

# **Scotland's Class of '99: the early career paths of graduates who studied in Scottish Higher Education Institutions**

A report to the Scottish Further and Higher Education Funding Council

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## EXECUTIVE SUMMARY

### *Researching Scotland's graduates: the issues*

Drawing primarily upon data collected from a nationally-representative survey of UK graduates who completed their undergraduate degree programmes in 1999, this report focuses upon those who studied at Scottish universities, providing a snapshot of the early career experiences of a particular cohort of recent labour market entrants that complements available data on graduate employment in Scotland. It throws light on the impact of recent higher education expansion on the graduate labour market and further evidence on the extent to which recently-qualified graduates have been integrated into to occupational structure, and how far the knowledge and skills acquired at university are being used.

One in two of the 1999 undergraduate degree-holders were sampled at 38 UK higher education institutions (HEIs) selected to be representative of the full range of the UK graduate labour supply, and of these, five were located in Scotland – two 'ancient' universities, one 1960s one and two HEIs which were granted university status in 1992. Similar samples had been drawn from the 1995 graduating cohorts, and some use is made of the data collected in that earlier survey for comparative purposes.

The objective of this study has been two-fold: to assess the extent to which the post-graduation career trajectories and employment outcomes of Scottish HEI graduates are similar to, or diverge from, those who had studied in other UK locations, and to focus in on Scotland's *Class of '99*. The UK survey also sampled Scottish-domiciled graduates who had studied in other UK countries, but the numbers included are neither large enough nor sufficiently representative of Scottish educational emigrants to facilitate detailed comparison of this interesting minority. Indicative details of those included in the survey are provided in Appendix 2.

### *Scotland's Class of '99*

In our sample, Scottish HEIs graduates were slightly more likely than graduates from English and Welsh institutions to have been female and, on average, had a younger age profile, reflecting the population from which they were drawn. They were slightly less likely than those from England and Wales to have come from managerial and professional occupational backgrounds and more likely to have come less advantaged backgrounds, despite a greater propensity to come from family backgrounds where their mother or father had a degree or other HE qualification. Graduates who had studied at Scottish HEIs had been predominantly living in Scotland before entering higher education (83 per cent) but a significant proportion had been living in England and Wales (12 per cent).

Immediately after graduation, Scotland retained a similar proportion of its graduates to London and the South East but higher than other regions in England and Wales and by the time of the survey, four years after graduation, further outflow of Scottish HEI graduate labour was largely similar to that from other UK countries and regions.

Compared to graduates living in Scotland prior to study, non-Scottish graduates from Scottish HEIs were more likely to be male and to be 'young' graduates. They were significantly more likely to come from higher social class backgrounds, to have attended a fee-paying school prior to study and to have studied at an 'old' university.

*Employment outcomes and the transition from higher education to employment: UK comparisons*

Analysis of employment outcomes four years after graduation reveals that a higher proportion of graduates from Scottish HEIs were in career-related employment at the time of the survey than graduates from other regions. Half of Scottish graduates had entered non-graduate jobs immediately after graduation but this had fallen to approximately 15 per cent four years later.

Almost 40 per cent of Scottish graduates from Scottish institutions were in public sector employment, 55 per cent in the private industry and 5 per cent in the not-for-profit sector. These ratios are similar to those for graduates from England and Wales, although Scottish HEI graduates were less likely to have been working in education than the former.

Four years after graduation, Scottish HEI graduates were more likely than those who had studied elsewhere to have said that they took their current job because they wanted to work in the region or locality. They were more likely to be in employment for which a degree was required, and more likely to be using their degree-acquired skills and subject knowledge, than those from the other UK countries. Not surprisingly, they were also more likely to report that possession of a degree and their specific subject of study had been relevant in getting their current job.

Analysis of the occupational distribution by SOC(HE) reinforces this picture of lower levels of non-graduate employment. Graduates from Scottish HEIs had higher levels of employment in traditional graduate jobs and almost half of all graduates from Scotland rated their jobs as being ideal or near-ideal for someone with their qualifications, higher than in the other sub-samples.

In terms of job characteristics and job quality, outcomes for Scottish graduates are similar to those of their peers from English and Welsh institutions, but they rated their jobs as 'better' than those from NI institutions. In fact, almost 70 per cent of graduates from Scottish HEIs reported overall satisfaction with their current jobs, with 14 per cent scoring low satisfaction -

similar to graduates from the other UK regions. However, Scottish HEI graduates were more often satisfied with total pay and hours worked.

#### *The employment outcomes of Scottish HEI graduates*

As in the UK graduate population as a whole, women graduates from Scottish HEIs were significantly more likely to be working in the public sector, and men in private sector employment. According to standard occupational classification major groups, women were less likely than their male peers to be in managerial, senior administrative or professional occupations, and more likely to be in associate professional and technical occupations. However, according to SOC(HE) women were more likely to be in traditional graduate jobs and *niche* graduate occupations, and less likely to be in non-graduate jobs. Men and women were equally likely to be in employment for which a degree was required, to be using their degree-acquired skills and subject knowledge and to feel their job was appropriate for someone with their qualifications, but women were less likely to be at both extremes, in terms of their subjective rating of current employment: less likely to rate their job quality very low or very high.

As for the UK cohort as a whole, class of degree is correlated with outcome where degrees results were classified, with high academic achievers more likely to be in appropriate employment and more satisfied with their career outcomes than lower achievers. Among those with pass or unclassified degrees (more common among Scottish HEI graduates than in other UK counties), there was a distinct polarisation according to subject studied, which reinforced the general achievement-related principle: for example, medical and some other vocational degrees are unclassified and associated with high rather than low achievement, in terms of both prior qualifications and outcomes, but it is generally the case that unclassified degrees constitute a lower qualification or lower levels of achievement than honours degrees.

#### *The impact of migration*

Those who had moved to Scotland from other UK locations to study at Scottish HEIs were somewhat more likely to be in a job for which a degree was required, less likely to be in professional jobs and more likely to be in managerial or senior administrative jobs – traditional or new jobs, according to SOC(HE), which is reinforced by the fact that they were somewhat less likely to be using their degree subject knowledge, although equally likely to be using their graduate skills. These outcomes reflect their greater tendency to have moved away from Scotland.

Scottish HEI graduates currently working in Scotland were more likely to be working in education and primary industries than those working elsewhere. They were less likely to be

working in ICT and business or financial services and in managerial or professional occupations (SOC2000), and more likely to working in *niche* or non-graduate jobs SOC(HE). They were, subsequently, less likely to be in employment requiring a degree but were making equal use of their skills and knowledge or graduate skills. Most Scottish HEI graduates rated their jobs as appropriate for someone with their skills and qualifications and to be satisfied with their current jobs overall, but those working in Scotland were marginally less likely than those who had left to rate their jobs as appropriate, or to record high job quality scores and high levels of job satisfaction.

#### *Earnings among Scottish HEI graduates*

Graduate earnings are highest in London and the South East of England, but there is no evidence to suggest that graduates employed in Scotland receive, on average, higher or lower annual earnings than graduates working in South West, Central, East or Northern England. In particular, graduates from Scottish HEIs who were working in Inner or Outer London four years after graduation had a significant area effect associated with their earnings.

As in the UK as a whole, there was significant gender inequality in earnings, especially according to subject of study, occupational classification and sector of employment, but the gender gap between male and female Scottish HEI graduates was lower than for those who had studied elsewhere.

There was a differential impact of having had a work placement as part of an undergraduate programme of study for men and women. For men, there was a slight earnings penalty associated with work experience during their studies, whilst for women there was a positive impact.

Scottish HEI graduates who had come to Scotland to study from elsewhere in the UK were earning higher average salaries at the time of the survey than indigenous students, although this is likely to be related to the higher social class background of educational migrants and their greater propensity to have studied at older universities, as well as their greater likelihood of having moved away from Scotland to obtain employment. For Scottish HEI graduates, moving out of Scotland for employment immediately after graduation was associated with higher earnings four years on, compared to those who remained in the country.

On average, graduates in medicine and related disciplines, ICT and law were the highest average earners. Social science graduates reported the lowest average earnings. For both men and women average earnings were highest for those working in banking, finance and insurance. For men, earnings were lowest in distribution, hotel and catering and education

and for women, in transport and tourist services. Not surprisingly, Scottish HEI graduates employed in non-graduate occupations and jobs which were likely to represent under-employment were paid significantly less, on average, than those in graduate-appropriate employment and in these jobs there appeared to be less of a gender impact on earnings than for those in graduate-level occupations.

*The incidence and impact of student debt on the Scottish Class of '99*

Scottish students were slightly less likely than those from England and Wales to have reported having had debts, but more likely to have done so than those from Northern Ireland. Seventy three per cent of Scottish HEI graduates reported that they had repayable debt when they completed their undergraduate studies in 1999, compared to 79 per cent of those from English and Welsh HEIs and two-thirds of NI graduates. Scottish HEI graduates also reported lower average levels of borrowing than their counterparts from English and Welsh HEIs. For all Scottish HEI graduates, average debt was £4,300 compared to £5,100 for English and Welsh HEI graduates and £3,400 for those from Northern Ireland.

Two-thirds of debt accumulated by Scottish HEI graduates was in the form of student loans and 26 per cent from other creditors, including credit cards and overdrafts. This is similar to the pattern of borrowing for graduates of English and Welsh HEIs, although Scottish graduates were more greatly indebted to family and friends on average. NI graduates had been relatively more reliant on student loans as a Source of income. Twenty one per cent of Scottish HEI graduates with repayable debt reported that their options after completing their studies had been restricted by this borrowing, approximately half of whom indicated that they would have liked to have gone on to postgraduate study but did not want to add further to their debts. Debt upon graduation appeared to be less of a factor in making employment decisions among Scottish HEI graduates than for those from English and Welsh HEIs.

Female Scottish HEI graduates were both more likely to have accumulated debt than males and also to have higher average levels of borrowing. Males, however, were more likely to consider it to have restricted their options after completing their studies. Scottish HEI graduates from lower socio-economic groups reported lower average levels of debt, but were notably more likely to indicate that debt had restricted their options after graduation. Scottish HEI graduates who lived in Scotland prior to study were less likely to indicate having debts on graduation compared to those who came to the country to study from elsewhere, and reported significantly lower levels of borrowing. Scottish HEI graduates from other UK locations were more likely to consider debt to have been an issue in career decision-making after graduation. As in the survey as a whole, Scottish HEI graduates who reported debt as having restricted their choices post-graduation showed a lower propensity to enter full-time postgraduate study in the four years covered by the survey than those with no debt or with

debt that had not affected their options. They were also more likely to be employed in non-graduate jobs for much of the period covered by the survey.

#### *Use of careers guidance*

There was little variation in the extent to which graduates from the different UK regions utilised various Sources of careers advice, information and guidance and the extent to which they considered them to be have been useful. Among Scottish HEI graduates, younger graduates made significantly greater use of Sources of careers information and guidance available to them compared to their older peers, especially university careers services. As with the UK national population, Scottish HEI graduates from managerial or professional backgrounds were more likely to report using 'networks' than graduates from lower socio-economic groups.

Scottish graduates from post-1992 universities reported less use of university careers services than those from the longer-established HEIs but, having done so, were most likely to report them to have been useful. It is not surprising that, of Scottish HEI graduates in medicine, humanities and business studies, business graduates made most use of university careers services and graduates in medicine the least. Conversely, medicine graduates made greater use of networks than other graduates.

#### *Skills developed in HE and propensity to proceed to further study and postgraduate education*

There was little difference in the extent of development and use in employment of a range of transferable skills on the basis of location of study. There were, however, differences in skills development amongst Scottish HEI graduates according to subject discipline, reflecting the extent to which subjects were vocational or academically-based, and these are discussed in Chapter 6.

Graduates from Scottish HEIs were more likely to have undertaken postgraduate training or education as those from English and Welsh institutions, but less likely to have done so than those from NI institutions. Where they had done so, Scottish HEI graduates were more likely to have undertaken a postgraduate research degree, a further undergraduate degree or a postgraduate diploma or certificate than graduates from other UK countries. The graduates from Scottish HEIs most likely to have reported having undertaken postgraduate training or education in the period since graduation were more likely to be female, to have graduated in humanities, social sciences, business studies and natural science and to have attended an old university. They were also more likely to have come from a higher socio-economic background and have higher levels of educational attainment, both prior to HE and in terms of degree class achieved. Scottish HEI graduates were more likely than other UK graduates to



have indicated that their reason for postgraduate study had been to broaden their range of skills and knowledge, rather than to develop more specific knowledge. They were also more likely to indicate that one reason was that they had been unable to find a suitable job.

*Scottish HEI graduates' overall assessment of the relationship between their higher education and early career development*

With hindsight, over 95 per cent of Scottish HEI graduates would still choose to enter higher education and almost 90 per cent would study at the same institution. The interview data indicated that the majority of respondents believed their degrees to have been a good investment and, in common with other interview respondents in the Class of '99 study, graduates from Scottish HEIs were most likely to have reported personal and social development as what they valued most about their undergraduate education.

There was little difference in the reasons for entering higher education given by Scottish HEI graduates compared to those of other UK regions, although they were marginally more likely to have had a particular career in mind and were less likely to have simply wanted to be a student compared to graduates from England and Wales. As in the survey as a whole, members of the very small minority of graduates from Scottish institutions who reported that they regretted their decision to enter higher education were more likely to be male, to have studied arts, social sciences, engineering and 'other vocational' disciplines, to have achieved a lower degree classification and to have attended post-1992 universities. Disillusion with higher education appears partly related to poorer performance in the labour market: 'disenchanted' graduates were more likely to be in *niche* or non-graduate employment, were less likely to be in employment for which a degree was required or to be using their degree skills and knowledge.

The analysis provides little support for the contention that Scottish HEI graduates are failing to access opportunities that enable them to use and obtain appropriate recognition for their higher education skills and knowledge, and reinforces other recently-published evidence that the Scottish graduate labour market is buoyant and able to absorb the increased output of graduates resulting from recent higher education expansion. Over 80 per cent of the 1999 graduates who had studied at Scottish HEIs were very or reasonably satisfied with their careers to date, a comparable figure to that of graduates from the other regions. Scottish HEI graduates working outside the country at the time of the survey were notably more likely to be very satisfied with their careers to date, but geographical migration was associated with greater propensity to be in appropriate employment for graduates from all UK countries.

## CHAPTER 1

### Scotland's graduates and graduate employment opportunities in Scotland

#### 1.1 Scottish education and the Scottish economy

Related to devolution, there has been a resurgence of debate in Scotland about Scottish identity and Scotland's current and future potential within the increasingly complex and competitive world economy - and the role of education has been central to that debate. Particularly since the establishment of the independent Scottish Executive, there has been a concern to investigate current and future requirements of stakeholders with a view to maximising the relevance and effectiveness of HE provision in Scotland, with increasing efforts to develop 'joined-up thinking' in relation to knowledge and skills development across the full spectrum of educational and training provision. Several influential reports and consultations have been produced separately and in partnership by the major stakeholder organisations, including policy statements and analyses of existing evidence<sup>1</sup> culminating in the consultation document *Shaping Our Future* published by the Scottish Executive in 2002 and the evidence submitted to it<sup>2</sup>, followed by the recently-published Futureskills Scotland (2006) report *The Labour Market for Graduates in Scotland*, produced for Scottish Enterprise. In all of the documents produced by stakeholder groups, there is concern with employability and the need to meet employers' changing skills requirements, but also an explicit recognition of the wider social value of learning and knowledge.

The Scottish education system has a well-established reputation for excellence - one of the strengths for which Scotland has been renowned for generations, well-known to be distinct from (and often regarded as superior to) that of the other UK nations. Scotland's current record of participation in HE is impressive; participation in higher education is already 50 per cent of young Scots (17-21 year olds), although there is an interesting gender disparity, wider than in the UK as a whole; women's participation has risen consistently, to a substantially greater extent than men's since the early 1990s (SFEFC/SHEFC 2005). Although the participation of those from socially-disadvantaged areas remains disappointing and lower than in other UK nations (Futureskills 2006, *ibid*:8), participation of 'non-traditional' students (*i.e.* those who do not come from a managerial, professional or associate professional background) has been significantly higher than in other UK regions (SFEFC/SHEFC *op cit.*; Universities Scotland. 2002).

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- 1 For example, *Skills for Scotland* (The Scottish Office 1999), Strategy statement for Further Education Colleges in Scotland (Association of Scottish Colleges 2000), *Dynamic security: skills and employability in Scotland* (The Skills and Employability Network 1998), *Rethinking Scotland's Skills Agenda* (CBI Scotland 1999), *The Scottish Labour Market 2002* (Futureskills/Scottish Enterprise 2002), *Scotland is Changing: Colleges at the Forefront* (Association of Scottish Colleges 2003), *Life Through Learning Through Life: The Lifelong Learning Strategy for Scotland* (The Scottish Executive 2003).
  - 2 For example, *The Knowledge Society* (Universities Scotland 2002)

The different ideological climate within which debates about investment in education and the value and role of education takes place is illustrated by the Scottish Executive's decision not to shift part of the costs of HE onto students in the form of course fees for home students. Thus, underlying Scottish education provision, there is implicit recognition of education as a lifelong social investment. However, the success of this policy depends on the successful labour market integration of those who gain HE qualifications, as well as the realisation of social returns that may be more difficult to evaluate than, say, individual earnings premia<sup>3</sup>.

### 1.2 *Industrial restructuring, employment change and the graduate labour market in Scotland*

The labour market of the new millennium is very different to that of 10-15 years earlier: access to employment opportunities more broadly has been profoundly affected by the expansion and restructuring of higher education. At the same time, the impact of technology, particularly information and communication technology has been changing both the ways in which organisations are structured and work is organised within and among organisations and their networks (Universities Scotland *ibid.*, Castells 1996, Rubery *et al.* 2002). Highly-qualified entrants to the labour market, whether or not they have developed particular skills and knowledge related to ICT, are knowledge workers who constitute the core of the workforce required for socio-economic development in the increasingly competitive global economy (Albert and Bradley 1997). As ICT continues to facilitate and require skill changes (Felstead *et al.* 2002) and add to the impact of progressive restructuring of the economy (Gallie *et al.* 1998), it becomes increasingly important for individuals, educationalists and policy-makers to understand the dynamics of cost and benefits in education investment. Scotland is developing key skills in a higher proportion of its workforce than any other European country, but does this reflect appropriate investment in HE, in terms of the scale and substance of existing provision (Critical Thinking 2003)? A recent comparative study of skill creation in the seven major Western economies (Crouch *et al.* 1999) stressed the need to expand higher education systems, while maintaining and modernising technical education and apprenticeship systems – as, it appears, Scotland has been doing increasingly consciously and effectively (Scottish Executive 2003). Levels of employment are projected to remain relatively stable in Scotland over the next few years, with growth in Wholesale and Retail Distribution, Banking and Insurance, Business Services, Healthcare and Education counterbalanced by continuing decline in Engineering, some parts of manufacturing and Construction – but with expansion, overall, in professional, managerial, associate professional and technical occupations – as in the UK more broadly (Dickerson *et al.* 2004).

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3 Surveys of graduates, including our own recent and ongoing work, provide evidence about the employment outcomes of graduates from Scottish HEIs and there has also been a recent study - analysing Labour Force Survey data - of the returns to further education, both of which indicate that the individual returns are largely positive - both in economic and non-pecuniary terms, although there has recently been a decline in the scale of the graduate earnings premium.

What are the distinctive impacts of entering the labour market with an academic or vocational degree? What access do different types of higher education qualifications provide, in terms of access to jobs and employability - within the Scottish labour market and beyond? Do Scottish graduates migrate to other parts of the UK because they have been unable to access appropriate employment in Scotland - or because the individual returns to their qualifications are higher in other regions? Is there evidence of graduate under-utilisation?<sup>4</sup>. Where are there shortages and over-supply of highly skilled labour? As employers become increasingly confused by the diversity of undergraduate degree programmes, are those who could have gone on to higher education, but chose not to, disadvantaged by their decision, initially and in the medium term - or are they seen positively by employers as having more practical and applicable skills and knowledge?

### 1.3 *The research conducted and the analysis undertaken*

The enquiry that underlies this report was conducted within a larger project - an investigation of the career paths of UK graduates conducted by the authors on behalf of the Department of Employment and Skills (DfES) (Purcell *et al.* 2005). However, the UK report – *The Class of '99: a study of the early labour market experiences of recent graduates* - does not provide a detailed analysis of regional similarities and differences in career options and outcomes. For this reason, the Scottish Further and Higher Education Funding Council (SFC) decided to fund analysis of the data within that study for Scotland's graduates as its focal point. This report presents results from an investigation of the early careers of graduates who studied at Scottish Higher Education Institutions (HEIs), focusing predominantly on the 1999 cohort sample but also making comparison, where appropriate, with the 1995 sample. Where possible, we also look, in both samples, at the outcomes and experiences of Scottish-domiciled graduates who studied in other UK countries.

This report draws primarily on data from the *Class of '99* 1999 cohort study, but includes some comparison with the earlier survey of 1995 graduates (contacted twice, with first contact in what was termed the *Moving On* survey and second contact in what is referred to as the *Seven Years On* survey)<sup>5</sup>. Both the *Seven Years On* and *Class of '99* surveys covered graduates from across the range of Higher Education Institutions at 38 UK higher education institutions (HEIs), selected to be representative of the full range of UK undergraduate degree-holders<sup>6</sup>. Both cohorts of graduates were initially surveyed between three and a half

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4 See, for example, Brown, P. (2003) *The Opportunity trap: Education and Employment in a Global Economy*. Cardiff University School of Social Sciences, Working Paper Series 32; Wolf, A. (2002), 'Too many graduates?' *Prospect*, July, pp.36-41, Battu, H., Belfield, C. and P. Sloane (2000) 'How well can we measure graduate over-education and its effects?' *National Institute Economic Review*, 171, pp. 82-93; Mason, G. (1996) 'Graduate Utilisation in British Industry: the impact of mass higher education.' *National Institute Economic Review* 156, pp. 93-110.

5 See Elias, P. and K. Purcell (2001) *Scotland's Graduates Moving On. A New Horizon Report*. Glasgow: The University of Strathclyde and the Industrial Society; Elias, P. *et al.* (1999) *Moving On: graduate careers three years after graduation*. London: DfES

and four years after the completion of their undergraduate degrees, with the 1995 cohort being contacted a second time seven years after graduating<sup>7</sup>.

For both cohorts, the sample includes 5 Scottish HEIs, representative of the mix of old and new universities in Scotland and representative of north, south, east and west Scotland, with approximately 1,000 graduates from these HEIs responding at the first wave of each cohort. For the analysis, the data are weighted to be representative of the populations from which they were drawn. Thus, we are able to conduct separate analyses of graduates from Scottish HEIs and comparative analyses both between cohorts and between Scottish graduates and graduates from other UK locations. We are also able to distinguish between Scottish graduates who studied at Scottish HEIs, graduates from other locations who studied at Scottish HEIs, and Scottish HEI graduates who have remained in, or left, the Scottish labour market. Because the sample size of Scottish graduates who studied in other UK locations is rather small, we confine comparative analysis of these graduates and Scottish-domiciled graduates who had studied at Scottish HEIs to an annexe. More confident comparative analysis of the impact of educational and employment-led migration will be possible as the Futuretrack 2006 project, which we have just begun, develops<sup>8</sup>.

The strength of this report is its focus on a particular cohort who recently entered the labour market, whose particular skills, knowledge, qualifications and demographic characteristics are known, and facilitate exploration of the impact of such variables on labour market access and outcomes in the wake of significant higher education expansion. The report aims to provide information for those embarking on higher education programmes, as well as for policy-makers, employers, careers advisers, and those concerned with course planning and delivery in HE. At one level, educational strategists will find evidence to assist with the planning of future provision of higher education for Scotland's population. At another level, recent graduates or those planning to enter higher education can examine the career paths taken by Scottish graduates with different qualifications and aspirations and, from this, gain some indication of the opportunities available to them and possible short and medium-term implications of different career choices. Careers advisor and guidance specialists should also find the graduate labour market information and evidence from accounts provided by

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- 6 These projects – Moving On, Seven Years On and The Class of '99 - incorporated a questionnaire survey and detailed follow-up qualitative interviews. The Moving On survey collected information from approximately 9,600 graduates at 33 Higher Education Institutions (HEIs). The Class of '99 survey included responses from over 9,300 graduates at 38 HEIs (the 33 originally included in the 1995 cohort study, plus 5 additional HEIs). Of these, 8,571 respondents completed first degrees in 1999 and the others completed HND and DipHE qualifications. The Seven Years On survey included approximately 4,000 responses from the original Moving On respondents (graduates who had completed their undergraduate degree in 1995).
  - 7 Graduates in the 1995 cohort were first contacted in December 1998, with a second mailing to non-respondent in early Spring 1999. The 1999 cohort was first contacted in the late Spring and early summer of 2003. Consequently, the average length of from graduation until first contact for survey purposes was slightly longer for the latter, approximately 4 years.
  - 8 All UK students applying through the Universities Careers Admissions Service (UCAS) between 2005-6 to study on full-time higher education programmes are currently being invited to participate in an online survey that is the first sweep of a four stage longitudinal programme that will track respondents through until December 2011. See [www.hecsu.ac.uk](http://www.hecsu.ac.uk) for further details.

graduates of their early career development relevant to their professional activities. Detailed findings are presented in the chapters that follow.

#### 1.4 *The structure of this report*

In Chapter 2, we provide an overview of the Scottish HEI graduate *Class of '99* sample, including their demographic and educational profiles, and looking at similarities and differences between Scottish-domiciled graduates and those who had come to Scotland to study from other parts of the UK and discuss the extent to which the sample is representative of the Scottish HEI population from which it was drawn. In Chapter 3, we compare the outcomes and transition from higher education to employment of Scottish HEI graduates to graduates who studied in other parts of the UK. We compare their occupational profiles, job quality and job satisfaction. Chapter 4 focuses in on the Scottish HEI *Class of '99*, looking at the experiences of different kinds of graduates according to gender, subjects studied, types of institution attended, levels of achievement, opportunities accessed and choices made. In Chapter 5, we conduct a detailed analysis of the earnings of Scottish HEI graduates four years after graduation and of the level and subsequent impact of student debts among the cohort. Chapter 6 explores skills developed as undergraduates and used in employment, access to and use of careers guidance and information, and participation in postgraduate training and professional development subsequent to graduation. Finally, chapter 7 reports on the evaluation by Scottish HEI graduates of their higher education and their satisfaction with their early career development.

Annexe 2 provides information about Scottish-domiciled graduates in the *Class of '99* sample who had studied in other UK countries.



## Chapter 2

### An overview of graduates from the Scottish HEIs

#### 2.1 Introduction

The purpose of this chapter is to provide a profile of the sample of graduates discussed in this report and to provide a backdrop to the discussion of career paths and employment outcomes that follow. In particular, we outline the demographic and educational characteristics of the sample, comparing graduates from the Scottish universities with those from English and Welsh<sup>9</sup> and Northern Irish institutions. We also outline the geographical mobility of the sample in terms of location of domicile prior to entering HE, location of study and location of subsequent employment. This chapter also compares the characteristics of graduates from the Scottish HEIs who lived in Scotland prior to entering higher education to those who lived elsewhere in the UK. Where data are available, we compare our sample(s) with the population from which it was drawn or other relevant data with which to assess how representative it is.

#### 2.2 Demographic characteristics

Table 2.1 shows the gender distribution of the sample according to location of study. The gender ratio of Scottish graduates indicates that women were very slightly more in the majority than is the case for those who graduated in England and Wales. Northern Ireland (NI) had a comparatively lower proportion of male respondents. The sample is weighted to be representative of the HEI population from which it was drawn, and comparison with statistics for the corresponding year reported by the Scottish Executive indicates that this is a ratio resembling that of the cohort as a whole.

**Table 2.1 Gender, by location of study**

	The Class of '99			Scottish Executive First Destination Statistics 99-00
	Scotland	England and Wales	Northern Ireland	
Male	45.8	47.3	39.3	44.5
Female	54.2	52.7	60.7	55.5
<b>N (weighted)</b>	<b>8301</b>	<b>63380</b>	<b>5754</b>	-

N=77,436 (weighted)

Sources: *The Class of '99 survey*; Scottish Executive First Destination of graduates and diplomats 99-00, Table 1

<sup>9</sup> Graduates from English and Welsh HEIs have been grouped together because the systems of higher education are less distinct from one another than are those in Scotland and Northern Ireland and analysis indicates greater similarity of the population profiles and outcomes.



In previous analyses of graduate labour market data, we have found that age at graduation is an important factor in employment outcomes. For the purposes of this analysis, we divide the 1999 cohort sample into three categories:

- 'young' graduates, who graduated before the age of 24 (usually embarking on HE studies at ages 18 or 19);
- 'young mature' graduates, who graduated between the ages of 24-30 (embarking on HE studies between ages 21 and 27);
- 'older mature' graduates, who were over 30 when they completed their first degree (embarking on HE studies when aged over 28).

Table 2.2 shows the distribution of graduates by age group for each of the sub-samples compared. Unsurprisingly, given that the overwhelming majority of the Class of '99 sample had studied full-time, young 'standard' graduates form the vast majority of graduates under consideration. We find that there is little difference between different locations. If we compare the age distribution of Scottish graduates in the *Class of '99* study with Scottish Executive data on the number of first degree students in Scottish HE in the year 1998-99 we find young graduates slightly over-represented in our sample. This is likely, however, to be connected to the fact that first destination statistics include a higher proportion of part-time students who tend to be older on average than those that study full-time.

**Table 2.2** Age group, by location of study

	The Class of '99		
	Scotland	England and Wales	Northern Ireland
Young graduates	86.3	84.2	84.1
Young mature graduates	5.1	5.1	4.5
Older mature graduates	8.7	10.7	11.3

Source: *The Class of '99 Survey*

Another important factor to consider in the analysis of employment outcomes is the social class composition of the sample. For this purpose, we asked each respondent to indicate the occupation of their father and mother when they were aged 14<sup>10</sup>. This information was then reclassified according to the National Statistics Socio-Economic Classification (NSSEC) to indicate social class background. Table 2.3 presents the distribution for each sub-sample according to the five-class version of NSSEC. As with gender, the Northern Irish HEI sample was very different to the others but in line with aggregate statistics for the populations. The Scottish HEI sample was slightly less likely than those from England and Wales to have come from managerial and professional occupational backgrounds and more likely to have come from less advantaged backgrounds. This is in contrast to Futureskills Scotland (2006) who

<sup>10</sup> If father's occupation was given then this was used as the indicator of social class. If no occupation was given for father, then mother's occupation was used.

reported that Scottish HEIs take a slightly lower proportion of students from the three lowest social class groups than do other UK institutions.

**Table 2.3 Social class background (NSSEC), by location of study**

	Scotland	England and Wales	Northern Ireland
Managerial and professional occupations	42.7	46.1	29.6
Intermediate occupations	10.4	10.4	10.0
Small employers and own account workers	16.2	15.8	28.7
Lower supervisory and technical occupations	6.0	5.2	4.7
Semi-routine and routine occupations	16.6	13.6	17.7
Neither parent in paid employment	1.5	1.2	3.2
Not determined	6.6	7.6	6.0

Source: *The Class of '99 survey*

We also asked respondents to indicate the highest educational qualification of both their mother and father. Table 2.4 outlines the proportion of graduates from each location whose parents had either a degree (first or higher) or other HE qualification. Surprisingly, in the light of the previous table, we see that Scottish graduates were more likely than others to come from a parental background where at least one parent had a degree.

**Table 2.4 Highest qualification of parents, by location of study**

	Scotland		England and Wales		Northern Ireland	
	Mother	Father	Mother	Father	Mother	Father
Degree (First or higher)	23.1	29.3	19.2	26.9	12.7	16.1
Other HE qualification	13.4	12.7	12.6	12.6	11.2	8.3

Source: *The Class of '99 survey*

### 2.3 Educational characteristics

In terms of the educational background of the samples, Table 2.5 outlines the type of school attended by respondents prior to entering HE. It is not possible on the basis of the data that we have, to establish the extent to which schools were selective, apart from on the basis of whether or not they were fee-paying, but it is important to note that all Scottish state schools are non-selective. Overall, we find a high degree of similarity in the profile of Scottish HEI graduates and those who studied in England and Wales.

**Table 2.5 Type of school attended prior to entering HE, by location of study**

	Scotland	England and Wales	Northern Ireland
State School or Sixth Form College	79.9	79.3	81.9
Fee paying school	14.4	15.9	3.9
Other	5.1	4.3	12.6

Source: *The Class of '99 survey*

In order to assess pre-HE educational achievement we used the UCAS tariff point system, scoring graduates according to their attainment at 'A' level or SCE higher. For our purpose, we classify as 'non-standard' those entering undergraduate programmes with qualifications such as BTEC, HND or foundation degrees and who have not been incorporated into this tariff classification (although such qualifications do have UCAS tariff scores associated with them). Those graduates who accessed their courses via the attainment of these qualifications are often a qualitatively different group from those who have taken a more traditional route, in terms of demographic characteristics (especially age) and in terms of access to opportunities post-HE. The distribution of pre-HE attainment by location of study is presented in table 2.6. The data suggest that graduates from Scottish HEIs had considerably better prior attainment than graduates elsewhere; however this is likely to reflect the Scottish HEI sample in the study, which included a disproportionate number of ancient universities that required higher entry qualifications. Whilst the proportion of non-standard entry graduates is approximately equal for each location, those who graduated from Scottish HEIs included a large proportion that had entered HE via the attainment of a Certificate of Sixth Year Studies (CSYS).

**Table 2.6 Pre-HE educational attainment, by location of study**

	Scotland	England and Wales	Northern Ireland
285 UCAS tariff points or more	51.0	34.3	30.4
201 to 284 UCAS tariff points	15.4	18.8	29.7
200 UCAS tariff points or less	6.6	20.6	11.9
Non-standard Entry into HE	26.9	26.1	28.1

Source: *The Class of '99 survey*

The Class of '99 study surveyed graduates from 38 UK HEIs of which five were Scottish institutions and both Northern Irish HEIs. In our sample, graduates from Scottish HEIs were more likely to have attended pre-1960s or 1960s universities (72 per cent) compared to both England and Wales (46 per cent) and Northern Ireland (51 per cent). Our sample contains a higher proportion of graduates from older universities when compared to HESA student population data which indicates that in 1998-99, 64 per cent of UK-domiciled students at Scottish HEIs were attending a longer-established institution.

The mix of institutions in each location is also likely to be reflected in the distribution of subjects studied by graduates in the sample. Table 2.7 shows this distribution. In general, Scottish graduates were more likely to have studied vocational subjects. Proportionally fewer graduates from Scottish HEIs studied on subjects that are established in both new and old institutions such as social sciences, education and humanities. We cannot make direct comparisons between our sample and data from the Scottish Executive for the corresponding year because the classification of subjects are different, but the overall similar pattern of

distribution are sufficiently close to suggest that there are no substantial biases in the Class of '99 subject distribution.

**Table 2.7 Subject of study, by location of study**

	The Class of '99			Scottish Executive First Destination Statistics 99-00
	Scotland	England and Wales	Northern Ireland	
Arts	2.3	4.2	2.1	4.2
Humanities	7.2	10.4	8.5	4.6
Languages	2.1	2.9	1.5	5.6
Law	2.7	3.4	2.0	No data
Social Sciences	9.0	12.0	14.4	12.4*
Mathematics and Computing	5.3	6.7	2.9	4.8
Natural Sciences	11.8	10.1	7.1	13.2
Medicine and Related	14.0	7.4	17.9	12
Engineering	9.4	5.8	5.9	7.8
Business Studies	12.5	9.3	13.8	15.1
Education	5.1	7.4	7.1	4.6
Interdisciplinary	13.3	14.7	10.1	10.3
Other vocational	5.3	5.9	6.7	5.5**

Sources: *The Class of '99 survey*; Scottish Executive (2001) First Destination of graduates and diplomats 1999-00, Table 3 \*Social Studies and Mass communication \*\*Architecture and agriculture

In terms of mode of study (Table 2.8), the most notable difference is the lower proportion of graduates from Scottish HEIs who studied on sandwich courses compared to those in English and Welsh HEIs, and the higher proportion of those who had a 'distance learning' element in their courses.

**Table 2.8 Mode of study, by location of study**

	Scotland	England and Wales	Northern Ireland
Full-time study	90.9	86.6	85.4
Part-time study	4.5	5.2	9.9
Distance learning	2.1	0.4	0.2
Sandwich	1.7	7.5	4.4
Other	0.8	0.4	0.1

Source: *The Class of '99 survey*

Table 2.9 outlines the higher education attainment of the sample in terms of degree class. As noted in Elias and Purcell (2001), one of the key differences between the Scottish HE system and those of the other comparator countries is the survival of the 'ordinary' degree as an option for students who decide to complete their undergraduate studies after three years rather than continuing into their fourth year to complete the honours programme. We see therefore that approximately 23 per cent of Scottish graduates graduated with an ordinary degree (a similar distribution to that found for the Class of '95 by Elias and Purcell *ibid.*).

**Table 2.9 Class of degree, by location of study**

	Location of Study		
	Scotland	England and Wales	Northern Ireland
1	11.8	10.6	8.7
2(i)	39.6	52.1	55.6
2(ii)	21.2	31.1	27.2
3	4.0	3.0	1.8
Pass or ordinary degree	23.2	3.1	6.5

Source: *The Class of '99 survey*

#### 2.4 Geographical mobility

One key area of interest in exploring the employment outcomes for graduates from different UK locations is the extent of geographic mobility. In particular, it is important to assess the extent of migration to and from different locations. Futureskills Scotland note that higher education is a key factor affecting migration patterns in and out of Scotland; a net inflow of 19-20 year olds is largely accounted for by students attending Scottish HEIs, the majority of whom leave Scotland upon completion of their studies. Table 2.10 shows the region of study of the sample according to the region in which respondents were living immediately prior to entering higher education. Graduates from Scottish HEIs were predominantly living in Scotland before entering higher education (83 per cent) but a significant proportion were living in England and Wales (12 per cent). The proportion of Scottish-domiciled graduates who studied elsewhere in the UK is small, but analysis of the characteristics and employment outcomes of this group is presented in Annex 1. Comparing our data for Scottish HEI graduates with the distribution of entrants to Scottish HE in 1998-99 (the earliest year available), we find that our sample is largely representative: 81 per cent of UK-domiciled entrants to Scottish HEIs were living in Scotland prior to studying, 14 per cent were living in England and Wales and 5 per cent in Northern Ireland (Scottish Executive 2001).

**Table 2.10 Region of domicile prior to entering HE, by location of study**

		Region of Study					Northern Ireland
		Scotland	London and South East	South West and Wales	Midlands	North	
<b>Region of domicile prior to study</b>	Scotland	82.5	0.3	0.3	1.1	1.5	0.1
	London and South East	3.3	62.5	25.4	30.2	20.5	0.7
	South West and Wales	1.0	11.4	50.7	9.9	8.2	0.2
	Midlands	1.7	18.8	15.1	39.2	20.5	0.4
	North	6.4	5.1	7.0	18.0	47.7	0.6
	Northern Ireland	3.3	0.4	0.1	0.5	0.6	95.8
	Outside UK	1.9	1.4	1.4	1.1	1.0	2.3
	<b>TOTAL</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>N(weighted)</b>	<b>8301</b>	<b>17786</b>	<b>13156</b>	<b>11900</b>	<b>20539</b>	<b>5754</b>	

Source: The Class of '99 survey

In order to track the geographical movement of graduates in the early part of their careers we asked respondents to indicate the region where they had been employed in their first main job after graduation<sup>11</sup> in 1999 and where they were working at the time of the survey four years later. Table 2.11 shows that, of those graduates who had studied at Scottish HEIs, three-quarters were working in Scotland immediately after graduation and almost one-fifth had moved to England or Wales. Therefore, Scotland retained a similar proportion of its graduates to London and the South East but higher than other regions in England and Wales. Northern Ireland retained the highest proportion of its graduates immediately after graduation (85 per cent). We find remarkable similarity between our sample and that of the First Destination survey conducted in 1999-2000 which found that 74 per cent of Scottish HEI graduates were working in Scotland six months after graduation and 19 per cent working elsewhere in the UK (Scottish Executive 2001).

**Table 2.11 Region in which employed immediately after graduation, by location of study**

		Region of Study					
		Scotland	London and South East	South West and Wales	Midlands	North	Northern Ireland
<b>Region first employed after graduation</b>	Scotland	75.4	0.2	0.9	0.7	1.1	0.4
	London and South East	8.8	74.9	28.0	39.2	26.4	2.5
	South West and Wales	1.5	6.7	52.0	6.6	5.5	0.8
	Midlands	2.9	14.1	11.2	39.3	13.6	0.7
	North	4.8	2.1	5.1	11.2	49.0	1.2
	Northern Ireland	1.6	0.1	0.1	0.2	0.3	85.2
	Outside UK	5.0	1.9	2.8	2.7	4.1	9.2
	<b>TOTAL</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: *The Class of '99 survey*

Furthermore, by the time of the survey, four years after graduation, there had been some further movement out of Scotland by Scottish HEI graduates, although this also was also the case for all regions in England and Wales, all of which showed further outflow of its graduates. Graduate retention in Northern Ireland remained stable over the period (Table 2.12).

<sup>11</sup> This formulation was chosen to encourage them to discount holiday jobs and the extension of term-time employment in the immediate aftermath of completing their cases

**Table 2.12 Region in which employed at time of survey, by location of study**

		Region of Study					
		Scotland	London and South East	South West and Wales	Midlands	North	Northern Ireland
Region employed at time of survey	Scotland	71.5	0.7	0.4	1.0	1.6	2.0
	London and South East	13.2	71.0	32.2	43.5	33.7	3.5
	South West and Wales	1.4	9.1	46.1	7.3	6.0	1.0
	Midlands	2.8	13.9	11.7	36.5	12.5	1.4
	North	5.5	3.4	6.4	9.2	43.8	1.3
	Northern Ireland	1.5	0.2	0.2	0.1	0.3	85.2
	Outside UK	4.0	1.7	2.9	2.3	2.1	5.6
	<b>TOTAL</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: *The Class of '99 survey*

### 2.5 Who were the graduates who came to Scotland to study?

In understanding the composition of the sample of graduates from Scottish HEIs it is important to compare those graduates who come to Scotland to study from elsewhere in UK and to investigate whether they were characteristically different from those who lived in Scotland prior to studying in the country. This section briefly compares the characteristics of these groups<sup>12</sup>. Firstly, as Table 2.13 shows, the gender balance of non-Scottish graduates from Scottish HEIs was virtually equal, and, therefore, they were more likely to be male than those who remained in Scotland to study.

**Table 2.13 Location of domicile of Scottish HEI graduates prior to HE, by gender**

	Non-Scots graduating from Scottish HEIs	Scots graduating from Scottish HEIs
Male	50.9	44.6
Female	49.1	55.4
<b>N(weighted)</b>	<b>6764</b>	<b>1537</b>

N=8301 (weighted)

Source: *The Class of '99 survey*

Non-Scottish graduates from elsewhere in the UK were also more likely to be young graduates (Table 2.14). This is likely to partly reflect the greater likelihood of young graduates being geographically mobile.

**Table 2.14 Location of domicile of Scottish HEI graduates prior to HE, by age at graduation**

	Non-Scots graduating from Scottish HEIs	Scots graduating from Scottish HEIs
Young graduates	92.1	84.8
Young mature graduates	4.2	5.3
Older mature graduates	3.7	9.8

Source: *The Class of '99 survey*

<sup>12</sup> The sample size for non-Scottish graduates from Scottish HEIs is small, but allows for indicative comparison.

The geographically mobile graduates were significantly more likely to have higher social class backgrounds than their Scottish peers. Scottish-based graduates from Scottish institutions were over twice as likely to have come from a 'semi-routine or routine occupation' background compared to those who came to Scotland to study from elsewhere in the UK (Table 2.15).

**Table 2.15 Location of domicile of Scottish HEI graduates prior to HE, by social class background**

	Non-Scots graduating from Scottish HEIs	Scots graduating from Scottish HEIs
Managerial and professional occupations	50.3	41.0
Intermediate occupations	12.8	9.8
Small employers and own account workers	16.9	16.0
Lower supervisory and technical occupations	2.9	6.7
Semi-routine and routine occupations	8.1	18.6
Neither parent in paid employment	1.6	1.5
Not determined	7.3	6.4

Source: *The Class of '99 survey*

The social class difference shown above is reinforced by comparison of the type of school attended prior to entering high education. Of those from Scottish HEIs who had previously lived outside Scotland, over a quarter had attended a fee-paying school compared to fewer than 12 per cent for Scottish graduates from Scotland. Graduates from outside Scotland had higher average pre-entry qualifications than those who had lived in Scotland before going to university and were less likely to have entered HE via non-standard entry qualifications. Non-Scottish graduates who studied in Scotland were consequently more likely to have studied at an 'old' university, as Table 2.16 shows. Only 16 per cent studied at new universities compared to almost one-third of Scottish graduates at Scottish HEIs.

**Table 2.16 Location of domicile of Scottish HEI graduates prior to HE, by type of institution attended**

	Non-Scots graduating from Scottish HEIs	Scots graduating from Scottish HEIs
Old University	63.8	40.4
1960s University	20.0	28.3
Post-1992 University	16.1	31.3

Source: *The Class of '99 survey*

This institutional distribution is likely to be reflected in the distribution of subject studied by the two groups. Table 2.17 shows that the graduates in our sample from elsewhere in the UK who had studied at Scottish institutions disproportionately studied languages, social sciences, humanities and other vocational subjects.



**Table 2.17** Location of domicile of Scottish HEI graduates prior to HE, by subject of study

	Non-Scots graduating from Scottish HEIs	Scots graduating from Scottish HEIs
Arts	1.8	2.4
Humanities	15.6	5.3
Languages	5.5	1.3
Law	0.0	3.3
Social Sciences	12.0	8.3
Mathematics and Computing	3.6	5.7
Natural Sciences	11.6	11.9
Medicine and Related	11.8	14.5
Engineering	7.1	9.9
Business Studies	8.1	13.5
Education	3.7	5.4
Interdisciplinary	11.3	13.8
Other vocational	7.7	4.8

Source: *The Class of '99 survey*

Finally, we consider patterns of migration for these graduates after leaving higher education. Table 2.18 shows that only 27 per cent of graduates from elsewhere in the UK who studied at Scottish HEIs were first employed in Scotland. One in ten of them moved overseas and almost two-thirds moved to another UK part of the UK. Interestingly, the patterns of movement of Scottish graduates from Scottish HEIs immediately after graduation are much like those for graduates from England, Wales and Northern Ireland. 86 per cent remained in Scotland (consistent with HESA first destination data for 2005 which find that 90 per cent of Scots-domiciled graduates stay in Scotland immediately after graduation) and only one in ten moves to another UK location.

**Table 2.18** Location in which employed immediately after graduation, location of domicile of Scottish HEI graduates prior to HE

		Non-Scots graduating from Scottish HEIs	Scots graduating from Scottish HEIs
<b>Location in which first employed after graduation</b>	Scotland	27.0	86.0
	England and Wales	54.1	10.2
	Northern Ireland	7.5	0.3
	Outside UK	11.4	3.6

Source: *The Class of '99 survey*

Table 2.19 shows that the proportion of non-Scottish graduates from Scottish HEIs who remain in Scotland fell to 24 per cent after four years, largely because of movement to England and Wales. Perhaps of more concern is the fact that after four years the proportion of Scottish graduates from Scottish HEIs working in Scotland has fallen to approximately 82 per cent again in contrast to increasing numbers in England and Wales.

**Table 2.19 Country in which employed at time of survey, by country of domicile prior to HE and location of study**

		Non-Scots graduating from Scottish HEIs	Scots graduating from Scottish HEIs
<b>Location in which employed at time of survey</b>	Scotland	24.1	81.6
	England and Wales	59.6	15.1
	Northern Ireland	8.1	0.1
	Outside UK	8.2	3.1

Source: *The Class of '99 survey*

Among the Scottish HEI graduates in our sample, we interviewed a number who illustrated the high levels of geographic mobility reported by graduates in their early career especially those seeking graduate opportunities in a limited occupational labour market, such as in the case of Gail.

**Gail** graduated from a new university in Scotland in 1999 with a degree in food science and management. Originally, from Northern Ireland, when asked why she had chosen to study at the institution she had chosen, she said:

*'I think it was the course I liked, I had been over to see the study site in [location of study], I liked the city, it was small and there was a good feel about it'.*

Upon completion of her degree, she was recruited onto the graduate training programme of a large food processing company working in North Wales. When asked whether she had intended to return to Northern Ireland after completing her studies she said:

*'I wasn't ruling anything out, I think I would have preferred at that time to work in Northern Ireland but then realised I had a very good opportunity open to me through [employer's name] that wouldn't necessarily have come about in Northern Ireland, with it being a much smaller place'.*

After completing the training programme, Gail was employed by the same organisation as a quality assurance manager for 18 months before taking an 8 month career break to travel. Upon her return she registered with a number of national recruitment agencies and at the time of the survey in 2003 she was employed as a quality assurance manager for another food processing company working in Yorkshire. When asked whether she considered it to have been necessary to be highly mobile in her career, she replied:

*'I don't think it was necessary but I feel I was able to go for the best opportunity much faster by being flexible in location'.*

In the short term, she indicated that she intended to return 'home' to Northern Ireland to 'put my roots down'.

Whilst Gail is an example of a highly-mobile educational migrant to Scottish HE who is unlikely in the short term to return to the country, we also interviewed Scottish HEI graduates, both from Scotland and elsewhere, who had returned to the Scotland after an initial period of mobility post-graduation and others who ultimately aspired to do so. Adrian is an example of a non-Scottish educational migrant who, at the time of the survey, had made his home in Scotland.

**Adrian** graduated in 1999 with a BEd (Design and Technology) from a Scottish 1960s university. Prior to entering HE, he had lived in North West England. Asked why he had come to Scotland to study, he said:

*'I was trying to avoid being a teacher, I was supposed to be a Naval Architect but after six weeks I didn't enjoy it. So they offered me the BEd in Design and Technology and I didn't look back... [The reason I studied in Scotland] came down to the original course I was going to do, there were only six places in the UK that offered it and two of those were in Scotland and I didn't want to go South'.*

After graduation, Adrian worked in the North of England as a design and technology teacher, but after a year, he returned to Scotland, citing a desire to relocate as his main reason for leaving that job. He then worked in a number of supply-teaching posts in Scotland before obtaining his current permanent teaching post.

## 2.6 Summary

- In our sample, Scottish HEIs graduates were slightly more likely than graduates from English and Welsh institutions to have been female and, on average, had a younger age profile, reflecting the population from which they were drawn.
- Scottish HEIs graduates were also slightly less likely than those from England and Wales to have come from managerial and professional occupational backgrounds and more likely to have come from less advantaged backgrounds, despite a greater propensity to come from family backgrounds where their mother or father had a degree or other HE qualification
- Graduates from Scottish HEIs had been predominantly living in Scotland before entering higher education (83 per cent) but a significant proportion had been living in England and Wales (12 per cent).
- Immediately after graduation, Scotland retained a similar proportion of its graduates to London and the South East but higher than other regions in England and Wales.
- At the time of the survey, four years after graduation, further migration of Scottish HEI graduate labour was similar to outflow from other locations.
- Compared to those graduates living in Scotland prior to study, non-Scottish graduates from Scottish HEIs were more likely to be male and to be 'young' graduates. They were significantly more likely to come from higher social class backgrounds, to have attended a fee-paying school prior to study and to have studied at an 'old' university.
- Patterns of migration immediately after graduation for Scottish-based graduates of Scottish institutions immediately after graduation is much like that for graduates from England, Wales and Northern Ireland.

## Chapter 3

### Employment outcomes and the transition from higher education into employment - UK comparisons

#### 3.1 Introduction

In this chapter we compare the employment outcomes of graduates from Scottish HEIs with those who graduated from institutions in England and Wales and Northern Ireland<sup>13</sup>. The work history data collected in the survey also allows us to track the transition from education into the labour market from the point of graduation to the time of the survey. We use these data to examine the movement of graduates into particular types of employment over the four year period covered.

Table 3.1 shows the situation of respondents at the time of the survey, comparing location of study. We found that of graduates from Scottish HEIs, 90 per cent were in employment and almost three quarters in employment related to their long-term career plans: a marginally higher proportion than for those who graduated in other UK countries. We also found, however, that a marginally higher propensity of graduates from Scotland were '*unemployed and seeking work*'.

**Table 3.1** Situation of respondents at time of the survey in 2003, by location of study

	Scotland	England and Wales	Northern Ireland
Full-time related to long-term career plans	69.9	67.3	65.8
Part-time related to long-term career plans	3.3	3.1	4.1
In full-time employment (other)	15.3	17.5	17.3
In part-time employment (other)	1.7	2.5	2.9
Self-employed	3.2	3.5	3.9
Postgraduate study	7.8	7.3	8.6
Unemployed and seeking work	3.0	2.5	2.1
Out of the labour force/not seeking work	1.3	1.3	1.1
Other	2.6	2.8	2.3
N (Weighted) Total =70,690	(7548)	(57893)	(5248)

Source: *The class of '99 Survey*

#### 3.2 Where were they working and what were they doing four years on?

In terms of broad sector of employment, the proportion of Scottish HEI graduates working in the public sector was similar to the proportions of those from English and Welsh HEIs at around 38 per cent, whereas those graduating from NI HEIs were significantly more likely to

<sup>13</sup> Because the structure of graduate employment and labour market in Northern Ireland is significantly different to those of the other UK countries, we distinguish Scottish, English and Welsh and Northern Irish HEI graduates rather than comparing Scottish HEI graduates with those from the other UK countries as a whole (See Purcell *et al.* 2005b)

have been doing so. Comparison with *Futureskills Scotland* data suggests that our sample under-represents the proportion of graduates in Scotland working in the public sector. However, this is likely to be explained by the fact that younger graduates are less likely to be working in the public sector, especially education, than older graduates (*Futureskills Scotland 2006*).

The higher proportion of Northern Irish graduates working in the public sector is shown in Table 3.2, but a comparison between the Scottish and English and Welsh sub-samples is interesting. We find a notably higher proportion of the Scottish graduates were employed in agriculture, mining and quarrying and 'other public services' with lower proportions working in construction, ICT, business services and education. 'Other public services' includes healthcare, social services and local and national public administration, so constitutes a large and diverse range of services.

**Table 3.2 Sector of employment at time of survey by location of study**

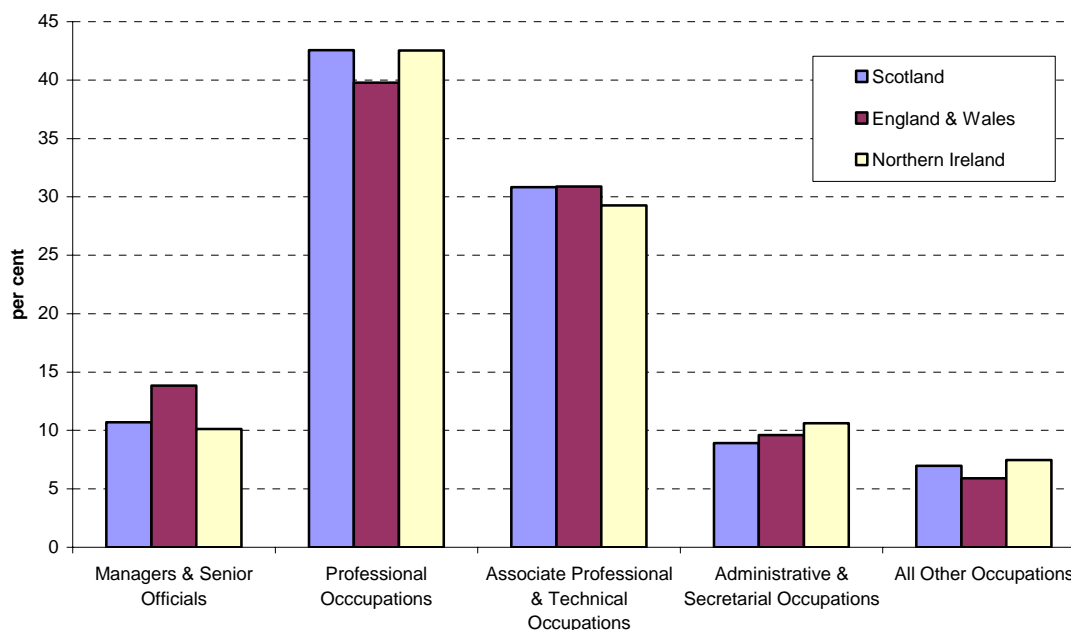
	Scotland	England and Wales	Northern Ireland
Agriculture, mining, quarrying	5.7	0.8	2.0
Manufacturing	6.0	6.3	6.8
Electricity, gas, water supply	1.2	1.3	1.6
Construction	3.0	4.1	4.6
Distribution, hotels, catering	5.0	4.7	5.4
Transport and tourist services	2.6	2.1	0.5
Information and communications sector	6.1	8.3	4.0
Banking, finance, insurance	11.0	10.7	7.7
Business services	11.6	15.3	9.4
Education	15.2	18.5	17.5
Other public services	28.6	24.4	35.8
Other	3.2	2.4	2.9

Source: *The class of '99 Survey*

Examining the occupational distribution of our sample according to the Standard Occupational Classification (SOC2000) to indicate the extent to which graduates who had studied in UK locations appeared to be working in graduate-level employment after four years, we found only minor differences in the occupational distributions. The most striking is the greater extent to which Scottish and Northern Irish graduates were working in professional occupations. Recent analyses undertaken by *Futureskills Scotland* (2006) similarly reported that, overall, 46 per cent of graduates in Scotland were employed in professional occupations, a slightly higher figure than in the rest of the UK. They also reported that 85 per cent of graduates in Scotland worked in 'higher level occupations' (the first three categories), comparable with 84 per cent in our sample. There was a lower proportion of graduates in our sample working in management occupations (10 per cent compared to 19 per cent) and a correspondingly higher proportion in associate professional employment (31 per cent and 20 per cent), which presumably reflects the fact that our sample is of one recent cohort at an

early stage in their careers. It may also be indicative (*ibid.*) of a trend towards increased graduate employment in associate professional occupations.

**Figure 3.1 Occupational distribution (SOC2000) of respondents at time of survey, by location of study**



Source: *The class of '99 Survey*

Using the work history data, we have been able to track the movement of sub-samples of graduates into these different occupational groups. We find that immediately after graduation, almost a quarter of graduates from Scottish HEIs were employed in 'other occupations', which are most likely to be non-graduate employment, but this had fallen to less than 10 per cent four years later. These figures are virtually identical to those for the whole Class of '99 sample. Similarly, the proportion of those employed in administrative occupations had also fallen from 15 per cent of the sub-sample to 8 per cent. The areas of greatest growth were professional and associate professional/technical occupations, which accounted for almost three-quarters of total employment after four years (rising from 45 per cent initially) and, from our detailed analyses of accounts of graduates in the interview sample, are likely to be employment where their graduate skills and knowledge were required and used. For the whole sample, this increase was from 45 per cent to 70 per cent. The proportion of Scottish HEI graduates in managerial occupations remained relatively constant over the four years, rising from 8 per cent to 11 per cent, compared to the whole sample where employment in these occupations rose from 7 to 14 per cent.

Table 3.3 outlines the contractual status of graduates in employment at the time of the survey. There are differences in the distributions of graduates from the three sub-samples, with those from Scottish HEIs somewhat more likely to have been in fixed-term employment.

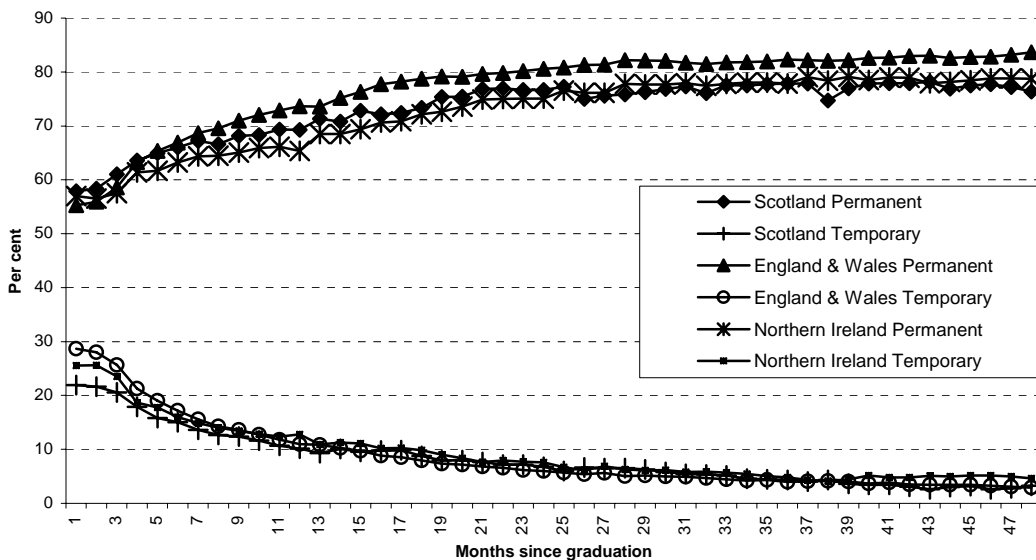
**Table 3.3 Contractual status of respondents in employment at time of survey, by location of study**

	Scotland	England and Wales	Northern Ireland
Permanent or open-ended contract	74.9	78.1	73.6
Fixed-term contract	14.3	11.0	12.7
Probationary period prior to confirmation	2.9	3.3	2.9
Self-employed	2.6	2.9	2.9
Temporary, through an agency	1.7	1.5	1.6
Other temporary or casual	1.6	1.3	2.2
Other	1.0	0.8	1.8

Source: *The class of '99 Survey*

Figure 3.2 outlines the movement of graduates according to location of study into permanent and out of temporary employment. It shows that approximately 55 per cent of all graduates enter permanent employment immediately after graduation and this proportion continued to rise over the subsequent two and a half years; more rapidly for graduates from England and Wales. Conversely, English and Welsh HEI graduates were most likely and Scottish HEI graduates least likely to have gone straight into temporary employment, although movement out of this form of employment converged for the three groups.

**Figure 3.2 Type of employment contract in early careers, by location of study**



Source: *The class of '99 Survey*

We found little difference between graduates from Scottish HEIs and those from English and Welsh institutions (Table 3.2.3) in the reasons given for taking their current job. The responses of Northern Irish graduates, on the other hand, were markedly different. Minor differences were evident in the greater extent to which graduates of Scottish HEIs indicated the importance of location, the opportunity to gain experience to move to their preferred job

and compatibility with partners' career. The Scottish HEI graduates gave marginally more positive reasons and were less likely to have taken their job because it was *'better than being unemployed'*. It is significant that they were most likely, of the groups, to have taken the job because they wanted to work in the location or locality.

**Table 3.4** Reasons for graduates taking their current jobs, by location of study

	Scotland	England and Wales	Northern Ireland
The salary level was attractive	34.5	35.1	32.2
Other conditions of employment were attractive	32.3	30.1	25.4
I wanted to work in this locality/region	44.5	42.8	39.0
I was already working for this employer	12.7	12.5	12.3
It offered interesting work	46.5	47.6	37.3
To gain experience to obtain the type of job I want	24.5	22.6	18.4
It offered job security	26.9	25.5	28.6
It was compatible with my partner's career	6.1	5.1	2.5
It suits me in the short term	15.4	16.9	14.6
It is better than being unemployed	12.8	13.3	16.4
Other	3.8	3.9	2.8

Source: *The class of '99 Survey*

### 3.3 *Employment fit for a graduate?*

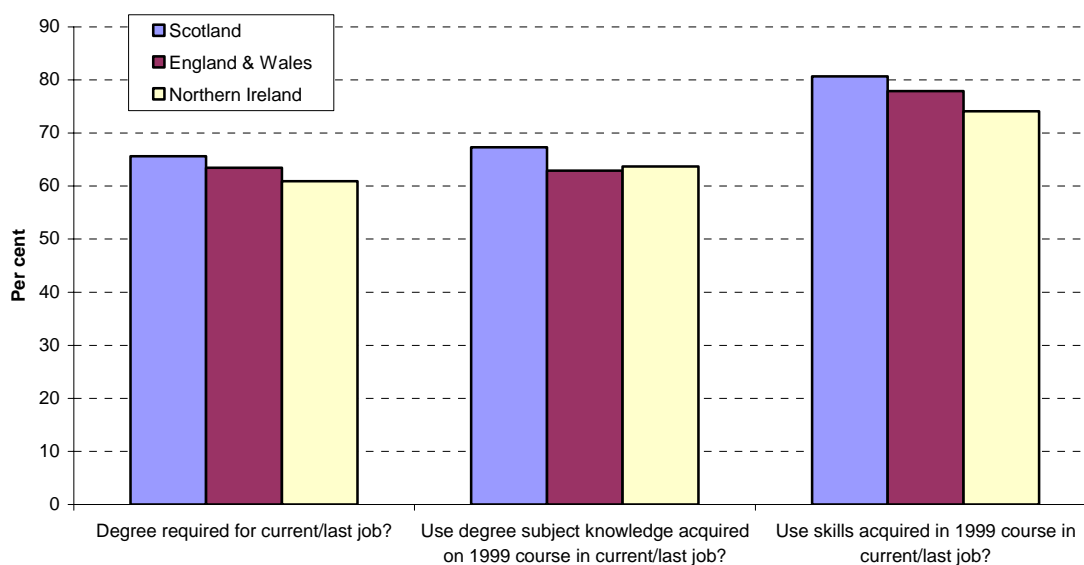
The central question surrounding the expansion of higher education in all parts of the UK, from a labour market perspective, is whether the graduate labour market has absorbed the increased supply of graduate labour or whether there is evidence to suggest that graduates are *'over-educated'* for the employment they obtain and subsequently *'under-employed'*. We can address this question using the Class of '99 data in a number of ways to consider whether graduates from Scottish HEIs are more or less subject to under-employment than graduates from other locations. First, we consider three questions that were asked of respondents about their jobs at the time of the survey:

- Was a degree required for your current job?
- Do you use your degree subject/discipline knowledge in the course of your job?
- Do you use the skills acquired on your degree in your current job?

Figure 3.3 shows that four years after graduation, graduates from Scottish HEIs appeared to be more likely to be in graduate-appropriate employment and making use of the knowledge, skills and credentials conferred by their degree course.



**Figure 3.3** Graduates' requirement for degree, use of degree subject knowledge and use of graduate skills in current job, by location of study



Source: *The class of '99 Survey*

This provides a relatively positive picture of Scottish HEI courses - and analysis of the work history data revealed that graduates from Scottish HEIs were more likely than those from England and Wales to have provided positive responses to all three questions at all points on their work history trajectories. There is little difference, either, in the extent to which these recent graduates changed jobs and activities in their early careers, as Table 3.5 shows.

**Table 3.5** Number of work history events, by location of study

	Scotland	England and Wales	Northern Ireland
1	15.0	13.1	15.9
2	19.4	19.2	22.3
3-5	52.5	52.5	49.1
6 or more	13.6	14.7	11.3

Source: *The class of '99 Survey*

These findings are also borne out when we consider the question of what factors respondents felt were relevant in having enabled them to obtain the job they were doing at the time of the survey (Table 3.5). Overall, it would appear that both the possession of a degree and the subject studied were more important factors for graduates from Scottish HEIs and, like graduates from Northern Ireland, they were more likely than those from England and Wales to consider that a higher degree or subsequent professional qualifications had been relevant.

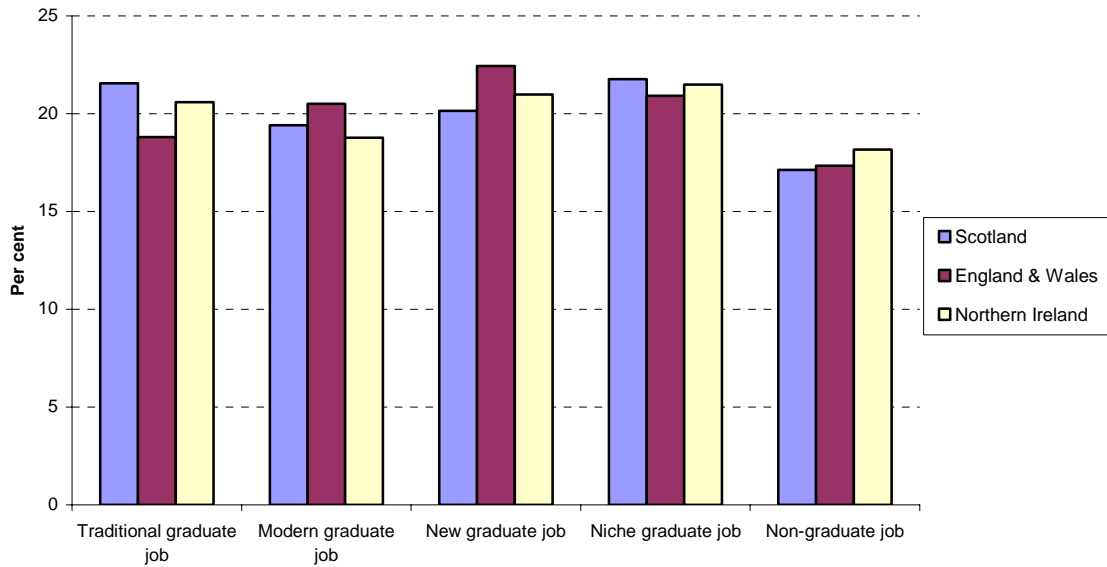
**Table 3.6** The factors graduates stated as relevant in getting their current jobs, by location of study

	Scotland	England and Wales	Northern Ireland
The qualification you obtained in 1999	76.3	72.9	70.1
The subject you studied in 1999	51.8	49.7	43.6
The class or grade of your 1999 award	25.4	31.6	25.6
Recognition by a Professional Body of your 1999 course	20.3	15.4	23.6
A higher educational qualification obtained since 1999	18.2	14.5	19.9
A professional qualification you have obtained since 1999	14.6	14.9	17.1
Employment experience in this organisation in another job	15.8	17.3	16.1
Employment experience/training in another organisation	33.3	35.8	29.9
Other	5.1	4.2	5.5

Source: *The class of '99 Survey*

To explore graduate job qualities further, we use SOC(HE): the occupational classification specifically devised to analyse graduate labour market change (Elias and Purcell 2004; 2005b). Figure 3.5 shows the distribution, according to SOC(HE), of the jobs held by respondents at the time of the survey, compared by location of study. It shows that the overall occupational profile of the sample of graduates from Scottish HEIs is closer to that of graduates from Northern Ireland, albeit with lower levels of non-graduate employment, than to graduates of England and Wales. We find that 83 per cent of Scottish HEI graduates were in a graduate job, comparable with the findings of Futureskills Scotland (2006) which reported that 84 per cent of graduates in Scotland were in such employment. Overall, we find that graduates from Scottish HEIs were more likely to be in traditional graduate jobs than graduates from other UK locations, again consistent with the overall labour market trends (*ibid.*) and less likely to be in non-graduate employment. They were however, less likely than other graduates to be in new graduate jobs or modern graduate employment than those from English and Welsh HEIs. This distribution may reflect, in part, the different institutional balance of the Scottish HEI sample, especially in comparison with that for England and Wales. Overall, graduates from old universities are more likely to go into traditional graduate employment whereas graduates from post-1992 institutions had a greater propensity to enter new graduate jobs.

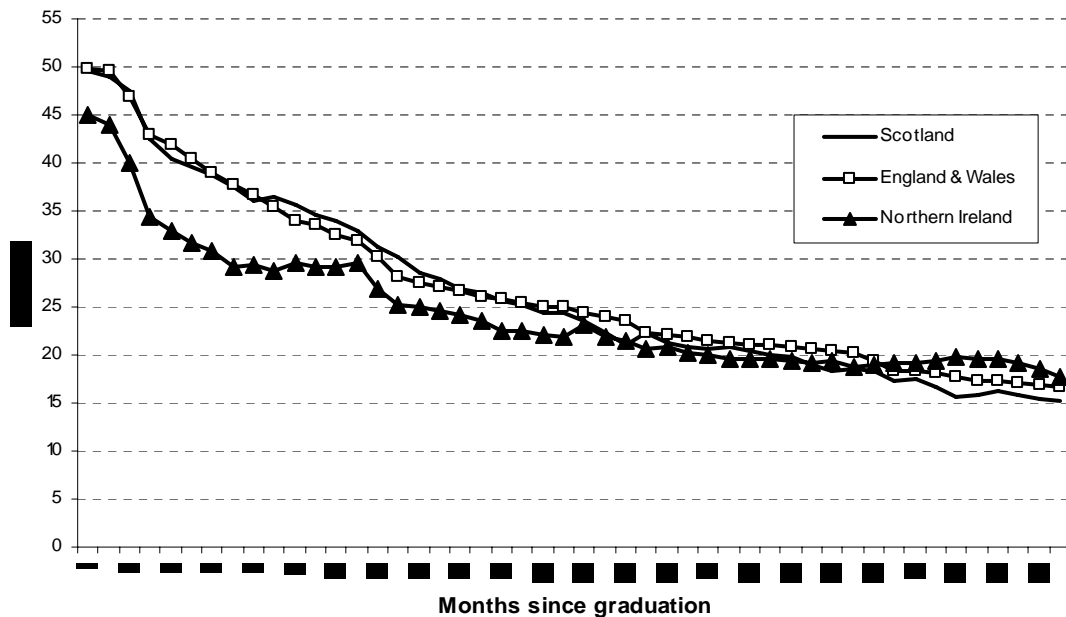
**Figure 3.4 SOC(HE) category of job held at the time of the survey, by location of study**



Source: *The class of '99 Survey*

Using the work history data to compare the movement out of non-graduate employment for graduates from Scotland with those from the other UK locations (Figure 3.5), we find that graduates from Scottish institutions entered non-graduate employment in similar proportions to those from England and Wales but the Scottish graduates were less likely to be in such employment at the time of the survey. In comparison with those from Scotland, England and Wales, graduates from NI were less likely to enter non-graduate jobs immediately after graduation but after four years were more likely to be in such employment.

**Figure 3.5 Movement out of non-graduate employment\* by location of study**



\* SOC(HE) classification  
Source: *The class of '99 Survey*

The discussion of 'graduate-ness' up to this point has focused largely on measures based on broad occupational classifications which may not pick up on the nuances of particular occupations or jobs. Some 'non-graduate jobs' according to SOC(HE) classification may well be appropriate employment for a graduate (for example, departmental retail manager with a major supermarket chain where the job was accessed via a graduate trainees scheme) and many niche occupations may reflect jobs outside the graduate niche. However, we can also consider the subjective assessment of the *Class of '99* respondents of whether their current jobs were appropriate for someone with their skills and qualifications. The results are presented in Table 3.7, comparing location of study. From a Scottish perspective, the most notable finding is that a higher proportion of graduates from Scottish HEIs (almost half) reported that their jobs are either ideal or near-ideal. Similarly, a lower proportion rate their jobs at the inappropriate end of the scale compared to graduates of NI, England and Wales.

**Table 3.7**      **Appropriateness of current job, taking into account qualifications achieved (On a scale of 1-7)**

	Scotland	England and Wales	Northern Ireland
1 - Very inappropriate	4.2	5.0	7.4
2	4.5	7.4	6.7
3	7.7	9.2	9.0
4	15.2	13.5	10.6
5	18.7	20.2	19.4
6	25.8	23.6	24.2
7 - Ideal	22.1	19.1	20.8

Source: *The class of '99 Survey*

Finally, an alternative measure of job quality (assuming the exercise of higher levels of skill equates to more interesting, responsible and well-rewarded jobs) is an assessment by the incumbent of how long it took to do the job relatively well. Overall, as shown in Table 3.7, the Scottish HEI graduates were least likely to have reported taking three months or less to do their job relatively well, and most likely to have said that it took more than a year – which suggests that the jobs undertaken by Scottish HEI graduates had higher skill levels than the average, overall.

**Table 3.8**      **Length of time taken by graduates to do their jobs relatively well**

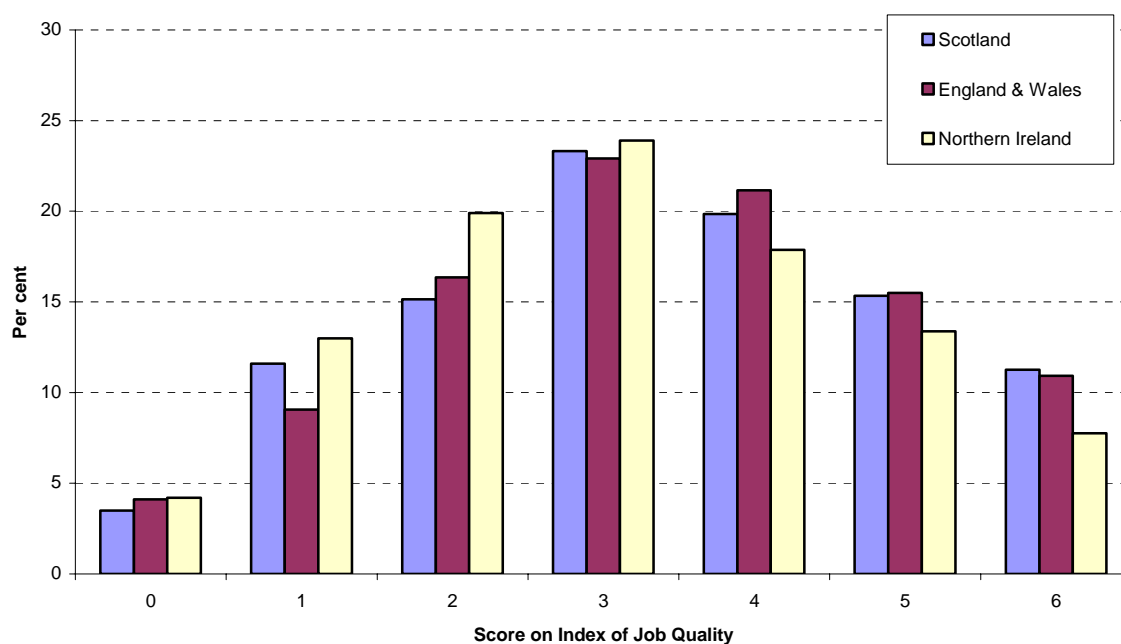
	Scotland	England and Wales	Northern Ireland
Less than 1 week	3.3	5.1	5.0
Less than 1 month	9.9	10.2	9.6
1 month, up to 3 months	19.0	22.8	20.1
Over 3 months, up to 6 months	21.9	20.4	19.3
Over 6 months, up to 1 year	19.5	19.6	22.0
Over 1 year, up to 2 years	13.5	10.7	10.7
Over 2 years	10.5	8.5	10.0

Source: *The class of '99 Survey*

In order to assess the job quality of occupations undertaken by graduates we asked respondents to identify which of a number of job characteristics they felt their job provided. Graduates from Scottish HEIs were most likely to indicate that their jobs provided a competitive salary, opportunities for an international career and working with people they enjoyed socialising with, but less likely to report opportunities to reach managerial level.

Responses to six of the job characteristics investigated (*Competitive salary, continual skills development, interesting and challenging work, long-term security, working in a progressive and dynamic organisation and working with people you enjoy socialising with*) were considered to provide a measure of the 'quality' of the job, that included the subjective assessment of both earnings and non-pecuniary benefits, to yield a 'quality index' for the job with a minimum value of zero and a maximum value of six. Figure 3.6 shows the distribution of scores of the job quality index, for the job held at the time of the survey, according to location of study. We find that the graduates of Scottish HEIs were as likely as those from England and Wales to be at the top end of the job quality spectrum, but also slightly more likely to be at the other end, with a very slightly lower mean score.

**Figure 3.6 Index of job quality, by location of study**



N = 70690 (Weighted)  
 Source: *The class of '99 Survey*

### 3.4 Job Satisfaction

Finally, we turn to levels of job satisfaction reported in the survey. Data were collected on levels of satisfaction with different aspects of employment on a similar 7-point scale, as

shown in Table 3.9. This table shows the proportion of respondents from each location who reported being satisfied (indicated by a score of five or over) with each respective aspect of employment. The differences revealed in the sub-sample responses are largely negligible, but Scottish graduates appear to have been more likely to be satisfied than the others with their total working hours and their total pay.

**Table 3.9** Proportion of graduates satisfied with aspects of their current job (scoring five or more on a scale of one to seven), by location of study

	Scotland	England and Wales	Northern Ireland
Promotion prospects	47.4	48.7	42.6
The Work itself	69.7	69.3	70.8
Total Pay	48.8	45.4	43.2
Relationship with supervisor/manager	74.6	74.2	75.2
Job security	67.0	68.6	70.8
Opportunity to use initiative	76.9	79.1	75.7
Hours worked	65.4	60.8	63.5

Source: *The class of '99 Survey*

Table 3.10 shows the distribution of reported levels of overall job satisfaction comparing graduates from the different UK locations. Again, we find similarity between graduates of Scottish HEIs and those who studied in England and Wales.

**Table 3.10** Overall satisfaction of graduates in their current jobs

	Scotland	England and Wales	Northern Ireland
1 - Not satisfied at all	2.5	1.6	1.7
2	3.3	4.7	3.8
3	8.6	7.5	6.7
4	14.6	14.7	17.6
5	34.3	35.1	37.2
6	29.4	29.3	27.2
7 - Completely satisfied	5.1	5.0	3.9

Source: *The class of '99 Survey*

### 3.6 Summary

This chapter compared the employment outcomes four years after graduation and career trajectories of graduates from Scottish HEIs from those from other UK locations. It was found that:

- A higher proportion of graduates from Scottish HEIs were in career-related employment at the time of the survey than graduates from other locations. Half of Scottish graduates had entered non-graduate jobs immediately after graduation but this had fallen to approximately 15 per cent four years later.

- Almost 40 per cent of Scottish graduates from Scottish institutions were in public sector employment, 55 per cent in the private industry and 5 per cent in the not-for-profit sector. These ratios are similar to those for graduates from England and Wales, although Scottish HEI graduates were less likely to have been working in education than the former;
- Four years after graduation, Scottish HEI graduates were more likely to be in employment for which a degree was required, and more likely to be using their degree-acquired skills and subject knowledge, than those from the other UK countries.
- Not surprisingly, they were also more likely to report that possession of a degree and their specific subject of study had been relevant in getting their current job.
- Scottish HEI graduates were more likely than those who had studied elsewhere to have said that they took their current job because they wanted to work in the region or locality.
- Analysis of the occupational distribution by SOC(HE) reinforces this picture of lower levels of non-graduate employment. Graduates from Scottish HEIs had higher levels of employment in traditional graduate jobs.
- Almost half of all graduates from Scotland rated their jobs as being ideal or near-ideal for someone with their qualifications, higher than in the other sub-samples.
- In terms of job characteristics and job quality, outcomes for Scottish graduates are similar to those of their peers from English and Welsh institutions, but rate their jobs as 'better' than those from NI institutions.
- Almost 70 per cent of graduates from Scottish HEIs reported overall satisfaction with their current jobs, with 14 per cent scoring low satisfaction - similar to graduates from the other UK locations. However, Scottish HEI graduates were more often satisfied with total pay and hours worked.

## Chapter 4

### The employment outcomes of graduates from Scottish HEIs

#### 4.1 Introduction

The previous chapter compared the early career paths to labour market transitions of 1999 graduates from Scottish HEIs with those of graduates from elsewhere in the UK. In this chapter, we concentrate only on graduates from Scottish HEIs and assess employment outcomes and movement into the labour market by three key variables that are relevant to differences in labour market experience and access to career opportunities; gender, degree class and type of institution attended. We also compare the outcomes of those who were resident in Scotland prior to their undergraduate studies and other UK-domiciled graduates who had studied at the Scottish HEIs sampled. We look at similarities and differences in outcomes according to whether these graduates were working in Scotland or elsewhere.

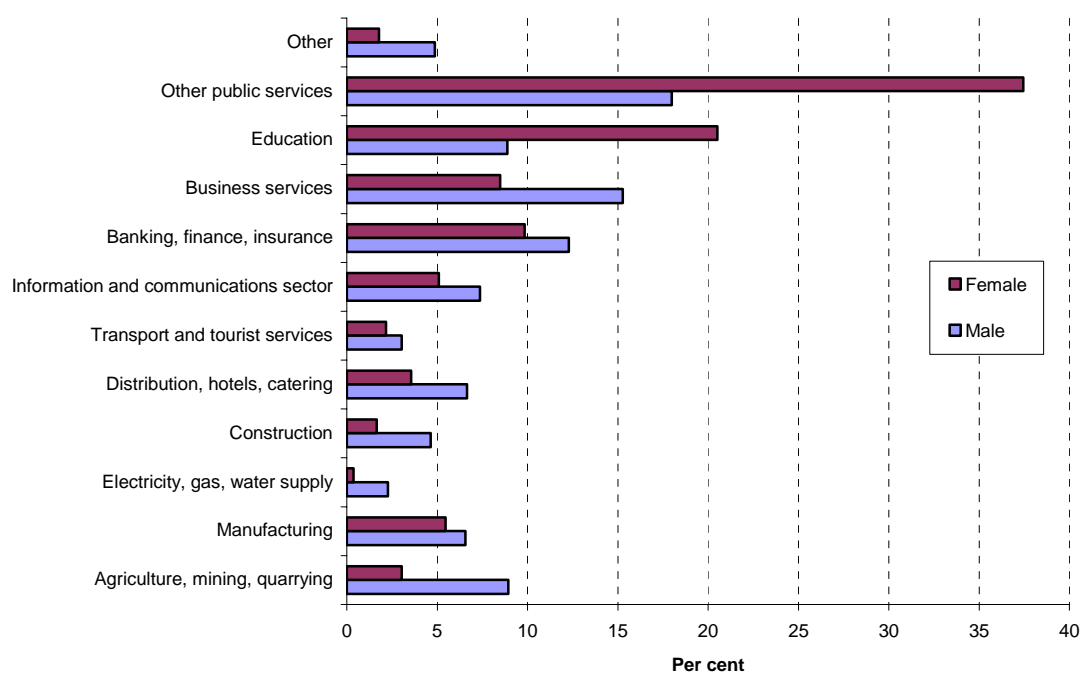
The Scottish *Class of '99* sample was drawn, as in the study of the 1995 graduating cohort studied previously (Elias *et al.* 1999:118-124) to provide a sufficiently large Scottish HEI sample to facilitate robust analysis, but the cell sizes when making comparisons between the 'indigenous' and 'educational migrant' sub-samples mean that the analysis at a detailed level must be regarded as indicative rather than conclusive.

#### 4.2 Gender and labour market outcomes

After four years in the labour market, we find that approximately 52 per cent of female Scottish HEI graduates were working in the public sector compared to only 24 per cent of males. Conversely, 70 per cent of males were employed in the private sector compared to 42 per cent of females. Five to six per cent of both groups were employed in the not-for-profit sector. In the *Class of '99* sample as a whole, this gender difference was less extreme, with 48 per cent of women employed in the public sector compared to 29 per cent for men. The Scottish HEI graduate men were more likely to work in all private sector areas of employment, most markedly in business services and the primary industries (as shown in Figure 4.1).



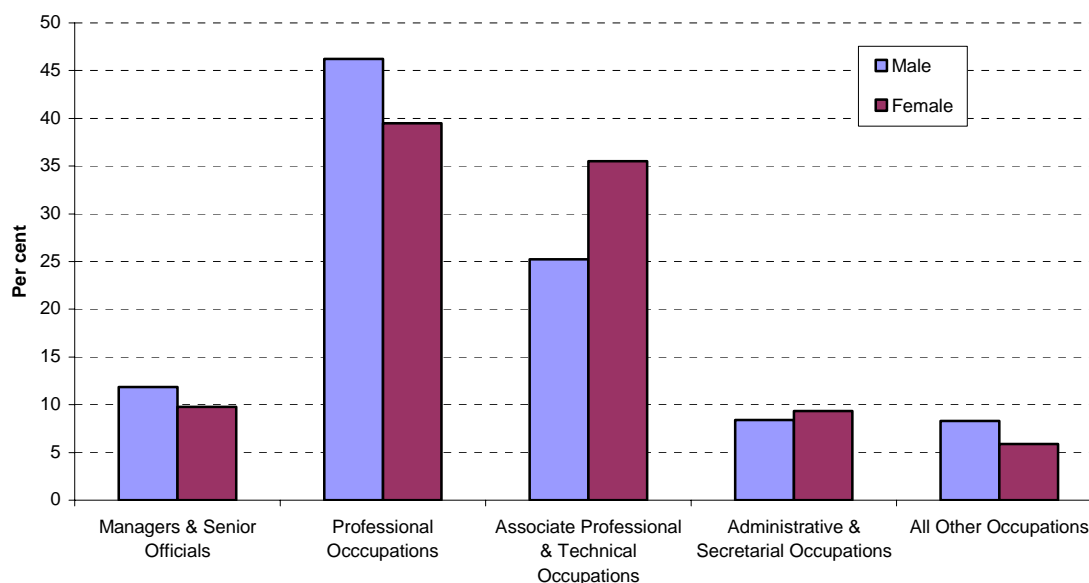
**Figure 4.1 Scottish HEI graduates' current employment, by sector and gender**



N=7548 (weighted)  
 Source: *The Class of '99 Survey*

Figure 4.2 shows that, in terms of occupational classification, females were 10 per cent more likely than males to be working in associate professional and technical occupations. Men were slightly more likely to be working in both management and senior administrative roles, substantially more likely to be in professional occupations, and also slightly more likely to be working the 'other occupations' groups, which are likely to be jobs where they would not be making use of their higher education in terms of credentials, knowledge or skills.

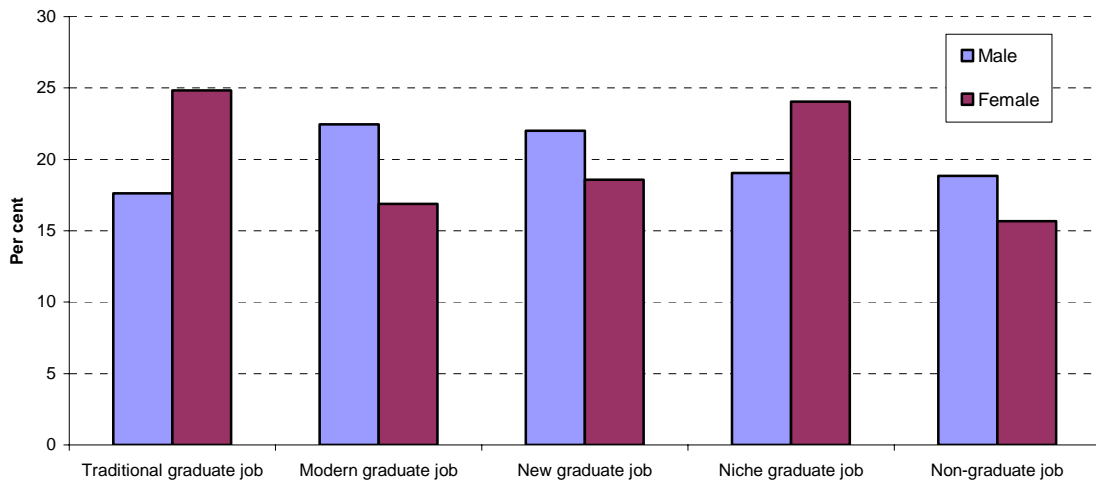
**Figure 4.2 Scottish HEI graduates' occupation at time of survey, by SOC2000 (major group) and gender**



Source: *The class of '99 Survey*

The distribution of the sample by SOC(HE) throws clearer light on these differences. Partly reflecting the greater propensity of female graduates employed in the public sector, women were more likely to be working in traditional graduate occupations such as secondary school teachers or health service professionals such as GPs or pharmacists. They were also more likely to be working in *niche* graduate occupations which is substantially accounted for by the proportion of female nursing graduates, but also included some HR and sales occupations. Men were more likely to working in modern graduate jobs, in particular those in ICT such as programmers and developers, and also various branches of engineering. Men were more likely to be in new graduate jobs, although such occupations tended to be less 'gendered'. Examples of new graduation occupations filled by both sexes included occupational therapists and physiotherapists, management accountants, marketing and public relations managers and laboratory technicians. The picture painted by Figure 4.2 is reinforced: men were more likely to be working in non-graduate jobs. Examples of such jobs in our sample are clerical and administrative assistant, vet assistant, call centre operative, customer service advisers, food service manager, support worker, team leader – computer operations, and teaching and learning administrator; and one or two of those reported job titles illustrate how some non-graduate jobs are likely to be more unambiguously non-graduate than others, as will be discussed below.

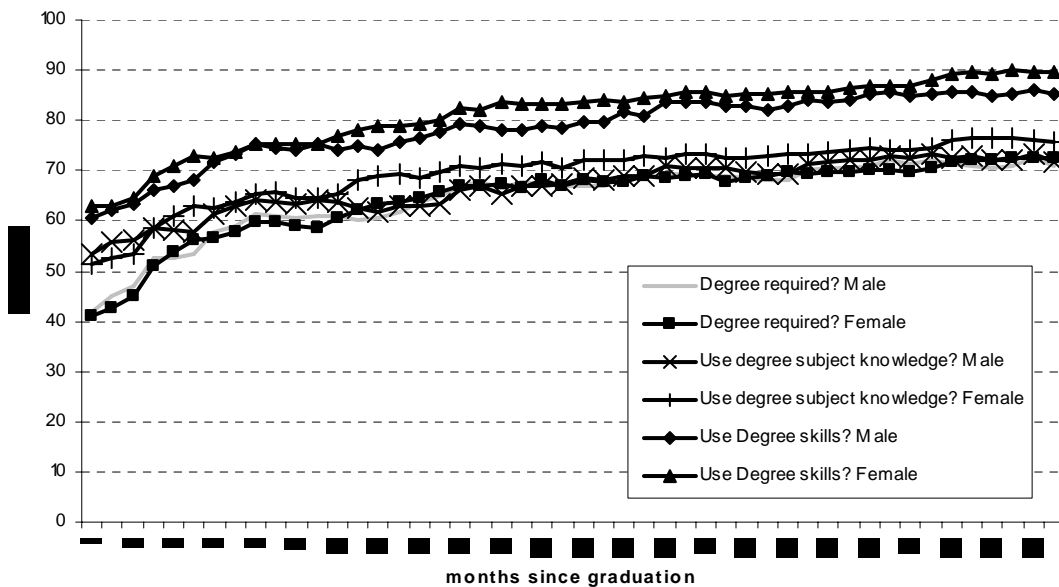
**Figure 4.3 Scottish HEI graduates current occupation at time of survey by SOC(HE) and gender**



Source: The class of '99 Survey

Reinforcing the evidence that male graduates were more likely to be in non-graduate employment, overall, we found that they were very slightly less likely than women to be in employment where they were required to have a degree or to be using their degree-acquired skills and subject knowledge and this was the case through their early career trajectories as Figure 4.4 shows.

**Figure 4.4 Movement into graduate-appropriate employment of Scottish HEI graduates, by gender, June 1999 - May 2003**

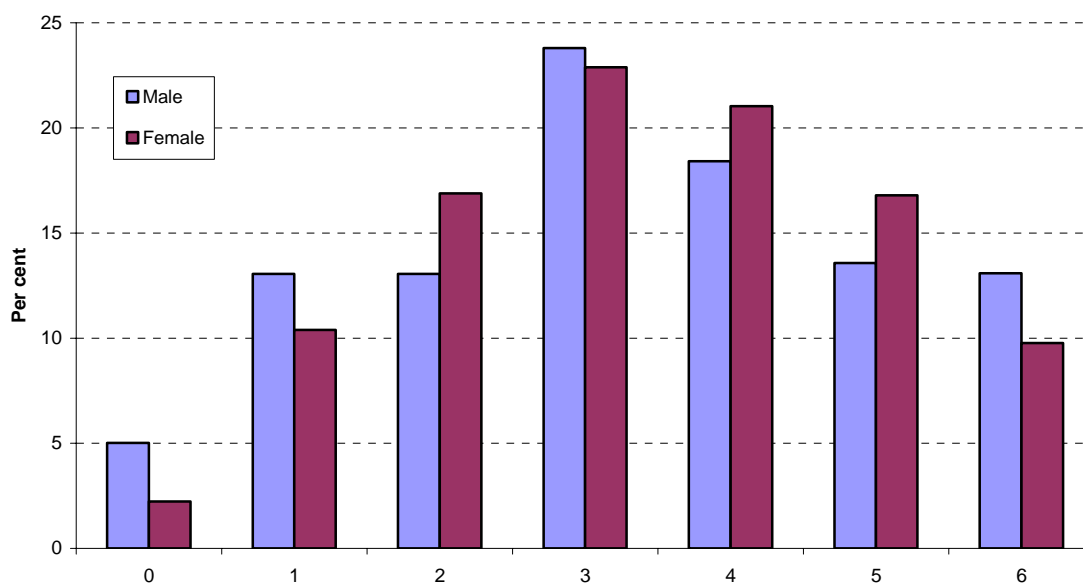


Source: The class of '99 Survey

Moreover, on assessment of the appropriateness of their current employment for someone with their qualifications, male and female graduates report similar outcomes, with almost 48 per cent of both groups suggesting their job was either ideal or near ideal. The mean scores for male graduates was 5.1 compared to 5.2 for females out of a possible score of 7, where 1 = 'completely inappropriate' and 7 = 'ideal' 'for someone with my skills and qualifications'.

If we compare the mean scores on the index of job quality, female graduates rated their jobs slightly more highly, but Figure 4.5 reveals that the distributions indicate a more polarised pattern for men, with higher proportions both at the low quality and at the very high quality ends of the spectrum. Women are more likely to have rated their jobs in the mid-spectrum.

**Figure 4.5 Job quality ratings by Scottish HEI graduates of current job 4 years after graduation, by gender\***



\* On scale of 0-6 where 0 is low and 6 is high  
Source: The class of '99 Survey

Finally, we can compare levels of job satisfaction between male and female graduates from Scottish HEIs, on a similar scale of 1 – 7, where 1 = 'not satisfied at all' and 7 = 'completely satisfied'. Again, we find relatively similar patterns (mean scores for men and women were 4.91 and 4.96 respectively) but there were a marginally higher proportion of men who reported being at the dissatisfied end of the scale, presumably reflecting the higher proportion of men in non-graduate employment.

**Table 4.1** Scottish HEI graduates' satisfaction with current job, four years after graduation

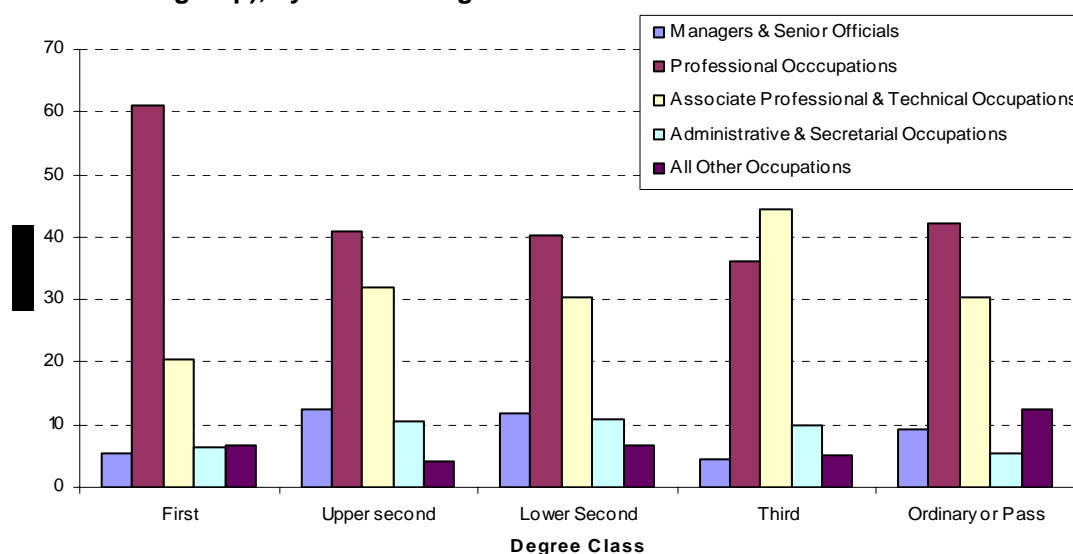
Subjective rating on scale of 1-7	Male	Female
1 - Not satisfied at all	3.3	1.9
2	3.6	3.1
3	8.5	8.8
4	14.0	15.1
5	34.6	34.1
6	27.9	30.7
7 - Completely satisfied	6.2	4.2

Source: The class of '99 Survey

#### 4.3 Class of degree obtained and labour market outcomes

The next section focuses on impact of degree class on early career outcomes, examining the types of employment achieved by Scottish HEI graduates according to level of academic achievement. Figure 4.6 shows that, according to SOC2000, there were differences in career trajectories that remained four years later on the basis on degree award. Most notably, over 60 per cent of graduates with first class degrees were working in professional occupations and 20 per cent in associate professional or technical occupations. In comparison, approximately 40 per cent of those with upper and lower-second class degrees were in professional occupations and just over 35 per cent of those with thirds. Overall, the profiles of those graduates with upper and lower second class degrees were very similar, although those with upper-second class degrees were less likely to be in 'other occupations'. Numbers in the third class honours category are small, but these are the graduates most likely to be in associate professional or technical occupations and those who left HE with an ordinary degree or a pass were clearly skewed, being second most likely to be in professional occupations and also most likely to be in 'other occupations', due to the polarisation between medical and other vocational unclassified degrees and others.

**Figure 4.6** Current occupation of Scottish HEI Graduates by SOC2000 (Major group), by Class of Degree

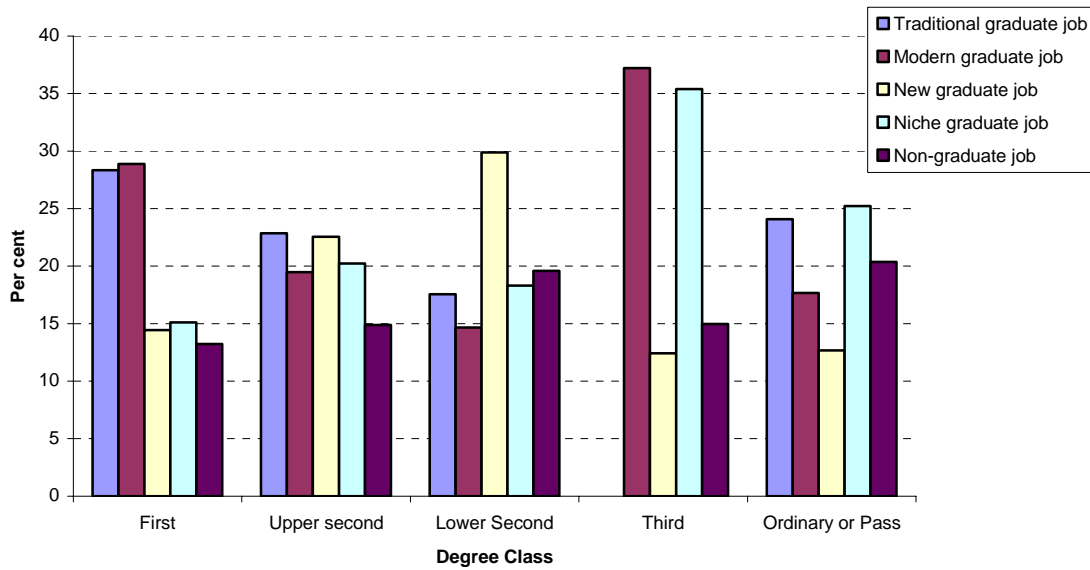


N=7,046 (weighted)

Source: *The Class of '99 Survey*

Differences in the occupational distribution of graduates according to degree class are even more in evidence if we compare their jobs at the time of the survey by SOC(HE). Those with firsts were again most likely to be in traditional graduate jobs and least likely to be in non-graduate occupations. Interestingly, graduates with thirds are most likely to be in both modern and *niche* graduate jobs, whereas those with ordinary or pass degrees were most likely to be in new graduate jobs and non-graduate jobs (alongside those with lower seconds). The polarity of outcomes among those with ordinary or pass degrees revealed by the previous figure is again apparent and detailed analysis reveals that almost all the Scottish HEI graduates those with ordinary or pass degrees working in traditional graduate occupations were doctors or secondary school teachers and the majority of those in *niche* graduate occupations were nurses. Conversely, the majority of those in non-graduate jobs were clearly in unambiguously low-paid, low-skill jobs, to a greater extent than was the case for those in the 'non-graduate' category as a whole.

**Figure 4.7 Current occupation Scottish HEI graduates by SOC(HE) and class of degree**



Source: *The Class of '99 Survey*

Finally, we consider the continued relevance of respondents' degrees four years after graduation. Those who graduated with first class degrees remained most likely to be in graduate-level employment, according to whether they were in a job which required possession of a degree, and also most likely to be using their degree-acquired skills. For those possessing lower awards, there appears only small variation, although those who graduated with an ordinary or pass degree were most likely to indicate drawing on their degree subject knowledge, which reflects the vocational bias of this group, reflecting those in medical and teaching occupations.

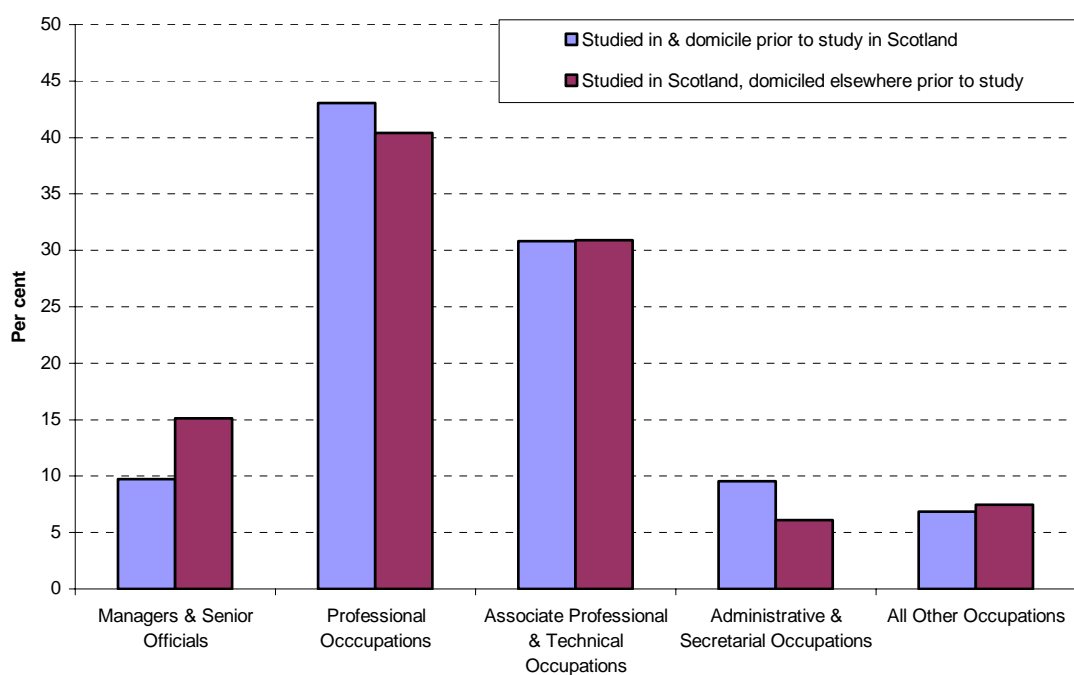
**4.4 Mobility and labour market outcomes**

Chapter 2 outlined some of the patterns of mobility of graduates of Scottish HEIs in terms of prior domicile, employment immediately after graduation and subsequent employment four years on. It showed that, in our sample, approximately 19 per cent of the graduates from Scottish institutions did not live in Scotland prior to study and a quarter of these non-Scottish domiciled students were not employed in Scotland immediately after graduation (rising to 29 per cent after four years). This section seeks to assess employment outcomes according to two of these variables: where respondents were living prior to study and where they were employed at the time of the survey. We make two kinds of comparison: between those who did or did not live in Scotland prior to study, and between those who were employed in Scotland and those who were not.

#### 4.4.1 Labour market outcomes by domicile prior to study

This section seeks to assess whether Scottish HEI graduates from elsewhere in the UK and those from Scotland achieved different outcomes after four years in the labour market. We saw in Chapter 2 that their profiles differed substantially and a matter of record that the educational migrants most often leave Scotland on completion of their HE studies – but do they have different career outcomes? We begin by comparing the occupational distribution of the two groups. Figure 4.8 shows that the key differences between the two groups, according to the SOC2000 major group structure, is that those who studied in Scotland but lived elsewhere prior to doing so were more likely to be in managerial employment four years later whereas those Scottish graduates from Scotland were more likely to be in professional and administrative occupations.

**Figure 4.8 Scottish HEI graduates by major occupational group (SOC2000) and by domicile prior to study**

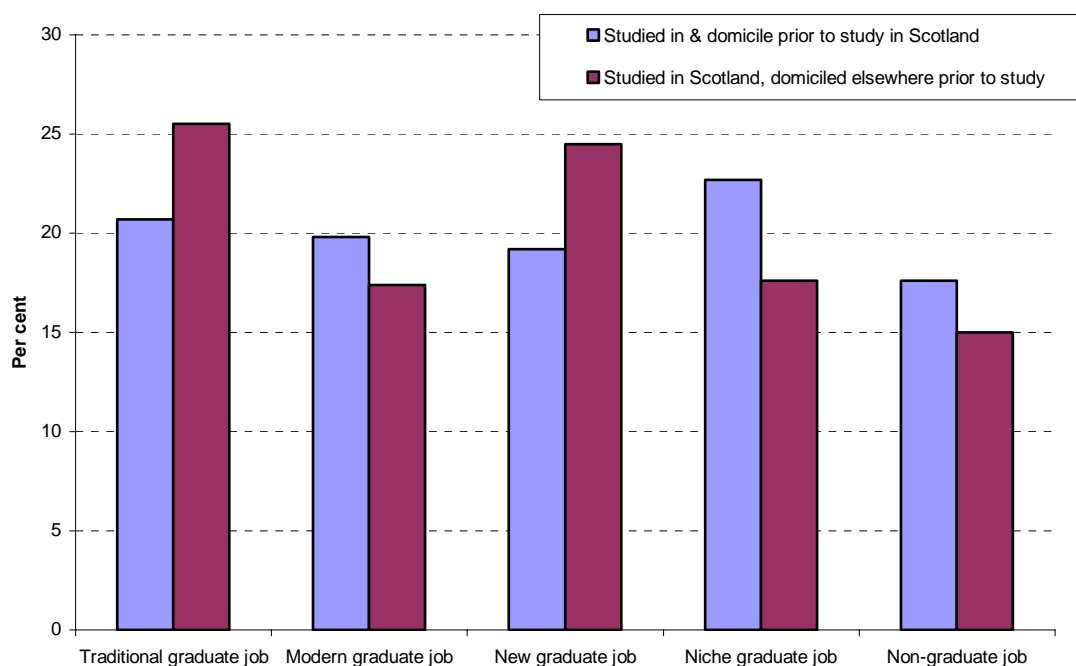


N=7,124 (weighted)  
Source: *The Class of '99 Survey*

Figure 4.9 shows that those who came from elsewhere to study in Scotland were more likely to be working in traditional and new graduate jobs to a notable degree. Of more concern, perhaps, is the finding that those who had lived in Scotland prior to study were those most likely to be in non-graduate jobs. Scottish-domiciled students appear to be somewhat less likely to have been geographically mobile and this may reflect lesser ability to move or reflect a positive choice to remain in Scotland, both to study and to work subsequently.



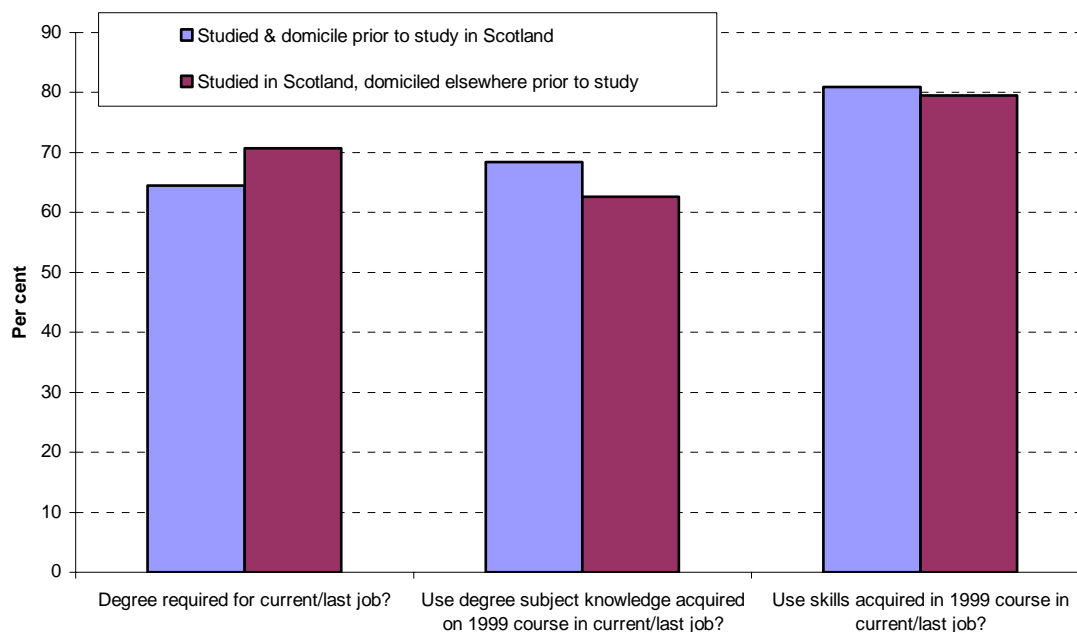
**Figure 4.9 Scottish HEI 1999 graduates by SOC(HE) by domicile prior to study**



Source: *The Class of '99 Survey*

There appears, however, to be less difference if we consider the extent to which the two groups were in employment that required them to have a degree, and were making use of their degree subject knowledge and skills. Figure 4.10 shows that those graduates from Scottish HEIs who lived in the country prior to study were less likely to be in employment at the time of the survey for which a degree had been required, but more likely to be using their degree subject knowledge. The two groups were equally likely to be using their degree-acquired skills.

**Figure 4.10** Scottish HEI graduates' requirement for degree, use of degree subject knowledge and use of graduate skills in current job, by domicile prior to study

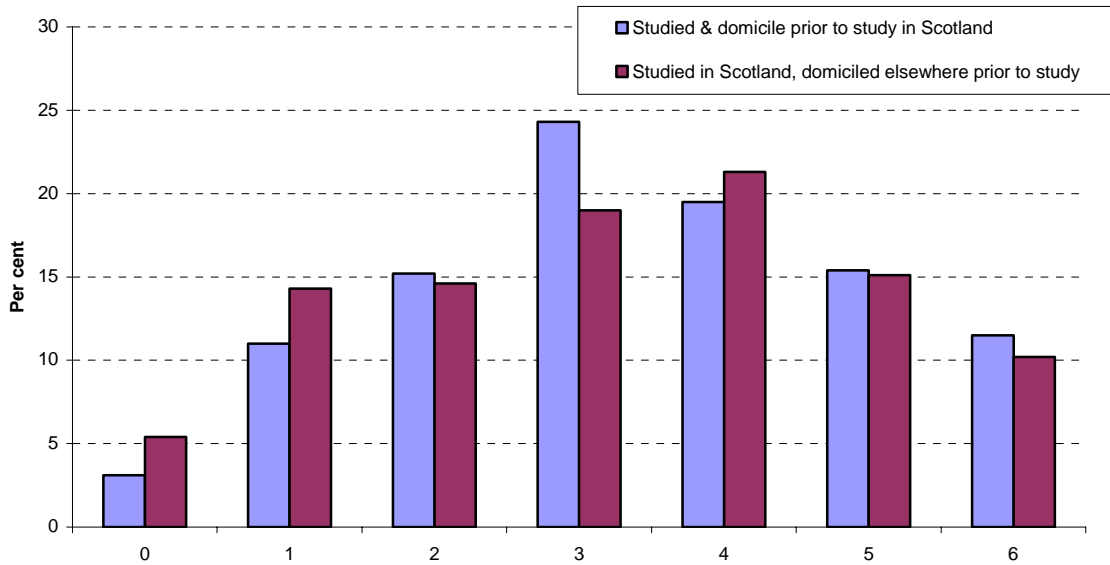


Source: *The Class of '99 Survey*

There was a small difference in the extent to which the two groups felt they were in appropriate employment for someone with their skills and qualifications. Those who lived in Scotland prior to their undergraduate study recorded a lower mean 'appropriateness' score than those who had been resident elsewhere, but in terms of overall job satisfaction, those who lived in Scotland prior to study reported higher levels of satisfaction.

There were also some differences evident in assessment of job quality for Scottish HEI graduates according to where they were had lived prior to study. Indigenous Scots had a mean job quality score of 3.4 compared to 3.2 for those who were resident elsewhere. Figure 4.11 shows that differences in the distribution of scores on the index which account for this variation in means. Overall, the indigenous Scots appear to have been in more appropriate employment and to have rated it slightly more highly than their migrant peers.

**Figure 4.11 Job quality ratings by Scottish HEI 1999 graduates of current job 4 years after graduation, by prior domicile\***



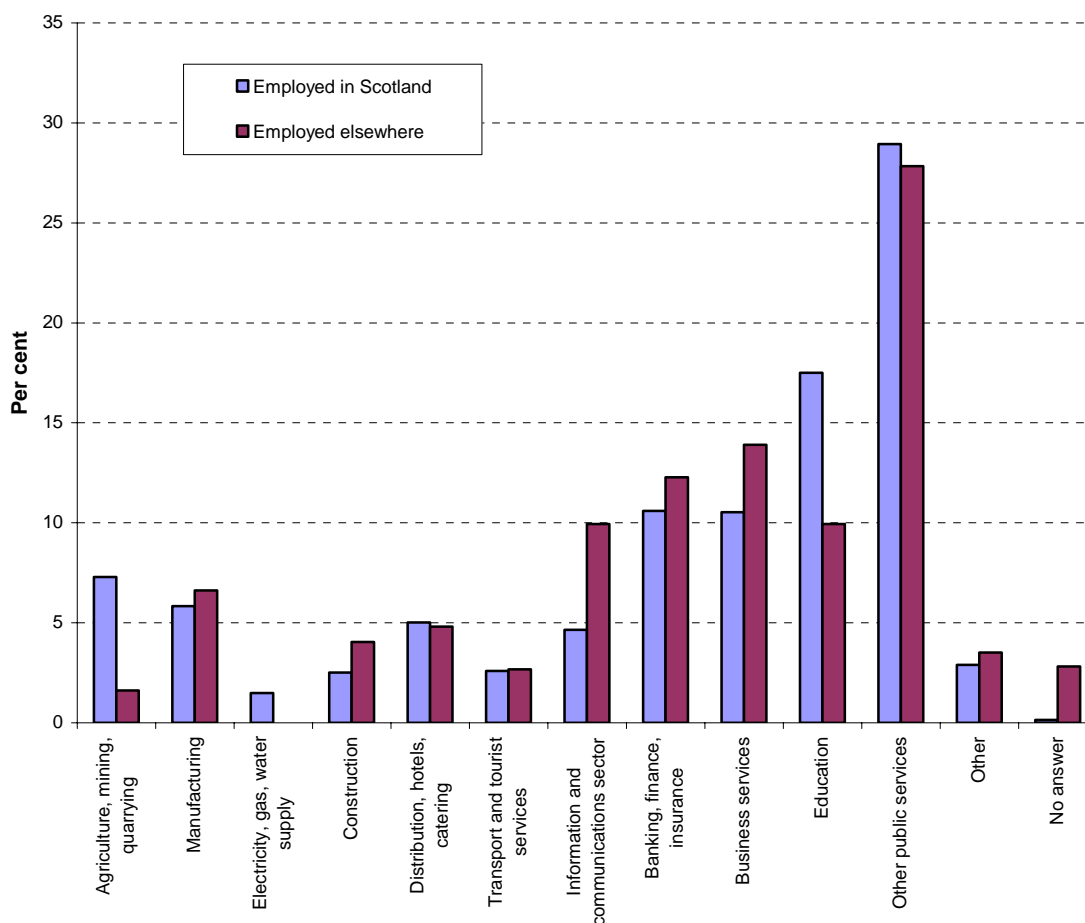
\* On scale of 0-6 where 0 is low and 6 is high  
 Source: *The Class of '99 Survey*

Overall, there was no significant difference in the extent to which graduates from Scottish HEIs were satisfied with their careers to date according to where they were domiciled prior to entering higher education.

#### 4.4.2 Labour market outcomes by where employed immediately after graduation

In this section we compared employment outcomes according to where the graduates from Scottish HEIs were employed at the time of the survey, four years after graduation. Figure 4.13 compares the sectoral distribution of graduates according to whether they were employed in Scotland or elsewhere. Most notably, we find that those working outside Scotland were far less likely to be working in primary/extractive industries, almost half as likely to be working in education, twice as likely to be working in ICT and more likely to be working in both business services and banking and finance. Further detail about the actual jobs done by members of the 1999 Scottish HEI graduate cohort will be provided in the next section, where we discuss those employed in Scotland at the time of the study.

**Figure 4.12 Sector of employment at time of survey of Scottish HEI Graduates, by location of employment at time of survey**

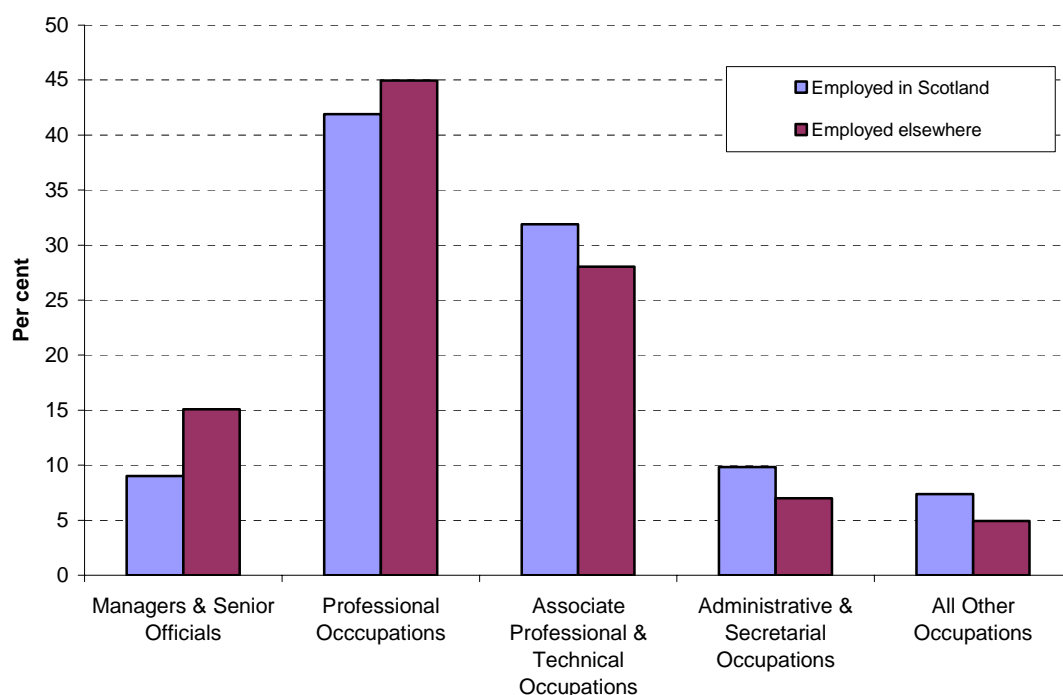


N=7,425

Source: *The Class of '99 Survey*

In terms of the jobs being done by Scottish HEI graduates, according to where they were employed four years on, Figure 4.14 shows the occupational distribution according to SOC2000. It shows that while there was not a large difference in distribution overall, those currently working in Scotland were more likely to be in occupations where they were likely to be 'under-employed' (administrative employment and 'other occupations'). Multivariate analysis of the entire Class of '99 showed that graduates who had moved to another region were more likely to be in graduate jobs, according to all the measures we use, and this is borne out by analysis of the Scottish 'class of '99'. Figure 4.13 shows that the greatest difference between the 'stayers' and emigrants was that those working outside Scotland were more likely to be in managerial or professional occupations four years after graduation.

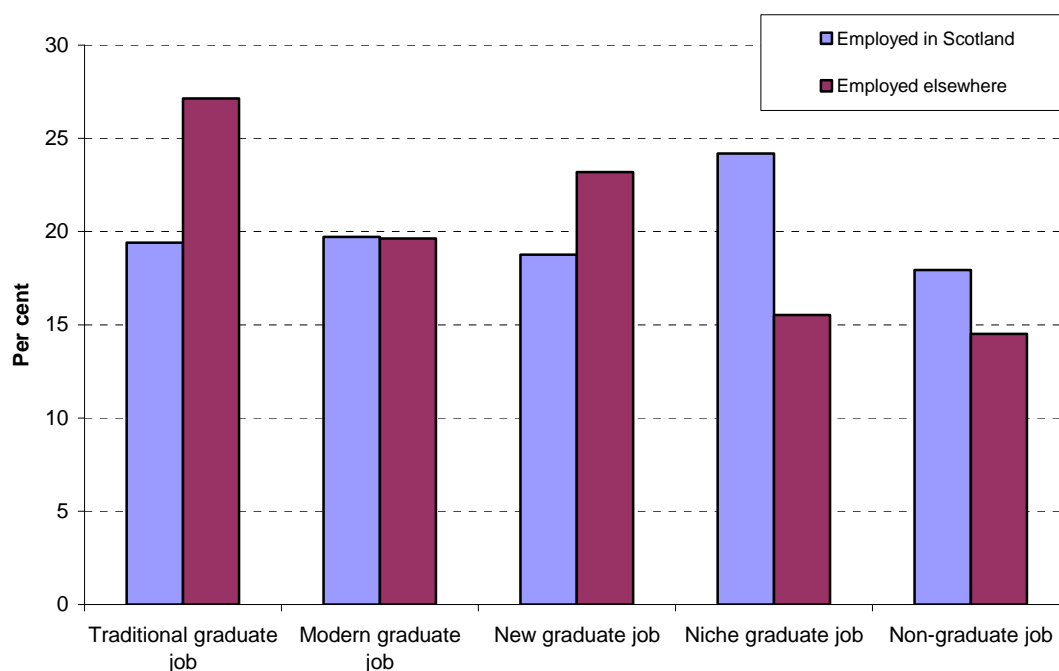
**Figure 4.13 Scottish HEI 1999 graduates by major occupational group (SOC2000) and by location of employment at time of survey**



Source: *The Class of '99 Survey*

Figure 4.14 shows the occupational distribution according to SOC(HE). Again, graduates from Scottish HEIs working in Scotland were more likely to be in non-graduate jobs and also *niche* graduate jobs. Those working elsewhere were more likely to be in both traditional and new graduate employment, which reinforces the evidence of the analysis above. The two groups were equally likely to be in modern graduate jobs, but further investigation of these jobs showed that those remaining in Scotland were more likely to be primary teachers and other public sector employees, such as social workers, whereas those working outside Scotland were more likely to be working in ICT-related roles, such as software developers and systems engineers.

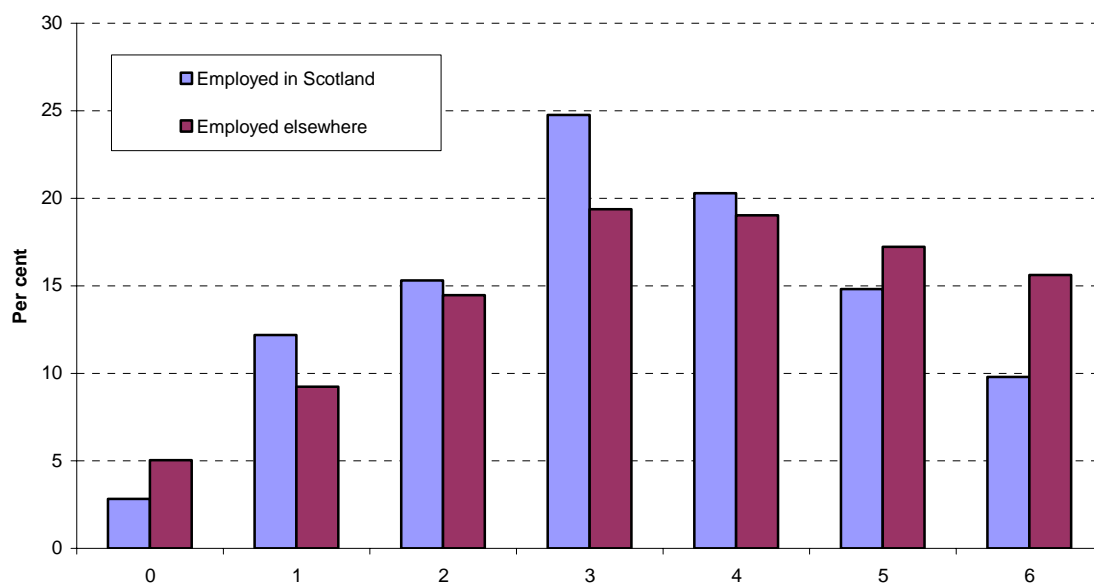
**Figure 4.14 Scottish HEI 1999 graduates by SOC(HE), by location of employment at time of survey**



Source: *The Class of '99 Survey*

The greater likelihood of Scottish HEI graduates currently working in Scotland to be in non-graduate employment is reflected by the fact that they were also less likely to be in employment where a degree had been a requirement (65 per cent compared to 70 per cent for those working elsewhere). However, both groups were equally likely to be in employment where they using their degree-acquired skills (approximately 68 per cent) and knowledge (approximately 80 per cent). Those who were working outside of Scotland also had a greater tendency to rate their job at the time of the survey as being appropriate for someone with their qualifications (recording a mean score of 5.3, on a seven point scale compared to 5.1 for those working in Scotland). A similar difference is shown in the mean job satisfaction ratings for each group. Those working in Scotland recorded a mean score of 4.9 compared to 5.1 for those working elsewhere. In terms of job quality, Figure 4.15 shows the distribution of scores on the index of job quality for the two groups. It shows that those working elsewhere were more likely to have scored their job at the high quality end of the scale, but also more likely to have rated their jobs as being of very low quality. Mean scores were 3.3 for those working in Scotland and 3.5 for those working elsewhere.

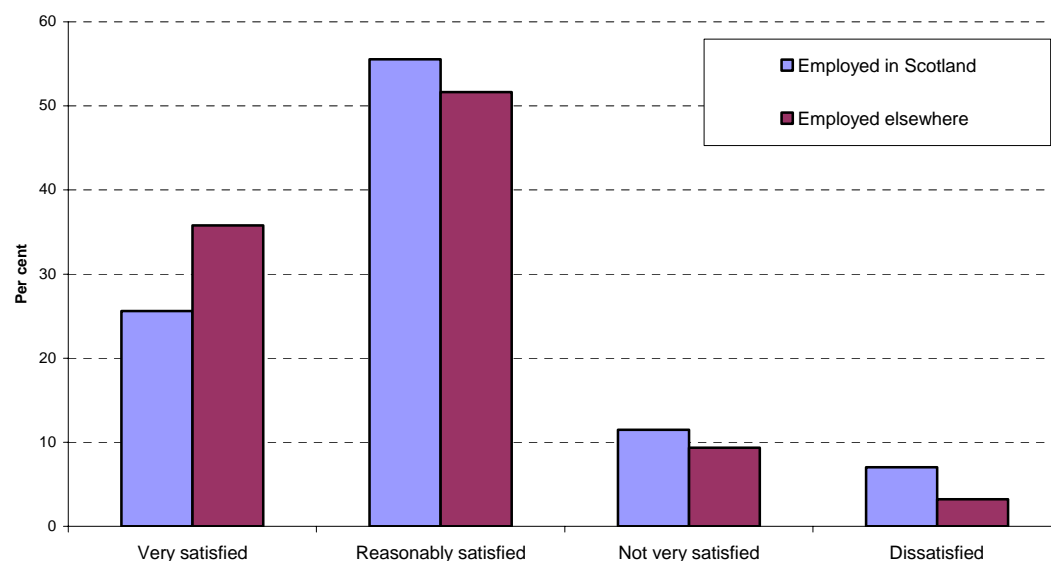
**Figure 4.15 Job quality ratings by Scottish HEI 1999 graduates of current job 4 years after graduation, by location of employment at time of survey\***



On scale of 0-6 where 0 is low and 6 is high  
 Source: *The Class of '99 Survey*

The findings above appear to translate directly to an assessment of overall career satisfaction. As Figure 4.16 shows, graduates from Scottish HEIs who were working outside the country four years on, were more likely to be very satisfied with their careers to date and, subsequently, over half as likely to be very dissatisfied, compared to those working in Scotland

**Figure 4.16 Scottish HEI Graduates satisfaction with career to date four years after graduation**



Source: *The Class of '99 Survey*

#### 4.5 Summary

The analysis in this chapter explored differences within the Scottish HEI *Class of '99* according to gender, type of university attended, class of degree, domicile prior to embarking on higher education, and location four years after graduating.

- As in the UK graduate population as a whole, women graduates from Scottish HEIs were significantly more likely to be working in the public sector, and men in private sector employment.
- According to standard occupational classification major groups, women were less likely than their male peers to be in managerial, senior administrative or professional occupations, and more likely to be in associate professional and technical occupations. However, according to Soc (HE) women were more likely to be in traditional graduate jobs and *niche* graduate occupations, and less likely to be in non-graduate jobs.
- Men and women were equally likely to be in employment for which a degree was required, to be using their degree-acquired skills and subject knowledge and to feel their job was appropriate for someone with their qualifications.
- Women were less likely to be at both extremes, in terms of their subjective rating of current employment: less likely to rate their job quality very low or very high.
- As for the UK cohort as a whole, class of degree is correlated with outcome where degrees results were classified, with high academic achievers more likely to be in appropriate employment and more satisfied with their career outcomes than lower achievers. Those with pass or unclassified degrees (more common among Scottish HEI graduates than in other UK counties), there was a distinct polarisation according to subject studied, which reinforced the general achievement-related principle.
- Those who had moved to Scotland from other UK locations to study at Scottish HEIs were somewhat more likely to be in a job for which a degree was required, less likely to be in professional jobs and more likely to be in managerial or senior administrative jobs – traditional or new jobs, according to SOC(HE), which is reinforced by the fact that they were somewhat less likely to be using their degree subject knowledge, although equally likely to be using their graduate skills. These outcomes reflect their greater tendency to have moved away from Scotland.
- Scottish HEI graduates currently working in the country were more likely to be working in education and the primary industries than those working elsewhere. They were less likely to be working in ICT and business or financial services and in managerial or professional occupations (SOC2000), and more likely to working in *niche* or non-graduate jobs SOC(HE). They were, subsequently, less likely to be in employment requiring a degree but were making equal use of their skills and knowledge or graduate skills.



- As revealed in the previous chapter, most Scottish HEI graduates rated their jobs as appropriate for someone with their skills and qualifications and to be satisfied with their current jobs overall. However, those working in Scotland were marginally less likely than those who had left to rate their jobs as appropriate, and to record high job quality scores and high levels of job satisfaction.

## Chapter 5

### Earnings and student debt among Scottish HEI graduates

#### 5.1 Introduction

Firstly, this chapter outlines the earnings of Scottish HEI graduates at the time of the survey in 2003, focussing in particular upon those in full-time employment or self employment, comparing this sample where appropriate with graduates from elsewhere in the UK. It also examines differences in average earnings among different subgroups within the Scottish HEI graduate sample, in particular gender and social class background.

The second part of the chapter examines levels of student indebtedness of Scottish HEI graduates from the 1999 cohort and considers how this debt is related to subsequent labour market outcomes and experience. Again, where appropriate, we compare levels of debt and its impact on career choices between subgroups of Scottish HEI graduates.

#### 5.2 The earnings of graduates from Scottish HEIs 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' to '£60,000 and over'. In the following analyses we have substituted the mid-point of the range as an estimate of the actual annual salary. The end-points corresponding to the two intervals described were arbitrarily replaced by the values £9,000 annum £65,000 per annum respectively, these values being selected as an approximation to the mean value in the open-ended range of the distribution of earnings.

Of the 885 respondents who gained their first degree at the five Scottish Higher Education institutions represented in the sample of 38 Higher Education Institutions in the UK survey, 73 per cent reported at the time of the survey in 2002/03 that they were in full-time or part-time paid employment related to their long term career plans, marginally higher than the proportion of respondents who had studied at those HEIs in the sample located outside Scotland (70.5 per cent). Those not in employment were likely to be engaged in postgraduate study (8 per cent), unemployed (3 per cent) or were out of the labour force (1.4 per cent). In most of the analyses that follows, graduates who completed their undergraduate programmes over the

age of 30 have been excluded from the analysis because they tend to exhibit very different earnings patterns deriving from their prior experiences and different profiles. However, in the multivariate analysis, because age is a controlling variable it has not been necessary to exclude these cases.

Table 5.1 contrasts the mean annual earnings and average weekly hours for male and female graduates in full-time employment or self employment who reported earnings, by whether or not they studied at a Scottish HEI.

**Table 5.1 Average annual earnings and weekly hours of 1999 graduates in full-time employment or self employment in 2002/03, by location of HEI and gender**

Location of Study	Male graduates		Female graduates	
	Average annual earnings	Average weekly hours	Average annual earnings	Average weekly hours
Scotland	£25,800	42.7	£22,700	41.5
Elsewhere in UK	£26,400	43.2	£22,500	41.3

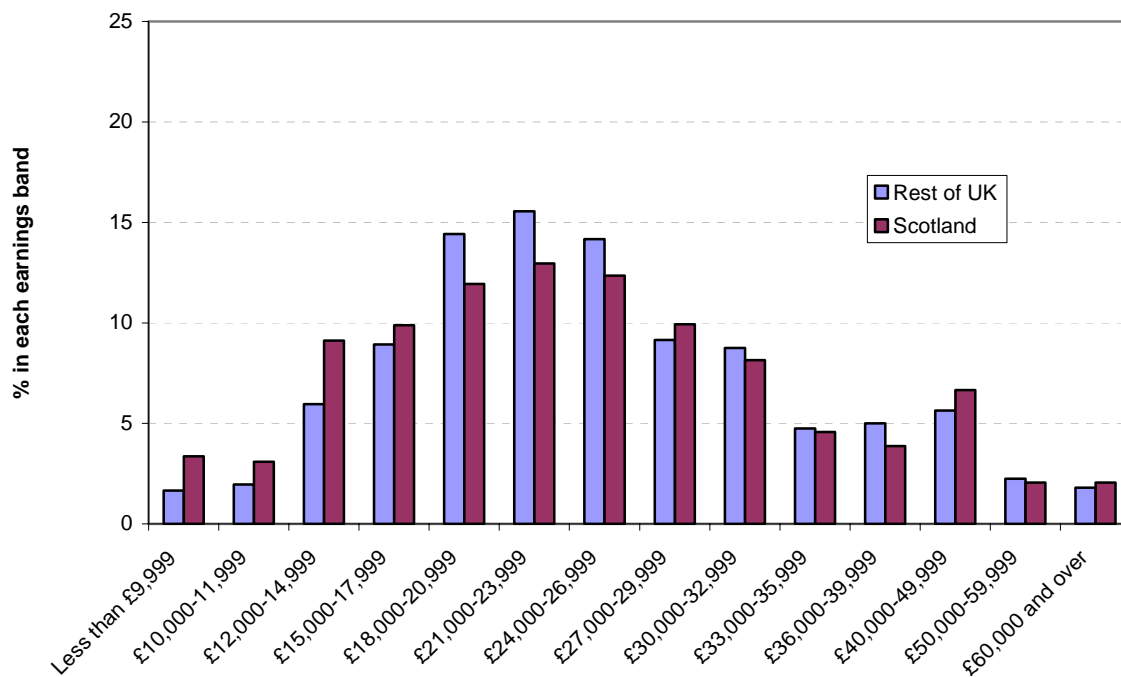
Source: *The Class of '99* survey

From these data it can be seen that the mean gross annual earnings of male graduates in full-time jobs who gained their degrees from the Scottish HEIs is marginally lower than for those who obtained degrees from HEIs elsewhere in the UK. In part, the lower mean earnings reported by graduates from Scottish HEIs reflected the lower average weekly hours worked. For women, though, mean annual earnings are higher for those who obtained their first degree from a Scottish HEI than for those who graduated from an institution outside Scotland. As found for the 1995 cohort at approximately the same stage of their careers (Elias and Purcell 2001: 26).

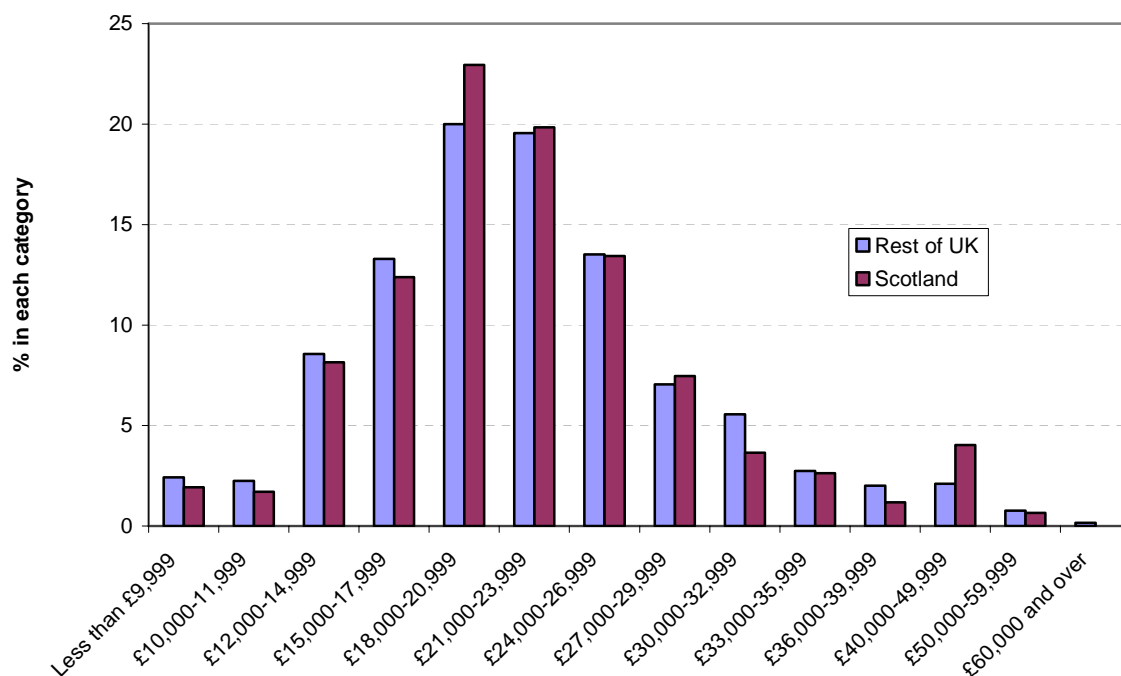
The distribution of annual gross earnings for those who gained a first degree in 1999 and reported that they were in full-time employment or self employment at the time of the survey is shown in Figure 5.1.

**Figure 5.1** The distribution of annual gross earnings of 1999 graduates in full-time employment or self employment in 2003/04

**Men in full-time jobs**



**Women in full-time jobs**



Source: The *Class of '99* Survey

Male graduates from Scottish HEIs have a slightly broader distribution of earnings than for those who gained their first degree from the institutions located in the rest of the UK. Higher proportions of male graduates from the Scottish HEIs earned at the high end and the low end of the distribution than was the case for graduates from HEIs in the rest of the sampled institutions. For women, more of the Scottish graduates reported their annual earnings some four years after graduation around the midpoint of the distribution than was the case for female graduates from the rest of the UK.

Table 5.2 shows the average earnings of Scottish HEI graduates according to a number of variables that may or may be influential in subsequent labour market outcomes. We find that in all cases average male earnings are greater than female earnings. A major difference is that Scottish HEI postgraduates earned less than those who did not undertake postgraduate study. The most likely reason for this difference is the fact that postgraduates have had less full-time employment experience than those who did not engage in postgraduate study. Their later earnings may well rise above those for non-postgraduates. In terms of whether graduates had a work placement as part of their undergraduate programme, we find that for men, there was a slight earnings penalty for those who had some prior work experience but for women work experience was found to have a positive impact on earnings four years after completing their studies. On average, Scottish HEI graduates who had come to Scotland to study from elsewhere in the UK were earning higher salaries at the time of the survey than those who were indigenous students. It needs to be noted, however, that there are likely to be several intervening factors associated with this finding, in particular the higher social class background of educational migrants and their greater propensity to have studied at older universities. Finally, Table 5.2 also shows that moving out of Scotland for employment immediately after graduation is associated with higher earnings four years on.

**Table 5.2 Average earnings of Scottish HEI graduates in full-time employment in 2003/04**

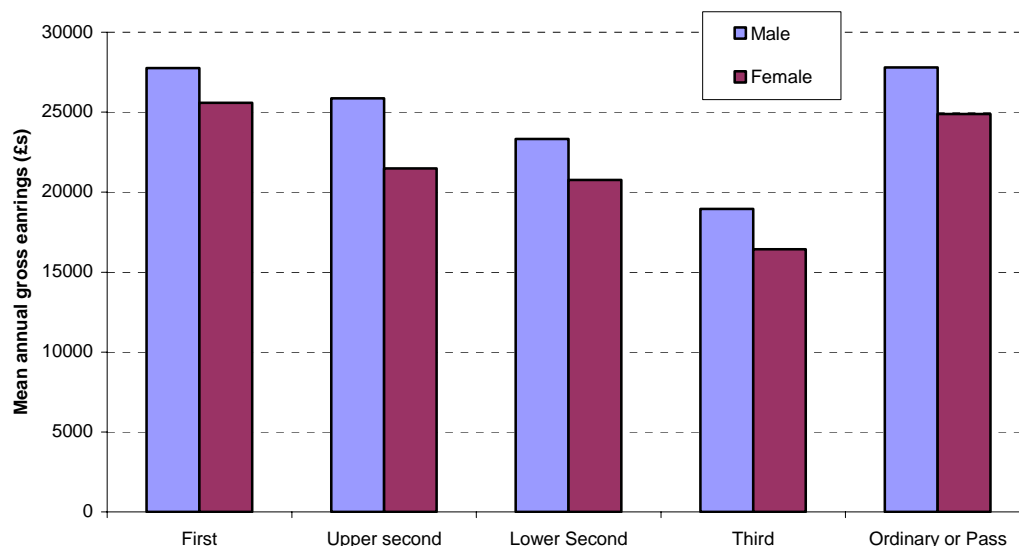
	Male	Female
Undertook Postgraduate Study	£24498	£21908
Did not undertake postgraduate study	£26665	£23415
Work placement as part of course	£25091	£23275
No work placement	£25433	£22137
Domiciled in Scotland prior to study	£25244	£22280
Domiciled elsewhere in UK prior to study	£27103	£23682
Employed in Scotland immediately after graduation	£24672	£21802
Employed elsewhere immediately after graduation	£28020	£24932

Source: The *Class of '99* Survey

For Scottish HEI graduates, the class of degree obtained also appears to be influential in earnings outcomes (Figure 5.2). We find that graduates from Scottish HEIs with ordinary or

pass degrees (for Scottish HEI graduates this is largely those with ordinary degrees) were among the highest earners alongside those with first class honours. This pattern of distribution is virtually identical to that for the entire Class of '99 sample, although reflects the lower average level of earnings among Scottish graduates.

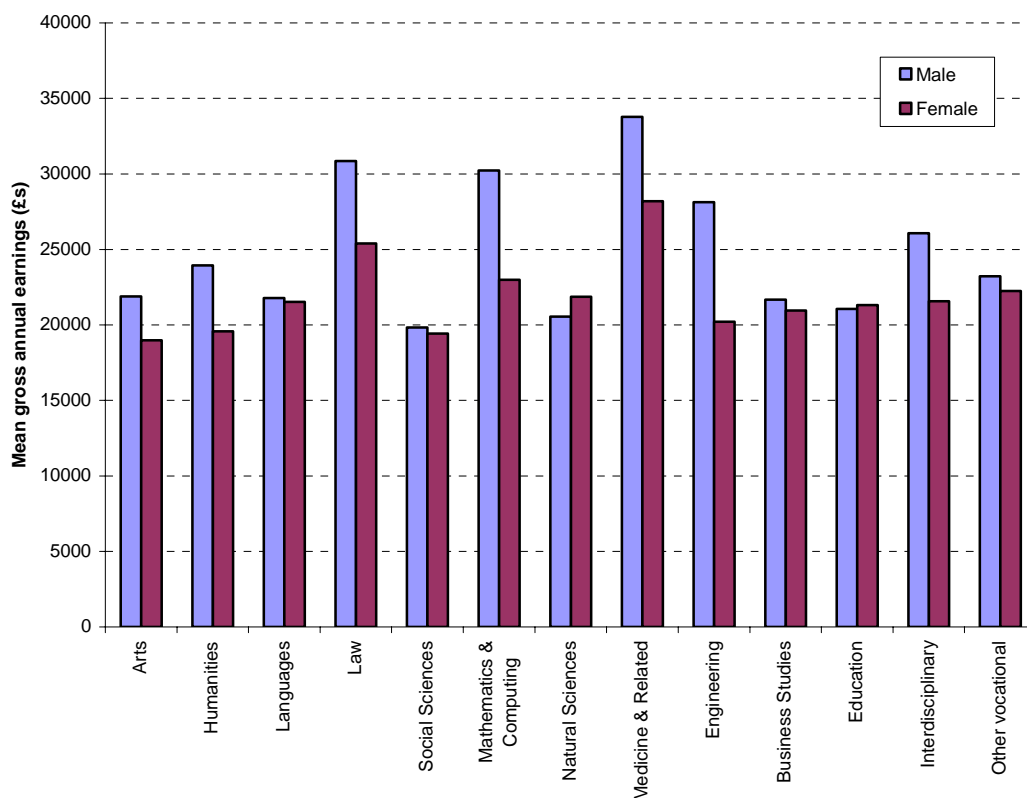
**Figure 5.2 Mean gross annual earnings of Scottish HEI graduates, by class of degree and gender**



Source: The *Class of '99* Survey

We also find that subject of study has an impact both on subsequent average earnings and on the extent of gender inequality (Figure 5.3). On average, graduates in medicine and related disciplines and law were the highest earners, but this was also where greatest levels of inequality between the earnings of men and women were evident, which essentially reflects the fact that women were more likely than men to be nurses or paramedical specialisms, whereas the majority of males in this category were doctors. There was also significant inequality evident for graduates in ICT and engineering, both areas of study which typically lead to employment in male-dominated sectors of the economy. There was relative equality of earnings, however, for graduates in natural and social sciences, business studies, languages and education. Social science graduates reported the lowest average earnings overall.

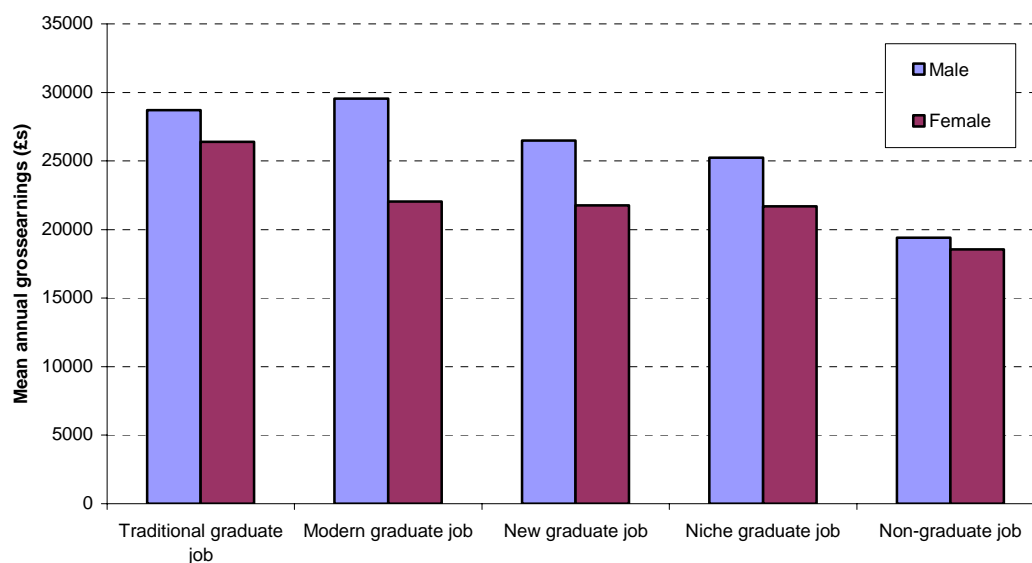
**Figure 5.3 Mean gross annual earnings of Scottish HEI graduates, by subject of study and gender**



Source: The *Class of '99* Survey

Figure 5.4 shows the distribution of mean annual earnings associated with employment in different occupational categories according to SOC(HE). Most notably, we find that those Scottish HEI graduates employed in non-graduate occupations were paid significantly less on average than those in graduate-appropriate employment. In these jobs there also appears less of a gender impact on earnings. The effect of gender was most evident for employment in modern graduate jobs; however, this is likely to be related to occupational and sectoral distribution within this group of occupations. Many women in modern graduate jobs are working as primary teachers whereas men in this group tend to work in ICT or engineering.

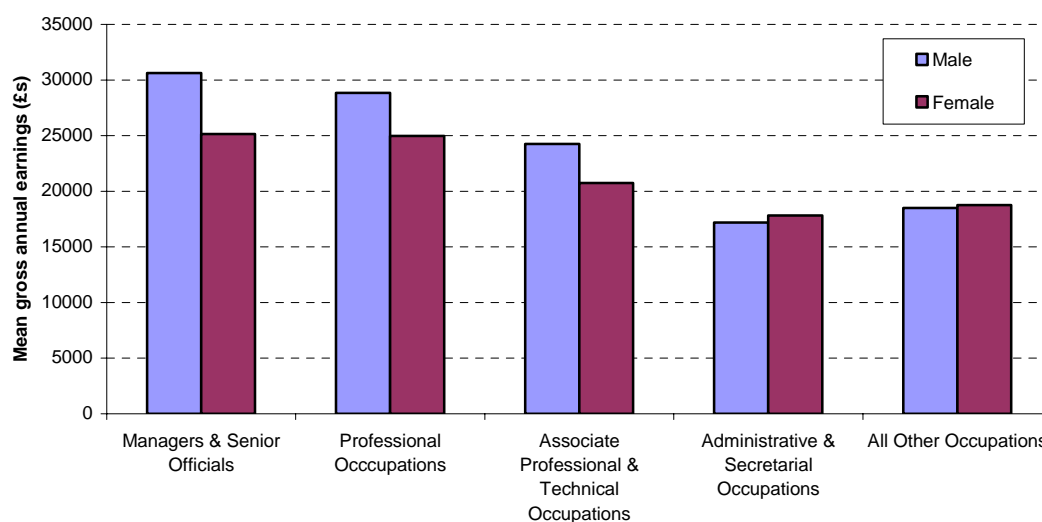
**Figure 5.4 Mean gross annual earnings of Scottish HEI graduates, by SOC(HE) classification of job at time of survey and gender**



Source: The *Class of '99* Survey

Analysis by SOC2000 major group shows much the same picture. Graduates working in occupational groups which are likely to represent under-employment (administrative and 'other' occupations) are on average paid significantly less than those in more appropriate employment. Again, there is less gender inequality in earnings in these groups than for those in apparently graduate-level employment.

**Figure 5.5 Mean gross annual earnings of Scottish HEI graduates, by SOC2000 classification of job at time of survey and gender**



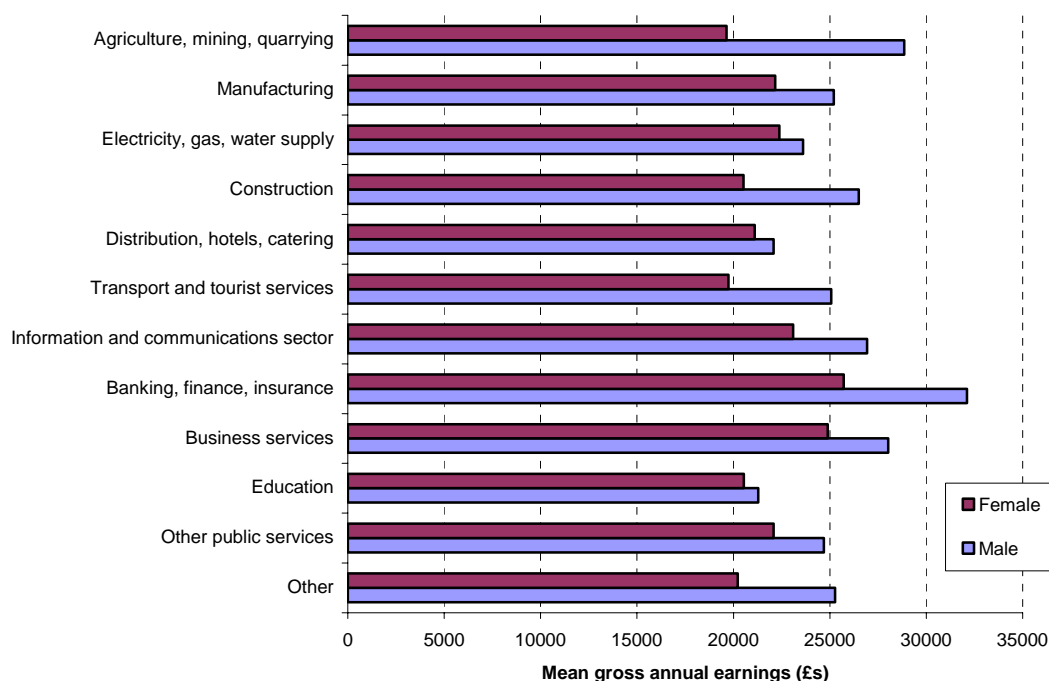
Source: The *Class of '99* Survey

Finally, we compare average earnings for Scottish HEI graduates according to the sector in which they were working in 2003/04. Table 5.6 shows that for both men and women average



earnings were highest for those working in banking, finance and insurance. For men, earnings were lowest in distribution, hotel and catering and education and for women, in transport and tourist services. Again, we see considerable gender inequality of earnings, particularly in banking and finance, the primary industries and construction. Relatively equal average earnings were evident in education and distribution, hotels and catering.

**Figure 5.6 Mean gross annual earnings of Scottish HEI graduates, by sector of employment and gender**



Source: The *Class of '99* Survey

### 5.3 Multivariate analysis of earnings

To gain a better understanding of differences in graduate earnings we use multivariate statistical techniques to unravel the complexity of the relationship between earnings and a wide set of factors that can contribute to these differences. Age, experience, subject and class of degree, sector and location all contribute to such differences. In this section we make use of the richness of the data available in the graduate cohort studies to unpick these differences, seeking to identify the experience of a Scottish higher education and employment and to compare/contrast these experiences with those gained by graduates from the rest of the UK.

Table A1 at the end of this report in Annexe 1 lists the general model we use here to analyse earnings. This model reveals the wide variety of factors we include in this analysis, covering the contractual basis of a graduate's current (2003/04) employment, whether or not the employer required a degree for the job, sector, gender segmentation at the workplace,

training time, size of organisation, type of graduate job, location of employment, gender, family status, class of degree obtained in 1999, mode of study, type of institution attended, subject of degree, entry qualifications, parental socio-economic status and age of the graduate and a few other factors including motivation and postgraduate raining.

Table A1 makes no attempt to distinguish between graduates from Scottish HEIs and those from non-Scottish HEIs. It shows the general pattern of the factors on the earnings of all UK graduates. What it does reveal though is the fact that graduates employed in Scotland have earnings which are no different from the earnings of graduates working in the North of England, the Midlands, East Anglia and the South West (the reference regions).

Table A2 shows results from an analysis of the earnings of 1999 graduates in full-time employment in 2003/04, comparing those who studied at a Scottish higher education institution from those who studied elsewhere in the UK. Due to the smaller sample size among the former group, many of the factors entered into this analysis lack statistical significance. Here we focus upon those effects which are both statistical significant and for which we observe differences between the Scottish graduates and others.

We note that the requirement for a university degree by the employer has a larger positive effect on earnings among the Scottish graduates than for those graduating from HEIs in the rest of the UK. At 16 per cent, this is approximately 4 percentage points higher than for non-Scottish graduates.

The sector in which the graduate is employed also appears to have a more pronounced effect on earnings for Scotland's graduates than for other graduates. In the manufacturing, construction, distribution and transport sectors, Scottish graduates earn less relative to the reference category (graduates employed in banking, insurance and finance) than for graduates from non-Scottish HEIs. Gender segmentation at the workplace shows the same pattern of effects on earnings for Scottish graduates as for non-Scottish graduates, but again we observe a more pronounced effect among the graduates from Scottish HEIs. Those who work exclusively or mainly with men are more likely to earn more than those who work in workplaces where their type of work is done mainly by women. While we have previously drawn attention to this phenomenon for the UK sample (Purcell *et al.* 2004), this result reveals that the effects of gender segmentation are stronger for graduates from Scottish HEIs.

Location of employment places a strong part in establishing earnings differences between graduates. The 'Inner London' effect is similar for graduates from Scottish HEIs as for graduates from other UK institutions, with earnings for graduates working in this area some 27 per cent higher relative to graduates working in the Midlands/North of England/South West (the reference areas). The earnings of graduates employed in Scotland shows no

appreciable difference from this reference group of UK regions. However, for graduates from Scottish HEIs working in Outer London in 2003/04 there is a strong and significant earnings premium associated with this location.

For both graduates from Scottish HEIs and non-Scottish HEIs, subject of first degree continues to contribute a major part to differences in earnings. Relative to those who studied in the social sciences, law graduates, maths and computing graduates, medicine and related subjects, engineering and education all display significant positive variation from the reference category. The important point to note is that these differences are more marked among the graduates from Scottish HEIs than for those from other UK HEIs. Finally, we note that the influence of age on graduate earnings appears to be stronger among graduates from the Scottish universities in the sample than for others, with earnings rising by 9 per cent per year of age compared with 4 per cent for graduates from other UK HEIs.

#### 5.4 Levels and sources of student debt

We now turn to the levels of student debt amongst Scottish HEI graduates in the Class of '99 sample and the Sources from which this debt was accumulated. 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 5.3 shows the percentage of respondents who reported that they had repayable debt upon leaving higher education, according to location of study and by age at graduation (using the three-fold classification outlined in Chapter 2). It shows that the proportion of Scottish HEI graduates with repayable debt upon the completion of their studies was lower than for graduates of English and Welsh institutions but higher than for those graduating from Northern Irish universities. Seventy three per cent of Scottish HEI graduates reported having some kind of repayable debt upon the completion of their studies, compared to 79 per cent of the English and Welsh HEIs. It also shows that the mature and young mature graduates were less likely to leave higher education with debt. Among Scottish graduates, approximately half of older mature respondents reported having some form of repayable debt after completing their studies.

**Table 5.3 Proportion of all respondents who reported having repayable debt upon the completion of their studies, by location of study and age**

	Scotland	England and Wales	Northern Ireland
Young graduates	75.8	82.4	71.5
Young mature graduates	65.0	71.9	49.8
Older mature graduates	48.5	52.4	39.2
<b>ALL GRADUATES</b>	<b>72.8</b>	<b>78.6</b>	<b>66.8</b>
N(weighted)	8301	63381	5754

Source: *The Class of '99 Survey*

The survey question 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. It is likely that older respondents were a more heterogeneous group in terms of the extent to which they had pre-existing debt that was not necessarily connected to their undergraduate study or to have had alternative Sources of income available to them. To abstract from these difficulties and to avoid problems associated with small sample sizes, in the remainder of this section our analysis focuses upon only 'young' graduates.

Table 5.4 shows the levels of repayable debt for each group of graduates (according to location of study) and the Source of this debt. Figures are given based on all survey respondents and also only for those who reported having had debt when they completed their studies. We find that Scottish HEI graduates were not only less likely to have accumulated debt than their counterparts from English and Welsh HEIs but they also reported lower average levels of debt. Graduates from Northern Irish HEIs reported the lowest levels of debt overall.

**Table 5.4 Levels of repayable debt, by location of study and Source of debt**

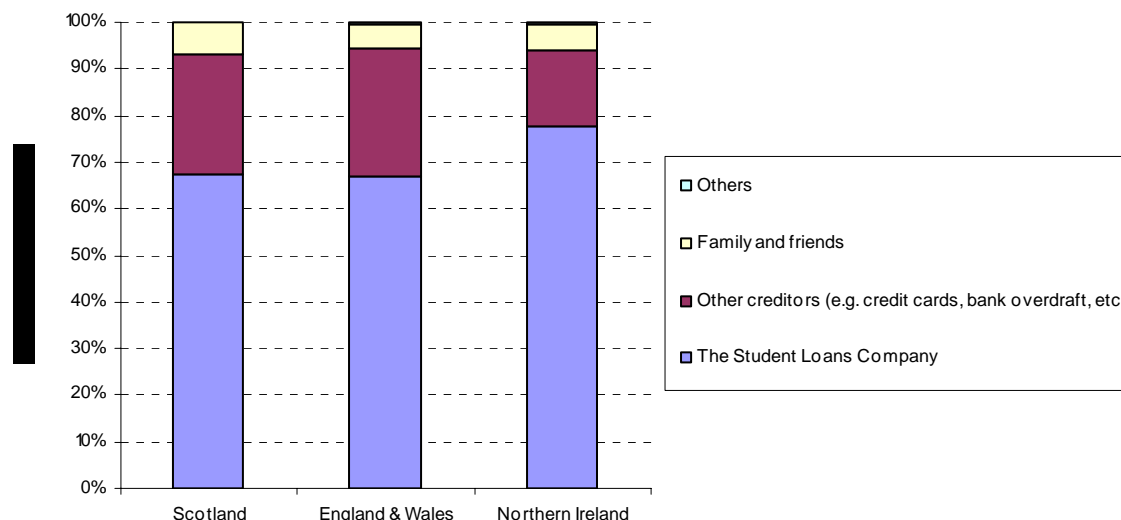
		Scotland	England and Wales	Northern Ireland
		£	£	£
<b>All graduates</b>	The Student Loans Company	2920	3412	2609
	Other creditors (e.g. credit cards, bank overdraft)	1129	1389	542
	Family and friends	287	261	185
	Others	11	21	17
	<b>Total mean debt</b>	<b>4346</b>	<b>5083</b>	<b>3353</b>
	N (weighted)	7151	53287	4834
<b>Those graduates with debt</b>	The Student Loans Company	3853	4142	3651
	Other creditors (e.g. credit cards, bank overdraft)	1489	1686	759
	Family and friends	379	317	258
	Others	14	26	23
	<b>Total mean debt</b>	<b>5735</b>	<b>6171</b>	<b>4692</b>
	N (weighted)	5419	43892	3454

Source: *The Class of '99 Survey*

Considering only those who reported having debt Figure 5.7 shows the relative contribution of each Source to total levels of repayable debt according to location of study. We find that Scottish HEI graduates were relatively similar to graduates from England and Wales in the extent to which they had relied upon different Sources of income during their studies, although lending from family and friends appears to make up a marginally higher proportion of total debt amongst Scottish HEI graduates. For Scottish HEI graduates borrowing from the Student Loans Company accounted for approximately two-thirds of all repayable debts, debts from other creditors accounted for just over a quarter and debts from family and friends

accounted for 7 per cent. NI graduates were relatively more reliant upon student loans as a Source of income.

**Figure 5.7 Sources of repayable debt as proportion of total borrowing, by location of study**



Source: *The Class of '99 Survey*

Table 5.5 shows the extent and average level of borrowing amongst Scottish HEI graduates according to gender, social class background and domicile prior to study. It shows that female graduates were both more likely to have accumulated debt than males and also to have higher average levels of borrowing. Although there is no discernible pattern of borrowing in terms of the proportion of respondents who had accumulated debt according to social class background, it is notable that average levels of debt were lower for those from lower socio-economic groups. Scottish HEI graduates who lived in Scotland prior to study were less likely to indicate having debts upon graduation compared to those who came to the country to study from elsewhere and those who did accumulate debt reported significantly lower levels of borrowing

**Table 5.5 Debt among Scottish HEI graduates by gender, social class background and domicile prior to study**

		<b>% with debt</b>	<b>Average debt</b>
<b>Gender</b>	Male	71.3	3955.5
	Female	79.6	4677.0
<b>Social Class Background</b>	Managerial and professional occupations	77.3	4703.4
	Intermediate occupations	73.7	4155.5
	Small employers and own account workers	77.3	4197.9
	Lower supervisory and technical occupations	72.7	4120.8
	Semi-routine and routine occupations	79.0	3989.1
<b>Domicile Prior to Study</b>	Scotland	74.9	4165.5
	Elsewhere	79.5	5075.9

Source: *The Class of '99 Survey*

### 5.5 *The impact of debt on early careers*

This section outlines how debt appears to influence the early careers of graduates, both in terms of employment outcomes and further participation in full time education. 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 affected in some other way.

The responses to these questions are presented in Table 5.6 according to location of study. Seventy nine per cent of Scottish HEI graduates with repayable debt indicated that this debt had not affected their options after completing their course, identical to the figure for Northern Irish HEI graduates and higher than that for graduates from England and Wales. This is consistent with the comparatively lower average levels of debt among Scottish and NI graduates. Of the 21 per cent of Scottish HEI graduates with repayable debt who indicated that their options were affected by their debt, approximately half indicated that they would have liked to have gone on to postgraduate study but did not want to add further to their debts. This is similar to the figure for English and Welsh HEI graduates, but lower than that for NI graduates. Debt upon graduation appeared to be less of a factor in making

employment decisions among Scottish HEI graduates when compared to those from English and Welsh HEIs based on the extent to which debt was a variable in job choice.

**Table 5.6 Impact of debt by location of study**

	Scotland	England and Wales	Northern Ireland
No, my options were not limited by my debts	78.7	73.4	78.8
Yes, wanted postgraduate study, didn't want to add to debts	11.1	12.7	13.9
Yes, turned down low paid job, wanted to repay debts	1.5	3.7	0.7
Yes, had to accept job didn't want in order to repay debts	2.1	4.3	1.7
Yes, in some other way	7.8	9.8	4.8

Source: *The Class of '99 Survey*

Table 5.7 outlines the proportion of Scottish HEI graduates who reported having had debts upon completing their studies and who indicated that this had affected their options after graduation. Again, figures are given according to gender, social class background and domicile prior to study. We find that male Scottish HEI graduates with debt were more likely to have considered these a problem than did females despite higher levels of debt among women. The table also shows a correlation between social class background and the extent to which it was considered an impediment to career choices after graduation. Despite levels of debt being lower among graduates from lower socio-economic groups, twenty eight per cent of graduates from the lowest socio-economic group considered debt to have restricted their choices compared to 18 per cent of those from the highest group. Finally, Scottish HEI graduates who came to Scotland to study from outside the country were more likely to report debt being a problem compared to indigenous Scottish graduates.

**Table 5.7 Proportion of indebted Scottish HEI graduates who considered debt to have restricted their options by gender, social class background and domicile prior to study**

	Debt considered a problem (%)	
<b>Gender</b>	Male	20.1
	Female	17.9
<b>Social Class Background</b>	Managerial and professional occupations	17.7
	Intermediate occupations	20.2
	Small employers and own account workers	14.5
	Lower supervisory and technical occupations	24.5
	Semi-routine and routine occupations	28.3
<b>Domicile Prior to Study</b>	Scotland	17.6
	Elsewhere	23.6

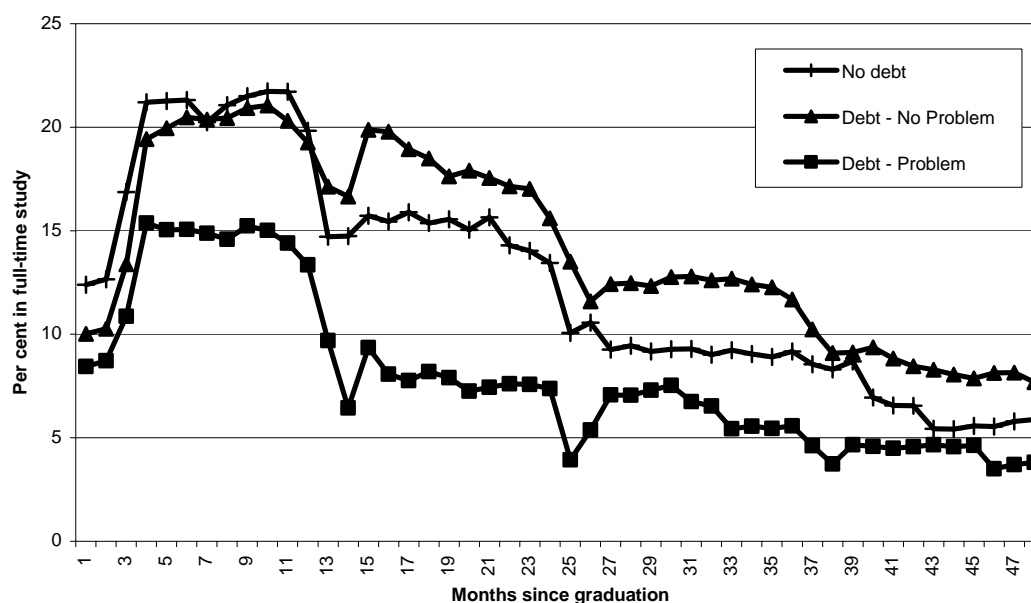
Source: *The Class of '99 Survey*

Finally, we examine the effects of debt upon early career choices by utilising the career history information collected by the survey. For the purpose of this analysis, we divide the

Scottish HEI graduates into three groups; those respondents who graduated without incurring any repayable debt, those who graduated with debt, but indicated that this debt did not affect their options and those who graduated with repayable debt and who indicated that this debt had affected their options in some respect.

Figure 5.8 shows the proportion of Scottish HEI graduates in each group who went on to further full time study 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 first full academic year following graduation, participation in full time study was approximately 5-6 per cent lower among this group than those respondents who reported having debt that did not affect their options or who had no debt.

**Figure 5.8** Proportion of Scottish HEI graduates in full-time study in the four years following graduation, by debt status



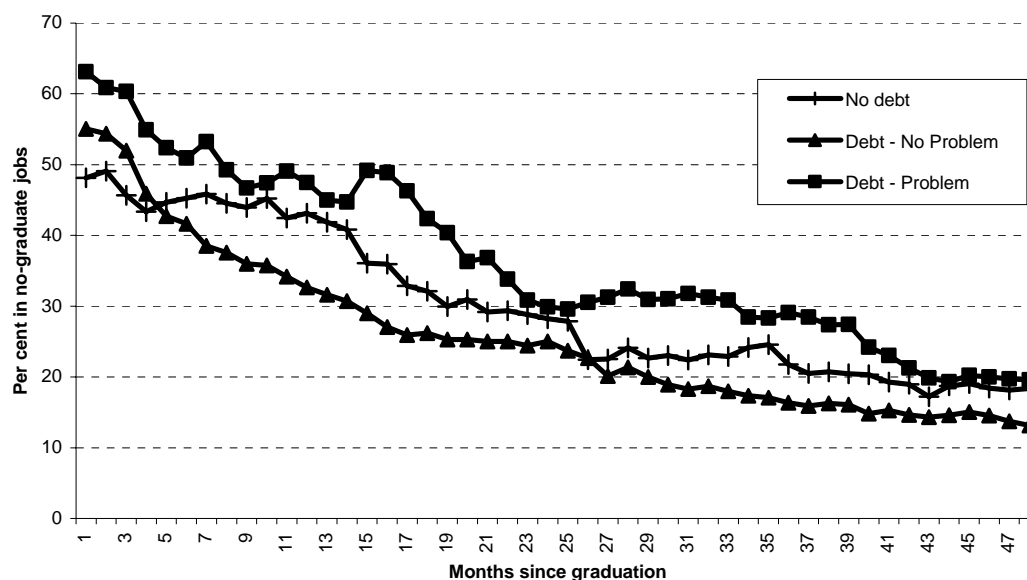
Source: *The Class of '99 Survey*

Figure 5.9 compares the employment outcomes of the same three groups, specifically their propensity to be in non-graduate occupations according to SOC(HE) in the four years covered by the survey. It shows that immediately following graduation, less than half of employed Scottish HEI graduates with no repayable debt worked in non-graduate occupations, compared to 55 per cent of those with debt they did not consider to have affected their options. For graduates with debt they felt had affected their options, almost two-thirds were employed in non-graduate occupations immediately after graduation. Whilst the proportions of each group in non-graduate employment appear to fall at roughly the same rate over the subsequent period, it is not until approximately three and a half years after graduation that



there is convergence between the groups. At this point, graduates with debt that had affected their options were employed in non-graduate occupations in equal proportions to those with no debt. Graduates with debt that they felt had not affected their options were still less likely to be in non-graduate jobs at the time of the survey, four years after graduation.

**Figure 5.9** Proportion of Scottish HEI graduates in non-graduate employment in the four years following graduation, by debt status



Source: *The Class of '99 Survey*

## 5.6 Summary

### Earnings

- There is no evidence to suggest that graduates employed in Scotland receive, on average, higher or lower annual earnings than graduates working in South West, Central, East or Northern England;
- There is a different pattern of earnings among graduates from Scottish HEIs to those from universities and colleges in the rest of the UK. The same general pattern of influences was apparent, but the magnitude of the region of study relationship appears more pronounced among the graduates from Scottish HEIs than for the others. In particular, graduates from Scottish HEIs who work in Outer London four years after graduation had a significant area effect associated with their earnings.
- As in the UK as a whole, there was notable gender inequality in earnings, especially according to subject of study, occupational classification and sector of employment. The gender gap between male and female Scottish HEI graduates was lower than for those who had studied elsewhere.

- There was a differential impact of having had a work placement as part of an undergraduate programme of study for men and women. For men, there was a slight earnings penalty associated with work experience during their studies, whilst for women there was a positive impact.
- On average, Scottish HEI graduates who had come to Scotland to study from elsewhere in the UK were earning higher salaries at the time of the survey compared to those who were indigenous students, although this might be connected to the higher social class background of educational migrants and their greater propensity to have studied at older universities.
- For Scottish HEI graduates, moving out of Scotland for employment immediately after graduation was associated with higher earnings four years on, compared to those who had remained in the country.
- On average, graduates in medicine and related disciplines, ICT and law were the highest average earners. Social science graduates reported the lowest average earnings overall.
- Scottish HEI graduates employed in non-graduate occupations and jobs which were likely to represent under-employment were paid significantly less on average than those in graduate-appropriate employment. In these jobs there appeared to be less of a gender impact on earnings than for those in graduate-level occupations.
- For both men and women average earnings were highest for those working in banking, finance and insurance. For men, earnings were lowest in distribution, hotel and catering and education and for women, in transport and tourist services.

#### *Debt*

- Seventy three per cent of Scottish HEI graduates reported having repayable debt when they completed their undergraduate studies in 1999, compared to 79 per cent of those from English and Welsh HEIs and two-thirds of NI graduates.
- Scottish HEI graduates reported lower average levels of borrowing than their counterparts from English and Welsh HEIs. For all Scottish HEI graduates, average debt was £4346 compared to £5083 for English and Welsh HEI graduates and £3353 for those from Northern Ireland.
- Two-thirds of debt accumulated by Scottish HEI graduates was in the form of student loans and 26 per cent from other creditors, including credit cards and overdrafts. This is similar to the pattern of borrowing for graduates of English and Welsh HEIs, although Scottish graduates were more greatly indebted to family and friends on average. NI graduates were relatively more reliant on student loans as a Source of income.
- Twenty one per cent of Scottish HEI graduates with repayable debt reported that their options after completing their studies were restricted by this borrowing,

approximately half of whom indicated that they would have liked to have gone on to postgraduate study but did not want to add further to their debts. Debt upon graduation appeared to be less of a factor in making employment decisions among Scottish HEI graduates when compared to those from English and Welsh HEIs.

- Female Scottish HEI graduates were both more likely to have accumulated debt than males and also to have higher average levels of borrowing. Males, however, were more likely to consider it to have restricted their options after completing their studies.
- Scottish HEI graduates from lower socio-economic groups reported lower average levels of debt, but were notably more likely to indicate that debt had restricted their options after graduation.
- Scottish HEI graduates who lived in Scotland prior to study were less likely to indicate having debts upon graduation compared to those who came to the country to study from elsewhere and reported significantly lower levels of borrowing. Scottish HEI graduates not from Scotland were more likely to consider debt to have been an issue in career decision-making after graduation.
- Scottish HEI graduates who reported debt as having restricted their choices post-graduation show a lower propensity to enter full-time postgraduate study in the four years covered by the survey compared to those with no debt or with debt that had not affected their options. They were also more likely to be employed in non-graduate jobs for much of the period covered by the survey.

## Chapter 6

### **Use of careers guidance, graduate skills developed and used, and participation in postgraduate education and training**

#### *6.1 Introduction*

This chapter is split into three parts. The first examines the use of Sources of careers advice, guidance and information that graduates in our sample report having taken advantage of in the period since they graduated. We consider a range of Sources of information and guidance and compare the extent to which graduates from each of the UK locations have used these and the extent to which they consider them to have been of use in the course of their careers. We then focus only on graduates from Scottish HEIs and compare the use and usefulness of these Sources according to gender, type of institution, age and subject of study.

The second part of this chapter focuses on skills, both those developed on undergraduate degree programmes and those being used in the workplace. We compare the extent to which graduates reported developing a range of broadly-transferable skills on their undergraduate programmes of study and the extent to which they were using those same skills in the job which they held at the time of the survey. Again, we compare by location of study and, focusing on graduates from Scottish HEIs, examine skills development and use according to subject studied and gender.

The final section examines the incidence of postgraduate training and education among graduates from Scottish HEIs in the four year period from graduation. We consider the reasons given for undertaking postgraduate study and briefly consider the impact of such study on subsequent career outcomes

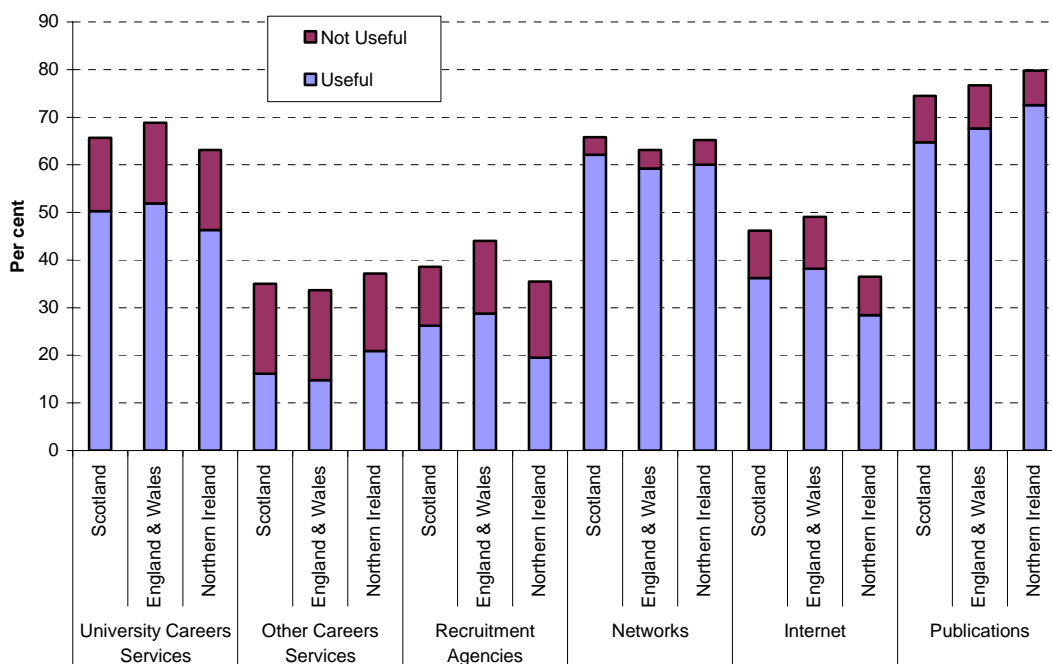
#### *6.2 Careers advice, guidance and information*

For graduates entering a complex labour market, careers advice and support has been recognised to be increasingly important (e.g. Purcell and Rowley 2001, AGCAS 2005). 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.

The survey gathered information about a broad variety of Sources of information and advice. For the analysis that follows, these have been grouped into six broad categories; recruitment agencies, university careers advisory services, other careers advisory services, publications, networks and internet. University careers services include the use of careers services at any university at any time before or after graduation. Other careers services include careers

consultants and job centre/careers service. 'Networks' covers lecturers, family and social networks and professional colleagues through work. Publications include newspapers and specialist careers publications, whether those used for information on vacancies or information and guidance on careers. Figure 6.1 reveals the extent to which the sample had used these Sources of careers information, advice and guidance since graduation, comparing graduates who studied in the various UK locations. We find little significant variation both in the extent to which graduates from different locations used the various Sources of information and guidance and the extent to which they had found them useful. Graduates from England and Wales were slightly more likely to have utilised university career services, recruitment agencies and the Internet, whereas graduates from Scottish HEIs were marginally more likely to have referred to networks for advice and guidance.

**Figure 6.1 Proportions of graduates who reported using Sources of information, advice and guidance and those who consider them to have been of use, by location of study**



N (weighted) = 77,436  
 Source: *The Class of '99 Survey*

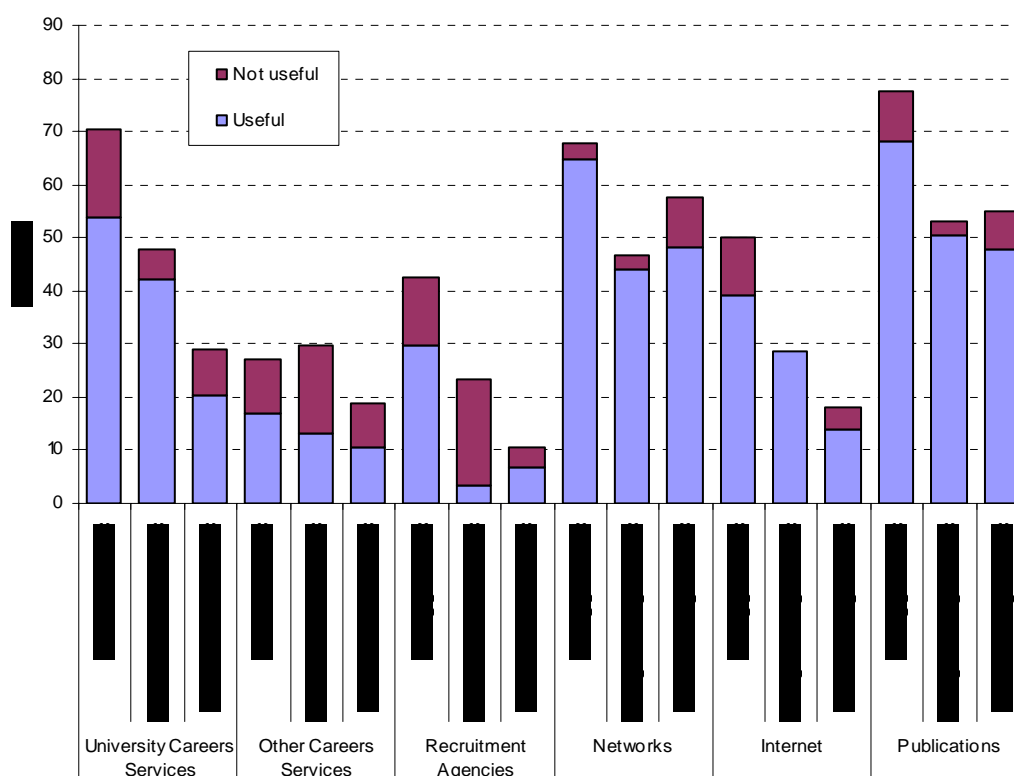
Previous research, including the main Class of '99 study, has indicated that in the past, the use and usefulness of advice and guidance has varied according to gender, social class background, age and subject and institution of study. It is interesting therefore to examine this assumption solely for graduates of Scottish HEIs.

We begin by considering gender. Overall, there was relative similarity in the extent to which male and female graduates utilised the range of Sources of information, advice and guidance. Men and women were similarly likely to have used both university and other careers advisory

services, but, men were marginally more likely to have reported using recruitment agencies and the internet for careers and job information. Conversely, women reported greater use of networks and publications. There was, however, little difference in the extent to which men and women considered these Sources to be useful.

There was a more substantial difference in the use and perceived usefulness of different Sources of information and guidance according to age. Figure 6.2 shows that in almost all cases, young graduates made greater use of the Sources of information and guidance available to them. The most marked difference was in the use of university careers services which were used by over 70 per cent of young graduates but less than 30 per cent of older mature graduates. There were also considerable differences in the reported use of both recruitment agencies and the internet. This might be partially explained in the mature entrants to higher education were more likely to do with a specific career or employment outcome in mind and therefore have less need for careers advice but, equally, older graduates might not be aware of or be comfortable using careers services provided by HEIs.

**Figure 6.2** Proportions of Scottish HEI graduates who reported using Sources of information, advice and guidance and those who consider them to have been of use, by age group



N (weighted) = 8,301

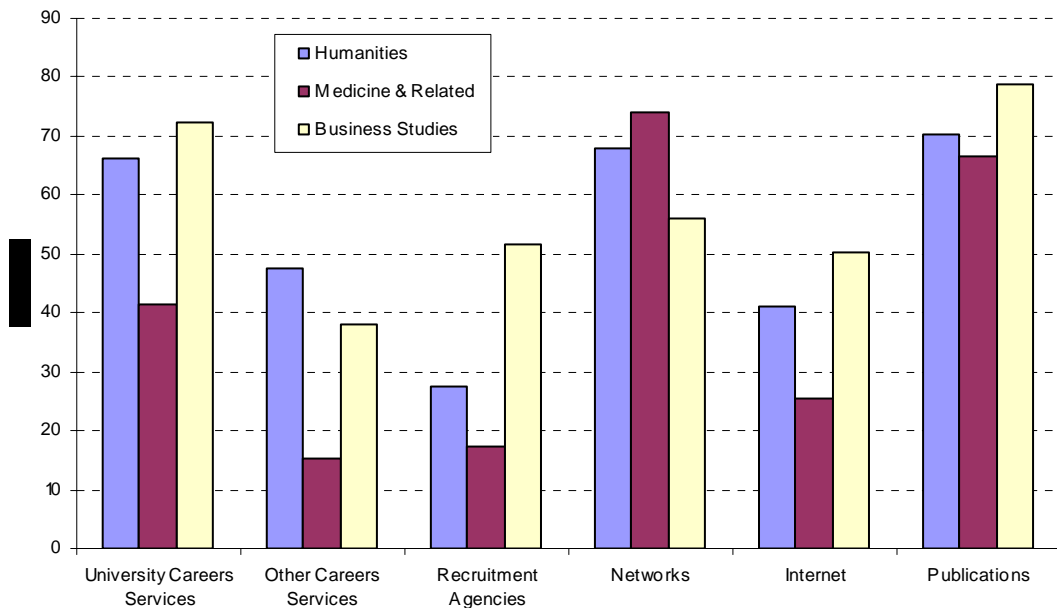
Source: *The Class of '99 Survey*

The Class of '99 report showed that there was little difference in the use of the various Sources of careers advice, guidance and information according to social class background.

This was also found to be largely the case for graduates from Scottish HEIs, although graduates from managerial or professional backgrounds were more likely to report using 'networks' than graduates from lower socio-economic groups: 72 per cent of graduates from professional or managerial backgrounds reported using networks compared to 62 per cent of those from routine or semi-routine occupational backgrounds. There were mixed results in the analysis according to the type of institution attended. Graduates from post-1992 universities reported less use of university careers services than those from the longer-established HEIs but, conversely, having done so were most likely to report them to have been of use. This group was most likely to use careers services other than those provided in HEIs and, markedly, were more likely to have used recruitment agencies.

Finally, we consider the use of Sources of careers, advice, guidance and information on the basis of subject studied. Figure 6.3 compares use of careers advice and information amongst graduates in medicine and related disciplines, business studies and humanities. These three subject areas have been chosen to reflect different points on the spectrum between academic and vocational disciplines. It is perhaps surprising that business graduates made most use of university careers services and graduates in medicine the least (perhaps, reflecting the vocational nature of their subject and subsequent lower requirements for guidance or advice). Conversely, medicine graduates made greater use of networks than other graduates. Business graduates made significantly greater use of recruitment agencies than both other groups.

**Figure 6.3 Proportions of Scottish HEI graduates who reported using sources of information, advice and guidance and those who consider them to have been of use, by subject of study**



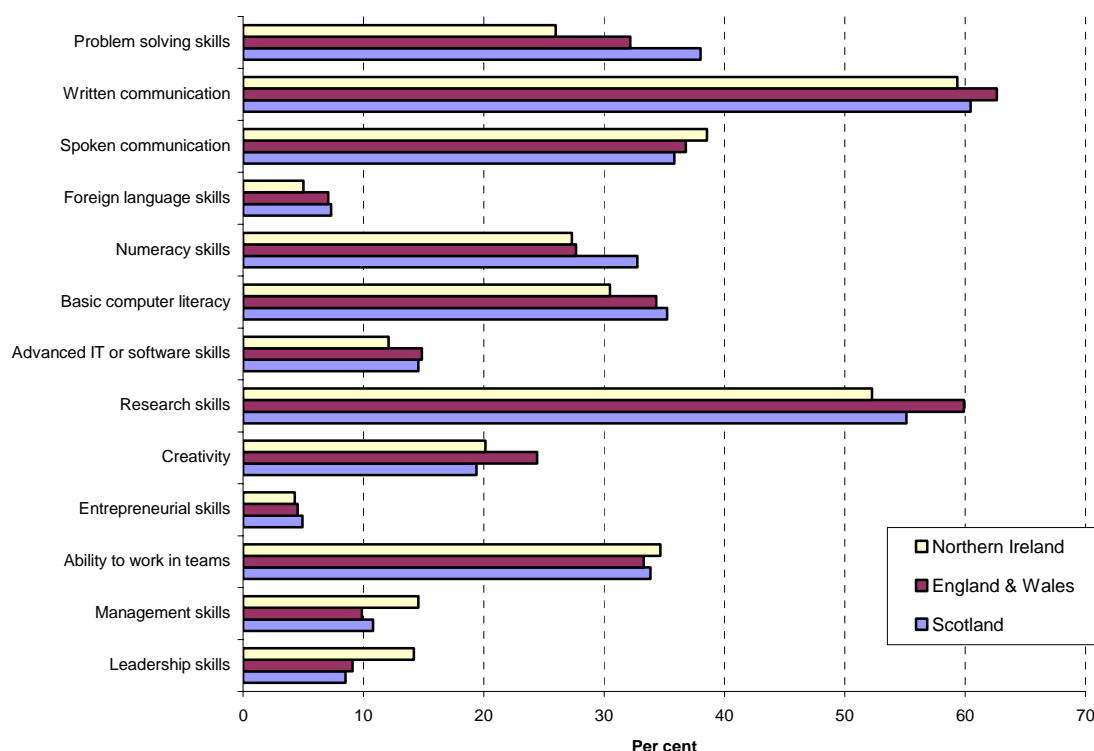
Source: *The Class of '99 Survey*

### 6.3 Skills development and use in the labour market

In this section we examine the extent to which graduates reported developing particular transferable skills on their undergraduate degrees and using these same skills in the jobs they were doing at the time of the survey. We asked respondents to indicate the extent which they had developed and were using a number of skills, either 'not at all', 'some' or 'a lot'. We focus, in the analysis that follows, on those graduates who indicated that they had developed and used the skills 'a lot'.

Figure 6.4 compares the extent to which graduates reported developing transferable skills 'a lot' on their degree programmes, comparing graduates from different UK locations. Perhaps not surprisingly, we find little difference between the locations, although graduates from Scottish HEIs were more likely than both other groups to report having developed problem-solving and numeracy skills 'a lot', possibly reflecting subject distribution.

**Figure 6.4 Skills developed 'a lot' on 1999 degree, by location of study (employed graduates only)**

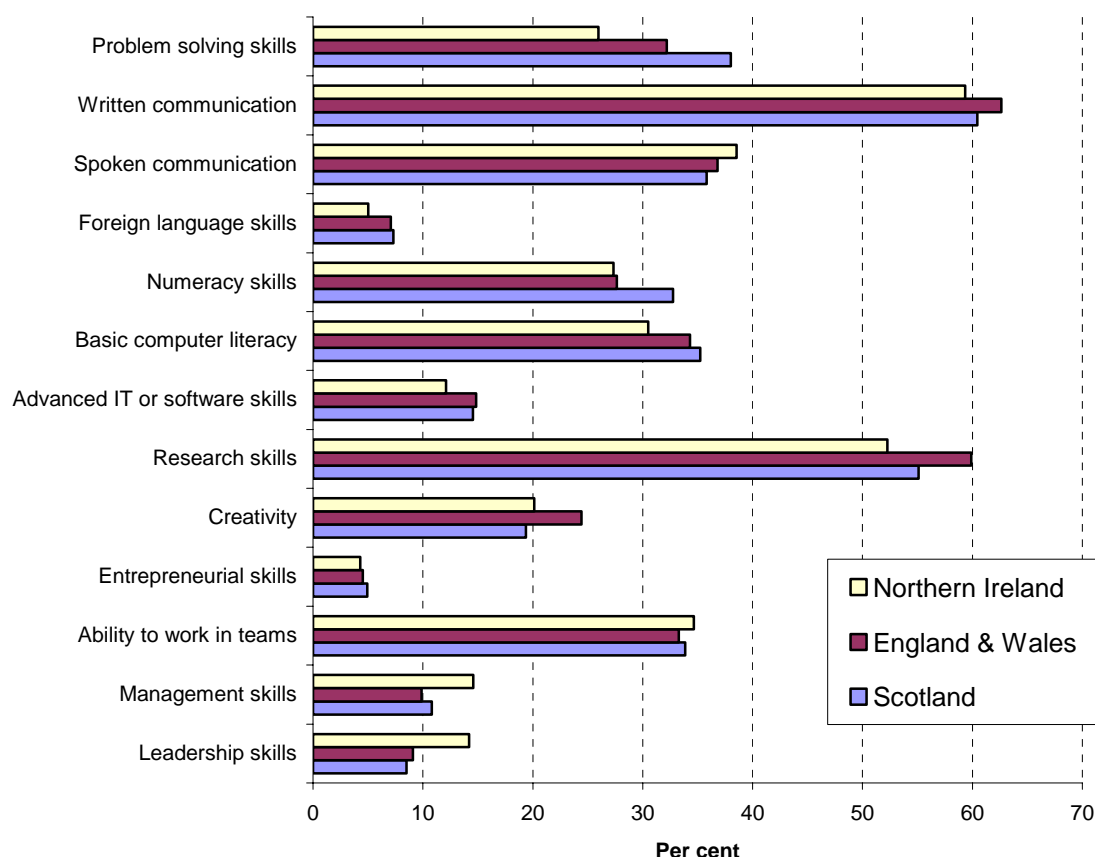


N = 70,690 (Weighted)  
Source: *The Class of '99 Survey*

Figure 6.5 compares the extent of use of the same skills in respondents' jobs at the time of the survey, again comparing by location of study. Again, we find little difference although graduates from Scottish HEIs were less likely to report using management and leadership skills and advanced IT skills 'a lot'. This reflects of the sectoral and occupational distribution of graduates from the different locations as discussed in Chapter 3.



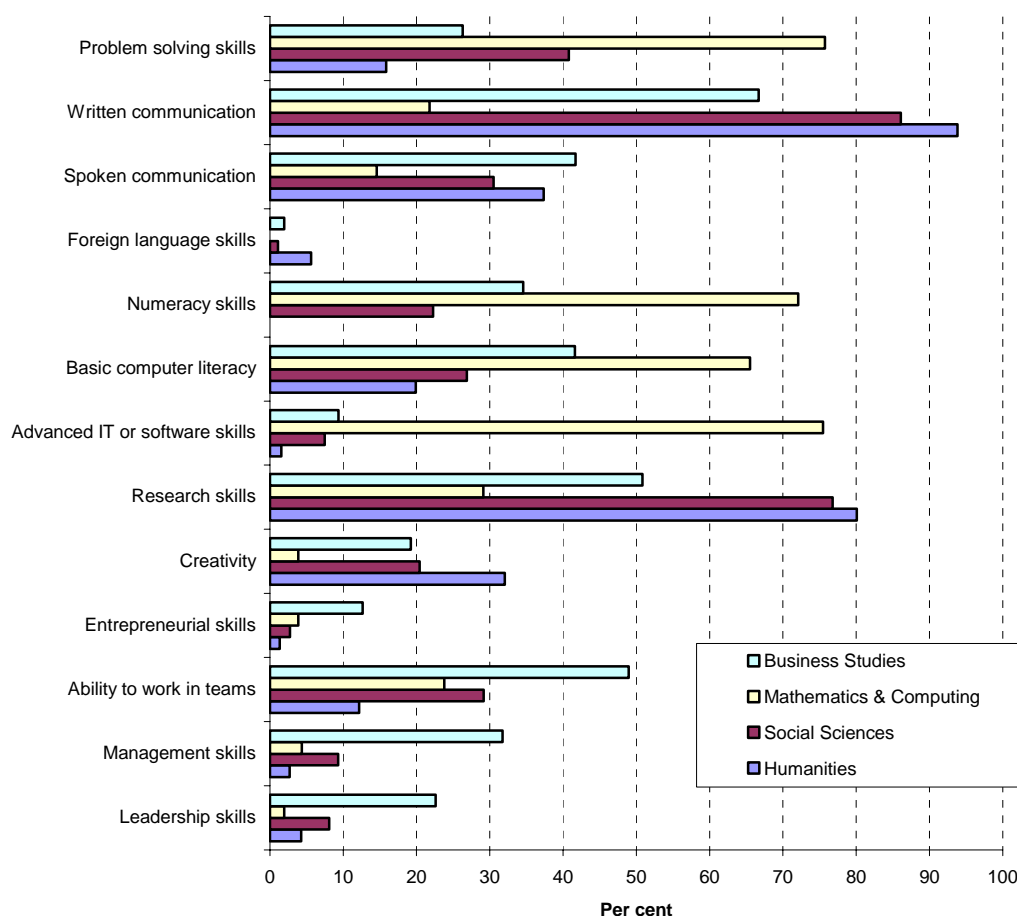
**Figure 6.5 Skills used 'a lot' in job at the time of survey, by location of study (employed graduates only)**



Source: *The Class of '99 Survey*

In terms of subject studied, Figure 6.6 shows the extent to which Scottish HEI graduates in four selected disciplinary areas reported having developed various skills in the course of their studies. The subjects shown have again been chosen to reflect particular points on the vocational-academic spectrum but also according to the emphasis they were likely to place on the development of particular skills. We find that business graduates were notably more likely than other graduates to report the development of work-related skills: managerial, leadership, entrepreneurial and teamworking. Maths and computing graduates report greater development of problem-solving, IT-related and numeracy skills. Humanities graduates were more likely to report the development of academic skills such as research skills and written communication. Interestingly, social science graduates tend to fall somewhere in the middle ground in most areas, reflecting a relative balance between academic and vocational skills. This pattern of skills development is virtually identical to that reported by graduates of English and Welsh HEIs.

**Figure 6.6 Skills developed on 1999 degree 'a lot' by Scottish HEI graduates, by subject studied**



Source: *The Class of '99 Survey*

One of the central themes which we sought to explore in the qualitative phase of the research was the relationship between respondents' undergraduate education and their subsequent jobs and career, with particular reference to the skills and knowledge they had developed and subsequently utilised. As might be expected, depending on degree discipline and subsequent career, respondents differed in the extent to which they made a direct connection between their experiences at university, the skills and knowledge they had acquired and their employment. Some referred to a direct and specific relevance for the actual subject knowledge that they had acquired, even for those who not necessarily studied on specifically-vocational programmes:

*'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.... Just having the grounding that the educational studies degree provided for me enables me to communicate effectively with stakeholders...The knowledge, the structure [of higher education] and about how to learn, learning styles.... just to have an awareness of all of that'.*

(Female education graduate, Scottish old university, product development manager, education, Glasgow, new graduate job)

*'Yes. I think having an academic background and a degree... having been at university helps in terms of the kind of people I am liaising with in the job. I do end up talking to students and things like that at various times as well. Having some experience of what they are going through I think helps.'*

(Male social science graduate, Scottish old university, administrator, public services, Glasgow, non-graduate job)

*'Certainly as part of my planning degree, we studied transport planning as an optional class and obviously in planning, you are looking at the relationship between land use and transportation, and the way in which urban-form, rural-form dictates travel patterns and likewise travel patterns can dictate urban-form and rural-form of the shape of cities and so forth and so on. Likewise, in geography, we were very interested in the relationship between transport and environment pollution, use of the car, our climate change, vehicle emissions and stuff like that. There were very strong links in there in terms of what I studied in both degrees. Also from a social science point of view, we were very interested in links between transport and economic development, urban regeneration and social inclusion, so I studied economic development, regeneration, social inclusion as core parts of my first degree... So certainly I felt that my experience in my degree gave me a good understanding of that diverse range of policy areas in which transport is situated. So, it was a useful grounding to have before I came into my current job.'*

(Male humanities graduate, Scottish 1960s university, policy manager, public services, Edinburgh, new graduate job)

Most often, however, respondents referred to the general 'training' that higher education had provided in terms of particular academic skills that they had taken into the workplace, such as report writing, research, communication and presentation skills and self-management. The extracts below were typical of many responses:

*'I would say that a history degree teaches you how to write, how to write an argument. I need that when I write reports... also how to do presentations, which I have to do now. It is a way of learning as well and researching information, which I have to do within my job.'*

(Female humanities graduate, Scottish old university, ICT and marketing officer, education, London, new graduate job)

*'Just being well organised and being able to manage time and manage tasks and all that, having an awareness of deadlines and being well prepared, the kind of things you learn as you are doing a degree. They have come in helpful. I was studying psychology and philosophy and in terms of the actual subject matter, the content of the degree, the subjects I studied for my degree haven't really come in to play as such, but as I said on the form the skills that I feel I developed during that time have.'*

(Male social science graduate, Scottish old university, administrator, public services, Glasgow, non-graduate job)

*'... because we produce a lot of reports, produce a lot of materials for schools and other agencies and I think the accuracy you need to produce a historical document or a dissertation, that kind of incisive work, I use that now... Perhaps not the knowledge, but certainly the skills that you acquire, being able to summarise an argument, put an argument forward, most of those things, you definitely need to have knowledge about without a doubt.'*

(Male humanities graduate, Scottish 1960s university, careers adviser, public services, West Scotland, modern graduate job)

#### 6.4 Postgraduate Training and Education

The questionnaire survey asked respondents to report whether they had taken any 'further full or part-time work-related or career-related courses lasting one month or more' since graduating in 1999. We find that graduates from Scottish HEIs and those from England and Wales were similarly likely to have done so (57 per cent and 56 per cent respectively). Graduates from NI were notably more likely with 66 per cent reporting having done so. If we consider only graduates from Scottish HEIs, those that reported having undertaken postgraduate training or education in the period since graduation were more likely to be female, to have graduated in humanities, social sciences, business studies and natural science and to have attended an old university. Propensity to have undertaken postgraduate study or training was also associated with higher socio-economic background and higher educational attainment, both prior to HE and in terms of degree class achieved. We then asked respondents to indicate what type of further study they had undertaken. The findings are shown in Table 6.1.

**Table 6.1 Type of postgraduate training and education, by location of study (those who indicated having undertaken such training only)**

	Scotland	England and Wales	Northern Ireland
Short course(s) to develop job-related skills	23.8	26.8	30.2
Undergraduate degree course	5.2	2.7	2.7
Postgraduate Certificate in Education (PGCE)	10.2	13.6	9.8
Other postgraduate certificate/diploma	23.1	16.5	20.2
Professional qualification programme	24.5	28.0	24.7
Taught Masters' degree	19.0	20.9	27.0
Postgraduate research degree (e.g. PhD, MPhil)	13.2	7.7	8.7
Other	8.2	9.2	6.8

N= 43,898 (weighted)

Source: *The Class of '99* survey

We find the graduates from Scottish HEIs were more likely to have returned to HE to undertake a further undergraduate degree, a postgraduate diploma or certificate and a postgraduate research degree. The greater likelihood of having gone on to a research degree or a postgraduate certificate or diploma might reflect the HEI sample bias, but although the numbers are relatively small, the significantly greater likelihood of having gone on to a second undergraduate course is intriguing. Does this reflect the comparatively lower age at which Scottish students embark on higher education and indicate a greater likelihood of immature course choices which leads to subsequent re-education? This does not appear to be the case in the response to a later question about what they would do if making the choice again (Table 7.2). There was, however, some evidence in the qualitative data that for some graduates in our interview sample initial choice of course might be associated with

unsatisfactory career outcomes and a desire to retrain. The example of Amy is just such a case:

Amy graduated from an old Scottish university in 1999 with an MA in combined arts. Having decided to pursue a career in journalism she embarked on a HNC in practical journalism immediately after completing her undergraduate degree. She then worked as a reporter for a local newspaper for two years before deciding that she would like to make move into public relations and took a job as a PR officer for an industry authority, a job she was doing at the time of the interview. During this time, however, Amy decided that she wanted to pursue a career as a clinical psychologist, a subject she had studied as part of her undergraduate degree. To this end, she enrolled on an Open University psychology degree. She was in her final year when interviewed. She then hoped to get enrol as a PhD student to pursue this new career path. In summarising her career decisions to date, she said:

*'I knew I didn't to stay in journalism and I really didn't want to do public relations long term, but to be perfectly honest I thought well, it pays a lot more money and it will help me to do my course until I finish my psychology degree. So, that is why I decided to leave journalism because it is so badly paid'.*

In explaining why she had experience a rather haphazard career path to date and the subsequent decision to retrain at this stage, Amy highlighted the difficulty of making important life decisions at a relatively young age:

*'I went to university with the intention of studying psychology which is what I started off studying and then didn't do very well in it which is why I am doing it again now! I kind of regret that I failed psychology at university twice and that is why I ended up not graduating with a psychology degree just because I was a bit of a plonker at university and didn't go to any classes. So if I think back realistically it was quite silly and I do regret it but then I do think it is good because I am going to be older when I actually finally do what I want to do whereas I don't think when you are 16 you necessarily know what you want to do for the rest of your life'.*

We asked those respondents who indicated having taken postgraduate study to indicate why they had done so (Table 6.2). Interestingly, two of the reasons indicated by graduates from Scottish HEIs to a greater extent than those from England and Wales were *'I thought it would improve my job prospects'* and *'I had been unable to find a suitable job'* which may have been a reflection of labour market conditions for graduates in Scotland when this cohort entered the labour market. It appears that graduates from Scottish HEIs had more often considered it necessary to broaden their skills or knowledge than to develop more specific expertise.

**Table 6.2** Reasons given for undertaking postgraduate training and education, by location of study (those who indicated having undertaken such training only)

	Scotland	England and Wales	Northern Ireland
To develop broader range of skills/knowledge	46.4	39.7	47.8
To develop more specialist skills/knowledge	53.5	58.3	59.2
To change my career options	22.5	21.1	21.8
I thought it would improve my employment prospects	53.7	45.8	52.2
I had a particular career in mind and needed this course	38.6	44.7	37.8
My employer requested/required me to do so	21.7	23.3	16.8
I had been unable to find a suitable job	11.1	7.3	9.0

N= 43,898 (weighted)

Source: *The Class of '99* survey

The qualitative interviews with Scottish HEI graduates reinforced the diverse rationales for further training and education discussed above. The majority of interviewees had undertaken some form of further training or education ranging from short induction courses to Masters and research degrees and for the majority the motivation for this was career-related. In the interview data we find a number of examples that illustrate the categories detailed in Table 6.2. The case of Amy cited above is obviously an example of a graduate seeking to significantly change their career direction, however, most interviews had undertaken further study in order to progress their careers in a more linear way, such as in the following case of a dental graduate wishing to progress up the professional hierarchy:

*'It was just further experience and if you want to get promotion you need to do further training, further exams... it has given me more career opportunities'.*

(Young female dentistry graduate, Scottish old university, locum dentist, public services, Central Scotland, traditional graduate job)

For some respondents at this stage of their careers, postgraduate study involved some form of professional accreditation or chartered membership of a professional body, for example, Chartered Institute of Marketing or associate membership of the Chartered Institute of Banking. Others were seeking to 'credentialise' their skills, for example in the area of management:

*'I am currently studying for a modern apprenticeship in management, which is at industry level 3 or 4. It's something that is an additional thing to have, but it's obviously not postgraduate study, it's not at a higher level than my degree. It's to have a qualification in the management skills'.*

(Female education graduate, product development manager, education, new graduate job)

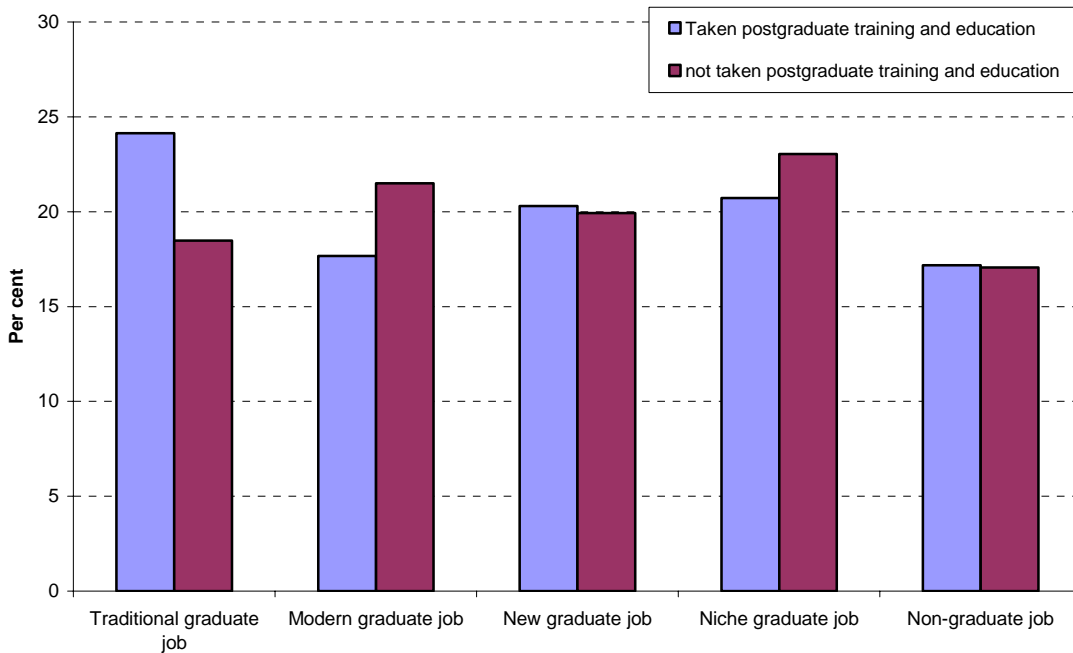
For some further study was seen as further specialisation in the area of their degree discipline, for example, in the case of a business studies graduate working in marketing in the not-for-profit sector who said; *'...that was more important to have it because of working in the field of marketing because my degree is in business'.*

There was, in general, recognition of the need for lifelong learning and continuous professional development in the course of respondents' careers, but that this was most likely to be in the form of on-the-job training.

*'I've had a bit of training since I actually started the job. I've had a team leader's course, equal opportunities awareness, and extensive computer training as well... I think that's necessary to be able to do the job... But I don't think I would really need to go back into a formal course as such, again at university, I get the most out of job training now'.*  
 (Male humanities graduate, careers adviser, public services, modern graduate job)

Finally, we briefly consider the impact of having undertaken some form of post-graduate education and training on employment outcomes. Most marked, is the finding that those graduates from Scottish HEIs who reported having undertaken some form of postgraduate training or education were notably more likely to be in traditional graduate jobs, as shown in Figure 6.7 and less likely to be in modern and *niche* graduate jobs.

**Figure 6.7 Jobs at time of survey of Scottish HEI graduates according to SOC(HE) and whether respondent had undertaken postgraduate training or education since graduation**



Source: *The Class of '99 Survey*

However, using the SOC2000 occupational classification, graduates who had undertaken postgraduate study since 1999 were more likely to be working in associate professional and technical occupations with lower proportions in managerial occupations. Those who had undertaken such training and education reported marginally higher levels of 'appropriateness'

of their current job for someone with their qualifications, slightly higher scores on the index of job quality but slightly lower levels of job satisfaction. Reported levels of career satisfaction were identical for those who had undertaken postgraduate training and education and those who had not.

### 6.5 *Summary*

- There was little variation in the extent to which graduates from the different UK locations utilised various Sources of careers advice, information and guidance and the extent to which they considered them to be have been useful.
- Among Scottish HEI graduates, 'young' graduates made significantly greater use of Sources of careers information and guidance available to them compared to their older peers, especially university careers services.
- Scottish HEI graduates from managerial or professional backgrounds were more likely to report using 'networks' than graduates from lower socio-economic groups.
- Scottish graduates from post-1992 universities reported less use of university careers services than those from the longer-established HEIs but, having done so, were most likely to report them to have been of use.
- Comparing Scottish HEI graduates in medicine, humanities and business studies, business graduates made most use of university careers services and graduates in medicine the least. Conversely, medicine graduates made greater use of networks than other graduates.
- There was little difference in the extent of development and use in employment of a range of transferable skills on the basis of location of study.
- There were, however, differences in skills development amongst Scottish HEI graduates according to subject discipline, reflecting the extent to which subjects were vocational or academically-based.
- Graduates from Scottish HEIs were equally likely to have undertaken some form of postgraduate training or education compared to those from English and Welsh institutions, but less likely than those from NI institutions.
- Scottish HEI graduates were more likely to have undertaken a postgraduate research degree, a further undergraduate degree or a postgraduate diploma or certificate compared to graduates from other UK locations.
- Graduates from Scottish HEIs who reported having undertaken postgraduate training or education in the period since graduation were more likely to be female, to have graduated in humanities, social sciences, business studies and natural science and to have attended an old university. They were also more likely to have come from a higher socio-economic background and have higher levels of educational attainment, both prior to HE and in terms of degree class achieved.



- Scottish HEI graduates were more likely than other UK graduates to indicate a desire to broaden their range of skills and knowledge, as opposed to developing more specific knowledge, as a reason for undertaking further study. They were also more likely to indicate having been unable to find a suitable job.
- Scottish HEI graduates who reported having undertaken some form of postgraduate training or education were notably more likely to be in traditional graduate jobs but less likely to be in modern and *niche* graduate jobs.

## Chapter 7

### An assessment of university experience and early career development

#### 7.1 Introduction

In this concluding chapter, we consider the assessment made by the Scottish HEI graduates of their university experience and their evaluation of their undergraduate study in the context of their subsequent careers. For this we draw on both the quantitative and qualitative data and make comparisons with graduates from the other UK locations as appropriate.

#### 7.2 Initial entry to higher education

Satisfaction with early career amongst graduates, is, of course, influenced by expectations, not only on entry to the labour market but also in relation to what they sought to gain from their higher education experience, both intrinsically and in terms of career outcomes. Even those graduates who do not enter higher education with a strong vocational motive are likely to value their higher education at least partly according to their relative success in the labour market and the utility of their degrees. In this section we examine how the graduates obtained their place on the degree programme they completed in 1999, how they view their time spent at university and what, with hindsight, they might do differently.

Table 7.1 shows that, in our sample, a higher proportion of graduates from Scottish HEIs obtained their university place through UCAS as their first choice, when compared to graduates who studied elsewhere. Again, this is likely to be related to the institutional sample of Scottish HEIs, with a higher proportion of old or 1960s universities. Scottish HEI graduates in the sample who attended old universities were most likely to have studied on their first choice course (84 per cent compared to 72 per cent for 1960s universities and only 54 per cent for those who attended new universities).

**Table 7.1 How graduates obtained places on the course completed in 1999 by location of study**

	Scotland	England and Wales	Northern Ireland
Through UCAS, as my first choice course	72.3	61.8	62.4
Through UCAS, as one of my reserve choice courses	9.1	11.6	10.3
Through UCAS Clearing	4.0	9.3	4.0
Directly approaching the institution, after results known	8.4	10.9	14.2
Other	5.4	5.2	7.1

N=77,436 (weighted)

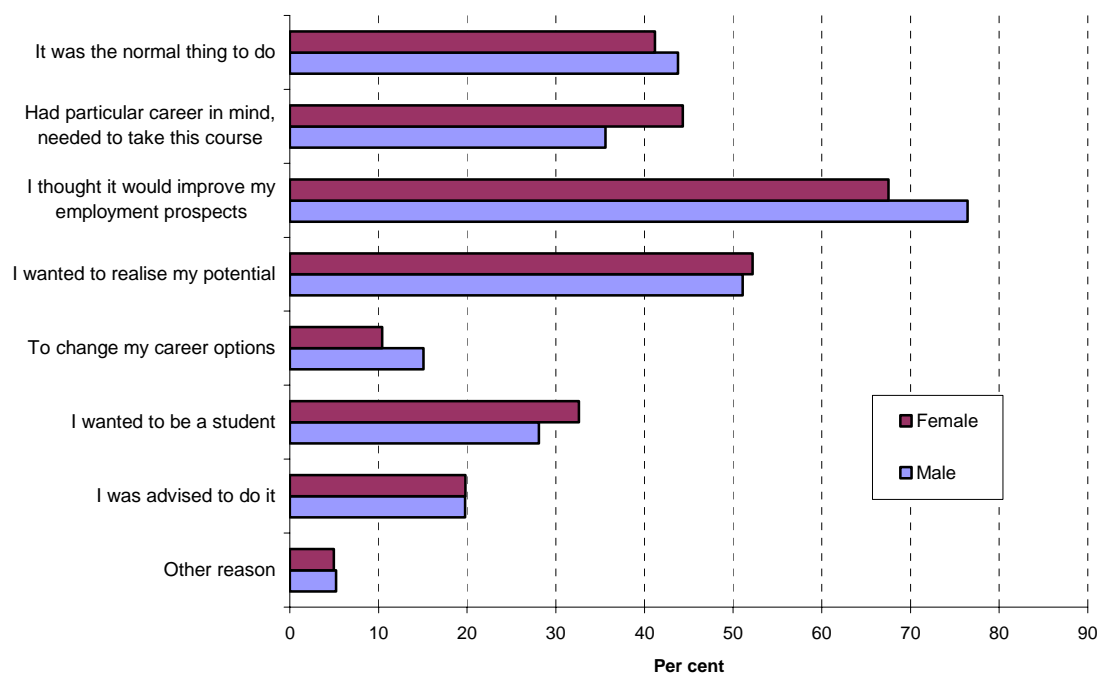
Source: *The Class of '99 Survey*

Similarly, graduates from Scottish HEIs were marginally more likely than who studied in England, Wales and Northern Ireland to have studied on their preferred course at their preferred place of study, although conversely they were also more likely to indicate they had no clear preference for either. Graduates of post-1992 Scottish HEIs were most likely to claim to have had no clear preference or to have had a preference to have studied somewhere else and were least likely to have studied on their preferred course at a preferred institution. Analysis by domicile prior to HE suggests that graduates from Scottish HEIs who had not lived in Scotland prior to study were more likely to have expressed a preference to have studied elsewhere (8 per cent compared to 4 per cent for those who had lived in Scotland).

An important difference among graduates in exploring issues of satisfaction with both their time in higher education and their subsequent careers is their original motivation for entering HE. Analysis comparing graduates according to their location of study shows little difference between the groups. Of the optional reasons provided in the questionnaire, graduates from Scottish HEIs entered higher education because it was the normal thing to do, because they thought it would improve their employment prospects, to change their career options and because they wanted to realise their potential in similar proportions to the sample as a whole. They were, however, marginally, more likely to have had a particular career in mind and less likely to have wanted to be a student than graduates from England and Wales.

Among those who studied at Scottish HEIs we found differences in the reasons given for entering higher education according to gender, as shown in Figure 7.1. Most notably, men were more likely to indicate that they thought it would improve their job prospects generally whilst women were more likely to report having a specific career in mind.

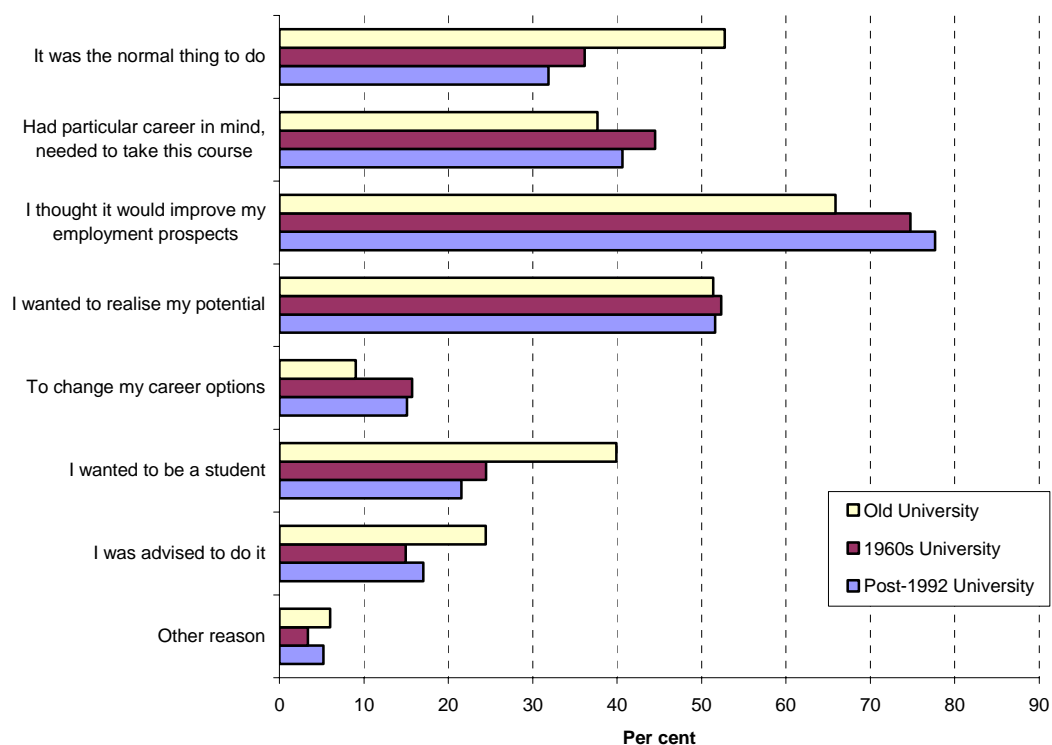
**Figure 7.1** Reasons for entering higher education given by Scottish HEI graduates, by gender



Source: *The Class of '99 Survey*

Significant differences are also evident in analysis according to type of institution attended (Figure 7.2). Those graduates who had attended an old university were notably more likely to have indicated that it was the normal thing to do and a desire to be a student. Those who had attended a post-1992 and 1960s universities were more likely to have indicated that they thought it would improve their employment prospects and to change their career options (reinforcing the tendency of mature students to attend 'newer' institutions).

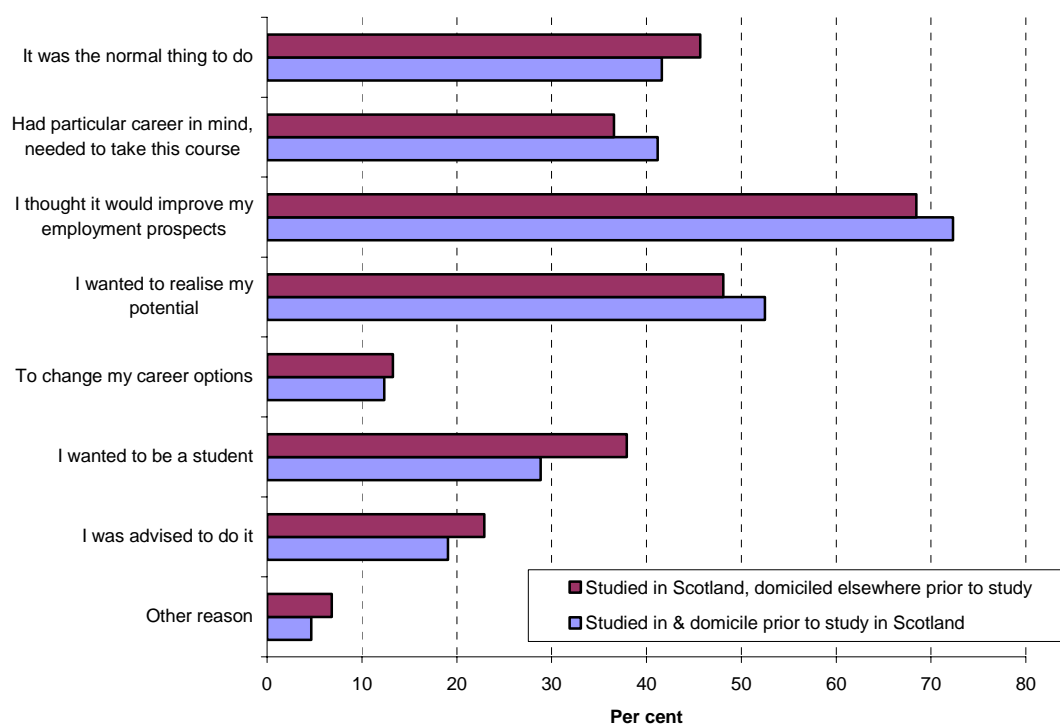
**Figure 7.2** Reasons for entering higher education given by Scottish HEI graduates, by type of institution attended



Source: *The Class of '99* Survey

It is also interesting to note the different reasons given for entering higher education by graduates from Scottish HEIs who were living in Scotland prior to study and Scottish HEI educational migrants (Figure 7.3). We find the indigenous Scots displayed more employment-related motivation, whether for a specific career or employment in general, than the incomers.

**Figure 7.3** Reasons for entering higher education by Scottish HEI graduates, by location prior to study



Source: *The Class of '99 Survey*

An important question asked in the survey was what, with hindsight, respondents would change about their undergraduate studies and, indeed, if they would still enter higher education if they could choose again. Table 7.2 shows that approximately two-thirds of Scottish HEI graduates would do the same course at the same place and a further 22 per cent would do a different course but at the same institution. Only 8 per cent would choose to study somewhere different. Finally, and perhaps most importantly, only 3.6 per cent of graduates from Scottish HEIs would choose not to enter higher education, a comparable figure with that for graduates from England, Wales and Northern Ireland. It is to this group of 'disaffected' graduates that we now turn.

**Table 7.2** What graduates would change about their higher education by location of study

	Scotland	England and Wales	Northern Ireland
Do the same course at the same place	65.8	65.4	61.3
Do a similar course at a different place	7.9	9.2	7.7
Do a different course	22.1	20.7	25.4
Choose not to enter higher education	3.6	3.2	4.3

Source: *The Class of '99 Survey*

### 7.3 *'Disaffected' graduates from Scottish HEIs*

It is important to understand who exactly these 'disaffected' graduates were, bearing in mind the small proportion of graduates who indicated that they would choose not to enter higher education if starting out again. Compared to the sample of graduates from Scottish HEIs as a whole, those who reported that they would choose not to enter higher education were more likely:

- To be male
- To be 'young' graduates
- To have studied arts, social sciences, engineering and 'other vocational' subjects
- To have achieved lower second or third class degree
- To have attended post-1992 universities
- To have come from *'intermediate'* occupational backgrounds

It may be that those who report that they would choose not to go into higher education were likely to have made this judgment in the light of disenchantment with their transition to the labour market and relative lack of success in achieving satisfactory employment. Analysis shows that this is likely. When compared to the Scottish HEI sample as a whole, such graduates were:

- More likely to be in *niche* or non-graduate occupations after four years in the labour market
- More likely to be in associate professional and technical, administrative and secretarial or lower occupations
- Less likely to have required a degree for their employment
- Less likely to be using their degree-acquired skills and knowledge in employment

In all, approximately 60 per cent of the 'disaffected' group reported being not very satisfied or dissatisfied with their careers to date, one-third indicated being not satisfied with their jobs at the time of the survey (scoring three or less on a scale of 1-7) and a quarter reported being in *'very inappropriate'* employment (compared to 2.5 per cent for the whole sample of Scottish graduates). Graduates who were employed immediately after graduation in Scotland were no more likely to report regretting their decision to enter HE than those employed outside of the location.

Analysis of the *Class of '99* data for all respondents showed that a key differentiator of those graduates who reported that they would not enter higher education was their motivation for initially doing so. Table 7.3 presents a comparison of the motives for entering HE, comparing the whole sample of graduates from Scottish HEIs with those who reported being

'disaffected'. We find this latter group significantly less likely to have had a clear sense of direction and they were less likely to report it being the normal thing to do and to have been advised to do it.

**Table 7.3 Reasons given for entering higher education, comparing all graduates from Scottish HEIs and 'the disaffected'**

	All graduates from Scottish HEIs	The disaffected
It was the normal thing to do	42.4	34.8
Had particular career in mind, needed to take this course	40.3	19.5
I thought it would improve my employment prospects	71.6	90.4
I wanted to realise my potential	51.7	34.6
To change my career options	12.5	6.1
I wanted to be a student	30.5	9.7
I was advised to do it	19.8	10.8
Other reason	5.1	4.0
<b>N (weighted)</b>	<b>8,301</b>	<b>295</b>

Source: *The Class of '99 Survey*

#### 7.4 The value of a degree amongst graduates from Scottish HEIs

In the full Class of '99 report, we reported that in response to the interview question 'what do you value most about your undergraduate education', respondents tended to highlight at least one of four broad themes; personal and social development, the academic learning experience, skills development and labour market advantage (pp.196-198). This was also true of the sample of interviewees who had attended Scottish HEIs. As with the whole interview sample, the most often referred-to positive aspect of the university experience was the opportunity for personal growth and social development, or as many put it, simply '*growing up*'. The two extracts that follow highlight many of the themes implicit in many responses, including independence, exposure to new ideas and situations and self-sufficiency. Several also referred to the extra curricular aspects of their undergraduate education:

*'I think I value most the fact that it introduced me to a full spectrum and variety of people and life. If you grew up in a small town on the west coast of Scotland, like I did when I was younger, it wasn't a totally sheltered upbringing but you don't meet people who are different, you don't experience diversity, you don't experience poverty, you don't experience people from different races or sexuality or whatever, and you are very much in your own mind-set about what life is about. So going to a big city, meeting people who are different ages, different educational backgrounds, different religions, sexualities, or whatever, that was a great thing for me... it was that kind of wider social context that helped me the most'.*

(Male humanities graduate, Scottish 1960s university, policy manager, public services, Edinburgh, new graduate job)



*'... having the time living away from home, learning skills like financial management, time management, balancing study with the social life, in a supported environment where you develop very strong friendships'*

(Female languages graduate, Scottish old university, volunteer manager, not-for-profit, South East England, new graduate job)

Many graduates also referred to the perceived labour market advantages that the attainment of a degree had given them. This was often in the sense of access to opportunities, whether simply with regards to the credential requirements for certain jobs or, for example, through professional recognition of their award or the experience gained through a work placement. This was also expressed in the sense that it had allowed graduates time to clarify their ideas about their career intentions and had eased the transition from a 'learning' to a 'work' environment.

### 7.5 *A good investment?*

In following up the question of what graduates valued most about their education, we asked interview respondents whether they felt their undergraduate education had been a good investment. As indicated in the analysis, presented in Section 7.3, in the vast majority of cases the responses was unequivocally positive

*'I would definitely recommend [university] to anyone, without a doubt, yes'*

(Male humanities graduate, careers adviser, public services, modern graduate job)

*'Yes, absolutely, I look back on that as a very privileged experience. I was very lucky to be able to do that, a lot of people can't afford to go to university nowadays, I mean I got a grant. People nowadays don't get that. People maybe need to work or whatever. They don't have the chance to get a higher education and I'm a great believer in education, even if just for education for it's own sake, regardless of what weird subjects you might want to study which may not seem to have any great relevance to anything outside... I think it's a value to society at large that people are able to do that, so I certainly feel it's been a value to me, personally in terms of my world view and stuff, as much as anything, not just in the pure kind of career terms about the skills and the abilities it has given me for furthering jobs'*

(Male humanities graduate, Scottish 1960s university, policy manager, public services, Edinburgh, new graduate job)

However, there were some who, despite indicating that it had been a good investment, placed caveats on their response. Most often this was with reference to the debt implications that are the financial reality for the majority of graduates, although most were pragmatic about the trade-off necessary in attending higher education:

*'I'm hugely in debt and I will be for the next five years paying off my student loan but I wouldn't be in the position I am today with a house of my own and a career that pays well without that'*

(Female natural science graduate, Scottish old university, primary teacher, Edinburgh, modern graduate job)

*'Oh, I have student loans and I am quite bitter about having student loans, but I accept that it's necessary'.*

(Female education graduate, Scottish old university, product development manager, education, Glasgow, new graduate job)

Others who had yet to see this investment bear fruit in labour market terms, still placed a great deal of value on having attended university, for reasons other than financial 'reward'.

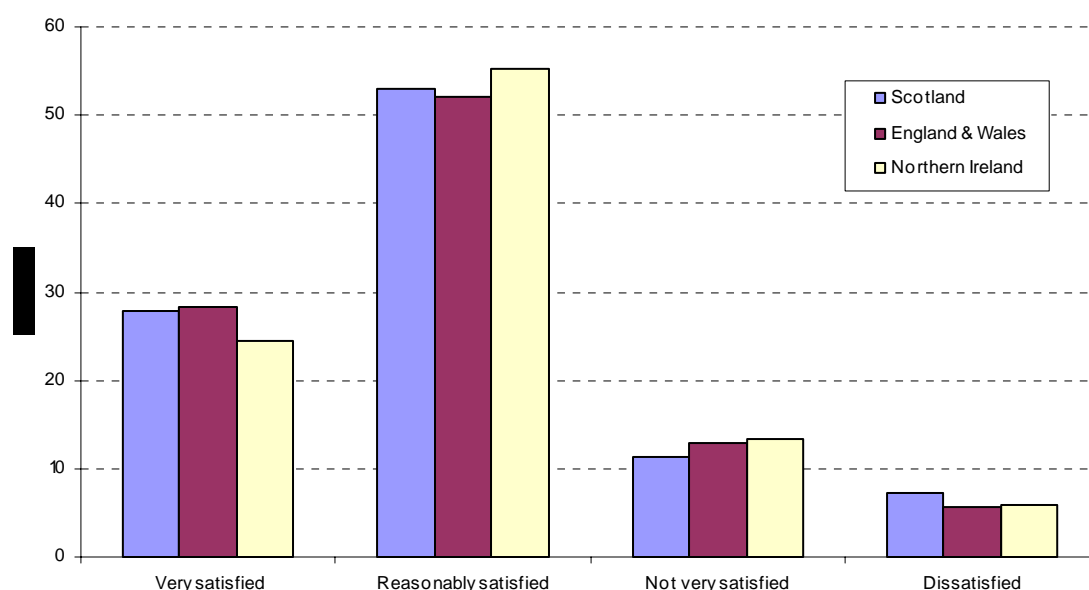
*'It depends what you mean by an investment. If you mean financially, then I would say no because I am still in debt from being at university and I am not in a financial position where I am earning a lot of money. I am not making any more money now than I would have if I hadn't gone to university and 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'.*

(Male social science graduate, Scottish old university, administrator, public services, Glasgow, non-graduate job)

## 7.6 Career satisfaction

Finally, we address the issue of overall career satisfaction among graduates four years after graduation. Figure 7.4 compares levels of satisfaction according to location of study and shows little difference between the three locations. It shows that four years after graduation over 80 per cent of graduates from Scottish HEIs were either very or reasonably satisfied with their careers to date, a comparable figure to that for graduates from the other locations. There are, however, a marginally higher proportion of Scottish HEI graduates who report being dissatisfied.

**Figure 7.4** Satisfaction with career-to-date, according to location of study



Source: *The Class of '99 Survey*

Considering only graduates from Scottish HEIs, there is some difference in levels of satisfaction comparing males and females. Women were slightly more likely to have stated that they were very satisfied (30 per cent compared to 26 per cent) and men were more likely to have indicated dissatisfaction (9 per cent compared to 6 per cent). If we compare responses on the basis of type of institution attended, graduates of post-1992 universities were both least likely to be very satisfied and also most dissatisfied with their career to date. Those who had attended old universities were notably more likely to be very satisfied (almost one-third of respondents). There is little difference in career satisfaction according to whether graduates were living in Scotland or elsewhere prior to study. However, comparing levels of satisfaction according to where graduates were first employed after graduation, those who left the location were more likely to report being very satisfied, but there was little difference in the proportions of graduates who were not very satisfied or dissatisfied. In terms of the location of current employment, Table 7.4 shows that graduates from Scottish HEIs working elsewhere were notably more likely to be very satisfied with their careers to date and less likely to be not very satisfied or dissatisfied, although it is worth noting that, as in the sample as a whole, geographical migration tends to be associated with greater propensity to be in appropriate employment and to be satisfied with career development.

**Table 7.4** Satisfaction with career to date, by location of employment at time of survey (Graduates from Scottish HEIs only)

	Employed in Scotland	Employed elsewhere
Very satisfied	25.2	35.0
Reasonably satisfied	54.4	49.6
Not very satisfied	11.7	10.6
Dissatisfied	8.3	4.7

Source: *The Class of '99 Survey*

### 7.7 Career intentions

In this final section, we consider responses to a series of questions in the survey which sought to explore the short to medium-term career intentions of the respondent sample. In many areas there was little difference in the propensity of graduates to expect to make particular decisions, comparing those from Scotland and those from England and Wales (As in much of the analysis, graduates from Northern Ireland showed distinctly different patterns of response). Notably, graduates from Scottish HEIs and those from English and Welsh HEIs were similarly likely to expect to 'achieve a higher position', 'to achieve more secure employment', 'to achieve a better use of my qualifications', to 'move to a more challenging job' or to undertake further study. Graduates from Scottish HEIs, however, were less likely to anticipate some changes; they were less likely to expect to change their employer or their field of responsibilities, and also less likely to take a career break for family or personal reasons (Table 7.5).

**Table 7.5** The changes graduates expect to make in the next five years by location of study

	Scottish HEI graduates	Other GB HEI graduates
Change my employer	52.7	60.2
Change my field of responsibilities	57.5	63.9
Change to a completely different job or career	18.4	21.0
Move to a job with potential for better work/life balance	28.2	31.1
Work in another UK region	20.8	21.5
Work abroad	33.4	28.8
Take a career break for personal development	11.5	14.5
Take a career break for family-related reasons	14.9	19.3

Source: *The Class of '99 Survey*

Both sub-samples were equally to expect to work in another UK region, but those above from Scottish institutions were significantly more likely to expect to work abroad. Perhaps of more interest is the mobility intention of graduates according to where they were employed at the time of the survey. We find that one-third of graduates employed in Scotland expected to work abroad in the five years following the survey and 18 per cent expected to work in another UK region. This is compared to 29 per cent and 22 per cent respectively for graduates working in England and Wales.

## 7.8 Summary

- With hindsight, over 95 per cent of Scottish HEI graduates would still choose to enter higher education and almost 90 per cent would study at the same institution.
- The qualitative data indicates that the majority of respondents believe their degrees to have been a good investment and, in common with other interview respondents in the Class of '99 study, graduates from Scottish HEIs were most likely to have reported personal and social development as being what they valued most about their undergraduate education.
- There was little difference in the reasons for entering higher education given by Scottish HEI graduates compared to those of other UK locations, although they were marginally more likely to have had a particular career in mind and were less likely to have simply wanted to be a student compared to graduates from England and Wales.
- Those graduates from Scottish institutions who reported that they regretted their decision to enter higher education were more likely to be male, to have studied arts, social sciences, engineering and 'other vocational' disciplines, to have achieved a lower degree classification and to have attended post-1992 universities.
- Disillusionment with higher education appears partly related to poorer performance in the labour market: 'disenchanted' graduates were more likely to be in *niche* or non-graduate employment, were less likely to be in employment for which a degree was required or to be using their degree skills and knowledge.
- Over 80 per cent of graduates from Scottish HEIs were very or reasonably satisfied with their careers to date, a comparable figure to that for graduates from the other locations.
- Scottish HEI graduates working outside the country at the time of the survey were notably more likely to be very satisfied with their careers to date, although this is likely to be connected to the fact that geographical migration is associated with greater propensity to be in appropriate employment.

## ANNEXE 1

**Table A1: The earnings of 1999 graduates in full-time employment in 2003/04: detailed results**

	Coeff.	Std. Error	Sig.	Mean	
				Males	Females
Hours per week (exc. breaks but inc. o/t, unpaid)	0.01	0.00	0.00	42.98	41.27
<i>Contractual basis of current job:</i>					
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%
<i>Sector of current job:</i>					
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%
<i>In my workplace, my type of work is done:</i>					
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%
<i>After first started this job, to learn to do it reasonably well took:</i>					
< 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.				

Scotland's Class of '99

					Contd.
<i>No employed by the organisation works for:</i>					
< 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%
<i>SOC(HE) classification of current job:</i>					
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%
<i>Currently employed in:</i>					
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
<i>Ability to take up/change job affected by:</i>					
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%
<i>Has dependent children aged:</i>					
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%
<i>Class of degree obtained in 1995:</i>					
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%
<i>Method of study for first degree:</i>					
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.
<i>Type of institution for first degree</i>					
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%
<i>Subject area of 1999 degree</i>					
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					
<i>Entry qualifications for first degree</i>					
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%
<i>Agrees strongly with the statement</i>					
I am extremely ambitious	0.07	0.01	0.00	25.2%	17.4%
<i>Worked during vacations or term time to:</i>					
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%
<i>Further training and education since July 1999</i>					
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.
<i>Parental socio-economic class:</i>					
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 A2: Factors associated with the gross annual earnings of 1999 graduates in full-time employment: a comparison of Scottish and other UK Higher Education Institutions**

	Scottish HEIs			Other UK HEIs		
	Coefficient	Standard error	Signif.	Coefficient	Standard error	Signif.
(Constant)	8.247	0.304	0.000	9.320	0.083	0.000
<i>Contractual basis of current job:</i>						
Permanent/open-ended	ref.			ref.		
Fixed term contract	0.007	0.036	0.845	<b>-0.056</b>	0.012	0.000
Probationary	-0.052	0.074	0.483	<b>-0.154</b>	0.020	0.000
Self-employed	-0.089	0.075	0.237	<b>-0.127</b>	0.023	0.000
Temp (agency)	-0.126	0.087	0.149	<b>-0.255</b>	0.030	0.000
Other temporary or casual	-0.125	0.090	0.163	<b>-0.172</b>	0.036	0.000
Other (not permanent)	0.029	0.124	0.813	<b>-0.153</b>	0.042	0.000
Degree was required to obtain current job	<b>0.155</b>	0.026	0.000	<b>0.117</b>	0.008	0.000
<i>Sector of current job:</i>						
Agriculture, mining	0.021	0.066	0.747	-0.071	0.035	0.043
Manufacturing	<b>-0.156</b>	0.069	0.024	<b>-0.082</b>	0.020	0.000
Electricity, gas, water	-0.138	0.127	0.280	<b>-0.135</b>	0.034	0.000
Construction	<b>-0.178</b>	0.075	0.018	<b>-0.098</b>	0.023	0.000
Distribution	<b>-0.259</b>	0.073	0.000	<b>-0.180</b>	0.023	0.000
Transport	<b>-0.202</b>	0.075	0.008	<b>-0.177</b>	0.028	0.000
Information and communications	-0.080	0.056	0.154	<b>-0.060</b>	0.017	0.000
Banking, finance and insurance	ref.			ref.		
Business services	-0.038	0.053	0.466	-0.016	0.015	0.303
Education	-0.093	0.063	0.142	<b>-0.083</b>	0.019	0.000
Other public services	-0.019	0.061	0.757	<b>-0.088</b>	0.019	0.000
Other	0.014	0.047	0.774	<b>-0.094</b>	0.015	0.000
Public sector	-0.011	0.046	0.804	-0.030	0.014	0.029
Private sector	ref.			ref.		
Not for profit sector	-0.077	0.060	0.204	<b>-0.091</b>	0.017	0.000
<i>In my workplace, my type of work is done:</i>						
exclusively by men	<b>0.112</b>	0.044	0.012	<b>0.088</b>	0.015	0.000
Mainly by men	<b>0.120</b>	0.032	0.000	<b>0.109</b>	0.010	0.000
by equal mixture of men and women	ref.			ref.		
mainly by women	<b>-0.082</b>	0.032	0.011	<b>-0.057</b>	0.010	0.000
exclusively by women	-0.098	0.049	0.047	<b>-0.106</b>	0.015	0.000
only by me	0.052	0.062	0.399	-0.033	0.019	0.087

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	Scottish HEIs			Other UK HEIs		
	Coefficient	Standard error	Signif.	Coefficient	Standard error	Signif.
<i>No employed by the organisation works for:</i>						
< 25 employees	ref.			ref.		
25 - 249 employees	-0.034	0.036	0.518	-0.020	0.011	0.067
250 - 999 employees	-0.059	0.039	0.139	-0.008	0.012	0.514
1000+ employees	<b>-0.040</b>	0.034	0.000	<b>0.056</b>	0.011	0.000
<i>Location of employment in 2003/04</i>						
Inner London	<b>0.268</b>	0.052	0.000	<b>0.268</b>	0.010	0.000
Outer London	<b>0.382</b>	0.088	0.000	<b>0.185</b>	0.014	0.000
South East	0.063	0.063	0.320	<b>0.086</b>	0.011	0.000
Scotland	-0.031	0.035	0.368	-0.029	0.014	0.037
Northern Ireland	-0.043	0.092	0.642	<b>-0.082</b>	0.012	0.000
Republic of Ireland	0.245	0.116	0.034	0.091	0.042	0.032
Male	0.034	0.026	0.197	<b>0.063</b>	0.008	0.000
<i>Class of degree obtained in 1995:</i>						
First class degree	ref.			ref.		
Upper second	-0.107	0.050	0.034	<b>-0.063</b>	0.021	0.003
Lower second	-0.096	0.053	0.073	<b>-0.115</b>	0.022	0.000
Third	-0.257	0.082	0.002	<b>-0.182</b>	0.029	0.000
<i>Subject area of 1999 degree</i>						
Arts	0.026	0.050	0.603	<b>-0.063</b>	0.014	0.000
Humanities	0.012	0.082	0.882	<b>-0.039</b>	0.015	0.010
Languages	0.142	0.071	0.047	0.018	0.021	0.380
Law	<b>0.232</b>	0.072	0.001	<b>0.092</b>	0.021	0.000
Social sciences	ref.			ref.		
Maths and computing	<b>0.162</b>	0.059	0.006	<b>0.064</b>	0.017	0.000
Natural sciences	0.047	0.048	0.322	-0.003	0.014	0.843
Medicine and related	<b>0.294</b>	0.051	0.000	<b>0.250</b>	0.017	0.000
Engineering	<b>0.126</b>	0.056	0.024	<b>0.041</b>	0.018	0.024
Business studies	0.093	0.046	0.044	<b>0.050</b>	0.014	0.001
Education	<b>0.263</b>	0.070	0.000	<b>0.120</b>	0.020	0.000
Other vocational	0.134	0.110	0.226	0.007	0.031	0.821
Interdisciplinary	0.092	0.052	0.077	0.026	0.015	0.088
<i>Parental socio-economic class:</i>						
Managerial and professional occupations	ref.			ref.		
Intermediate occupations	-0.069	0.041	0.091	-0.022	0.012	0.066
Small employers and own account workers	-0.012	0.033	0.727	0.009	0.010	0.378
Lower supervisory and technical occupations	-0.069	0.047	0.142	-0.009	0.016	0.558
Semi-routine and routine occupations	-0.044	0.033	0.182	-0.022	0.011	0.042
Neither parent in paid employment	0.147	0.102	0.147	0.004	0.030	0.904
Not determined	-0.040	0.048	0.411	<b>0.038</b>	0.014	0.008
Age	<b>0.091</b>	0.017	0.000	<b>0.037</b>	0.005	0.000
Age squared	<b>-0.001</b>	0.000	0.000	<b>0.000</b>	0.000	0.000
R <sup>2</sup>	0.446			0.357		
N (unweighted)		714			6,950	

Note: Coefficients which are statistically significantly different from zero are shown in bold.

## ANNEXE 2

### Who left Scotland to study and what do they do now?

This annexe compares the profile of the Class of '99 graduates resident in Scotland prior to study who choose to study at other UK institutions from which sample members were drawn. It also compares their employment outcomes with those who chose to study at Scottish HEIs. Due to the fact that relatively few of the Scottish residents sampled had chosen to study elsewhere in the UK (only 7 per cent in our sample), the findings below are indicative rather than conclusive.

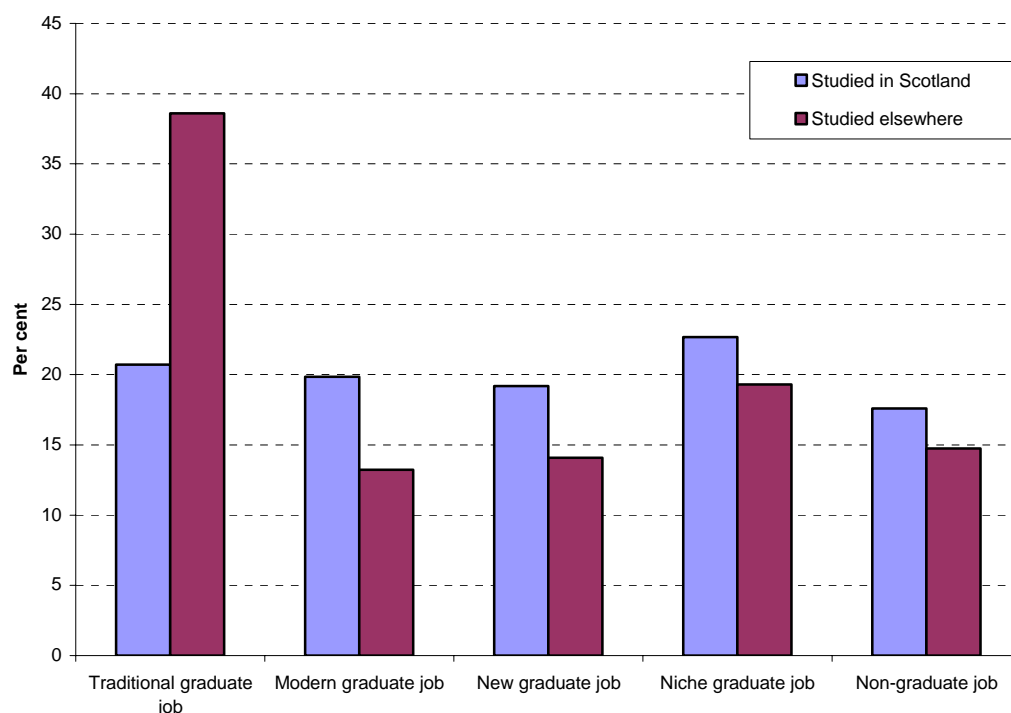
We first consider the characteristics of Scottish residents prior to study who had studied elsewhere. Compared to the sample of graduates from Scotland as a whole, those who chose to study at HEIs in the rest of the UK were more likely to be male (56 per cent compared to 45 per cent), notably more likely to come from managerial or professional or managerial occupational backgrounds (76 per cent compared to 41 per cent) and to be young graduates (97 per cent compared to 41 per cent). They were much more likely to have attended an old university (73 per cent compared to 40 per cent). In terms of the subject studied, they were significantly more likely to have studied natural sciences (22 per cent compared to 11 per cent in whole 'Scottish' sample) and medicine and related disciplines (18 per cent compared to 14 per cent). They were also less likely to have studied social sciences (5 per cent compared to 8 per cent), engineering (3 per cent compared to 10 per cent) and business studies (10 per cent compared to 14 per cent).

Of those who had studied outside of Scotland, 25 per cent were employed in Scotland in their first job after graduation, compared to 86 per cent of those who had studied at Scottish HEIs. This proportion had risen to 28 per cent working in Scotland after 4 years in the labour market, compared to 82 per cent of those who graduated from Scottish institutions.

As far as employment outcomes are concerned, there is some evidence to suggest that Scottish graduates who had studied elsewhere in the UK had tended to enter managerial or professional employment (68 per cent compared to 53 per cent of those who study in Scotland). Conversely, a higher proportion of Scottish graduates from Scottish HEIs were working in associate professional and technical occupations. These figures could be indicative of a higher supply of the former graduate opportunities in other UK regions, most notably London and the South East.

As shown in Figure A1, this is supported by analysis according to SOC(HE). Graduates who had studied elsewhere in the UK were significantly more likely to be in traditional graduate jobs, with a lower proportion in all other occupational groups.

**Figure A3 SOC(HE) category of job at time of survey, according to location of study (Graduates domiciled in Scotland prior to study only)**



N(weighted)=6,668

Source: *The Class of '99* survey

As shown in Figure A2, some of this occupational difference is reflected in the sectoral distribution of respondents. For example, those who studied outside of Scotland were more likely to be working in education, but notably less likely to be working other areas of the public sector. They were also more likely to be working in ICT, business services and transport and tourist services.

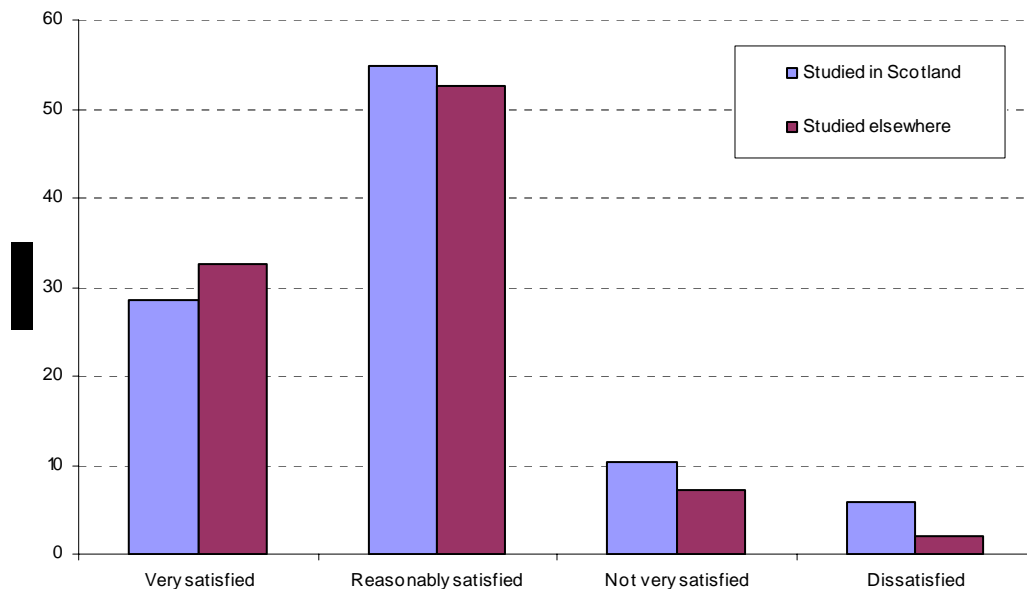
**Table A3 Sector of employment at time of survey, according to location of study (Graduates domiciled in Scotland prior to study only)**

	Studied in Scotland	Studied elsewhere
Agriculture, mining, quarrying	6.2	1.2
Manufacturing	6.4	2.1
Electricity, gas, water supply	1.5	2.5
Construction	2.8	4.4
Distribution, hotels, catering	5.5	5.2
Transport and tourist services	2.6	4.8
Information and communications sector	5.4	8.7
Banking, finance, insurance	11.0	11.6
Business services	11.0	14.9
Education	16.0	21.6
Other public services	28.3	20.1
Other	2.5	1.7

Source: *The Class of '99* survey

Scottish graduates who studied elsewhere were also marginally more likely to report having been required to have a degree for their jobs at the time of the survey (68 per cent compared to 65 per cent). Conversely, those who graduated from Scottish HEIs were more likely to be using to be using their degree-acquired knowledge (68 per cent compared to 63 per cent). The two groups were equally likely to be using their degree skills (80 per cent). Those graduates who had studied outside of Scotland scored more highly in terms of the mean level of appropriateness of their jobs at the time of the survey (*for someone with your qualifications*) and reported higher mean scores on the index of job quality. However, there was little difference between the groups in mean levels of job satisfaction. As Figure A2 shows, Scottish graduates who had studied outside Scotland were more likely to report being very satisfied with their careers to date and, consequently, less likely to indicate being not very satisfied or dissatisfied.

**Figure A4** Satisfaction with career to date, according to location of study (Graduates domiciled in Scotland prior to study only)



Source: *The Class of '99* survey



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