further one year of study to obtain a degree after attainment of a HND had little difference to employment prospects.

Table A1.3 outlines the occupational distribution according to the major group structure of SOC2000. It again shows that the completion of a degree post-HND does not confer any immediate labour market advantage in terms of obtaining higher-level occupations compared to those who exit higher education having obtained a HND, although a longer timescale will be required to investigate this more fully.

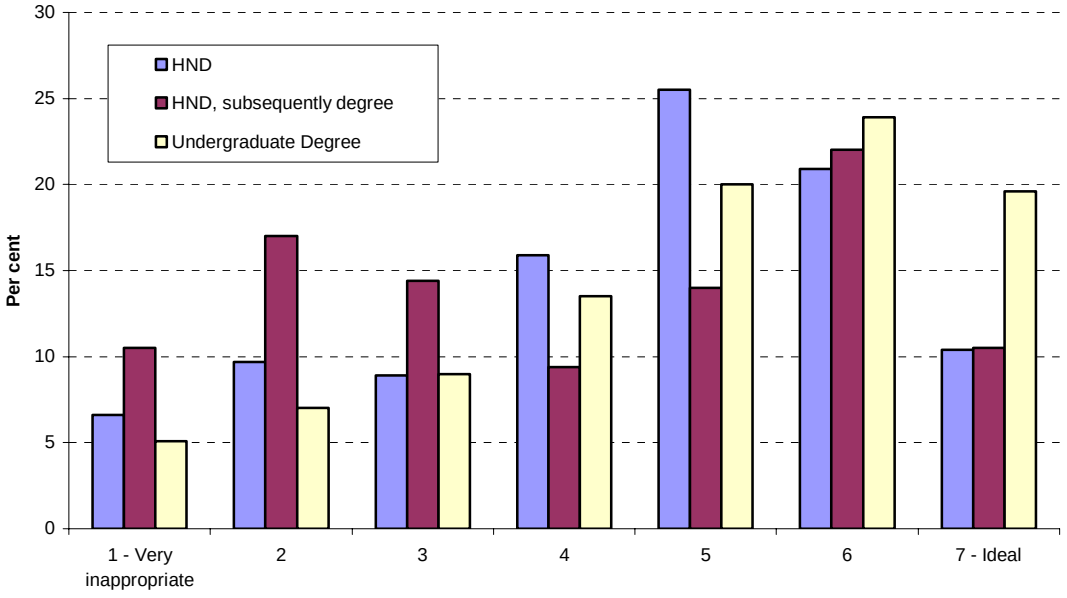
**Table A1.3: SOC2000 Major group of current/last job, comparing qualifications achieved**

| | HND | HND, subsequently degree | Undergraduate Degree |
|---|---|---|---|
| Managers and Senior Officials | 11.5 | 9.5 | 11.8 |
| Professional Occupations | 24.0 | 24.2 | 36.7 |
| Associate Professional and Technical Occupations | 25.5 | 17.1 | 28.0 |
| Administrative and secretarial Occupations | 14.2 | 19.1 | 9.6 |
| Skilled Trades Occupations | 3.8 | 1.5 | 0.6 |
| Personal Service Occupations | 4.3 | 5.0 | 2.0 |
| Sales and Customer Service Occupations | 5.2 | 10.6 | 2.3 |
| Process, Plant and Machine Operatives | .9 | | 0.6 |
| Elementary Occupations | 2.6 | .4 | 1.1 |

Whilst 1999 HND completers reported lower career satisfaction overall compared to the graduate sample, this was most pronounced for those who subsequently gone on to complete an undergraduate degree. One-third of all those who completed a degree post-HND reported being not very satisfied or dissatisfied with their career to date, compared to less than 20 per cent for both other groups. In terms of current employment, using the job quality measure referred to and explained elsewhere in this report, those who had completed degrees post-HND were significantly more likely to report being in jobs of relative low quality (represented being reporting less than 3 of the 'indicators of job quality' were provided in their jobs). Over half of this group reported low quality jobs compared to one-third of the HND-only group and 27 per cent of the other graduate sample. However, in terms of satisfaction with their current job both groups of 1999 HND completers reported similar levels of satisfaction albeit lower than the other group of graduates.

One final measure of labour market outcome to consider is the extent to which the samples considered themselves to be in appropriate employment for someone with their qualifications. Figure A1.2 presents responses to this question comparing the three groups. It shows that 1999 graduates are twice as likely to consider their current jobs to be ideal than both groups of HND completers. However, there were significantly higher proportions of those who completed a degree post-HND who consider their jobs to be largely inappropriate.

**Figure A1.2: Appropriateness of current job, comparing 1999 HND Completers and Graduates**




Overall, despite the *caveats* that must be placed on some of this analysis given the small sample size, it does appear that the completion of a degree post-HND does not provide any immediate labour market advantage on those who choose this route in higher education. In fact, it would appear to contribute to greater levels of career dissatisfaction and greater

feelings of being in inappropriate jobs, which is likely to reflect disappointment that their greater investment in HE has not lead to an obvious pay-off in the short term. The extra year in the labour market, however, of graduates who completed their studies in 1999 is likely to be an important explanation for the more satisfactory integration to the labour market – and it is likely that those who stopped at HND had lower expectations than those who done the additional year.

In terms of social class background, those from a managerial and professional background reported making greater use of networks and careers advisory services (likely to be linked to higher usage amongst graduates from old universities) compared to those from lower socio-economic groups.

## Appendix II: Research methodology and sample comparisons with HESA statistical returns

Data collection methods associated with this report consisted of a postal survey of graduates who gained their first degree or HNC/HND in 1999 plus a series of telephone interviews with a selected group of respondents to the postal survey.

### Questionnaire design

The postal questionnaire followed the design of a similar postal survey of 1995 graduates, conducted in 1997/98. The A4 booklet sent to graduates contained 16 pages of questions, including a detailed event history in which each graduate recorded all their main activities since graduating in July 1999. The questionnaire was designed and piloted in the period from October 2002 to February 2003.

### Defining the population to be sampled

To achieve comparability with information collected in the survey of 1995 graduates, it was decided that the same institutions that had participated in the earlier survey would be invited to assist in contacting their 1999 graduates. A total of 33 Higher Education Institutions took part in the earlier survey. All of them agreed to participate in this survey.

We had previously noted some imbalance in the structure of responses from the survey of 1995 graduates. In particular, universities in Yorkshire and Humberside region were over-represented and there was no Oxbridge participation. To correct for this imbalance, four new universities were invited to participate, including one of the Oxbridge universities. All agreed to participate. Additionally, the Department for Education and Learning in Northern Ireland was keen to see both of the main higher education institutions in Northern Ireland participate in the survey. One of these institutions was already participating, resulting in a further addition. In total, 38 Higher Education Institutions took part in the survey.

At each of these institutions we requested that 1 in 2 of their domestically-domiciled 1999 leavers who had gained a degree, HNC or HND should be mailed a questionnaire. Due to stricter conditions relating to access to student names and addresses (often parental addresses), we were not able to undertake mailing direct from the research team – something we achieved with over half of the selected graduates for the 1995 survey. This meant that we were unable to undertake a second mailing given that most institutions would not record who had been mailed in the first instance. As expected, this had an impact upon response rates to the survey. For the survey of 1995 graduates we achieved a final response rate of approximately 30 per cent. The overall response rate to this survey was 24 per cent.

**Comparison with HESA statistics**

The low response rate to the survey reflects the fact that a significant proportion of the addresses used by institutions to contact ex-students were out of date. Where parental addresses were used, and parents had moved in the 7 – 8 year period since their son/daughter commenced undergraduate studies, we were most unlikely to achieve a response. This raises the important question about how representative the achieved response id of all 1999 qualifiers from higher education. To gain some indication of the extent to which sample selection has biased the achieved sample, we compare certain characteristics of the sample with similar information collected by institutions on behalf of the Higher Education Statistics Agency (HESA). The latter information, collected in late 1999/early 2000 by institutions, records, *inter alia*, the institutions attended, gender, subject studied, age, ethnic background and entry qualifications. Figures A2.1 to A2.55 compare data from HESA with similar information from survey respondents. HESA data have been restricted to domestically-domiciled UK students studying full-time who attained a first degree in July 1999. Survey responses have been restricted to respondents who stated that they gained a first degree (not HNC/HND) in July 1999. HESA data are shown for the 38 sampled institutions only and for all higher education institutions. Survey responses are shown unweighted and weighted, sample responses weighted to the gender composition of each institution in the sample.

Looking first at Figure A2.1, it can be seen that the left most set of bars are identical to those on the right of this diagram. This is an artefact of the weighting system used. The gender composition of the survey is biased towards female respondents. While female graduates are in the majority in all higher education institutions, the survey under-represents men by about 10 percentage points. Weighting adjusts for the potential bias this would produce in any information derived from the survey and not shown separately for males and females.

Figure A2.2 shows the age structure of the population of 1999 graduates, distinguishing between the three age groups used in this report (young graduates – those who were aged 31 years or under at the time of the survey; young mature – those who were aged 32 to 37 years at the time of the survey; and older mature graduates – aged over 38 years at the time of the survey. As can be seen, the survey over-represents older mature graduates. This reflects the response rate from young graduates.

Figure A2.3 shows the distribution of subjects studied in the population of 1999 graduates and among survey respondents. Some caution must be exercised when interpreting this diagram in that the grouping of subjects as defined from HESA data may not match the interpretations placed upon this question by survey respondents. The survey data and HESA data correspond well in the following subject areas – Law, Maths and Computing, Engineering, Business Studies and ‘Other Vocational’ subjects. Subjects which are under-represented in

the survey are Arts (-2%), Languages (-5%) and Natural Sciences (-4%). Subjects which are over-represented are Humanities (+5%), Social Sciences (+4%) and Interdisciplinary subjects (+2%).

Figure A2.4 shows the proportions of graduates from minority ethnic backgrounds in the HESA statistical returns and as recorded by respondents to the survey. As was the case in the 1995 survey, graduates from minority ethnic backgrounds are under-represented in the survey. Those from Indian minority ethnic backgrounds are 3 per cent of all leavers from the sampled institutions, but only represent 2 per cent of the weighted sample of respondents. Similar under-representation is seen across nearly all of the minority ethnic groups defined in the HESA statistical returns and in the survey.

Finally, figure A2.5 shows the proportions of graduates in the HESA statistical returns and in the survey responses that entered university with non-traditional qualifications. It is worth noting that the sampled institutions record lower percentages of students with such entry qualifications than is the case for all institutions, particularly for those who enter with HNC/HND or ONC/OND/BTEC/ qualifications. The survey response shows that this bias is further exacerbated in the achieved sample, particularly for the group who entered with ONC/OND/BTEC qualifications.

**Figure A2.1: Comparison of HESA statistical returns with survey data: gender ratios**

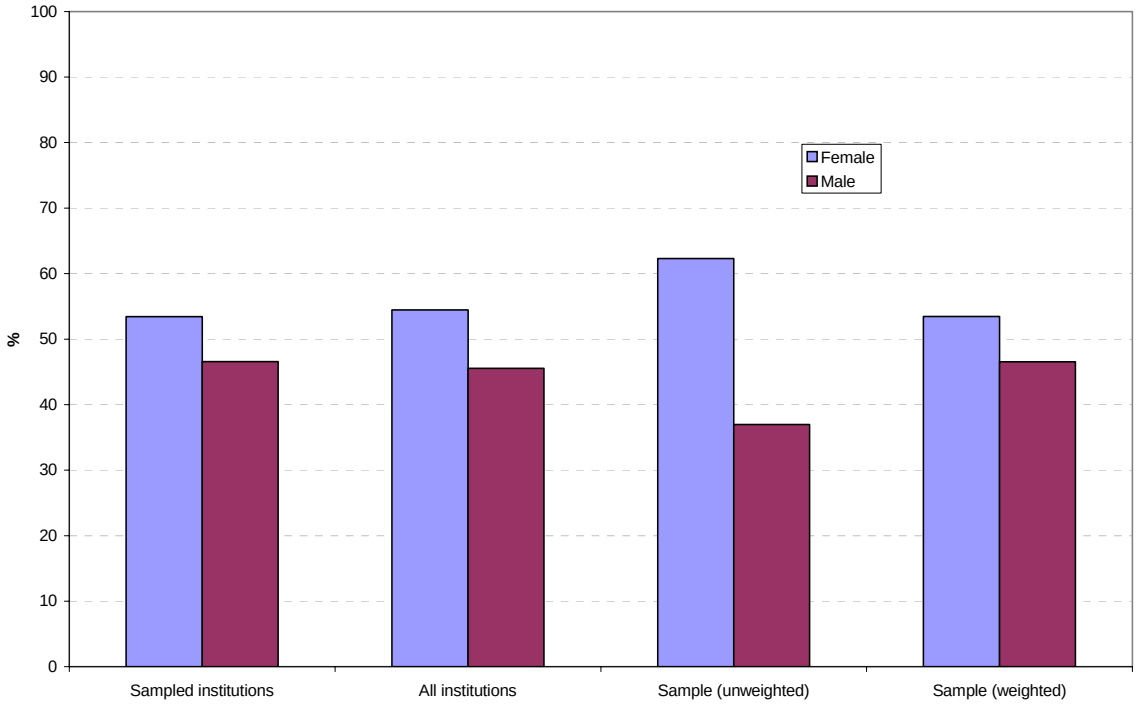


**Figure A2.2: Comparison of HESA statistical returns with survey data: age structure**

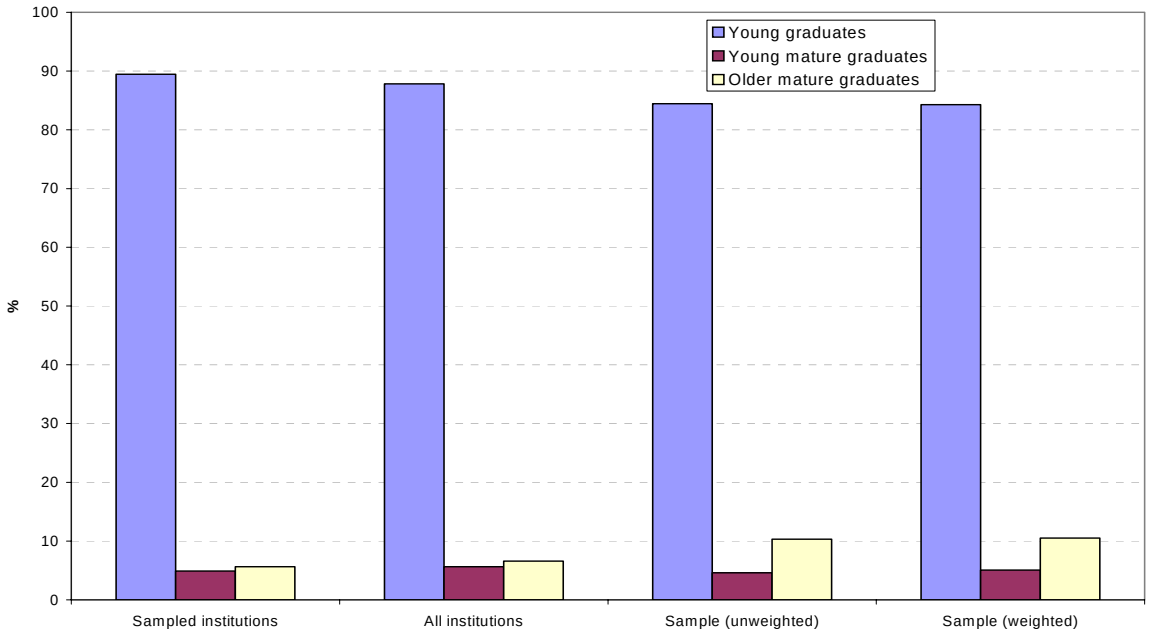



**Figure A2.3: Comparison of HESA statistical returns with survey data: subjects studied**

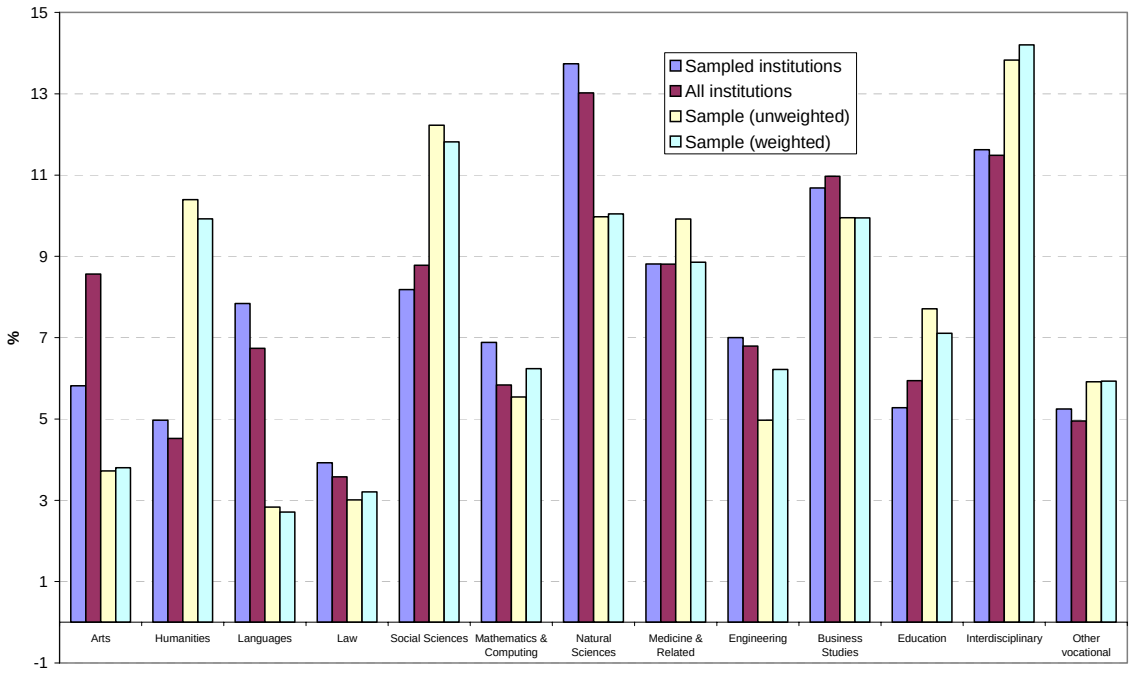


**Figure A2.4: Comparison of HESA statistical returns with survey data: minority ethnic backgrounds**

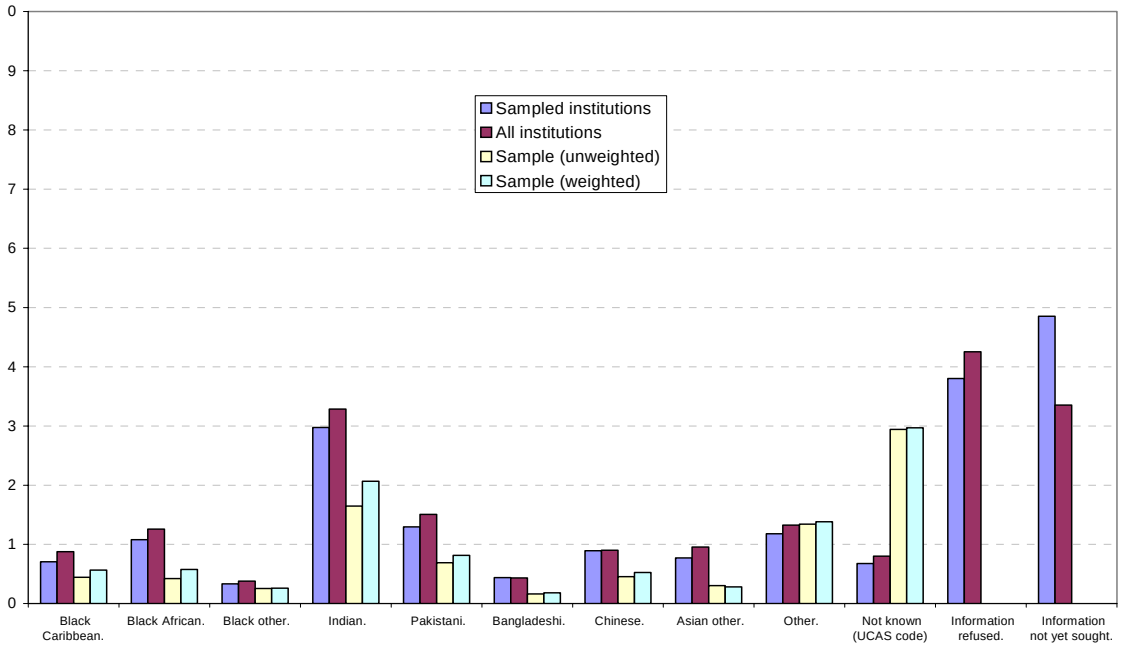
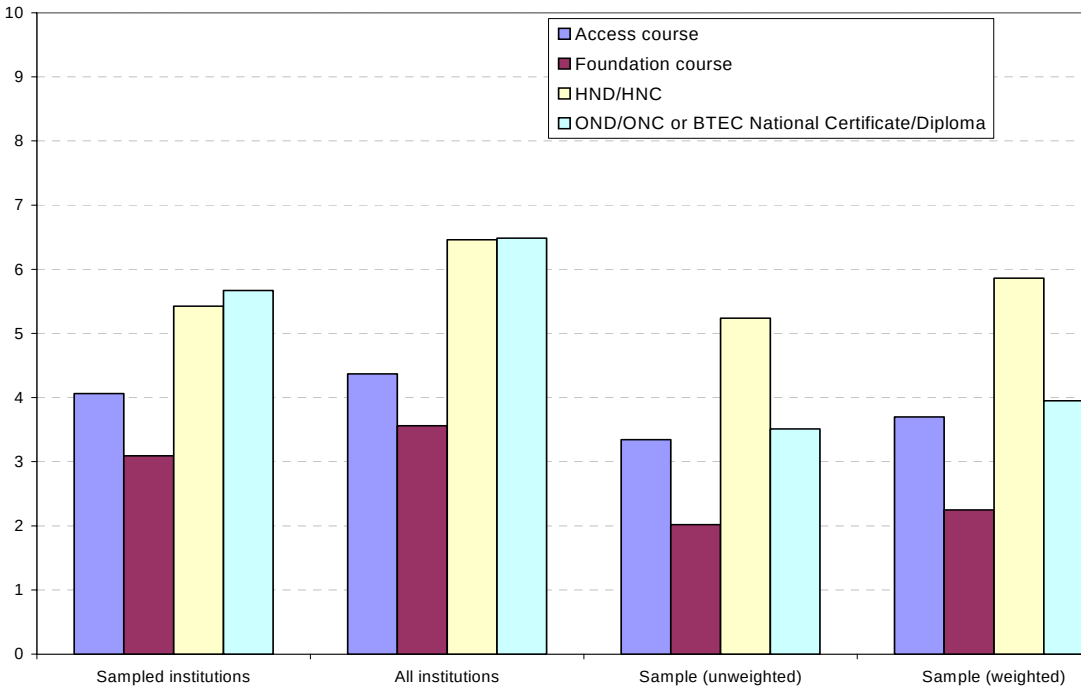



**Figure A2.5: Comparison of HESA statistical returns with survey data: non-traditional entry qualifications**



**Follow-up interviews with graduates**

In addition to the survey, we conducted 100 telephone interviews with a sub-sample of respondents. To counterbalance the positive tendencies likely to be revealed by the higher response rates from relatively 'successful' graduates and so that we could address policy issues more effectively, the research brief required us to focus disproportionately on graduates whose characteristics were generally associated with difficulties in labour market integration, or who had reported in the survey response that they were dissatisfied with their career development. Interview subjects were selected on the basis of having achieved lower than average earnings, being employed in a non-graduate job at the time of the survey, having experienced periods of unemployment or having indicated they would not enter higher education if they had their time again. In the sample as a whole, a balance of graduates according to type of institution attended, degree subject, region of domicile and sector of employment was also achieved, and as points of reference in the sample we conducted a range of interviews with a graduates who had experienced little difficulty integrating into the labour market at an appropriate level and appeared to be doing reasonably well in terms of employment outcomes.

These interviews were semi-structured and, on average, lasted for 30-40 minutes. They addressed four main areas in detail:

- ***The graduates' current or last job*** – initial recruitment to their current job, requirements for the position held, relevance of their degree to the job, how they perceived different aspects of their jobs, what they did in their jobs on a day-to-day basis and issues relating to work-life balance.
- ***Career development to date*** – the rationale for decisions made in the course of careers, job change intentions, the extent of career planning, individual perception of labour market strengths and weaknesses, obstacle and problems encountered in the labour market and the importance of future career development.
- ***Career* and *Social Relationships*** – the importance and impact of personal and family ties on career decision-making, the educational and employment characteristics of partners and career precedence in relationships.
- ***Future Expectations* and *Aspirations*** – short and longer-term career intentions, expectations and aspirations with regard to mobility, further study and movement in and between organisations and sectors.

The interviews also addressed the perceived value of their undergraduate education and whether respondents considered that their time in higher education had been a good investment.

# APPENDIX III Detailed regression results

## Table A3.1: The earnings of 1999 graduates in full-time employment in 2003/04: detailed results

| | Coeff. | Std. Error | Sig. | Mean Males | Mean Females |
|---|---|---|---|---|---|
| Hours per week (exc. breaks but inc. o/t, unpaid) | 0.01 | 0.00 | 0.00 | 42.98 | 41.27 |
| *Contractual basis of current job:* | | | | | |
| Permanent/open-ended | ref. | | | 79.6% | 78.1% |
| Fixed term contract | -0.06 | 0.01 | 0.00 | 9.9% | 12.3% |
| Probationary | -0.11 | 0.02 | 0.00 | 3.4% | 2.9% |
| Self-employed | -0.13 | 0.02 | 0.00 | 3.1% | 2.5% |
| Temp (agency) | -0.15 | 0.03 | 0.00 | 1.1% | 1.6% |
| Other temporary or casual | -0.14 | 0.03 | 0.00 | 0.9% | 1.0% |
| Other (not permanent) | -0.14 | 0.04 | 0.00 | 0.8% | 0.8% |
| Degree was required to obtain current job | 0.06 | 0.01 | 0.00 | 63.8% | 65.2% |
| *Sector of current job:* | | | | | |
| Agriculture, mining | -0.09 | 0.03 | 0.00 | 2.0% | 0.8% |
| Manufacturing | -0.05 | 0.02 | 0.00 | 9.2% | 5.1% |
| Electricity, gas, water | -0.06 | 0.03 | 0.05 | 1.8% | 1.0% |
| Construction | -0.09 | 0.02 | 0.00 | 7.4% | 1.4% |
| Distribution | -0.12 | 0.02 | 0.00 | 4.3% | 4.1% |
| Transport | -0.11 | 0.02 | 0.00 | 2.9% | 1.8% |
| Information and communications | -0.05 | 0.02 | 0.00 | 9.7% | 6.7% |
| Banking, finance and insurance | ref. | | | 13.9% | 9.8% |
| Business services | -0.04 | 0.01 | 0.01 | 15.5% | 12.4% |
| Education | -0.12 | 0.02 | 0.00 | 10.5% | 22.5% |
| Other public services | -0.09 | 0.02 | 0.00 | 20.5% | 32.5% |
| Other | -0.01 | 0.03 | 0.74 | 1.2% | 1.0% |
| Private sector | ref. | | | 66.7% | 44.7% |
| Public sector | -0.01 | 0.01 | 0.25 | 28.5% | 47.2% |
| Not for profit sector | -0.06 | 0.02 | 0.00 | 3.7% | 6.9% |
| *In my workplace, my type of work is done:* | | | | | |
| exclusively by men | ref. | | | 15.3% | 3.0% |
| mainly by men | 0.02 | 0.01 | 0.08 | 31.0% | 13.0% |
| by equal mixture of men and women | -0.06 | 0.01 | 0.00 | 41.0% | 39.5% |
| mainly by women | -0.10 | 0.02 | 0.00 | 8.2% | 29.1% |
| exclusively by women | -0.13 | 0.02 | 0.00 | 1.0% | 10.0% |
| only by me | -0.10 | 0.02 | 0.00 | 2.6% | 4.6% |
| *After first started this job, to learn to do it reasonably well took:* | | | | | |
| < 1 week | -0.04 | 0.02 | 0.01 | 4.8% | 4.1% |
| 1 week to 1 month | -0.07 | 0.01 | 0.00 | 8.8% | 10.0% |
| 1 - 3 months | -0.02 | 0.01 | 0.01 | 21.4% | 22.7% |
| Over 3 months | ref. | | | | |

Contd.

| | | | | | |
|---|---|---|---|---|---|
| *No employed by the organisation works for:* | | | | | |
| < 25 employees | ref. | | | 13.3% | 15.8% |
| 25 - 249 employees | -0.04 | 0.01 | 0.00 | 23.1% | 26.5% |
| 250 - 999 employees | -0.02 | 0.01 | 0.05 | 15.1% | 15.8% |
| 1000+ employees | 0.02 | 0.01 | 0.01 | 39.0% | 34.3% |
| *SOC (HE) classification of current job:* | | | | | |
| Traditional graduate job | 0.17 | 0.01 | 0.00 | 17.3% | 20.0% |
| Modern graduate job | 0.15 | 0.01 | 0.00 | 20.6% | 18.8% |
| New graduate job | 0.14 | 0.01 | 0.00 | 22.5% | 21.4% |
| *Niche* graduate job | 0.12 | 0.01 | 0.00 | 19.5% | 19.7% |
| Non graduate job | ref. | | | 13.8% | 16.2% |
| *Currently employed in:* | | | | | |
| Inner London | 0.23 | 0.01 | 0.00 | 18.3% | 16.0% |
| Outer London | 0.17 | 0.01 | 0.00 | 7.7% | 6.9% |
| South East | 0.07 | 0.01 | 0.00 | 13.1% | 12.1% |
| Scotland | -0.01 | 0.01 | 0.46 | 7.7% | 8.5% |
| N. Ireland | -0.08 | 0.01 | 0.00 | 8.7% | 12.6% |
| Female | -0.05 | 0.01 | 0.00 | | |
| Age | 0.03 | 0.00 | 0.00 | 27.88 | 27.73 |
| Age squared | 0.00 | 0.00 | 0.00 | 812.42 | 804.80 |
| *Ability to take up/change job affected by:* | | | | | |
| Family ties | 0.02 | 0.01 | 0.02 | 25.0% | 28.0% |
| Other personal ties | -0.08 | 0.02 | 0.00 | 2.0% | 2.0% |
| Disability/long term illness | -0.07 | 0.02 | 0.00 | 3.0% | 3.0% |
| *Has dependent children aged:* | | | | | |
| 0-1 years | 0.00 | 0.02 | 0.96 | 2.5% | 1.5% |
| 2-3 years | -0.04 | 0.03 | 0.12 | 2.4% | 1.2% |
| 4-5 years | 0.02 | 0.04 | 0.59 | 1.4% | 0.5% |
| 6-11 years | -0.01 | 0.02 | 0.75 | 3.5% | 2.2% |
| 12 years or older | 0.02 | 0.02 | 0.21 | 3.7% | 4.3% |
| Fee paying school | 0.02 | 0.01 | 0.04 | 16.6% | 12.5% |
| *Class of degree obtained in 1995:* | | | | | |
| First class degree | ref. | | | 10.0% | 8.9% |
| Upper second | -0.05 | 0.01 | 0.00 | 45.7% | 54.9% |
| Lower second | -0.10 | 0.01 | 0.00 | 31.2% | 26.8% |
| Third | -0.15 | 0.02 | 0.00 | 4.2% | 1.8% |
| *Method of study for first degree:* | | | | | |
| Full-time | ref. | | | 88.0% | 90.0% |
| Part-time | 0.15 | 0.02 | 0.00 | 5.0% | 5.0% |
| Distance learning | 0.10 | 0.05 | 0.03 | 1.0% | 0.0% |
| Sandwich | 0.05 | 0.01 | 0.00 | 8.0% | 5.0% |
| Other | 0.05 | 0.05 | 0.36 | 0.0% | 0.0% |

Contd.

| | | | | | |
|---|---|---|---|---|---|
| Type of institution for first degree | | | | | |
| Old university | ref. | | | 40.3% | 40.8% |
| 1960s university | -0.01 | 0.01 | 0.55 | 14.4% | 11.8% |
| Post 1992 university | -0.03 | 0.01 | 0.00 | 41.0% | 38.8% |
| HE college | -0.05 | 0.01 | 0.00 | 4.3% | 8.6% |
| *Subject area of 1999 degree* | | | | | |
| Arts | -0.06 | 0.02 | 0.00 | 2.6% | 3.8% |
| Humanities | -0.07 | 0.01 | 0.00 | 7.6% | 11.2% |
| Languages | -0.01 | 0.02 | 0.57 | 1.6% | 3.6% |
| Law | 0.03 | 0.02 | 0.13 | 2.9% | 3.5% |
| Social sciences | -0.02 | 0.01 | 0.22 | 10.2% | 12.8% |
| Maths and computing | 0.07 | 0.02 | 0.00 | 10.2% | 3.3% |
| Natural sciences | -0.01 | 0.01 | 0.72 | 10.9% | 8.6% |
| Medicine and related | 0.20 | 0.02 | 0.00 | 5.0% | 12.8% |
| Engineering | 0.02 | 0.02 | 0.31 | 11.8% | 1.1% |
| Business studies | ref. | | | 11.7% | 10.3% |
| Education | 0.07 | 0.02 | 0.00 | 4.1% | 10.3% |
| Other vocational | 0.00 | 0.01 | 0.89 | 13.2% | 13.8% |
| Interdisciplinary | | | | | |
| *Entry qualifications for first degree* | | | | | |
| 24+ A/AS level points | 0.02 | 0.01 | 0.01 | 35.3% | 34.7% |
| 16-23 A/AS level points | ref. | | | 19.9% | 24.6% |
| <16 A/AS level points | 0.00 | 0.01 | 0.75 | 44.8% | 40.8% |
| Access course | -0.04 | 0.02 | 0.04 | 3.0% | 3.0% |
| Foundation course | -0.05 | 0.02 | 0.01 | 3.0% | 3.0% |
| HND/HNCs | -0.02 | 0.02 | 0.21 | 8.0% | 4.0% |
| OND/ONCs or BTEC | -0.02 | 0.01 | 0.13 | 8.0% | 5.0% |
| GNVQ | 0.01 | 0.02 | 0.69 | 2.0% | 2.0% |
| Other | 0.01 | 0.01 | 0.65 | 6.0% | 7.0% |
| *Agrees strongly with the statement* | | | | | |
| I am extremely ambitious | 0.07 | 0.01 | 0.00 | 25.2% | 17.4% |
| *Worked during vacations or term time to:* | | | | | |
| work placement | 0.02 | 0.01 | 0.04 | 15.0% | 13.0% |
| to gain useful experience | 0.03 | 0.01 | 0.00 | 23.0% | 20.0% |
| just for the money | 0.01 | 0.01 | 0.49 | 78.0% | 83.0% |
| *Further training and education since July 1999* | | | | | |
| Short course(s) | -0.03 | 0.01 | 0.00 | 14.0% | 17.0% |
| Undergraduate degree | -0.03 | 0.03 | 0.22 | 1.0% | 1.0% |
| PGCE | 0.02 | 0.02 | 0.30 | 4.0% | 9.0% |
| Other postgraduate cert. or dip. | -0.01 | 0.01 | 0.37 | 7.0% | 13.0% |
| Professional qualification | 0.05 | 0.01 | 0.00 | 18.0% | 18.0% |
| Taught Master's degree | -0.04 | 0.01 | 0.00 | 11.0% | 11.0% |
| Postgraduate research degree | -0.07 | 0.02 | 0.00 | 3.0% | 2.0% |
| Other | -0.03 | 0.02 | 0.06 | 4.0% | 5.0% |

Contd.

| | | | | | |
|---|---|---|---|---|---|
| *Parental socio-economic class:* | | | | | |
| Managerial and professional occupations | ref. | | | 43.9% | 45.5% |
| Intermediate occupations | -0.01 | 0.01 | 0.57 | 10.9% | 9.8% |
| Small employers and own account workers | 0.01 | 0.01 | 0.14 | 17.0% | 17.9% |
| Lower supervisory and technical occupations | -0.01 | 0.01 | 0.70 | 5.4% | 5.2% |
| Semi-routine and routine occupations | 0.00 | 0.01 | 0.65 | 13.1% | 14.3% |
| Neither parent in paid employment | 0.02 | 0.03 | 0.48 | 1.2% | 1.5% |
| Not determined | 0.06 | 0.01 | 0.00 | 8.6% | 5.9% |
| Constant | 9.09 | 0.09 | 0.00 | | |
| Adj R sq | 0.45 | | | | |
| N | 7,114 | | | | |

Note:. All independent variables are represented by 0, 1 values with the exception of age and weekly hours worked. The dependent variable is the natural logarithm of annual gross earnings at the time of the survey (February 2003 to June 2004). The dependent variable is the natural logarithm of average gross annual earnings (mid-point of the reported earnings band)

**Table A3.2: Comparison of the earnings of 1995 graduates and 1999 graduates: detailed results**

| | 1995 graduates | | | 1999 graduates | | | Mean | |
|---|---|---|---|---|---|---|---|---|
| | Coeff. | Std. error | Sig. | Coeff. | Std. error | Sig. | 1995 graduates | 1999 graduates |
| (Constant) | 9.43 | 0.02 | 0.00 | 9.60 | 0.03 | 0.00 | | |
| Type of institution attended | | | | | | | | |
| . Pre 1992 university | ref. | | | ref. | | | 49.4% | 55.4% |
| . Post 1992 university | -0.05 | 0.01 | 0.00 | -0.04 | 0.01 | 0.00 | 42.0% | 36.0% |
| . Higher Education college | -0.06 | 0.01 | 0.00 | -0.03 | 0.02 | 0.06 | 8.5% | 8.6% |
| Class of degree obtained | | | | | | | | |
| . First | 0.03 | 0.01 | 0.01 | 0.07 | 0.01 | 0.00 | 7.8% | 8.8% |
| . Upper second | ref. | | | ref. | | | 48.0% | 50.8% |
| . Lower second | -0.05 | 0.01 | 0.00 | -0.06 | 0.01 | 0.00 | 32.9% | 29.1% |
| . Third | -0.10 | 0.02 | 0.00 | -0.12 | 0.02 | 0.00 | 3.5% | 2.9% |
| . Other | | | | | | | | |
| Further qualification obtained | | | | | | | | |
| . Short, job-related | -0.07 | 0.01 | 0.00 | -0.05 | 0.01 | 0.00 | 13.5% | 15.5% |
| . Postgraduate certificate | 0.00 | 0.01 | 0.74 | 0.02 | 0.01 | 0.04 | 17.3% | 17.6% |
| . Professional qualification | -0.01 | 0.01 | 0.60 | 0.05 | 0.01 | 0.00 | 13.4% | 17.3% |
| . Masters degree | 0.00 | 0.01 | 0.74 | -0.04 | 0.01 | 0.00 | 11.0% | 11.1% |
| . PhD | 0.02 | 0.02 | 0.44 | -0.06 | 0.03 | 0.03 | 2.1% | 2.3% |
| . Other qualification | -0.05 | 0.02 | 0.00 | -0.06 | 0.02 | 0.00 | 4.6% | 4.4% |
| Subject studied | | | | | | | | |
| . Arts | -0.06 | 0.01 | 0.00 | -0.04 | 0.02 | 0.01 | 12.0% | 11.6% |
| . Humanities | -0.01 | 0.01 | 0.49 | -0.01 | 0.02 | 0.52 | 7.7% | 8.7% |
| . Languages | 0.02 | 0.02 | 0.28 | 0.01 | 0.02 | 0.55 | 4.7% | 3.8% |
| . Law | -0.01 | 0.02 | 0.77 | 0.04 | 0.02 | 0.13 | 4.0% | 3.7% |
| . Social sciences | ref. | | | ref. | | | 12.6% | 12.7% |
| . Maths/computing | 0.14 | 0.02 | 0.00 | 0.10 | 0.02 | 0.00 | 6.7% | 6.7% |
| . Science | -0.03 | 0.01 | 0.03 | 0.01 | 0.02 | 0.63 | 10.2% | 10.8% |
| . Medicine | 0.14 | 0.02 | 0.00 | 0.21 | 0.02 | 0.00 | 6.7% | 7.6% |
| . Engineering | 0.07 | 0.02 | 0.00 | 0.08 | 0.02 | 0.00 | 9.9% | 5.9% |
| . Business studies | 0.05 | 0.01 | 0.00 | 0.04 | 0.02 | 0.02 | 10.2% | 10.6% |
| . Education | 0.03 | 0.02 | 0.09 | 0.13 | 0.02 | 0.00 | 7.8% | 6.1% |
| . Other vocational | 0.00 | 0.02 | 0.97 | -0.01 | 0.03 | 0.80 | 4.7% | 1.5% |
| . Interdisciplinary | 0.00 | 0.02 | 0.94 | 0.01 | 0.02 | 0.40 | 2.1% | 9.1% |
| Entry qualifications | | | | | | | | |
| . 24 plus UCAS points | 0.05 | 0.01 | 0.00 | 0.06 | 0.01 | 0.00 | 24.5% | 33.0% |
| . 16-23 UCAS points | 0.01 | 0.01 | 0.09 | 0.01 | 0.01 | 0.36 | 25.6% | 23.6% |
| . Under 16 UCAS points or . other entry qualifications | ref. | | | ref. | | | 49.9% | 43.47% |
| Age at time of survey | | | | | | | | |
| . 25 or under | ref. | | | ref. | | | 50.8% | 43.0% |
| . 26-29 years | 0.05 | 0.01 | 0.00 | 0.05 | 0.01 | 0.00 | 33.2% | 42.0% |
| . 30-39 years | 0.08 | 0.01 | 0.00 | 0.07 | 0.02 | 0.00 | 8.7% | 7.9% |
| . 40-49 years | 0.06 | 0.02 | 0.00 | 0.12 | 0.02 | 0.00 | 5.2% | 5.3% |
| . 50+ years | 0.02 | 0.03 | 0.48 | 0.01 | 0.03 | 0.75 | 1.7% | 1.7% |
| Work-limiting disability | -0.08 | 0.02 | 0.00 | -0.11 | 0.03 | 0.00 | 2.8% | 2.0% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Method of study for degree | | | | | | | | |
| . Full-time | ref. | | | ref. | | | 87.6% | 89.0% |
| . Part-time | 0.17 | 0.02 | 0.00 | 0.18 | 0.02 | 0.00 | 6.1% | 4.9% |
| . Distance learning | 0.29 | 0.05 | 0.00 | 0.11 | 0.05 | 0.03 | 0.6% | 0.6% |
| . Sandwich | 0.05 | 0.01 | 0.00 | 0.05 | 0.02 | 0.00 | 10.7% | 6.4% |
| Degree required for current job | 0.17 | 0.01 | 0.00 | 0.13 | 0.01 | 0.00 | 65.5% | 65.8% |
| No employed in current organisation | | | | | | | | |
| . Under 25 | ref. | | | ref. | | | 13.3% | 15.0% |
| . 25-249 | 0.02 | 0.01 | 0.03 | -0.01 | 0.01 | 0.60 | 25.2% | 26.4% |
| . 250+ | 0.10 | 0.01 | 0.00 | 0.05 | 0.01 | 0.00 | 52.0% | 52.7% |
| Current job is in | | | | | | | | |
| . Private sector | ref. | | | ref. | | | 35.6% | 40.2% |
| . Public sector | -0.03 | 0.01 | 0.02 | -0.05 | 0.02 | 0.00 | 61.2% | 54.1% |
| . Voluntary sector | -0.09 | 0.02 | 0.00 | -0.10 | 0.02 | 0.00 | 3.2% | 5.7% |
| Agree strongly that 'I am extremely ambitious' | 0.12 | 0.01 | 0.00 | 0.12 | 0.01 | 0.00 | 20.4% | 20.0% |
| Agree strongly that 'I do not expect to get my main fulfilment from work' | -0.02 | 0.01 | 0.10 | -0.01 | 0.01 | 0.55 | 12.6% | 13.8% |
| Self employed | -0.04 | 0.02 | 0.04 | -0.14 | 0.02 | 0.00 | 4.0% | 3.7% |
| Ethnic origin | | | | | | | | |
| . Indian | 0.03 | 0.02 | 0.16 | 0.09 | 0.03 | 0.00 | 2.0% | 1.7% |
| . Pakistani | -0.01 | 0.04 | 0.89 | 0.11 | 0.05 | 0.04 | 0.6% | 0.6% |
| . Bangladeshi | 0.08 | 0.08 | 0.32 | 0.04 | 0.11 | 0.69 | 0.2% | 0.1% |
| . Chinese | -0.03 | 0.04 | 0.47 | 0.02 | 0.06 | 0.72 | 0.5% | 0.4% |
| . Asian (other) | 0.03 | 0.04 | 0.39 | 0.12 | 0.08 | 0.10 | 0.6% | 0.4% |
| . Black Caribbean | -0.01 | 0.05 | 0.80 | -0.03 | 0.06 | 0.68 | 0.4% | 0.4% |
| . Black African | 0.07 | 0.06 | 0.21 | 0.03 | 0.07 | 0.68 | 0.3% | 0.4% |
| . Black (other) | -0.03 | 0.07 | 0.63 | 0.12 | 0.07 | 0.07 | 0.2% | 0.3% |
| . White | ref. | | | | | | 93.5% | 92.3% |
| . Other ethnic group | 0.05 | 0.03 | 0.12 | 0.04 | 0.02 | 0.09 | 1.2% | 3.5% |
| Sector of employment | | | | | | | | |
| . Agriculture | -0.01 | 0.03 | 0.70 | -0.09 | 0.04 | 0.03 | 1.6% | 1.1% |
| . Manufacturing | -0.07 | 0.02 | 0.00 | -0.11 | 0.02 | 0.00 | 7.4% | 4.4% |
| . Utilities | -0.08 | 0.03 | 0.01 | -0.11 | 0.04 | 0.00 | 1.2% | 1.3% |
| . Construction | -0.08 | 0.02 | 0.00 | -0.05 | 0.03 | 0.04 | 4.0% | 3.4% |
| . Distribution, etc. | -0.15 | 0.02 | 0.00 | -0.16 | 0.03 | 0.00 | 4.5% | 3.1% |
| . Transport, ICT | 0.01 | 0.02 | 0.58 | -0.02 | 0.02 | 0.29 | 4.1% | 9.2% |
| . Finance, etc. | ref. | | | | | | 9.9% | 10.9% |
| . Business services | 0.07 | 0.01 | 0.00 | 0.01 | 0.02 | 0.40 | 14.1% | 10.8% |
| . Education | -0.10 | 0.02 | 0.00 | -0.10 | 0.02 | 0.00 | 18.7% | 18.6% |
| . Other public services | -0.11 | 0.02 | 0.00 | -0.08 | 0.02 | 0.00 | 15.4% | 21.1% |
| . Other | -0.07 | 0.01 | 0.00 | -0.07 | 0.02 | 0.00 | 17.4% | 13.8% |
| Female | -0.08 | 0.01 | 0.00 | -0.09 | 0.01 | 0.00 | 56.5% | 63.1% |
| Cumulative months employed since graduating | 0.008 | 0.00 | 0.00 | 0.003 | 0.00 | 0.00 | 36.3 months | 46.1 months |

| | | |
|---|---|---|
| Adjusted R squared | 0.34 | 0.26 |
| N (unweighted) | 7,865 | 5,666 |

Note:. All independent variables are represented by 0, 1 values. The dependent variable is the natural logarithm of annual gross earnings at the time of the survey (December 1998 to January 1999 for 1995 graduates and February 2003 to June 2004 for 1999 graduates). The earnings of 1999 graduates have been deflated by a factor ranging from 19 to 23%, depending upon the date that 1999 graduates returned the survey. These factors represent the change in the index of average earning between the end of December 1998 and the date the 1999 graduate returned the survey.

**Table A3.3: Logistic regression of the probability that respondent experiences 6 months or longer of unemployment following graduation**

| | B | S.E. | Sig. | Means |
|---|---|---|---|---|
| Male | ref | | | 9% |
| Female | -0.51 | 0.10 | 0.00 | 5% |
| | | | | |
| Young | ref | | | 6% |
| Young mature | 0.23 | 0.23 | 0.30 | 7% |
| Older mature | 0.48 | 0.17 | 0.01 | 10% |
| | | | | |
| No kids | ref | | | 6% |
| Kids | -0.42 | 0.28 | 0.13 | 6% |
| | | | | |
| No disability | ref | | | 6% |
| Disabled | 1.17 | 0.19 | 0.00 | 19% |
| | | | | |
| Not extremely ambitious | ref | | | 7% |
| Extremely ambitious | -0.25 | 0.13 | 0.05 | 6% |
| | | | | |
| Managerial and Professional | 0.12 | 0.23 | 0.61 | 6% |
| Intermediate Occupations | 0.12 | 0.26 | 0.63 | 7% |
| Small Employers and Own Account Workers | 0.05 | 0.25 | 0.85 | 6% |
| Lower Supervisory and Technical Occupations | ref | | | 6% |
| Semi-routine and routine occupations | 0.34 | 0.24 | 0.17 | 8% |
| Neither Parent in Paid Employment | 0.28 | 0.43 | 0.51 | 8% |
| Not Determined | -0.06 | 0.28 | 0.83 | 7% |
| | | | | |
| 0-9 A level points | 0.40 | 0.17 | 0.02 | 8% |
| 10-19 A level points | 0.03 | 0.18 | 0.85 | 6% |
| 20-29 A level points | 0.14 | 0.15 | 0.38 | 6% |
| 30+ A level points | ref | | | 5% |
| | | | | |
| No HND | ref | | | 7% |
| HND | -0.60 | 0.25 | 0.02 | 5% |
| | | | | |
| Arts | 1.74 | 0.29 | 0.00 | 15% |
| Humanities | 1.01 | 0.27 | 0.00 | 7% |
| Languages | 0.91 | 0.37 | 0.01 | 6% |
| Law | 0.35 | 0.43 | 0.41 | 4% |
| Social science | 1.04 | 0.26 | 0.00 | 8% |
| Business | 0.40 | 0.29 | 0.17 | 4% |
| Maths | 1.00 | 0.29 | 0.00 | 8% |
| Natural Science | 1.03 | 0.27 | 0.00 | 8% |
| Medicine | ref | | | 3% |
| Engineering | 0.92 | 0.30 | 0.00 | 9% |
| Education | 0.06 | 0.34 | 0.86 | 3% |
| Interdisciplinary | 1.19 | 0.25 | 0.00 | 8% |
| Other | 0.63 | 0.31 | 0.04 | 5% |
| | | | | |
| Old university | 0.24 | 0.20 | 0.24 | 7% |
| 1960s university | 0.12 | 0.23 | 0.59 | 7% |
| Post 1992 University | 0.03 | 0.20 | 0.86 | 6% |
| HE college | Ref | | | 6% |

| | | | | |
|---|---|---|---|---|
| First | Ref | | | 4% |
| 2(I) | 0.32 | 0.19 | 0.09 | 5% |
| 2(ii) | 0.73 | 0.20 | 0.00 | 8% |
| 3rd | 0.90 | 0.29 | 0.00 | 11% |
| Pass/Diploma | 0.72 | 0.27 | 0.01 | 8% |
| Ordinary | 0.69 | 0.78 | 0.38 | 10% |
| | | | | |
| Constant | -4.20 | 0.42 | 0.00 | |
| | | | | |
| Sample | 7857 | | | |
| Nagelkerke R-squared | 0.073 | | | |
| Cox and Snell R-squared | 0.028 | | | |
| Goodness of Fit (Chi Square) | 9.54 | 0.299 | | |

The dependent and all independent variables are represented by 0, 1 values.

**Table A3.4: Logistic regression of the probability that respondents being employed in a non-graduate job approximately four years after graduation**

| | Coef | Std Err | Sig. | Means |
|---|---|---|---|---|
| Male | ref | | | 18% |
| Female | 0.17 | 0.07 | 0.02 | 20% |
| | | | | |
| 25 or under | 0.35 | 0.13 | 0.01 | 20% |
| 26 to 29 years | 0.17 | 0.13 | 0.21 | 18% |
| 30 to 39 years | ref | | | |
| 40 to 49 years | 0.23 | 0.19 | 0.22 | 19% |
| 50 plus | 0.30 | 0.24 | 0.21 | 28% |
| | | | | |
| No disability | ref | | | 19% |
| Disabled | 0.82 | 0.16 | 0.00 | 37% |
| | | | | |
| Not extremely ambitious | ref | | | 20% |
| Extremely ambitious | -0.41 | 0.09 | 0.00 | 15% |
| | | | | |
| non-white | ref | | | 22% |
| white | -0.14 | 0.14 | 0.29 | 19% |
| | | | | |
| no children | ref | | | 19% |
| depend children | -0.39 | 0.21 | 0.07 | 15% |
| | | | | |
| Managerial and Professional | ref | | | 18% |
| Intermediate Occupations | 0.16 | 0.11 | 0.13 | 20% |
| Small Employers and Own Account Workers | 0.09 | 0.09 | 0.30 | 19% |
| Lower Supervisory and Technical Occupations | 0.00 | 0.15 | 0.98 | 19% |
| Semi-routine and routine occupations | 0.09 | 0.10 | 0.38 | 20% |
| Neither Parent in Paid Employment | 0.26 | 0.25 | 0.30 | 23% |
| Not Determined | 0.41 | 0.14 | 0.00 | 23% |
| | | | | |
| 1 to 10 | 0.49 | 0.12 | 0.00 | 21% |
| 11 to 20 | 0.38 | 0.12 | 0.00 | 21% |
| 21 to 30 | 0.34 | 0.10 | 0.00 | 19% |
| 30 plus | ref | | | 13% |
| | | | | |
| Arts | 1.87 | 0.23 | 0.00 | 27% |
| Humanities | 2.26 | 0.20 | 0.00 | 29% |
| Languages | 2.20 | 0.25 | 0.00 | 23% |
| Law | 1.39 | 0.27 | 0.00 | 15% |
| Social science | 1.93 | 0.20 | 0.00 | 24% |
| Business | 1.72 | 0.20 | 0.00 | 22% |
| Maths | 1.20 | 0.24 | 0.00 | 13% |
| Natural Science | 1.79 | 0.21 | 0.00 | 22% |
| Medicine | ref | | | 5% |
| Engineering | 0.85 | 0.26 | 0.00 | 10% |
| Education | 0.34 | 0.24 | 0.16 | 7% |
| Interdisciplinary | 1.92 | 0.20 | 0.00 | 24% |
| Other | 1.36 | 0.22 | 0.00 | 17% |
| | | | | |
| Old university | ref | | | 17% |
| 1960s university | -0.09 | 0.11 | 0.43 | 17% |

| | | | | |
|---|---|---|---|---|
| Post 1992 University | 0.32 | 0.09 | 0.00 | 20% |
| HE college | 0.52 | 0.13 | 0.00 | 24% |
| | | | | |
| First | ref | | | 14% |
| 2(I) | 0.01 | 0.12 | 0.91 | 18% |
| 2(ii) | 0.26 | 0.13 | 0.04 | 22% |
| 3rd | 0.41 | 0.21 | 0.05 | 25% |
| Pass/Diploma | 0.74 | 0.19 | 0.00 | 23% |
| Ordinary | 1.03 | 0.54 | 0.06 | 39% |
| | | | | |
| no work experience | ref | | | 21% |
| work experience | -0.35 | 0.08 | 0.00 | 14% |
| | | | | |
| none | ref | | | |
| 1 month | -0.15 | 0.16 | 0.37 | 16% |
| 2 months | 0.18 | 0.13 | 0.16 | 20% |
| 3 months | 0.22 | 0.17 | 0.21 | 24% |
| 4 to 6 months | 0.43 | 0.13 | 0.00 | 27% |
| 6+ months | 0.80 | 0.13 | 0.00 | 37% |
| | | | | |
| no repayable debt | ref | | | 18% |
| debt - no problem | -0.07 | 0.08 | 0.41 | 17% |
| debt - problem | 0.32 | 0.10 | 0.00 | 26% |
| | | | | |
| moved from pre-university region | ref | | | 18% |
| stayed in pre-university region | 0.18 | 0.07 | 0.01 | 21% |
| | | | | |
| Constant | -4.04 | 0.29 | 0.00 | |
| | | | | |
| Sample | 7306 | | | |
| Nagelkerke R-squared | 0.14 | | | |
| Cox and Snell R-squared | 0.09 | | | |
| Goodness of Fit (Chi Square) | 18.80 | 0.02 | | |

The dependent and all independent variables are represented by 0, 1 values.

**Table A3.5: Logistic regression of the probability that respondents are employed in a *High Quality* job approximately four years after graduation**

| | Coeff | Std. Err. | Sig. | Means |
|---|---|---|---|---|
| Male | ref. | | | 29% |
| Female | -0.05 | 0.06 | 0.40 | 25% |
| | | | | |
| 25 or under | 0.54 | 0.19 | 0.00 | 29% |
| 26 to 29 years | 0.48 | 0.18 | 0.01 | 28% |
| 30 to 39 years | 0.21 | 0.21 | 0.32 | |
| 40 to 49 years | -0.07 | 0.23 | 0.77 | 14% |
| 50 plus | ref. | | | 10% |
| | | | | |
| No disability | ref. | | | 27% |
| Disabled | -0.65 | 0.24 | 0.01 | 14% |
| | | | | |
| Not extremely ambitious | ref. | | | 24% |
| Extremely ambitious | 0.55 | 0.07 | 0.00 | 36% |
| | | | | |
| non white | ref. | | | 22% |
| white | 0.26 | 0.13 | 0.05 | 27% |
| | | | | |
| Managerial and Professional | 0.27 | 0.14 | 0.05 | 28% |
| Intermediate Occupations | 0.39 | 0.16 | 0.01 | 29% |
| Small Employers and Own Account Workers | 0.11 | 0.15 | 0.48 | 25% |
| Lower Supervisory and Technical Occupations | ref. | | | 21% |
| Semi-routine and routine occupations | 0.15 | 0.15 | 0.32 | 22% |
| Neither Parent in Paid Employment | 0.35 | 0.27 | 0.19 | 28% |
| Not Determined | 0.20 | 0.19 | 0.27 | 25% |
| | | | | |
| 1 to 10 | ref. | | | 23% |
| 11 to 20 | 0.01 | 0.09 | 0.92 | 26% |
| 21 to 30 | -0.06 | 0.09 | 0.47 | 27% |
| 30 plus | 0.08 | 0.10 | 0.43 | 32% |
| | | | | |
| Arts | ref. | | | 17% |
| Humanities | 0.17 | 0.20 | 0.38 | 23% |
| Languages | 0.26 | 0.24 | 0.28 | 25% |
| Law | 0.69 | 0.23 | 0.00 | 33% |
| Social science | 0.27 | 0.19 | 0.17 | 24% |
| Business | 0.53 | 0.19 | 0.01 | 30% |
| Maths | 0.61 | 0.21 | 0.00 | 32% |
| Natural Science | 0.26 | 0.20 | 0.18 | 26% |
| Medicine | 0.46 | 0.20 | 0.02 | 27% |
| Engineering | 0.48 | 0.22 | 0.03 | 29% |
| Education | 0.12 | 0.20 | 0.54 | 19% |
| Interdisciplinary | 0.51 | 0.19 | 0.01 | 29% |
| Other | 0.56 | 0.21 | 0.01 | 29% |
| | | | | |
| Old university | 0.16 | 0.13 | 0.20 | 28% |
| 1960s university | 0.11 | 0.14 | 0.43 | 27% |
| Post 1992 University | 0.12 | 0.12 | 0.32 | 26% |
| HE college | ref. | | | 21% |
| | | | | |
| First | 0.06 | 0.20 | 0.75 | 27% |
| 2(I) | 0.10 | 0.18 | 0.59 | 27% |

| | | | | |
|---|---|---|---|---|
| 2(ii) | 0.08 | 0.18 | 0.65 | 26% |
| 3rd | ref. | | | 24% |
| Pass/Diploma | 0.27 | 0.22 | 0.21 | 28% |
| Ordinary | 0.70 | 0.64 | 0.28 | 31% |
| | | | | |
| no work experience | ref. | | | 25% |
| work experience | 0.14 | 0.06 | 0.02 | 30% |
| | | | | |
| none | 0.40 | 0.16 | 0.01 | 27% |
| 1 month | 0.38 | 0.21 | 0.07 | 27% |
| 2 months | 0.34 | 0.20 | 0.09 | 26% |
| 3 months | 0.30 | 0.23 | 0.19 | 25% |
| 4 to 6 months | 0.21 | 0.21 | 0.32 | 24% |
| 6+ months | ref. | | | 19% |
| | | | | |
| no repayable debt | ref. | | | 23% |
| debt - no problem | 0.17 | 0.07 | 0.02 | 29% |
| debt - problem | -0.20 | 0.09 | 0.03 | 21% |
| | | | | |
| moved from pre-uni region | ref. | | | 29% |
| stayed in pre-uni region | -0.20 | 0.06 | 0.00 | 23% |
| | | | | |
| Constant | -3.02 | 0.40 | 0.00 | |
| | | | | |
| Sample | 7414 | | | |
| Nagelkerke R-squared | 0.06 | | | |
| Cox and Snell R-squared | 0.04 | | | |
| Goodness of Fit (Chi Square) | 8.37 | 0.40 | | |

The dependent and all independent variables are represented by 0, 1 values.

**Table A3.6: Logistic regression of the probability that respondent undertakes a taught Masters degree following graduation**

| | B | S.E. | Sig. | Means |
|---|---|---|---|---|
| Gender | | | | |
| male | ref | | | 12.6% |
| female | -0.13 | 0.08 | 0.10 | 11.8% |
| | | | | |
| Age group | | | | |
| young graduates | ref. | | | 12.0% |
| young mature graduates | 0.52 | 0.17 | 0.00 | 13.1% |
| older mature graduates | 0.28 | 0.16 | 0.07 | 12.7% |
| | | | | |
| Dependent children | | | | |
| No dependent children | ref. | | | 12.2% |
| Has dependent children | -0.16 | 0.23 | 0.48 | 11.3% |
| | | | | |
| Extremely ambitious | 0.25 | 0.09 | 0.00 | 14.5% |
| | | | | |
| Social class | | | | |
| Managerial and Professional | -0.17 | 0.30 | 0.58 | 12.9% |
| Intermediate Occupations | -0.17 | 0.32 | 0.59 | 10.4% |
| Small Employers and Own Account Workers | -0.14 | 0.31 | 0.65 | 11.8% |
| Lower Supervisory and Technical Occupations | -0.07 | 0.34 | 0.84 | 11.3% |
| Semi-routine and routine occupations | -0.03 | 0.31 | 0.91 | 10.7% |
| Neither Parent in Paid Employment | ref. | | | 14.2% |
| Not Determined | 0.06 | 0.33 | 0.86 | 13.8% |
| | | | | |
| Qualififcations of parents | | | | |
| Father does not have degree | ref. | | | 10.4% |
| Father has degree | 0.35 | 0.09 | 0.00 | 16.9% |
| Mother does not have degree | ref. | | | 11.2% |
| Mother has degree | 0.11 | 0.09 | 0.24 | 16.3% |
| | | | | |
| Type of school attended | | | | |
| State comprehensive/sixth form college | ref. | | | 11.0% |
| State grammar school | 0.28 | 0.09 | 0.00 | 13.7% |
| Fee paying school | 0.03 | 0.10 | 0.75 | 15.0% |
| Other | 0.40 | 0.16 | 0.01 | 13.4% |
| | | | | |
| Entry qualifications | | | | |
| upto 10 A-level Points | ref. | | | 10.2% |
| 11-20 A-level Points | 0.20 | 0.11 | 0.08 | 10.3% |
| 21-30 A-level Points | 0.13 | 0.11 | 0.24 | 13.4% |
| 30+ A-level Points | 0.13 | 0.13 | 0.32 | 16.8% |
| | | | | |
| Subject studied | | | | |
| Arts | 0.81 | 0.25 | 0.00 | 10.9% |
| Humanities | 1.11 | 0.19 | 0.00 | 18.8% |
| Languages | 0.60 | 0.26 | 0.02 | 14.0% |
| Law | 0.24 | 0.28 | 0.40 | 8.6% |
| Social Sciences | 1.14 | 0.18 | 0.00 | 18.5% |
| Mathematics and Computing | 0.28 | 0.24 | 0.23 | 9.3% |
| Natural Sciences | 1.08 | 0.19 | 0.00 | 16.1% |

| | | | | |
|---|---|---|---|---|
| Medicine and Related | 0.31 | 0.21 | 0.15 | 7.8% |
| Engineering | 1.03 | 0.22 | 0.00 | 14.0% |
| Business | ref. | | | 4.6% |
| Education | 0.30 | 0.23 | 0.20 | 6.3% |
| Interdisciplinary | 0.78 | 0.19 | 0.00 | 13.3% |
| Other subject | 0.24 | 0.25 | 0.33 | 7.5% |
| | | | | |
| Type of institution attended | | | | |
| Old university | 0.70 | 0.19 | 0.00 | 16.7% |
| 1960s university | 0.63 | 0.20 | 0.00 | 13.8% |
| Post 1992 University | 0.28 | 0.18 | 0.13 | 8.6% |
| HE college | ref. | | | 7.7% |
| | | | | |
| Class of degree obtained | | | | |
| First class degree | 1.39 | 0.33 | 0.00 | 19.5% |
| Upper second | 1.22 | 0.32 | 0.00 | 14.0% |
| Lower second | 0.69 | 0.32 | 0.03 | 8.9% |
| Third | ref. | | | 4.5% |
| Pass/diploma | 0.05 | 0.41 | 0.90 | 4.3% |
| Ordinary | 0.91 | 0.82 | 0.27 | 11.3% |
| | | | | |
| Level of repayable debt | | | | |
| No debt | ref. | | | 13.7% |
| upto £3k | -0.26 | 0.11 | 0.02 | 11.7% |
| £3-£5k | -0.19 | 0.11 | 0.08 | 12.2% |
| £5-£7.5k | -0.19 | 0.11 | 0.08 | 12.7% |
| £7.5k+ | -0.35 | 0.11 | 0.00 | 10.1% |
| | | | | |
| Constant | -4.26 | 0.50 | 0.00 | |
| | | | | |
| Sample | 7774 | | | |
| Nagelkerke R-squared | 0.097 | | | |
| Cox and Snell R-squared | 0.051 | | | |
| Goodness of Fit (Chi Square) | 16.537 | 0.035 | | |

The dependent and all independent variables are represented by 0, 1 values.

**Table A3.7: Logistic regression of the probability that respondents gain a first class or upper second class degree**

| | Coeff. | Std. Err. | Sig. | Means |
|---|---|---|---|---|
| Male | ref | | | 58% |
| Female | 0.50 | 0.06 | 0.00 | 67% |
| | | | | |
| No disability | ref | | | 64% |
| Disabled | -0.35 | 0.19 | 0.07 | 53% |
| | | | | |
| Not extremely ambitious | ref | | | 63% |
| Extremely ambitious | 0.15 | 0.07 | 0.04 | 65% |
| | | | | |
| Non-white | ref | | | 57% |
| White | 0.22 | 0.12 | 0.08 | 64% |
| | | | | |
| Father no degree | ref | | | 61% |
| Father degree | 0.15 | 0.07 | 0.03 | 70% |
| Mother no degree | ref | | | 62% |
| Mother degree | 0.07 | 0.08 | 0.37 | 69% |
| | | | | |
| 0-9 A level points | ref | | | 48% |
| 10-19 A level points | 0.08 | 0.09 | 0.34 | 52% |
| 20-29 A level points | 0.86 | 0.08 | 0.00 | 71% |
| 30+ A level points | 1.35 | 0.10 | 0.00 | 81% |
| | | | | |
| No Foundation | ref | | | 64% |
| Foundation Course | -0.01 | 0.20 | 0.97 | 57% |
| No HND/HNC | ref | | | 64% |
| HND/HNC | -0.13 | 0.16 | 0.41 | 46% |
| No OND/ONC | ref | | | 64% |
| OND/ONC | -0.29 | 0.16 | 0.07 | 42% |
| No GNVQ | ref | | | 64% |
| GNVQ | -0.30 | 0.19 | 0.13 | 45% |
| | | | | |
| No paid work | ref | | | 65% |
| Work in term time | -0.31 | 0.15 | 0.04 | 52% |
| Work in vacation | 0.13 | 0.11 | 0.23 | 69% |
| Work both | -0.13 | 0.11 | 0.25 | 60% |
| | | | | |
| Constant | -0.56 | 0.17 | 0.00 | |
| | | | | |
| Sample | 5997 | | | |
| Nagelkerke R-squared | 0.12 | | | |
| Cox and Snell R-squared | 0.09 | | | |
| Goodness of Fit (Chi Square) | 10.15 | 0.26 | | |

The dependent and all independent variables are represented by 0, 1 values. The sample is restricted to the 'young' age group of graduates.

**Table A3.8: Logistic regression of the probability that respondents report that debts incurred as a student affected options after graduation**

| | Coeff. | Std. Err. | Sig. | Means |
|---|---|---|---|---|
| Male | Ref | | | 22% |
| Female | 0.32 | 0.08 | 0.00 | 26% |
| | | | | |
| No disability | Ref | | | 25% |
| Disabled | 0.45 | 0.23 | 0.05 | 32% |
| | | | | |
| | Ref | | | 24% |
| Do not expect to get main fulfilment from job | 0.31 | 0.10 | 0.00 | 28% |
| | | | | |
| First | Ref | | | 14% |
| 2(I) | 0.36 | 0.15 | 0.02 | 24% |
| 2(ii) | 0.58 | 0.16 | 0.00 | 29% |
| 3rd | 0.76 | 0.24 | 0.00 | 30% |
| Pass/Diploma | 0.12 | 0.26 | 0.65 | 20% |
| Ordinary | 0.88 | 0.78 | 0.26 | 33% |
| | | | | |
| Managerial and Professional | 0.05 | 0.10 | 0.64 | 24% |
| Intermediate Occupations | 0.02 | 0.14 | 0.91 | 24% |
| Small Employers and Own Account Workers | Ref | | | 23% |
| Lower Supervisory and Technical Occupations | 0.24 | 0.18 | 0.18 | 29% |
| Semi-routine and routine occupations | 0.19 | 0.13 | 0.16 | 27% |
| Neither Parent in Paid Employment | 0.28 | 0.30 | 0.35 | 33% |
| Not Determined | 0.23 | 0.16 | 0.16 | 26% |
| | | | | |
| no student loan | Ref | | | 15% |
| loan £0-1000 | 0.22 | 0.47 | 0.64 | 12% |
| loan £1-2000 | -0.09 | 0.18 | 0.63 | 10% |
| loan £2-3000 | 0.59 | 0.19 | 0.00 | 18% |
| loan £3-4000 | 0.71 | 0.15 | 0.00 | 21% |
| loan £4-5000 | 1.04 | 0.15 | 0.00 | 30% |
| loan £5000+ | 1.09 | 0.13 | 0.00 | 34% |
| | | | | |
| no credit | Ref | | | 13% |
| credit £0-500 | 0.56 | 0.22 | 0.01 | 20% |
| credit £5-1000 | 0.45 | 0.15 | 0.00 | 19% |
| credit £1-1500 | 0.56 | 0.12 | 0.00 | 22% |
| credit £1500-2000 | 0.88 | 0.12 | 0.00 | 28% |
| credit £2000+ | 1.34 | 0.10 | 0.00 | 42% |
| | | | | |
| no family | Ref | | | 22% |
| family £0-500 | 1.23 | 0.29 | 0.00 | 48% |
| family £5-1000 | 1.06 | 0.22 | 0.00 | 44% |
| family £1-1500 | 0.55 | 0.16 | 0.00 | 37% |
| family £1500-2000 | 0.94 | 0.40 | 0.02 | 50% |
| family £2000+ | 0.94 | 0.14 | 0.00 | 40% |
| | | | | |
| no other debt | Ref | | | 24% |
| other debt | 0.96 | 0.32 | 0.00 | 48% |
| | | | | |
| Arts | 0.86 | 0.25 | 0.00 | 32% |
| Humanities | 0.94 | 0.20 | 0.00 | 31% |
| Languages | 0.68 | 0.26 | 0.01 | 28% |

| | | | | |
|---|---|---|---|---|
| Law | 0.62 | 0.26 | 0.02 | 26% |
| Social science | 0.85 | 0.20 | 0.00 | 30% |
| Business | 0.14 | 0.21 | 0.50 | 19% |
| Maths | Ref | | | 15% |
| Medicine | 0.11 | 0.23 | 0.63 | 17% |
| Natural Science | 0.61 | 0.20 | 0.00 | 25% |
| Engineering | 0.13 | 0.26 | 0.61 | 17% |
| Education | 0.51 | 0.22 | 0.02 | 26% |
| Interdisciplinary | 0.54 | 0.20 | 0.01 | 24% |
| Other | 0.67 | 0.23 | 0.00 | 27% |
| | | | | |
| Constant | -4.03 | 0.27 | 0.00 | |
| | | | | |
| Sample | 5245 | | | |
| R-squared | 0.20 | | | |

The dependent and all independent variables are represented by 0, 1 values. The sample is restricted to the 'young' age group of graduates and those who reported having repayable debt.

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