

Access to what: analysis of factors determining graduate employability

A report to the HEFCE by the Centre for Higher Education Research and Information (CHERI)

November 2002

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PREFACE

This report is the first output of a project entitled *Access to what? How to convert educational opportunity into employment opportunity for groups from disadvantaged backgrounds*. The project is being funded by the Higher Education Funding Councils for England, Scotland and Wales, Universities UK, the Commission for Racial Equality, the Council for Industry and Higher Education, the Higher Education Careers Services Unit and the Open University.

The aim of the project is to improve the employment prospects of students from socially 'disadvantaged' groups. The present report provides a detailed analysis – based on survey data and HESA statistics – of the factors determining graduate employability and how these affect the employment prospects of students from lower socio-economic backgrounds, from ethnic minorities and mature students. The second phase of the project is exploring the policies and practices needed to create greater equity in the graduate labour market. The final report of the project is expected to be published early in 2003.

The report was prepared by Zsuzsa Blasko at the Centre for Higher Education Research and Information (CHERI) of the Open University with support from the rest of the project team, John Brennan, Brenda Little and Tarla Shah.

EXECUTIVE SUMMARY

1 Introduction

- 1.1 Data on graduate employment have been analysed in order to investigate the relationship between employment outcomes and various forms of 'social disadvantage'. A series of intervening variables have been identified which appear to be related to positive employment outcomes for graduates from 'disadvantaged' backgrounds.
- 1.2 Data sources were (i) the UK data set (N=4340) from an international survey of the graduate cohort of 1995, contacted 4 years after their graduation, (ii) HESA data on the same cohort.
- 1.3 The effects of socio-economic background, ethnic background and age on graduate employment were all considered. Employment outcomes included both objective factors (e.g. salary, level of job, incidence of unemployment) and subjective factors (e.g. job satisfaction, appropriateness of job).
- 1.4 The project distinguishes between direct and indirect effects of the background variables. Direct effects occur when graduates from disadvantaged backgrounds experience labour market disadvantages compared with their peers from similar courses at similar institutions and with similar degree results. Indirect effects of background variables occur when graduates experience disadvantage because of educational factors - such as the subject studied, institution attended or entry qualifications - which are systematically related to the background variables.

2 The effects upon employment outcomes of socio-economic background, ethnic background and age

- 2.1 In general, the findings support other studies which indicate that success in the labour market is to some extent associated with the background characteristics of the graduates. However, there are differences according to the various dimensions of employment success. There are also gender differences in the effects of background characteristics.
- 2.2 In the case of lower socio-economic background (as measured by parental occupation and parental education), both men and women graduates from lower socio-economic backgrounds received lower average salaries than graduates from more advantaged social backgrounds; £1500 a year in the case of men and £1000 a year in the case of women. They were also less likely than other graduates to perceive their jobs as ones for which a degree was necessary or to expect salary increases. In addition, male graduates from these backgrounds were more likely to have experienced a period of unemployment and were less likely to be in managerial and professional jobs than their middle-class counterparts. Women did not, however, appear to experience these additional disadvantages.
- 2.3 In the case of ethnic background, Asian men were less likely than other male graduates to characterise their jobs as ones which provided good opportunities to use their knowledge and skills. This was not the case, however, for Asian women who were also more likely to have a graduate job and to find their work challenging. Asian graduates of both genders were more likely than other graduates to be in managerial or professional jobs although these positive employment outcomes were not reflected in higher salaries or greater job satisfaction. In general, HESA data indicated that graduates from ethnic minorities face greater difficulties in obtaining an initial job but are not less likely than other graduates to be in graduate level jobs. Substantially higher proportions of graduates among each black minority group and among both Indian and Pakistani groups were still seeking employment or training (without having any other main activity) six months after graduation. The same was true for Bangladeshi men. However, unemployment levels were only slightly above those of white graduates for Chinese and other Asian groups, and among Bangladeshi women.
- 2.4 The effects of age appear to vary. Male graduates who entered higher education after the age of 24 experienced greater disadvantages in the labour market than their counterparts who were between 21 and 24 at entry to higher education. In fact, the latter age group experienced certain labour market advantages

compared with younger graduates, being more likely to be in a graduate level job and to be more satisfied with their job. The differences are broadly similar for female graduates.

3 **Direct and Indirect effects**

3.1 Like other graduates, graduates from socially-disadvantaged groups do less well in the labour market in part because of the institutions they attend, the subjects they study, the class of degree they obtain and their entry qualifications to higher education.

3.2 Our analyses suggest that the larger part of the labour market disadvantages experienced by older graduates and graduates from lower socio-economic backgrounds can be attributed to the above factors.

3.3 Nevertheless, our analyses also show that socio-economic background, age and ethnic background have an effect on employment even when the other factors are controlled for. Moreover, the effects are mainly in the same direction. New sources of disadvantage, relative to other groups in society, are added to existing ones.

3.4 Thus, controlling for the effects of other factors (i.e. indirect effects) the following can be attributed to the direct effects of the graduate's age and/or background:

- (i) For male graduates, parental education had a significant impact on income (nearly a 10% difference according to whether both parents were graduates or had left school at the minimum leaving age); they were also less satisfied with their jobs;
- (ii) First generation female graduates were only half as likely to feel that their qualifications were necessary for their jobs (compared with graduates who had graduate parents);
- (iii) Asian males were more likely to remain unemployed for at least a six month period; this was true for male graduates from Bangladeshi, Pakistani and Indian origins; it was also true for male graduates from black African, black Caribbean and 'other' black backgrounds; Bangladeshi men were also more likely to work in a non-graduate job;
- (iv) Black females were less satisfied with their jobs than other female graduates; and six months after graduation, female graduates from Bangladeshi, Pakistani, Indian, Chinese, black African, black Caribbean, 'other' black and 'other' Asian backgrounds were all significantly more likely to be unemployed than graduates from the ethnic majority;
- (v) Entering higher education after the age of 24 appeared to have a series of negative effects for both male and female graduates: increased risk of unemployment, poor career prospects, less likely to achieve a 'graduate level' job.

The picture was not entirely negative. Graduates who entered higher education between the ages of 21 and 24 appear to be doing quite well in the labour market. Asian women do better in terms of level of job than their white British counterparts. But overall, the negative picture remains. Background disadvantages can still be converted into employment disadvantages, relative to other groups of graduates, even when the effects of institution, subject and degree class have been taken into account.

3.5 In fact, our analysis finds that background factors (socio-economic background, ethnic background, age) interact with educational factors (subject studied, institution attended) to create distinctive patterns of disadvantage. For example, going to a pre-1992 university gives labour market advantages to most types of graduate except for women from lower socio-economic backgrounds. To take another example, studying a vocational subject generally can provide advantages in the labour market for all graduates but we also find evidence that graduates (especially male graduates) with non-vocational degrees are able to compensate for their subject disadvantage if they are from advantaged socio-economic backgrounds.

3.6 In other words, factors such as type of institution and subject of study act as intervening variables with a differential effect upon the employment prospects of graduates from different types of background. Undoubtedly, employment prospects for some graduates would be improved by studying a different subject at a different institution. But, whether or not such a course of action is a realistic option, there are other less dramatic intervening variables which can also have a positive effect upon employment outcomes. These are the focus of the next section.

4 Interventions in the cycle of disadvantage

4.1 We have looked at the effects upon employment outcomes of a range of higher education experiences, of approaches to the job-seeking process, and of features of the employment situation. These are all areas where policy interventions are, in principle possible. Would such interventions actually improve the employment prospects of graduates from disadvantaged backgrounds?

4.2 The main intervening factors which we examined were: work experience and term time working, extra-curricula activities, overseas experiences while in higher education, job-search techniques (the timing and the techniques used) and employer characteristics (large/small, public/private). We examined the effects of the factors first, on graduates as a whole and second, on the disadvantaged groups which are the subject of this study.

4.3 *Effects on all graduates*

4.3.1 For graduates as a whole, there are measurable employment benefits to be gained from experiencing a substantial period of work experience during your time in higher education, especially if you are taking a non-vocational course. On the other hand, working during term-time appears to have mainly a small negative relationship to employment outcomes. Involvement in extra-curricular activities was related to successful employment outcomes (especially for women) as was some kind of overseas study or work.

4.3.2 An early start to the job search appears to be associated with employment success. But it also appears better to leave it until well after graduation rather than to start it at the same time as studying for finals. Job search techniques especially associated with successful employment outcomes were (in rank order): using contacts established through employment undertaken during the course of study; contacting employers without knowing about a vacancy; seeking assistance from teaching staff (numerous benefits but only for women); using the institution's careers service; using personal connections; applying for an advertised vacancy; being approached by an employer.

4.3.4 As far as employer characteristics are concerned, positive employment outcomes are associated with working for medium or large-sized employers. Although private employers are likely to provide higher salaries, other employment features e.g. level of job and job satisfaction, appear more favourable in the public sector.

4.4 *Effects of intervening factors on graduates from disadvantaged backgrounds*

4.4.1 For the older group of 'mature graduates' (25+ on entering higher education) work experience during higher education is not associated with the employment benefits it provides other students. Older students are more likely to work long hours during term-time (at least 10 hours per week) and, as for other students, term-time working has a negative association with successful employment outcomes. For mature students, involvement in extra-curricular activities (which is at a much lower level than for other students) is not associated with employment success. Similarly, overseas experiences – before or during higher education – are not associated with successful employment outcomes for older graduates. Timing of the job search does not appear to have an impact on the employment prospects for older graduates. However, the technique of 'contacting employers without knowing about a vacancy' is associated with employment success for older graduates. Yet such graduates employ this approach less often than other graduates. They are somewhat more likely than other students to visit the careers office of their higher education institution. Type of employer and size of employer affect the employment prospects of older graduates in much the same way as they do the prospects of other graduates.

4.4.2 For graduates from lower socio-economic backgrounds, a number of intervening factors appear to be associated with positive employment outcomes. Such graduates experience even greater benefits from work experience than others do. They are more likely than others to work during term-time, and such work is associated with even greater disadvantages in the labour market than it is for other graduates. Extra-curricular activities have a beneficial association with employment but students from lower socio-economic backgrounds are less likely than others to be involved in them. An early job search is beneficial but job-search techniques which benefit others, i.e. contacting employers without knowing about vacancies and using personal contacts, are less effective for these graduates. Graduates from lower socio-economic

backgrounds are less likely to work for private sector employers, but there are no strong or systematic associations between type of employer and employment success for these graduates.

4.4.3 A comparable analysis for ethnic minority graduates was not possible because of sample size.

4.5 Table 1 provides a summary of the association between successful employment outcomes and a variety of potential 'intervening' factors from the higher education experience, the approach to job search and the characteristics of the employer. It is clear that some factors which appear to benefit other groups of students do not appear to benefit mature students or students from lower socio-economic backgrounds. Instead, already advantaged groups appear to be piling up additional advantages at the further expense of disadvantaged groups. This is because students from disadvantaged backgrounds have less access to these potentially beneficial intervening factors.

Table 1: Factors which are associated with successful employment outcomes

	All	Older graduates	Lower socio-economic groups
Work experience in HE	✓	*	✓
Absence of term-time working	✓	✓	✓ *
Extra-curricular activities	✓	*	✓ *
Overseas experiences in HE	✓	*	*
Early job search	✓	*	✓
Techniques of job search	✓	✓ *	*
Private employer	✓/X	✓/X *	*
Medium/large employer	✓	✓ *	✓

(✓ = positive effect X = negative effect * = limited access to the positive factor)

4.6 Considerable caution is necessary, however, in interpreting these data. Factors which are associated with employment success for students in general may contain lessons for students from disadvantaged groups, even if these same factors appear not to have been important for this sample of graduates. It must also be emphasised that a statistical association does not necessarily imply causality. Our analyses have controlled for the effects of some factors but many others are outside the scope of our analysis. Not least of these are the attitudes and aspirations of the students themselves. We wonder, for example, whether the apparent effectiveness of certain job search methods lies less in the methods themselves than in the light they throw on the ambitions and motivations of the students.

5 Conclusion

5.1 The research reported here supports the findings of other studies which indicate that success in the labour market for graduates is to some extent associated with the background characteristics of graduates.

5.2 Socio-economic background, ethnic background and age all have indirect effects upon employment through their association with factors such as institutional type, subject of study, entry qualifications and degree classification. But they also appear to have direct effects. Even when the influence of the above factors is controlled for, graduates from lower socio-economic backgrounds, ethnic minorities and older graduates do less well in the labour market than their peers (although better than their peers who did not go into higher education).

5.3 Some additional factors have been identified which appear to be associated with success for all graduates. Not all of these may benefit all types of student equally, but they are suggestive of practical interventions which policy makers could make to bring a greater degree of equity to the graduate labour market.

5.4 In the second phase of the project, the research team is working with four universities to investigate whether there are institutional policies and practices that can help produce a more 'level playing field' for graduates from disadvantaged backgrounds when they enter the labour market.

1 Introduction

1.1 Background to the project

Despite some progress in extending access to higher education to various disadvantaged groups (e.g. ethnic minorities, lower socio-economic groups) and a big political as well as academic interest in this process, little is known about how these 'non-traditional' students will fare in the graduate labour market. Some empirical findings (usually carried out for other purposes) and also anecdotal evidence suggest that graduates from such groups do relatively poorly on entry to the labour market. This project is utilising the results of existing studies carried out by the research team to address this major problem. The project links equity issues with graduate employment in a direct and detailed way and aims to have impact upon both national and institutional policies.

The aim of the project is to improve the employment prospects of students from socially 'disadvantaged' groups. It is organised in three phases: (i) factors determining graduate employability: statistical analysis of existing data, (ii) policies and practices to support greater equity in the graduate labour market, (iii) evaluation and dissemination. This report describes the results of phase one.

The project *objectives* are:

- (i) To identify the *educational* factors associated with employment success for such students (e.g. characteristics of study programmes, mode and timing of study, work experience, counselling and careers advice and information, expectations and attainment levels).
- (ii) To identify the *employment* factors associated with employment success for such students (e.g. size and type of employer, induction and training arrangements).
- (iii) To identify the *transitional* factors associated with employment success for such students (e.g. timing and method of job search, further training or study, temporary work).
- (iv) To identify the national policy implications of the above (e.g. for institutional funding and student support arrangements).
- (v) To identify the institutional policy implications of the above (e.g. for admissions, guidance and counselling, careers advice, curriculum and planning).
- (vi) To identify the implications for employers of the above (e.g. for recruitment strategies, induction and training procedures).
- (vii) To disseminate the results.

This report presents the findings of phase one of the project. It investigates the transition from higher education into employment of graduates from three groups: (i) ethnic minorities, (ii) lower socio-economic groups, (iii) mature students. Account has been taken of the effects of subject and mode of study, institution attended and other educational variables, as well as the effects of socio-biographical factors such as gender, ethnic group etc. The relationship between social and educational disadvantage and between both and employment success has been explored.

The analyses are based on the data from the UK sample of an international study of graduate employment undertaken for the EC¹. The survey was conducted among members of the cohort of UK domiciled students that had graduated in 1994/1995. The UK sample was drawn from 27 universities and colleges in England, Wales, Scotland and Northern Ireland stratified by size and type of institution. Overall, 4,340 questionnaires were returned from the UK graduates (representing a response rate of 34%). Before the analysis stage, the responses were weighted to reflect the subject spread and type of institution for the UK 1994/5 graduating cohort. The

¹ A report on some of the results of this study have been published by HEFCE in Brennan J et al, 2001.

resulting database comprised 3461 UK graduates. For this report, analysis is based on 2997 full-time and sandwich students.

To test how representative the findings from this survey were and to get additional information for sub-groups for which the cell sizes from the data were too small, additional analyses of data gathered by the Higher Education Statistics Agency (HESA) from the 1995 First Destinations Survey were undertaken.

1.2 Context

The numbers of students from lower socio-economic groups, from certain ethnic minorities and mature students in higher education has increased significantly in the 1990s. For example, the participation in higher education of people from lower socio-economic groups was only 3% in 1950 and had grown to 17% in 1998 (Connor et al, 2001). Although certain ethnic minority groups (e.g. Bangladeshis) are still underrepresented, overall ethnic minority participation in higher education is high. In 1994, over 8% of 18-20 year olds in higher education were from ethnic minorities compared with just over 5% in the population as a whole (Dearing Report 1997). Despite the trend towards widening participation, low socio-economic groups and also some ethnic minorities (some Black groups, Bangladeshis) are still underrepresented among those entering higher education. Also, different segments (types, subjects) of higher education are not equally accessible to these student groups. These segments are typically at the most prestigious end of higher education. Moreover, as a result of the above-average drop-out rates of many of these groups, their proportion is even lower among the successful graduates (HEFCE 2001b).

However, the starting point for the present project is that even a fully successful equalisation of access to higher education would not necessarily result in the equalising of outcomes. As Lynch and O’Riordan point out “...*equalising formal rights to education, or achieving proportionate patterns of participation, does not equate with equal rates of success or outcomes for disadvantaged groups*” (Lynch and O’Riordan, 1998, p 449). In the case of those accessing and also successfully finishing higher education, equality of outcome raises the following question: does a higher education degree provide access to the same labour market benefits for everyone with similar educational achievements irrespective of their socio-biographical background? In a mass higher education system, where over one-third of the relevant population earns a degree, it is natural to find a significant level of heterogeneity in employment situation, type of job, salary and other labour market outcomes of graduates. But can these kinds of variations in employment success at least partly be attributed to inherent differences in social origins and/or to ethnic differences and/or to the age the graduate entered university? These are the first questions this study looks at.

In the following section we introduce the notions of *direct* and *indirect* effects of the socio-biographical background. Differentiating between these two major sources of inequalities in the labour market provides a helpful framework for the analyses given here and will be applied throughout this report.

1.3 The notion of employment success

There are various individual benefits from attending higher education and employment benefits form only one group of these. As suggested in earlier studies (Brown and Scase 1994) a sense of personal improvement and enrichment of the personality is a common experience of students which is highly valued even if it is not accompanied by a high-flying career. In the UK subsample of the international graduate survey on which this report is based, 77% of the graduates reported that their degree had helped them considerably to develop as a person – this percentage was higher than that of those who found their degrees helpful to find a satisfying job (54%).

However, employment outcomes of higher education are of major importance not only from the individual’s but also from the society’s point of view. While graduates may no longer be

considered to constitute an elite in the labour market, there is no doubt about the high rates of financial return from attending higher education. Salary, however, is only one aspect of employment outcomes.

This project will argue that the notion of employment success is complex and problematic. It is not only multidimensional – meaning that even the various “objective” measures of success might be loosely correlated – but it also carries a considerable element of subjectivity in the sense that the personal meaning and experience of success can vary significantly. Although empirical (especially quantitative) research is bound to simplify, we are making attempts to grab as much of this complexity as possible.

One fairly obvious measure of employment success is the ability to find a job, that is the *lack of unemployment* experiences. As we will see, however, among young graduates in Britain finding some kind of a job is rarely a problem. The actual nature of the job, however, seems to be a much more sensitive question and one that can be answered in different ways. First we will look at the “level” of job, assuming that higher education should ideally lead to certain high level jobs, in which skills and knowledge of graduates are fully utilised. Accordingly, having a *managerial or professional job*; or a job *that is traditionally done by graduates*, and also the *self-report by graduates that the job they are doing requires a degree* will all be considered as indicators of labour market success. Similarly, positive responses to a range of questions regarding the level to which the *acquired skills and competencies are actually needed for the job* are also used as indicators of employment success in this study. Furthermore, we are certainly not eliminating *income* as one measure of success, accepting that financial recognition in a job is one with significant impact on life opportunities and life quality in a broad sense and is also a reasonably good proxy of other important characteristics of the job such as social prestige. To provide a somewhat longer view of the graduates’ position in the labour market than the 4 years after graduation snapshot provides, we also investigate the expectations of the graduates regarding *possible promotions and salary-increases*.

Although all the characteristics of success listed so far represent a general consensus on what is desirable to achieve in the labour market, the variations in the importance attached to each characteristic can be considerable. The relative importance of the “objective” characteristics of employment is strongly dependent on the value-system, aspirations and preferences of the individual. The above success criteria can be differently “weighted” by the various graduate groups. A job in the care industry can provide a substantial amount of personal fulfilment despite failing to meet certain criteria listed above. Similarly, flexibility in use of time in a mundane low status job can compensate for lower salary and even for lower social prestige for many people. In this study therefore we put a special emphasis on *job-satisfaction* as a measure of employment success.²

1.4 The notion of ‘disadvantage’

The students who are the subject of this report do less well on average, according to a wide range of measures, in the labour market than other students. In other words, they are disadvantaged in terms of *outcomes*, i.e. in their access to the economic benefits of higher education.

They may of course face many other kinds of disadvantage. Students from lower socio-economic backgrounds will lack material resources and access to the ‘best’ secondary schools, for example. Students from ethnic minorities are perhaps more likely to have encountered prejudice and discrimination. Age, however, is not of itself a disadvantage, except in this specific case of seeking entry into the more desirable end of the graduate labour market. Thus, the three categories of ‘disadvantage’ with which this report is concerned are quite different from each other. Perhaps the most important thing they share in common is that they are not ‘advantaged’ or privileged. The three characteristics differ in other ways. Age, by definition, is never constant.

² For a more detailed description of the variables applied see Appendix I.

Social class can be denied, faked or escaped (mobility is possible). Only ethnicity is a permanent feature of the individual. Individual students, of course, possess all three characteristics: they have an age, a race *and* a social class. For some, a favourable feature in one - especially class - will be sufficient to outweigh the unfavourable features of the other. For other students, two or more unfavourable features may reinforce each other - a kind of double or even treble disadvantage. The complexities of real lives are revealed in section 5 in the reports of some interviews with graduates.

Thus, the notion of a 'disadvantaged' student or group or background is problematic. And, as we shall see in the analyses that follow, it is frequently overlain by a further feature of the individual, i.e. gender. Perhaps the fairest thing to say about the notion of 'disadvantage' is that it occurs in respect of certain aspects of people's lives at certain times of their lives.

The way in which some key concepts have been operationalised in this report is explained in appendix I.

1.5 Key concepts in this report: Direct and indirect effects

This paper will focus on variations in the employment outcomes of graduates and will explore the connections between variations in outcomes and the graduates' socio-biographical backgrounds. Based on earlier research (described later) we expect that *those from a disadvantaged socio-biographical background experience more difficulties and are in a worse position in certain aspects of the graduate labour market than other graduates.*

It is important to make clear at this stage that our project is certainly not assuming that these student groups do not achieve considerable benefit from attending a university, i.e. that they do not improve considerably their labour market prospects. Indeed, earlier research suggests that certain groups can enjoy above average benefits from entering higher education even if their situation in the graduate labour market is worse than that of other graduates. Our assumption is only that the employment situation of graduates from disadvantaged socio-biographical backgrounds might be less successful in certain aspects in comparison to their fellow graduates from more advantaged backgrounds.

We differentiate between two major possible sources of the connection between socio-biographical origin and success in the labour market. (Chart 1 provides a schematic model for this differentiation.) The first are *indirect effects* of socio-biographical background. Indirect effects of background apply when graduates from disadvantaged backgrounds face worse than average opportunities in the labour market because of characteristics of their *educational* careers. Decisive sources of background effects via educational career are that students from disadvantaged socio-biographical backgrounds tend to study in lower-status institutions, and (in some cases) they also tend to study a subject with a relatively low labour market demand. They may also possess below average entry qualifications and obtain lower degree classifications. All of these are factors likely to disadvantage them in the labour market, irrespective of their social background.

We will talk about *direct effects* of background if graduates from disadvantaged socio-biographical backgrounds realise more difficulties in the labour market than their counterparts *even if they had similar educational experiences and followed the same higher education tracks*. (See arrow 3.) If two graduates with different socio-biographical backgrounds but with identical educational characteristics experience different opportunities in the labour market then these differences might be attributed to their social or biographical characteristics.

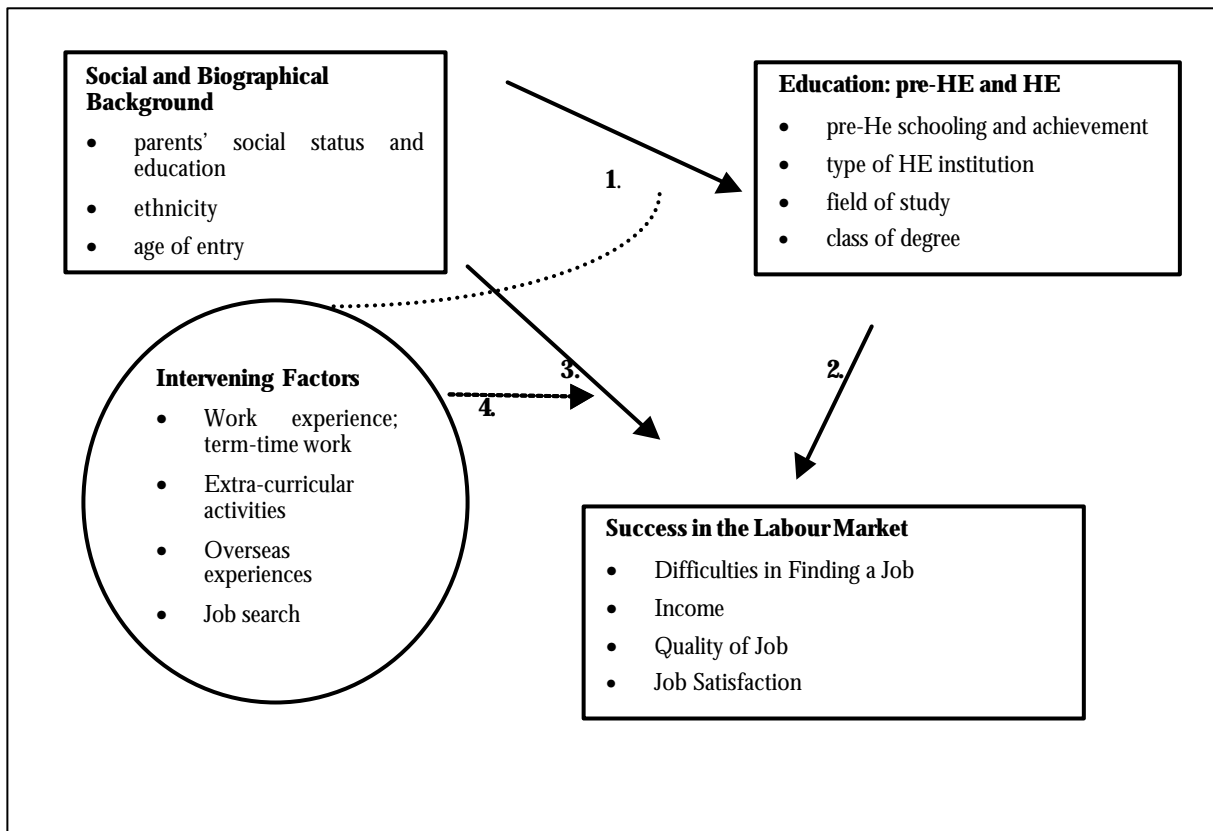
We argue that it is important to separate indirect and direct effects of socio-biographical background. Understanding of *indirect effects* will raise issues which relate to schooling, socialisation and inequalities in access to higher education. Educational inequalities turn into

employment inequalities since employers' recruitment strategies systematically discriminate in favour of graduates with certain educational characteristics such as good A levels, good reputation of higher education institution, subject studied and a good degree classification. (Purcell and Hogarth, 1999.)

When interpreting *direct effects* of socio-biographical background, we are directed towards factors such as *cultural characteristics* acquired in the family, lack of appropriate *social networks and financial assets* as well as various forms of *self-exclusion from certain high-status jobs*. These are factors which can continue to disadvantage graduates after they have left higher education, irrespective of their educational achievements. This project focuses on what can be done to minimise the negative effects of such factors.

Chart 1 identifies a set of factors which are likely to affect *direct* relationships between socio-biographical background and employment. Under the heading "Intervening Factors" we are suggesting mechanisms that can be possible targets of policy interventions aiming to equalise opportunities for various graduate groups. In other words, we are looking at ways of mitigating the *direct* effects of socio-biographical background. The role of work experience, term-time work, extra-curricular activities, overseas experiences, the job search process and also certain characteristics of the employer are investigated.

Chart 1: The effects of social origin on the graduates' labour market situation



1.6 Earlier research

Some research in the UK suggests that people from disadvantaged backgrounds do not realise the same amount of benefit from their higher education as others. Some studies have compared the employment outcomes for graduates from disadvantaged and advantaged backgrounds. In these cases we get a good overview of the employment situation of different groups, but we cannot necessarily tell whether the inequality found can be attributed to *direct* effects of background, to *indirect* effects or to both. In a range of other cases, however, the analysis clearly indicates the existence of direct effects of background. These analyses are typically based on regression

modelling and show the labour market disadvantages of one or the other “non-traditional” student group even when their educational characteristics are the same as “traditional” students.

Brennan and McGeevor (1990) discovered that in the first few months after graduation ethnic minority graduates were much more likely to be unemployed than others, around 13-17% more non-white than white graduates unemployed. Asians and Black Caribbeans also reported more difficulties in finding the ‘right job’ than did their white counterparts. When controls for factors such as subject of study and class of degree were introduced, the differences were even larger. Similarly, a more recent study (Department for Education and Employment, 1999) provides individual data on the likelihood of unemployment in the different graduate groups. These indicate that there is a greater than average risk of unemployment among those whose parents are unemployed themselves, and also in many ethnic minority groups such as Pakistani, Chinese, Bangladeshi and Black-African.

In the same DfEE study researchers found indications for direct background effects. Using multivariate models they showed that graduates who entered higher education at the age of 26-29, and those with parents in partly skilled occupations or with parents unemployed, are more likely than others to work in a non-graduate job 18 months after graduation. Being a mature student can mean an increase of this risk by around 4%, whereas having parents in partly skilled jobs can increase it by over 30%, having no parent in work by almost 80%. Another related finding was that three and a half years after graduation those from lower social classes also tend to earn less. Those with no parent in work earned 10% less, those with unskilled parents 6% less, and those with partly skilled parents 7% less than graduates with parents in managerial and technical positions.

Working on the improvement of performance indicators for higher education, J. Smith et al (2000) found that in the cohort of 1993 university leavers, those from lower social classes are *ceteris paribus* around 2% more likely than others to be unemployed or inactive six months after graduation. Mature students also have a higher risk of unemployment than those who entered higher education before the age of 24. Their analysis also shows that social class affects the likelihood of working in a graduate level occupation six months after graduation. Compared to social class II, graduates from the social class V are around 5-6 percentage points less likely to work in a job considered to be at graduate level.

In a paper aiming to contribute to the debate on fees in higher education, R. Naylor and his colleagues (2001) show that graduates from higher social classes tend to move into occupations with salaries 1-3% higher than those from lower social classes. However, in the case of females other than the 1993 cohort, this finding proves to be unstable.

In a HEFCE report on employment indicators (2001a) the graduate cohort of 1999 was investigated. The models originally constructed for the purposes of providing performance indicators included information on the socio-biographical background of graduates. These suggest that social class, age of entry and ethnicity all have some influence on the likelihood of being employed six months after graduation. The extent of these impacts varies from only 0.2-0.3% differences in the likelihood of unemployment between the different classes to around an 8% additional risk of being unemployed in the case of Pakistani, Bangladeshi and also Chinese graduates.

As this brief summary shows, evidence is appearing in various studies that there are links between differences in socio-biographical background and inequalities in labour market success of graduates. Although the extent of these background-linked variations is generally quite small, the consistency of the findings suggests a need for further exploration.

1.7 The structure of this report

Sections 2 and 3 aim to explore and specify disadvantages in the labour market attributable to differences in the socio-biographical backgrounds of graduates. In Section 2 the focus will be on the effects of *parental education and occupation* and the effects of *students' age*. Using data from a major international graduate employment survey, a range of employment outcomes such as unemployment, salary and job-satisfaction will be looked at and we will explore to what extent these elements of 'labour market success' are associated with being a 'traditional' student in higher education.

In Section 3 a similar analysis will be undertaken but with an emphasis on the effects of *ethnicity*. In this section HESA First Destination Survey data will be used. Being unemployed six months after graduation and not being in a graduate job are applied as indicators of lack of success in the labour market. Members of various ethnic minorities are compared to whites on these indicators.

Section 4 will look at how inequalities explored in the earlier sections might be mitigated. We will analyse the impacts of a range of characteristics of the *higher education experiences*, of the *job search process* and of the *employment situation*. The aim is to explore what factors can make a difference in the labour market situations of the most vulnerable graduate groups. We will also show how these groups differ from the graduate body as a whole in terms of accessibility to the factors having a positive effect on employment. Section 5 draws on interviews with a sample of graduates to provide some examples of the complex ways in which some of the factors discussed in the statistical analyses enter into real lives.

2 The effects of social background and age on the employment of graduates

The majority of the analysis in this section³ is based on data from the UK sub-sample of a major international survey of graduate employment, funded by the European Community (EC) in 1999 (Brennan et al 2001). 16,104 graduates from the 1995 cohort were randomly selected from 27 UK higher education institutions stratified by size and type and by field of study. Members of the sample were contacted by a mailed questionnaire nearly four years after their graduation. The number of responses was 4,340 (representing a response rate of 34%).

For the purposes of the present project, the 2,997 full-time or sandwich course students were selected. On this sub-sample, firstly bivariate analyses were conducted, then a range of linear and logit regression models were estimated. All the analyses presented below were done separately for males and females to allow for gender-specific observable and unobservable effects. For a more detailed description of the sample and also information on the indicators used see Appendix I.

Since the case numbers do not allow us to make a detailed analysis of ethnicity, the focus of this section will be on socio-economic background and age. Comments on ethnicity in this section will only be made when case numbers allow. A more thorough investigation of ethnic differences will be provided in Section 3, based on the HESA First Destination Survey for the same group of graduates. Although the First Destination Survey is more representative regarding the 1995 cohort, it is limited in terms of the data collected.

2.1 Graduates from different backgrounds in the labour market

In this section simple cross-tables and average measures are reported. The aim is to identify the connections between socio-biographical background and employment success, without differentiating between direct and indirect effects. In this way we can tell whether people from disadvantaged backgrounds have more difficulties and less opportunities in the labour market in a statistical rather than explanatory way.

As stated in the introduction, 'employment success' will be measured by several different indicators:

- Likelihood of unemployment;
- Income level;
- Type or "level" of job done defined by objective criteria (as measured by a graduate/non-graduate divide and also by having a managerial or professional job);
- The graduate's subjective perceptions of the level of the job (whether it requires a degree, to what extent his or her skills are utilised...);
- The graduate expectations regarding a promotion and salary-increase; and
- Job-satisfaction.

(A detailed description of the employment success measures used is given in Appendix I.)

If we simply look at the different employment outcomes of graduates from various social/ethnic backgrounds we find a rather complicated and sometimes contradictory picture. (Tables are

³ And also in Section 3.

provided in Appendix II.) Most importantly, different types of “success measures” lead to different conclusions, and different forms of socio-biographical disadvantages show their effects on employment outcomes in different ways.

However, the findings support other studies which indicate that success in the labour market is to some extent associated with the socio-biographical characteristics of the graduates. In particular:

- *Males with less qualified parents and/or with parents in lower level occupations* are more likely to spend some time unemployed in the first 3.5 years after graduation. They also tend to be in a non-managerial and non-professional occupation and characterise their job as one which does not provide opportunities to use their knowledge and skills. Furthermore, they also tend to describe their job as one for which it is not necessary to hold a degree or as one that does not provide attractive career prospects. A promotion or higher income in the coming years are also rarely expected. Graduates from families where parents completed only compulsory education earned on average £1,500 less a year and were also slightly less satisfied with their employment situation.
- Among *females* however, there is a higher than average proportion of graduates with less qualified parents in managerial or professional jobs and also in jobs defined as “graduate”. Nevertheless, members of these groups are less likely to perceive their job as one for which a higher education degree is necessary or to expect an increase in their income. Both parental education and parental occupation tend to have an impact on salaries, resulting in approximately £1,000 annual difference in favour of those from “better backgrounds”. These differences show themselves in a slightly lower level of job-satisfaction as well.
- *Asian males* are more likely to be in a managerial or professional position than white male British graduates, but are less likely to characterise their job as one which provides good opportunities to use relevant knowledge and skills acquired.
- Similarly, compared to white British females, *Asian female graduates* are also more likely to be in a managerial or professional position. They are also more likely to have a graduate job; to characterise their job as a graduate one, to find their job challenging and to describe it as one that provides good opportunities to use possessed skills and knowledge. Also, they tend to have fairly good mid-term career prospects. However, these advantages do not seem to be reflected in their salaries and job-satisfaction.
- *Male graduates* who entered higher education *after the age of 24* are more likely than others to spend some time unemployed in the first 3.5 years after graduation. The subjective measures of job quality suggest clear disadvantages for those starting higher education after the age of 24 and their mid-term career prospects also lag behind those of the younger graduates. Differences in their average income clearly reflect these disadvantages.
- Regarding the likelihood of spending a minimum of six months unemployed, males in the *21-24 years entry age* group also seem to be at a disadvantage. Also, their career prospects stay somewhat behind those of the ‘traditional age’ students as does their average income. However, members of this age group are more likely to be in a graduate job than younger graduates. In terms of subjective level of job, they are in no worse a position (in some respects even better) than the youngsters. They are also slightly more pleased with their jobs than either younger or older graduates.
- As is the case with males, the mid-term career prospects of women decline as we move from the younger towards the older graduates, although the middle age (21-24) group is more similar to the younger one than to the mature group (25+). There is also a gradual decrease in income moving from the youngest towards the oldest group of female graduates.

As the above summary shows, there is considerable variation in the relationship between employment outcomes and socio-biographical characteristics of men and women. Social background tends to have a greater impact on male graduates than on females. Asian females show a range of signs of doing quite well in the labour market, whereas no similar trend is evident among Asian males. Age however tends to have a similar impact on both genders, suggesting a

clear negative effect of entering higher education after the age of 24, but a somewhat ambivalent effect of starting between the age of 21 and 24 compared with younger students.

In the following sections we will investigate the factors behind these background-linked variations in the graduates' employment situation.

2.2 Sources of indirect background effects: socio-biographical differences in educational careers

2.2.1 The importance of institution attended and subject studied

As we have noted, indirect effects of socio-biographical background on graduate employment can come about because of the impact on employment of certain educational factors. Key ones are *institution* attended and *subject* studied.

Differences in the “reputation” of institutions were measured through a 3-category grouping: pre-1992 (‘old’) universities, post-1992 (‘new’) universities, and colleges. As earlier research (e.g. Brennan and McGeevor 1988; Brennan et. al. 1993) and our findings show, in addition to type of institution, subject studied is a fundamental determinant of later employment success.

To reflect the major differences in the relationships between subjects studied and employment, a 4-category grouping of subject fields was created. In this, we differentiated between *vocational science*, *non-vocational science*, *vocational arts* and *non-vocational arts* types of subjects (Table 1). This two-dimensional cut of fields provides a sensible grouping which is intuitively meaningful and is also responsible for a reasonable proportion of the differences in employment outcomes.

Table 1: Categorisation of subjects (case numbers in brackets)

	Vocational	Non-vocational
Science	Medicine, dentistry, veterinary (69) Other subjects allied to medicine (200) Computing (93) Engineering and technology, agriculture (349) Architecture, Building and planning (66)	Biological sciences (214) Physical sciences (207) Mathematical sciences (88)
Arts	Law (127) Business and administrative studies (384) Education (189) Librarianship and information (59)	Social sciences (302) Languages and humanities (417) Arts (179) Combined studies (54)

Most of the employment success measures applied in this study indicate clear differences between graduates from different types of institutions and different fields of studies. (See tables in Appendix III.)

- The findings suggest the relative advantages of old university graduates compared to new university graduates on the one hand, and the relative advantages of new university graduates compared to college graduates on the other. This is in line with other research findings suggesting the leading employers' strong preference towards graduates from more established institutions (Brown and Scase 1994; Purcell and Hogarth 1999).
- *Old university graduates* are more likely to work in a managerial or professional position than either new university or college graduates and they also describe their work as one which requires a degree more often than others. Besides, they find their tasks more challenging and feel they have more opportunities to use their skills and knowledge. *New university graduates* are in an in-between position between old university and college graduates in these respects. On average, pre-1992 university graduates earn about £1,700 more a year than post-1992 graduates, whereas new university graduates earn about £2,400 more than college graduates.

Old university graduates are usually happier with their jobs than new university graduates, who are in turn more satisfied than college graduates.

- In terms of subject differences, fields with the highest labour market value in most respects are *computing* and *medicine*. In addition, *engineering*, *law* and in some areas *architecture*, *mathematical sciences* and *business studies* can also provide above-average employment opportunities. On the other hand the least favourable outcomes – on average – can be expected in areas such as *art*, *humanities and languages* or *biology*.⁴
- Comparing the main categories of subjects, the labour market position of *vocational science* graduates in general proves to be more favourable, while the position of *non-vocational arts* graduates is less favourable than average. The relative positions of *vocational arts* fields and the *non-vocational science* areas are less clear, but they are definitely in-between the two extremes. The cut-off point between the types of fields is placed differently and also the extent of the differences varies across the various measures of employment success.
- Graduates who studied a non-vocational subject were almost twice as likely to be unemployed within the first three and a half years after graduation than those who studied a vocational subject (12% and 7%). Three and a half years after graduation there were 62% of non-vocational arts graduates working in a graduate level position, whereas the respective rate for vocational science graduates was 81%. Vocational subject graduates are more likely than non-vocational graduates to be in jobs which they perceive as graduate level and demanding, and there is a similar (although weaker) divide between science and arts graduates. The income difference between vocational science graduates and non-vocational arts graduates is around £5,600 a year. Non-vocational science graduates and non-vocational arts graduates are between the two extremes, but somewhat closer to the lower end of the scale. In terms of job-satisfaction, however, the only group that is significantly different – in the negative direction – from the others is that of non-vocational arts graduates.

2.2.2 Inequalities in access to institutions and subjects associated with good employment outcomes

In the last section we saw how type of institution and field of study can determine employment success. In this section we look at relationships between social background and higher education studies and examine the social differences in access to institutions and subjects leading to different labour market values. In this way we will be able to show whether the unequal distribution of graduate labour market success between graduates from different social backgrounds (as seen in section 3.1) can be due to what and where people study.

The main conclusions from the analysis presented in the tables below are the following:

- Unequal access to different types of institutions is very likely to contribute significantly to employment inequalities among graduates from different social backgrounds. The proportion of old university graduates is around 40% among those from the least qualified families, whereas over 60% of graduates with both parents holding a degree studied in an old university. Subject choices show no clear tendencies of strengthening inequalities, though graduates from more affluent backgrounds are over-represented in some traditionally high-prestige areas such as law and medicine.⁵ As was shown in several earlier studies, field choices of lower social status, mature and also some ethnic minority groups tend to be more instrumental and are led by more direct employment expectations than those of other students (e.g. Connor and Dewson 2001).
- Type of institution can be a factor leading to relative labour market disadvantage for students over the traditional entry age, since younger students have much better access to pre-1992 universities. For example, more than half of the “traditional age” female graduates studied in pre-1992 universities, whereas only one third of the older ones did so. However, older students tend to choose fields with more direct employment relevance, i.e. better than average labour market prospects. The only high status field they are under-represented in is medicine.

⁴ Respective tables are not presented in this report but are available from CHERL.

⁵ The finer HESA statistics show large differences by social class in the number of entrants to medicine, dentistry and veterinary (HEFCE 2001).

Unequal access to different parts of the higher education system was discussed in the Dearing Report in 1997 and was analysed further in later studies (e.g. Forsyth and Furlong 2000; Connor et al 2001). What is important to emphasise here is that disadvantaged student backgrounds are not simply associated with “higher education of lower prestige” but through this with “degrees of lower labour market value”.

Table 2: Type of higher education institution attended by socio-biographical background (%)

	Males			Females			All		
	Old uni.	New uni.	College	Old uni.	New uni.	College	Old uni.	New uni.	College
Parents' education									
Both compulsory or less (437; 550)	42	49	9	39	42	19	40	45	15
At least one secondary (307; 412)	47	48	6	47	42	11	47	44	9
One higher education degree (275; 431)	50	40	11	48	37	14	49	38	13
Both higher education degree (208; 319)	64	23	14	61	27	12	62	25	13
Missing (18; 46)	56	39	6	24	52	24	33	48	19
Parents' occupation									
Clerical or manual job (359; 472)	42	51	6	41	39	21	41	44	15
Professional or managerial job (737; 1076)	51	38	11	51	37	13	51	37	12
Missing (147; 208)	50	42	8	39	47	14	43	45	12
Ethnicity									
Asian (68; 66)	37	56	7	53	32	15	45	44	11
White British (1041; 1485)	48	44	9	45	39	16	46	41	13
White other (110; 136)	66	21	13	69	26	7	67	24	10
Any other ethnicity (9; 29)	67	22	11	14	69	17	28	54	18
Missing (14; 41)	43	57	0	37	46	17	39	47	14
Age of entry into HE									
Below 21 (814; 1230)	55	38	7	53	35	13	54	36	10
21 - 24 years (214; 210)	25	58	16	31	48	21	28	53	19
25 – years (175; 253)	44	44	12	35	47	18	39	46	16
Missing (41; 65)	66	27	7	26	43	31	42	36	22
All (1244; 1758)	49	42	9	47	38	15	48	40	13

Table 3: Subject studied by socio-biographical background (%)

VA= Vocational Arts; VS= Vocational Science; NA= Non-vocational Arts; NS= Non-vocational Science

	Males				Females				All			
	VA	VS	NA	NS	VA	VS	NA	NS	VA	VS	NA	NS
Parents' education												
Both compulsory or less (436; 550)	25	32	29	14	28	15	43	14	27	23	37	14
At least one secondary (306; 411)	22	35	31	13	24	16	45	16	23	24	39	15
One higher education degree (275; 430)	22	35	27	17	19	20	45	16	20	26	38	16
Both higher education degree (208;319)	16	33	35	16	20	20	47	13	18	25	42	14
Missing (18; 46)	11	22	50	17	20	20	48	13	17	20	47	16
Parents' occupation												
Clerical or manual job (359; 474)	26	34	25	16	25	16	43	15	25	24	36	16
Professional or managerial job (737; 1075)	19	35	31	15	22	18	46	15	21	25	40	15
Missing (147; 208)	25	27	37	11	24	18	44	15	24	22	41	13
Ethnicity												
Asian (68; 65)	46	40	7	7	35	23	34	8	41	32	20	8
White British (1042; 1484)	21	32	31	16	24	17	45	15	22	23	39	15
White other (110; 135)	15	36	40	9	19	22	43	17	17	28	42	13
Any other ethnicity (10; 30)	20	80	0	0	23	17	57	3	23	31	44	3
Missing (15; 42)	27	33	13	27	2	26	60	12	9	28	47	16
Age of entry into HE												
Below 21 (814; 1229)	17	34	33	16	20	17	46	17	19	24	41	16
21 - 24 years (214; 209)	32	35	20	13	35	21	37	7	34	28	28	10
25 - years (175; 253)	30	32	28	10	27	16	45	13	28	22	38	12
Missing (42; 64)	21	21	36	21	20	17	53	9	21	19	46	14
All (1243; 1757)	22	33	30	15	23	18	45	15	23	24	39	15

2.2.3 Class of degree

Academic achievement is also an important factor associated with employment success (as shown by CSU et al, 1999; Naylor et al 2001; Smith et al 2000 etc), and therefore it is crucial to investigate how it correlates with social background characteristics. Our data show that there is a slight tendency for graduates with better qualified parents to hold a first class honours degree more often than others. However, graduates with less educated parents are more likely to hold an upper second class degree than graduates from better qualified families. Consequently a largely similar proportion of these groups held a 'good' degree.

Both Asian males and females show a below-average level of academic achievement. This finding is in line with the HESA data and will be investigated further in the following section.

Age of entry into higher education does not seem to have any significant association with the class of degree earned.

Table 4: Class of degree by socio-biographical background (%)

	Males				Females				All			
	First class honours	Upper second class honours	Lower/undivided second	Pass or similar	First class honours	Upper second class honours	Lower/undivided second	Pass or similar	First class honours	Upper second class honours	Lower/undivided second	Pass or similar
Parents' education												
Both parents compulsory (436, 551)	8	48	35	10	6	57	34	3	6	53	35	6
At least one parent completed secondary (307, 412)	8	53	27	12	8	51	33	8	8	52	31	10
One parent graduated (274, 431)	10	40	35	15	9	48	37	7	9	45	36	10
Both parents graduated (208, 318)	14	42	30	14	11	50	32	8	12	47	31	10
Parents' education unknown (18, 46)	11	33	39	17	0	56	33	11	3	49	35	13
Parents' occupation												
Clerical or manual (360, 473)	11	46	34	10	6	54	35	6	8	50	34	8
Professional or managerial (737, 1076)	10	44	32	14	8	51	34	6	9	48	33	10
Other or missing (147, 208)	4	57	30	9	6	51	36	6	5	54	34	7
Ethnicity												
Asian (68, 65)	4	35	32	30	4	26	61	9	4	31	46	20
White British (1042, 1485)	10	46	33	12	8	52	34	6	9	50	33	8
White others (110, 136)	11	51	28	10	10	55	28	7	11	53	28	8
Other ethnicity (9, 30)	0	43	29	29	3	48	38	10	3	49	35	14
Ethnicity unknown (15, 42)	8	31	46	15	5	62	26	8	6	55	31	8
Age at Entry into HE												
Under 21 years (814, 1230)	10	47	33	10	7	51	36	6	8	49	35	8
21-24 years (214, 210)	6	45	29	21	9	48	30	13	8	46	29	17
25 years and older (174, 253)	9	46	31	14	13	54	30	4	11	51	30	8
Entry age unknown (41, 64)	17	40	31	11	3	66	23	8	8	56	27	9
All (1243, 1757)	10	46	32	12	8	52	34	6	8	49	34	9

2.2.4 Entry qualification

Educational achievements before higher education are also likely to have an impact on labour market opportunities (see e.g. DfEE 1999; Naylor et al mimeo; Smith et al 2000 etc). Graduates from the 'traditional' student groups enter higher education with a level 3 qualification significantly more often than other graduates. This holds for all the background factors examined such as parents' social position, ethnicity and entry age. This certainly should not be a problem in itself, since many of the "access" policies aim to improve the accessibility of higher education for those without a school-type qualification (see e.g. Jary 2001). However, we will see that type of entry qualification often has a separate negative effect on labour market opportunities. From this it follows that the negative impacts of these pre-entry characteristics are often disproportionately at work among graduates from disadvantaged backgrounds.

Respondents to the graduate survey rated their entry qualifications on a 3-point scale, with labels "high", "medium" or "low". According to this broad and subjective categorisation, graduates from higher status families, especially from families where both parents held a degree, were somewhat more likely to enter higher education with good entry grades. The ethnic differences are not as clear here, and they also vary by gender. (See following section for details.) Among males, those who entered higher education at a later age are less likely to rate their grades as "high" than younger students, but this is not the case among females.

Table 5: Type of entry qualification and entry grades by socio-biographical background (%)

	Males		Females		All	
	"School-type" qualification	Entry grade "high"	"School-type" qualification	Entry grade "high"	"School-type" qualification	Entry grade "high"
Parents' education						
Both parents compulsory (436, 551)	74	26	81	31	78	29
At least one parent completed secondary (307, 412)	82	30	89	29	86	29
One parent graduated (274, 431)	84	29	90	28	87	28
Both parents graduated (208, 318)	89	41	91	45	90	43
Parents' education unknown (18, 46)	67	29	83	4	77	11
Parents' occupation						
Clerical or manual (360, 473)	78	27	84	28	82	28
Professional or managerial (737, 1076)	86	32	91	35	89	33
Other or missing (147, 208)	59	28	71	26	66	27
Ethnicity						
Asian (68, 65)	64	26	75	18	70	23
White British (1042, 1485)	82	29	89	32	86	31
White others (110, 136)	77	36	84	42	81	39
Other ethnicity (9, 30)	57	50	79	10	70	19
Ethnicity unknown (15, 42)	79	27	87	13	83	17
Age at Entry into HE						
Under 21 years (814, 1230)	92	32	95	33	94	33
21-24 years (214, 210)	63	27	70	28	66	28
25 years and older (174, 253)	47	23	59	33	54	33
Entry age unknown (41, 64)	78	28	81	16	81	16
All (1243, 1757)	81	30	87	32	84	32

2.2.5 Other possible sources of disadvantage: interconnections of disadvantages in social background

Accumulation of disadvantages in the social and demographic background can increase the labour market difficulties of certain groups of graduates. Students from lower socio-economic backgrounds studying as mature students are very likely to face difficulties due both to their age and to their social origins.

As pointed out in the Dearing Report, "individuals from those groups which have not, traditionally participated in higher education at 18 are increasingly doing so at later ages" (Dearing Report 1997, Section 7.14). Although there is some deviation from this pattern, consistently with previous findings our data suggest that graduates from lower socio-economic backgrounds are usually somewhat over-represented among those who started their studies after the traditional entry age. The differences are not notable in the 22-24 year old group, since quite a high proportion of students from middle class families start their studies at these ages. (This is in line with the findings of other studies e.g. Egerton 2001.) Nevertheless it is very unusual for them to enter higher education after the age of 24, whereas about one fifth of graduates with parents having only completed compulsory education start their studies in their late twenties or after. As we will see later on, in some respects these students are suffering from double disadvantages when entering the labour market.

Asian students tend to start their studies at later ages than their white British counterparts. However, in the case of women it usually only means a delay of a couple of years, while Asian men are strongly over-represented among the oldest age groups.⁶ Our data suggest that it is more common for Asian males with less qualified parents to enter higher education than it is for white males from similar origins. However, from earlier studies (Connor and Dewson 2000) we know that social class differences across ethnic groups in higher education show a fairly complicated pattern. They mirror not only the social class differences between ethnic groups in society but also the specific relationships towards education of the different ethnic groups.

⁶ HESA data also indicate that there are hardly any ethnic minorities whose members are as likely as whites to enter higher education before the age of 21. More details on the age of students from ethnic minorities is given in the following section.

Table 6: Age of entry into higher education by socio-biographical background (%)

	Males				Females				All			
	-20	21-24	25 -	Unknown	-20	21-24	25 -	Unknown	-20	21-24	25 -	Unknown
Parents' education												
Both parents compulsory (436, 551)	61	14	20	2	62	14	21	3	62	15	21	2
At least one parent completed secondary (307, 412)	72	17	13	2	74	9	15	2	73	11	14	2
One parent graduated (274, 431)	64	21	12	3	75	13	8	4	71	16	10	4
Both parents graduated (208, 318)	72	18	4	6	76	13	9	3	75	15	7	4
Parents' education unknown (18, 46)	26	5	26	42	39	2	26	33	34	3	27	36
Parents' occupation												
Clerical or manual (360, 473)	64	16	17	3	71	13	17	3	68	14	15	3
Professional or managerial (737, 1076)	73	16	9	2	75	12	9	4	74	14	9	3
Other or missing (147, 208)	32	25	34	10	42	12	34	5	38	17	38	7
Ethnicity												
Asian (68, 65)	40	38	21	2	61	27	8	5	50	33	14	3
White British (1042, 1485)	69	15	14	2	72	11	14	3	71	13	14	2
White others (110, 136)	52	26	12	11	66	14	14	6	59	19	13	8
Other ethnicity (9, 30)	44	0	56	0	52	0	45	3	51	0	46	3
Ethnicity unknown (15, 42)	66	17	14	3	70	12	14	4	68	5	7	41
All (1243, 1757)	66	17	14	3	70	12	14	4	68	14	14	4

2.3 The effects of socio-biographical differences in the labour market when educational factors are equal

In order to establish the importance of the different factors in determining graduates' labour market success, a range of (linear and logit) regression analyses were conducted. In this way the separate impacts of the various background and educational factors introduced in the earlier sections can be identified and compared. Parameters for the models are presented in Appendix IV.

A technical note

Depending on the type of the outcome measure, two different kinds of models were estimated. For binary success measures, i.e. for those with two possible values (e.g. has been unemployed/has not been unemployed; graduate job/non-graduate job...) logit regressions were run. In these models the "odds" of being in one of the two possible categories are estimated. The odds for the baseline group is given by the "constant" of the regression. The "exponential (B)"-s in the tables can be interpreted as multipliers of the baseline odds getting into the corresponding category (e.g. being unemployed, having a graduate level job...) when compared to the baseline group.

For continuous variables linear regression models were estimated. Outcomes like the complex index (principal components) of the subjective level of job, middle-term career prospects and also salary and job-satisfaction are measured on continuous scales. It is sensible to ask the question therefore, how much change in these measures will result from one unit change of an explanatory variable. The "Unstandardised B Coefficients" presented in the tables can be interpreted as the change in the outcome measure when an explanatory factor is increased by one unit.

It is important to bear in mind that both in linear and logit regression models the effects of certain variables are separated from the others. The effect of parental background, for example, will not contain the indirect effect of parental background through the entry qualification. Instead, it will appear in the parameter of the qualification held, compounded with other effects of that variable. Indeed, this is the power of the regression technique.

The key findings from these models are the following.

- The major part of the labour market inequalities across social background and entry age can be attributed to educational factors discussed in the earlier sections. In other words, when pre-entry qualification, type of institution, subject studied and class of degree are equal, background characteristics have a limited impact on employment.
- Nevertheless, the models also show that **direct impacts of background do exist since the parameters that show the impacts of the various socio-biographical variables are statistically significant in more than one case.** The existence of these significant direct effects suggests that selection related to socio-biographical factors does not finish at graduation, i.e. at the end of the educational career but continues in the early employment years.

In the following we first consider how the different educational characteristics influence the labour market circumstances of graduates when other factors are controlled for. We will see that most of these effects are systematically working against those from disadvantaged backgrounds, i.e. contribute to the *indirect effects* of the background. After this we will examine the direct impacts of socio-biographical characteristics.

Direct effects

- Graduating in itself will not fully compensate for not holding a school-type entry qualification. Graduates will still suffer from the negative consequences of their prior education after 3 to 4 years in the labour market. The only exceptions from this are male graduates who entered the university with a **vocational or professional** qualification. They are more likely to be in a graduate job than those who held a traditional, school-type qualification. However, the same circumstance can increase the risk of unemployment and can also be associated with a relatively low salary among females. Similarly, women with **any other type of pre-HE qualification** (access course, entry exam etc.) are more likely to feel overqualified for their jobs than their counterparts with A levels. A similar negative effect among males with any other type of entry qualification is that of a reduced likeliness of getting a managerial or professional job. Problems faced by men graduates who held **no qualification** at all when starting university were even more notable.
- Those who rated their **entry grades** as “medium” or “low” also experienced disadvantages irrespective of what and where they studied or their socio-biographical backgrounds. Male graduates with such school achievements are less likely to have a managerial or professional occupation; less likely to describe their job as a graduate-level one; less likely to call it demanding and challenging; and also have a lower salary than those with better entry grades. Females with low entry grades have a worse opinion about the level of their job, have poorer career prospects, earn less and are less satisfied with their employment situation than those with good entry grades.
- **Males** who studied in a **college** rather than in an old university experience extra difficulties in the labour market in terms of periods of unemployment, probability of getting a graduate job (both according to the objective and the subjective criteria), and also in salary and job-satisfaction. The only statistically significant but rather important disadvantage deriving from studying in a **post-1992 institution** rather than in an **old university** is that of being less satisfied with the job. Disadvantages from studying in a **college** rather than in an **established university** for **females** are significant in terms of level of job and also job-satisfaction. However, there are several criteria regarding which colleges seem to provide a better start for women than the old universities do. Female college graduates not only have a somewhat lower risk of unemployment but are also more likely to expect positive changes in their career relatively shortly. There are a number of notable differences between post-1992 and pre-1992 university graduates as well. Members of the former group have a significantly lower salary and are also less likely to be in a job that requires a degree. However, they are also less likely to experience a longer period of unemployment in the first couple of years after graduation.

- **Class of degree** earned also makes a considerable difference in the employment opportunities of graduates. The findings suggest that for females extra benefits (higher level jobs in subjective terms, higher level jobs in objective terms, higher income and job-satisfaction) are only available for those with a first class degree. At the same time there is only a very small difference evident between holders of upper second class or lower degrees. In the case of males however, there is very little extra benefit for a first class degree (only level of job – subjective measure), but a range of differences (level of job – subjective measure; most appropriate level of education, career-prospects, income, likelihood of unemployment and also satisfaction) can be found between those with an upper second class honours degree and those with lower class degrees.
- **Subject studied** also has a significant impact on all of the outcome measures applied here. For example, compared to *law* graduates, when other factors are equal, male graduates in art, languages and humanities, combined studies, social sciences and also in biology or physical sciences face a range of extra difficulties. At the same time, graduates in computing do better than law graduates in many respects. For females, field of study effects are somewhat more contradictory, showing relative advantages in one case but relative disadvantages in the other. Nevertheless, female graduates in computing, medicine and also in other subjects allied to medicine do in some respects better than law graduates, whereas those in combined fields are inevitably in a weaker position.

When all of the above educational characteristics and other background factors are equal, the differences that remain can be attributed purely to the **direct effects of socio-biographical factors**.

- In the case of **males, parental education** has a significant impact on **income**. *Ceteris paribus*, graduates who came from a family where parents completed only compulsory education or secondary school earn on average 9-10% less a year than graduates with both parents having a degree. At the same time they were also slightly **less satisfied** with their job (-0.173 on a 5-point scale) and they also rated themselves somewhat lower on the combined **subjective measure of job level**. Differences in job satisfaction suggest that it is not (purely) lower ambitions and job values that makes graduates from less educated families end up in lower level or less well paid jobs. If this was the case their aspirations could be still met and they would be equally satisfied as their counterparts from more educated backgrounds.
- Among **females**, the clearest disadvantage of those with less qualified parents is apparent when **perceived level of job** is looked at. Controlling for the other factors, first-generation graduates are only half as likely to feel that their qualification was necessary for their job than graduates with two graduate parents. When an objective measure (the Warwick occupation-categorisation) was used, only those with parents with secondary education proved less likely to have a graduate job than those with two graduate parents. This “moderately disadvantaged” group however is less likely to spend more than 5 months unemployed in their first couple of years in the labour market and also reported relatively good career prospects compared to those from more educated families.
- Our findings regarding ethnicity differences are not very systematic. **Asian males** are more likely to remain unemployed for a period of at least six months than those belonging to the ethnic majority but no other disadvantage is apparent when other factors are controlled for. **Black males** however seem to be in a relatively good position according to their own view about the level of job they are doing. **Non UK white males** are less likely than UK graduates to say that their job requires a degree.
- **Asian females** have clear advantages over their white British counterparts in terms of level of job, both according to the objective categorisation of occupations and to their subjective rating of it. **Black** female graduates are less happy with their jobs compared with members of the ethnic majority.
- In the case of **males**, an **age of entry** only a couple of years beyond the traditional one can increase the risk of being unemployed to a significant extent. At the same time however, members of this age group can also enjoy a range of advantages, such as higher income, greater likelihood of being in a job for which they don't feel overqualified and more

satisfaction with the work compared to the younger ones. On the other hand, entering higher education after the age of 24 has only negative effects, namely an increased risk of unemployment, poor career-prospects and a significantly smaller chance of being in a graduate job three and a half years after graduation compared with other graduates.

- **Age of entry** into higher education seems to have a similar impact among **females**. In their case too, entering HE between the ages of 21-24 has a positive effect, but only in terms of subjective feelings about the level of job. Starting the studies even later however has a negative impact on the likelihood of being in a graduate job, their salary-level and also on job-satisfaction. Both older age groups can expect less improvement in their employment positions in the medium term than younger graduates. The only moderate satisfaction level of the more mature group suggests that their lower salaries, levels of job etc cannot simply be attributed to more moderate ambitions but also reflect failures in fulfilling their job expectations.

2.4 How the effects of socio-biographical factors are mediated by field of study and type of institution

In the above analysis it was implicitly assumed that social background has an identical (direct) effect on employment success wherever and whatever the graduate studied. However, there are several reasons to expect background effects to act differently in different contexts. In this section we will look at different types of subjects and institutions separately.

2.4.1 Field of study and the impact of social-biographical background

It is very likely that the characteristics of the graduates' background have different levels of importance across the different areas of graduate employment, and that these differences are related to different types of subjects. The relationship between higher education and the labour market differs remarkably between various subject areas (Brennan and McGeevor, 1988; Silver and Brennan, 1988). In vocational fields there is a fairly strong and direct connection between higher education studies and the labour market. Field of study rather precisely determines the type of jobs the majority of the graduates will fill⁷. Professional knowledge or excellence (evidenced by academic achievements, earlier work experience) plays an important role in the recruitment process. At the same time they might also leave less room for soft criteria, among which discrimination and socially coded, cultural elements of "personality" can play a decisive role and strengthen the impact of socio-biographical background.

Table 13 indicates the proportion of employed graduates in our sample describing several factors as "very important" in their successful application for their current job. The main message here is that vocational graduates overall, and especially vocational science graduates, are more likely to encounter objective, more technical criteria such as field of study, class of degree or work experience than other graduates. At the same time vocational science graduates are less likely to feel that "personality" played a decisive role in their employment process. Although "personality" seems to be quite an important factor in the selection process in all types of subjects, its importance in non-vocational areas is also significantly ahead of other criteria. Among non-vocational arts graduates "personality" was described as the most important criteria in 45% of the cases, whereas the second most frequent criteria ("field of study") was only 20%.

⁷ In our sample 51% of vocational field graduates reported that "field of study is the only possible or far the best field" for job. Among non-vocational graduates the respective figure was only 24%.

Table 7: Factors rated as “very important” in being recruited for the first job after graduation (%) (Multiple choice answers)

	Field of study	Class of degree	Practical work experience during study	Personality	Other ⁸
Vocational arts (643)	40	17	24	47	6
Vocational science (671)	54	16	30	37	7
Non-vocational arts (1019)	20	10	16	45	9
Non-vocational science (375)	33	18	18	40	8
Total (2708)	35	14	22	43	8

In addition to the more loosely defined employment criteria in the non-vocational areas, we can also expect that in *arts* fields there is a higher emphasis on the verbal and linguistic skills of candidates than in the more instrumental science areas. Theories dealing with social class specific socialisation and cultural divisions between social groups (Bernstein 1977; Bourdieu 1973, 1986; Bourdieu and Passeron 1977) suggest that linguistic competency is a segment of personality most closely linked to one’s social and cultural origin and also the most rigid one. Verbal and written communication skills, strongly linked to cultural backgrounds are key factors in the recruitment for many high-level professional and managerial jobs (Brown and Scase 1994 and Purcell and Hogarth 1999). On the basis of these we might expect employment opportunities of graduates in arts subjects to be more strongly influenced by their social background than those of science graduates.

On the basis of the connections presented above we expect that in non-vocational (especially non-vocational arts) type fields of studies socio-biographical background has a greater impact on employment success than it has in vocational (especially in vocational science) areas.

To test this hypothesis, slightly different variations of the previous models were estimated and they were augmented by interaction effects. At first, the above main effect models were re-estimated introducing the 4-category subject measure rather than the fine one used earlier.⁹ Secondly, two-way interactions between parental education and type of field on the one hand and age of entry and type of field on the other were introduced. Three of the above models were revised in this way namely the models for (1) the level of job as measured by the IER study; (2) whether the graduate feels that the job requires a degree and (3) income. Again, separate models for men and women were estimated. Parameters of the models are presented in Appendix V.

By adding the described interaction effects to the baseline models, we get a statistically significant increase in the explanatory strength when income and also when the likelihood of being in a graduate job are estimated. (See tables in Appendix V) In other words, it is relevant and also sensible to separate the four different subject-areas, since graduates’ salary and the level of their jobs is affected by their parental backgrounds in different ways and to different extents depending on what they studied.

If other factors are equal, males from less qualified backgrounds who studied a *vocational arts* subject receive an income one third lower than those with two graduate parents in similar fields. However, there is no similar inequality observable in any other type of subject. On the contrary, in *vocational science* areas male graduates from lowly qualified families can even do better (in terms of likelihood of doing a graduate job) than those from more educated backgrounds. Among females, no similar systematic tendency was found.

⁸ “Other”= Other than: field of study; main subject / specialisation; class of degree; practical/work experience acquired during the course of study; practical/work experience acquired prior to the course of study; reputation of college/university; experience abroad; foreign language proficiency; computer skills; recommendations/references from third persons; personality.

⁹ The purpose of this change was to decrease the number of the explanatory variables before increasing it substantially by the interaction effects added.

In the case of males these results seem to support our hypotheses regarding the differences between vocational and non-vocational fields on the one hand, and arts and science fields on the other at least when income earned and level of job (in objective terms) are concerned. There is however no similar field difference observable in the probabilities of being in a job one feels overqualified for.

For a deeper understanding of these findings, a re-testing on a separate dataset with a greater sample-size would be desirable. Ideally, a finer categorisation of fields of study should be used. This would enable us to link income and other inequalities very precisely to certain subjects of studies, very likely to some (or maybe all) of the fields grouped into the vocational arts types (in the case of males). However, to get a real insight into the mechanisms operating here and to test the validity of the possible explanations for these subject-specific differences presented earlier, qualitative investigations among graduates and their employers will be needed.

A better specification of age effects within the various subject types could be achieved in relation to the likelihood of getting a graduate level job (rather than a graduate-track or a non-graduate one). Findings by gender are remarkably different. For males who start higher education between the age of 21 and 24, studying an arts field rather than a science one seems to be a more beneficial option than it is for any other age group. Regardless of whether it is a vocational or a non-vocational field, they are more likely to get a graduate level job in arts areas than others. They clearly do not have any similar advantage if they choose a vocational science subject, and are not likely to do so if they go into a non-vocational science field (although the respective parameter is not statistically significant here).

In case of women, however, those who start their studies after the traditional age and choose a *non-vocational arts* field seem to get a lower than average chance to find a graduate level job than their younger counterparts. No similar disadvantage attributable to their age is apparent in any other subject area.

2.4.2 Type of institution and the impact of socio-biographical background

The social, ethnic and age profiles of students differ substantially between institutions. Where certain sub-groups exist in sizeable numbers within a particular institution, their needs and expectations will tend to become 'normalised' within institutional cultures, policies and procedures. Students with disadvantaged background characteristics exist in greater numbers in new universities and colleges and it is these institutions which are generally more used, and probably more concerned, to meet their particular needs. We thus suggest a tentative hypothesis that the pre-1992 universities have less capacity (and perhaps less intention) to tackle the problems of socially disadvantaged members among their student body. Also we expect that the fact that they are not "exceptional" helps "non-traditional" students to fit into the new university environment more easily and so to benefit from the opportunities the institution provides (personal contacts, social skills etc.) more fully.

In consequence, we expect graduates from disadvantaged socio-biographical backgrounds who went to old universities to be more likely than graduates who went to other institutions to continue to carry their disadvantages after graduation.

Findings in relation to the type of institution indicate that age of entry and to some extent parental education influence labour market opportunities in substantially different ways in the various types of institutions. Most – but not all – of the data suggest that the probability of experiencing further disadvantages due to some background factors is higher for old university graduates than for others. Older graduates from a new university are often in a better job than their younger counterparts, whereas mature students from old universities experience no advantages due to their age at all, or even have to face disadvantages. The situation of college graduates shows a somewhat contradictory picture. Parental education also seems to affect

graduates' from old universities more intensively than it does graduates from other types of institutions.

Male graduates who started their studies after the age of 21 and studied in an old university have a notably lower chance to work in a graduate job – both according to the objective and the subjective criteria – three and a half years after graduation than the traditional age graduates. This is not at all the case however among new university graduates. In fact, in new universities as well as in colleges the 21-24 year old starting group seem to do even better than their younger counterparts concerning their level of job. In colleges however, the oldest group seems to be disadvantaged in terms of the objective job level measure as well as in income level. The findings are contradictory here though, since on the basis of their subjective judgements regarding the level of the job, older graduates from colleges appear to be in a better position than the younger ones. After having studied in an *old university*, female graduates who had entered university between the age of 21 and 24 have a worse chance of getting a graduate job than their traditional age counterparts. Older graduates from old universities face similar disadvantages in terms of the subjective level of job. Again, among those who had studied in a new university or a college no similar negative age effect is present. Older (25+) students in such institutions are certainly not in a worse position in the labour market than youngsters are. Those who studied in a college can even be ahead of the under 21 entry age group. Younger mature (21-24) graduates from the post-1992 universities and colleges also seem to have at least as good opportunities in the labour market as school leavers (under 21).

For traditional age group students, studying in a pre-1992 university will usually ensure some sort of additional employment advantage. But do mature students obtain any extra benefits in the labour market at all from studying in an old university rather than in a new university or a college? The findings here suggest that they do not.

The employment situation of male graduates who started their studies after the age of 24 will be very similar irrespective of the type of institution they attended. Those entering higher education between the age of 20 and 24 can even experience advantages from not going into an old university but studying in an ex-polytechnic instead. Women who studied as mature students experienced lower benefits from studying in an old university than younger graduates, though still experienced some benefits, especially in terms of getting a graduate job.

Parental background differences were more limited but still interesting here. *First generation male graduates* from colleges seem to have a lower chance of getting a graduate job and also earn less than their counterparts from more qualified families in the same type of institutions. This is however the only inequality of this type detected among males.

The case of females is remarkably different. *First generation female graduates* from both kinds of university have *ceteris paribus* a 60% lower chance of working in a job they consider as a graduate one than graduates with two graduate parents. In terms of the more objective level of job measures, only those from the least educated parental backgrounds have a relatively low chance of being in a graduate job and only if they studied in an old university.

For males from low educated parental backgrounds going to an old university is a more beneficial option than it is for males from any other parental background. For females from such backgrounds, however, the advantages from going to an established university are more limited. The likelihood they will be overqualified for their jobs is very similar wherever they study, i.e. going to a pre-1992 university does not improve their opportunities in this sense as it does for other student groups.

2.5 Summary of this section

In this section we differentiated between two possible sources of the inequalities that graduates from disadvantaged backgrounds face in the labour market. *Indirect effects* of background occurred when graduates from disadvantaged backgrounds had worse than average experiences in the labour market because of features of their *educational* experiences and achievements. Our analysis shows that a large proportion of the additional employment difficulties faced by first generation graduates and those who entered higher education after the age of 24¹⁰ can be related back to factors such as

- Their under-representation in the pre-1992 universities;
- Their greater likelihood of holding a vocational or other type of entry qualification;
- Their tendency to have poorer entry qualifications than others.

All these factors are associated with worse than average employment opportunities in themselves, irrespective of any other characteristics of the graduate. Selection of students from disadvantaged socio-biographical backgrounds into these kinds of “disadvantaged” educational tracks is taking place throughout the educational process.

The second way in which graduates from disadvantaged backgrounds can experience disadvantages in the labour market is through *direct effects*. Direct effects of background occur when graduates experience more difficulties in the labour market than their counterparts from more favourable backgrounds even if they have had similar educational experiences and have followed the same higher education tracks. Although the overall magnitude of direct effects was considerably less than that of indirect effects, our data suggest that they are still important and compound the effects of disadvantages at earlier stages of education.

In the case of **males**

- Graduates who came from a family where **parents completed compulsory education only** earned on average 8% less a year, are slightly less satisfied with their job (by -0.173 points on a 5-point scale) and rated somewhat lower on the combined subjective measure of job level than graduates with both parents having a degree;
- **Asians** are more likely to remain unemployed after graduation for a period of at least six months than those belonging to the ethnic majority;
- **Entering higher education at the age of 21-24** can increase the risk of being unemployed to a significant extent. (However, members of this age group can even enjoy a range of advantages, such as higher income, greater likelihood of being in a graduate level job and more satisfaction with the work compared to the younger ones);
- Those who **entered** higher education **after the age of 24** have an increased risk of unemployment, poorer career prospects and even have a significantly smaller chance of being in a graduate job three and a half years after graduation than traditional age graduates.

In the case of **females**

- **First-generation graduates** are only half as likely to feel that their qualification was necessary for their job than graduates with two graduate parents;
- **Asians** have clear advantages over their white British counterparts in terms of level of job, both according to the objective categorisation of occupations and their subjective rating of it;
- **Black** female graduates are less happy with their jobs than members of the ethnic majority;

¹⁰ Due to the low case numbers, no similar conclusion can be drawn in relation to most ethnic minorities. The only relatively homogeneous group we could look at in detail is that of Asians. Asian females however in most respects tend to be in an even better position than white British graduates.

- Those who entered higher education at the **age of 21-24** consider their job as a graduate level one more often but expect less improvement in their employment position than younger graduates with otherwise similar characteristics;
- Those who entered higher education **after the age of 24** are less satisfied with their job, are less likely to be in a graduate-level job and also have worse career prospects than younger graduates.

After exploring some general patterns of inequality we investigated whether socio-biographical background has a similar impact on employment outcomes in all subject areas and in the different types of institutions. We aimed to identify subject areas and institution types where students from disadvantaged backgrounds are especially vulnerable, i.e. they are threatened by additional difficulties in the labour market than if they studied another subject and/or in a different kind of institution.

With regard to subject of study we found that for those with low qualified parents, studying an “arts” field rather than a “science” field is associated with extra disadvantages in the labour market, attributable only to their backgrounds. Males who studied a *vocational arts* subject receive an income of around one third lower than those with two graduate parents in similar fields. There is no similar inequality observable in other types of subject. On the contrary, in *vocational science* areas male graduates from lowly qualified families can even do better (in terms of likelihood of doing a graduate job) than those from more educated backgrounds. Among females, no similar systematic tendency was found.

A similar tendency was found in relation to the age of entry to higher education of the graduates but in the case of females only. Among them, starting university after the age of 20 seems to reduce the chance of getting a graduate job – if they choose a *non-vocational arts* subject to study. For males however, a different picture emerged, showing a starting age of 21-24 years being associated with exceptionally good chances of getting a graduate job – but only in *arts* areas.

With regard to the type of institution the age differences proved to be more important than social background differences. They suggest that entering higher education later than the traditional age leads to relatively low salary and/or a greater likelihood of getting a non-graduate job only among pre-1992 university graduates. Ex-mature students from a new university can even experience extra advantages compared to their younger counterparts, whereas there was a somewhat contradictory picture found among college graduates.

A major conclusion here is that compared with traditional age students, mature students have many fewer benefits from studying in an old university than traditional age students. The employment situation of male graduates who started their studies after the age of 24 will be very similar irrespective of the type of institution attended. Students entering higher education between the age of 20 and 24 can even experience advantages from not attending an old university. Women who studied as mature students experienced smaller benefits from studying in an old university than younger students, though still gained some, especially in terms of getting a graduate job.

3 The effect of ethnicity upon the employment of graduates

In this section differences in labour market experiences of graduates from various ethnic backgrounds will be examined using the 1995 HESA First Destinations survey which is carried out six months after graduation. The logic we follow will be very similar to that of the previous section. At first, the general patterns of ethnic differences in the graduate labour market will be described and then we examine the possible sources of these differences. Again, we will distinguish between *indirect* and *direct* effects of the graduates' background – ethnicity in this case. As indicators of employment success, the likelihood of not searching for a job (or training) six months after graduation and (among those already working) having a graduate job will be used. (Information about the data and measures used are provided in Appendix VI.)

It must be pointed out that the 1995 HESA survey was selected for analysis in order to ensure a comparable basis of analysis with the survey data used in the previous section. However, the HESA data for that year have their own limitations. There are significant missing data on ethnicity: 31% not known and 5% of cases when information was not provided.¹¹ Furthermore, the missing information is not randomly distributed across the population but is concentrated among the “old” university graduates.

3.1 graduates from different ethnic groups in the labour market

Six months after graduation 55% of white graduates were **working**.¹² The proportion of those enrolled in further education or training was 18%, while 12% were seeking employment or training. One in ten graduates (11%) was either working or studying but also trying to find another job or course at the same time.¹³ Finally, 4% of the white graduates reported that they were not available for employment.

The proportion of those working at the time of the First Destinations survey is considerably lower in every non-white ethnic group than among the white majority. In some minorities this difference can to a large extent be attributed to the exceptional frequency of post-first degree studies and participation in training. This is the case among Chinese, Pakistanis and “other” Asians of both sexes, among Bangladeshi females and also Black African males. In addition, Indians and also Black “other” and Bangladeshi males study somewhat more often than their white counterparts. From the HESA data it is not possible to differentiate between further studies chosen because of difficulties anticipated in the labour market and further studies chosen for more positive reasons. Other studies however suggest that in the case of ethnic minorities the former set of motivations is particularly strong and fear of failure in finding a decent job directs them towards post-HE education quite often (Brennan and McGeevor 1990).

At the same time – compared to whites again – a substantially higher proportion of graduates was still **seeking employment or training** without having any other main activity 6 months after graduation in every black minority group, among Indians and also Pakistanis. The same holds for Bangladeshi men. Unemployment was only slightly above the unemployment of white graduates among Chinese, other Asians and also among Bangladeshi females.

¹¹ The figures relate to the 211581 full-time and sandwich course students in the survey.

¹² Cases where no information on activity was available (17.6%) and also overseas students who went back to their home country (4.2%) were left out from these analyses.

¹³ Although not part of the usual groupings of employment situation, this category was constructed in order to detect some hidden forms of unemployment, when the graduate considers the reported “main” activity as provisional, and his/her clear intention is to find some other activity. Everyone, reporting study or work as first activity, but searching for training or job as the second was classified into this group.

The proportion of those seeking employment or training opportunities besides some other main activity and also of those not available for employment showed a very similar picture in every ethnic group.

Table 8/a: Graduates' activities 6 months after graduation (%)

	Working	Study or training	Seeking employment or training	Seeking employment or training + some other activity	Not available for employment
White (94966)	55.3	17.5	11.8	11.1	4.2
Black Caribbean (914)	47.5	18.4	19.1	11.5	3.5
Black African (857)	43.3	23.1	21.5	9.5	2.7
Black other (339)	47.2	20.6	19.2	8.6	4.4
Indian (3133)	47.1	22.1	18.0	9.4	3.4
Pakistani (1210)	37.8	28.5	21.2	9.3	3.2
Bangladeshi (268)	35.1	28.4	19.8	14.2	2.6
Chinese (1341)	47.1	27.3	13.6	7.9	4.1
Other Asian (815)	46.4	30.3	12.6	7.5	3.2
Other (1534)	47.5	21.6	17.5	9.1	4.3
Information refused (7749)	58.6	16.1	11.1	9.2	5.0
Not known (52351)	50.1	26.8	8.3	10.4	4.4
Total (165447)	53.2	20.8	11.1	10.7	4.2

Table 8/b: Activities of male graduates 6 months after graduation by ethnicity (%)

	Working	Study or training	Seeking employment or training	Seeking employment or training + some other activity	Not available for employment
White (44201)	54.4	17.0	14.0	10.4	4.2
Black Caribbean (300)	53.7	15.7	18.3	8.7	3.7
Black African (427)	38.2	26.5	24.6	8.7	2.1
Black other (134)	44.8	23.1	22.4	6.7	3.0
Indian (1559)	47.1	20.7	20.0	9.1	3.1
Pakistani (668)	40.3	26.2	22.0	9.6	1.9
Bangladeshi (174)	35.1	24.1	23.6	15.5	1.7
Chinese (705)	49.8	25.4	14.2	7.5	3.1
Other Asian (411)	49.4	28.0	13.6	6.8	2.2
Other (719)	45.5	22.0	20.0	8.9	3.6
Information refused (3972)	57.9	15.8	12.8	8.7	4.9
Not known (26496)	50.2	26.4	9.7	9.7	3.9
Total (79766)	52.6	20.5	12.9	10.0	4.1

Table 8/c: Activities of female graduates 6 months after graduation by ethnicity (%)

	Working	Study or training	Seeking employment or training	Seeking employment or training + some other activity	Not available for employment
White (50765)	56.1	18.0	10.0	11.8	4.1
Black Caribbean (614)	44.5	19.7	19.5	12.9	3.4
Black African (430)	48.4	19.8	18.4	10.2	3.3
Black other (205)	48.8	19.0	17.1	9.8	5.4
Indian (1574)	47.0	23.5	16.1	9.7	3.7
Pakistani (542)	34.7	31.4	20.3	8.9	4.8
Bangladeshi (94)	35.1	36.2	12.8	11.7	4.3
Chinese (636)	44.0	29.4	13.1	8.3	5.2
Other Asian (404)	43.3	32.7	11.6	8.2	4.2
Other (815)	49.2	21.3	15.3	9.2	4.9
Information refused (3777)	59.4	16.4	9.3	9.7	5.1
Not known (25855)	50.0	27.2	6.9	11.0	4.8
Total (85711)	53.7	21.1	9.4	11.3	4.4

Out of those white graduates who were already employed by the time of the first destination survey 56% of men and 51% of women were working in a **graduate job**.¹⁴ (Table 9) The variations by ethnic group are fairly limited in this respect. Among male graduates, only Bangladeshis had a worse than average chance to work in a graduate level job (44%), although this figure should be handled with caution because of the low case numbers. At the same time “other” Asians, but especially Chinese graduates, were more likely than others to be employed at the level of their actual qualification i.e. having a graduate job. At the same time, relatively few Chinese men were employed in a non-graduate position. Among females however Black Africans were substantially less often (40%) in graduate jobs and more often (33%) in non-graduate occupations than whites.

Table 9: Graduates’ jobs (% of those employed 6 months after graduation)

	Males			Females			All		
	Graduate job	Graduate track job	Non-graduate job	Graduate job	Graduate track job	Non-graduate job	Graduate job	Graduate track job	Non-graduate job
White	56.0	21.6	22.3	51.0	26.4	22.6	53.3	24.2	22.5
Black Caribbean	58.8	19.2	22.0	47.7	30.7	21.6	51.6	26.7	21.7
Black African	60.7	19.7	19.7	39.8	27.5	32.6	48.9	24.1	27.0
Black other	59.7	16.1	24.2	54.1	32.4	13.5	56.1	26.6	17.3
Indian	60.4	17.3	22.3	51.1	23.5	25.5	55.6	20.4	23.9
Pakistani	60.8	15.0	24.3	51.8	25.7	22.5	57.0	19.5	23.5
Bangladeshi	44.4	26.0	29.9	56.4	17.9	25.6	48.3	23.3	28.4
Chinese	72.8	14.0	13.2	53.1	23.5	23.5	64.0	18.2	17.8
Other Asian	64.2	15.8	20.0	56.0	22.3	21.8	60.3	18.9	20.8
Other	58.2	18.4	23.4	50.9	28.0	21.1	54.2	23.7	22.2
Information refused	63.7	17.4	19.0	58.8	21.0	20.2	61.2	19.2	19.6
Not known	63.7	19.2	17.1	55.0	24.8	20.1	59.4	22.0	18.6
Total	59.2	20.4	20.4	52.5	25.7	21.9	55.6	23.2	21.2

These figures suggest that finding a job is a more serious problem for many ethnic minorities than it is for white graduates. The high proportion of those continuing to study after graduation in some ethnic groups might also be a sign of (personally experienced or expected) difficulties in finding an appropriate job. Unfortunately, from the information collected in the First Destination Survey we cannot differentiate between various types of studies (postgraduate courses, professional training etc.) Neither can we tell whether studying rather than working was a decision of necessity (response to the poor labour market prospects available or even a way of avoiding unemployment) or an option taken as the most attractive one.

More importantly, however, the above-average ratio in a number of ethnic minority groups of those seeking employment, but especially among blacks, Indians and Pakistanis, indicates the increased problems certain non-white graduates are facing in the graduate labour market.

At the same time our analyses have shown that in terms of the quality of the job found only a few ethnic minority groups are in a worse position than white British. Using the nature of the job (graduate or non-graduate) as an indicator, significant disadvantages of Bangladeshi males and also Black African and – to a lesser extent – Black Caribbean females were investigated. Unfortunately, the FD survey does not provide any finer indicator of job quality. Consequently

¹⁴ Using the categorisation of the DfEE study – see earlier parts of this report.

neither income differences nor any other kinds of (possible) variations among graduates can be investigated.

Again, there can be a number of reasons why some ethnic minority groups can be at a disadvantage in the graduate labour market. Indeed, *direct effects* of their ethnicity – including possible discrimination by the employer – constitute only one group of them. It is very likely that *indirect effects* of ethnicity, most importantly disadvantages in some minorities' educational career play a significant role in putting these graduates into a relatively poor position in the labour market. We will first deal with this latter set of explanations to see what kind of “before-employment disadvantages” can contribute to the extra difficulties of some ethnic minorities in the labour market.

3.2 Sources of indirect background effects: ethnic differences in educational characteristics

3.2.1 Ethnic differences in the pre-HE studies – entry qualifications

The educational disadvantages some groups of ethnic minority students are already carrying when they enter higher education are severe. However, again we cannot generalise but need to look at the various groups separately.

The proportion of students holding a school-type entry qualification is far below the respective figure for whites, not only in every black group but to some extent also among Chinese, “other” Asians and Pakistanis.¹⁵ The same is true for Indian women. At the same time they are much more likely than others to enter university with a vocational or professional qualification (blacks and Pakistanis mainly) or some other type of qualification (Chinese and “other” Asians).

Besides the type of qualification the quality of it is likely to affect some – but not all – ethnic minorities badly in the labour market. Members of each black group (but especially Black Caribbean) and also Indians and Pakistanis tend to enter HE with fewer A levels than members of the ethnic majority. If we transform A levels into points we find that 19% of white students enter HE with more than 20 points whereas the respective figure is less than half of this for Black Caribbean and also Black Africans. Relevant ratios among Black others and Pakistanis are between these two extremes. Bangladeshi and Chinese students in universities however show a pre-HE performance very similar to white students, whereas “other” Asians appear to enter HE with higher A level scores than their white counterparts.

¹⁵ By **school-type qualification** in this study we mean the following entry qualifications: GCE "A" level (with no "AS" levels); SCE "Higher" and CSYS; SCE "Higher" with no CSYS; Mixed GCE "A" and SCE "Higher; Mixed GCE "A" and GCE "AS" qualifications; GCE "AS" qualifications only; International Baccalaureate. **Vocational/professional type qualifications** are: HNC or HND (including BTEC and SCOTVEC equivalents); GNVQ/GSVQ level 4; NVQ/SVQ level 4; Professional qualifications; NVQ/SVQ level 3; ONC or OND (including BTEC and SCOTVEC equivalents); GNVQ/GSVQ level 2; NVQ/SVQ level 2; NVQ/SVQ level 1; GNVQ/GSVQ level 3. **Other qualifications** include: A level equivalent qualification not elsewhere specified; Accredited ACCESS course; Un-accredited ACCESS course; GCSE / "O" level qualifications only; SCE O grades and Stand; Other UK qualification; Other EC qualification; Other overseas qualification (non-EC). Those with higher degrees at their entry were left out from this analysis and were put in the same group with those who did not provide any information on their qualification in the regression models introduced later on.

Table 10: Pre-HE schooling of graduates from different ethnic groups (%)

	Males		Females		All	
	School-type entry qualification	A/AS level points above 20	School-type entry qualification	A/AS level points above 20	School-type entry qualification	A/AS level points above 20
White	70.0	19.9	76.3	17.5	73.4	18.5
Black Caribbean	43.5	9.8	41.8	6.8	42.4	7.8
Black African	30.0	7.1	45.4	8.4	37.8	7.9
Black other	55.6	12.8	48.7	12.5	51.3	12.6
Indian	66.3	19.6	68.1	13.1	67.2	16.2
Pakistani	57.9	10.8	69.7	12.2	63.1	11.5
Bangladeshi	67.1	19.6	82.9	15.6	72.2	17.9
Chinese	53.0	25.8	60.4	19.5	56.5	22.6
Other Asian	60.4	43.0	63.8	25.0	62.0	33.9
Other	57.3	23.1	61.3	15.0	59.4	18.6
Information refused	61.9	37.6	64.6	28.8	63.2	33.3
Not known	91.1	63.2	91.8	60.7	91.4	62.0
All	74.6	34.3	78.7	28.5	76.7	31.1

3.2.2 Ethnic differences in the experience of higher education – institution attended, class of degree, subjects studied

It is certainly not independent of the pre-HE education inequalities summarised above that certain ethnic groups are strongly underrepresented in the most prestigious universities. In this 1995 cohort, around three tenths of white graduates completed their studies in an old university. Studying in an old university rather than elsewhere was even more common amongst “other” Asians (50%), and Chinese (37%). The respective figure was the lowest amongst Black Caribbean graduates (9%), slightly higher amongst Black Africans (12%) and higher but still significantly below the relevant ratio for whites in the “other” black groups (20%), Pakistanis, Indians and Bangladeshis. Consequently we can expect that institution attended by most non-white groups might well have a negative impact on their labour market opportunities. Exceptions to this are Chinese and “other” Asians.

Academic achievements of graduates might also contribute to the later employment difficulties of those from certain ethnic minority groups. The proportion of graduates with a first or an upper second class degree was the lowest amongst Black Africans both in the case of males (18%) and females (25%). The respective figures in the other ethnic groups are less extreme but they are still far below those amongst white graduates.

Table 11: Proportion of those having studied in an old university and of those with a good degree by ethnic background (%)

	Males		Females		All	
	Studied in an old university	Good degree	Studied in an old university	Good degree	Studied in an old university	Good degree
White	32.7	45.5	28.9	53.4	30.7	49.7
Black Caribbean	11.0	25.8	8.4	31.4	9.3	29.5
Black African	14.8	18.3	11.2	25.3	12.3	21.6
Black other	19.8	31.0	19.8	37.0	19.8	34.5
Indian	29.4	32.1	22.4	37.0	25.9	34.5
Pakistani	24.5	24.1	21.6	32.1	23.3	27.5
Bangladeshi	26.1	29.1	26.1	31.3	26.1	29.9
Chinese	40.0	38.5	34.0	38.8	37.2	38.7
Other Asian	53.4	36.7	46.0	39.0	49.8	37.3
Other	27.8	39.0	27.0	43.0	27.4	41.1
Information refused	44.0	39.7	40.1	45.2	42.2	42.4
Not known	91.5	51.9	89.3	59.5	90.5	55.6
Total	52.0	46.2	46.9	53.5	49.3	49.9

As we know from earlier studies (Brennan and McGeever 1990), ethnic minorities tend to be more instrumental in their subject of study choices than white students. Their strong tendency to go for the more vocational areas means that their field of study in itself should not lead to any special difficulties in the labour market.¹⁶ The proportion of those having studied some sort of vocational subject exceeds that for white graduates in almost every ethnic group. This pattern is the clearest amongst Chinese, with 75% of males and 66% of females in vocational areas. The proportion of white male graduates for example having studied computing (a vocational science subject, offering exceptional employment opportunities) is 7%, whereas the respective figure is as high as 15% among black Caribbeans, 13% among Indians, and it is around 10% among Pakistanis, Bangladeshis and also Chinese. Moreover, not even the traditionally highly rated fields, such as medicine or law, are monopolised by the ethnic majority, although different minorities have different access to them.

Compared to the whites, the two ethnic groups that are not more likely to study a vocational field are Black “others” and Black Caribbean. These student groups choose a non-vocational subject at least as often as their white counterparts. Given the risks that graduates from non-vocational arts fields are likely to face in the labour market, it might be especially problematic that one in every two “other” black HE students chooses a subject from this group. Brennan and McGeever’s study done in the mid-eighties (1990) shows a similar finding.

We can expect therefore that the negative employment experiences of ethnic minorities linked to their under-representation in the pre-1992 institutions and also to the often low proportion of good degrees can to some extent be counterbalanced by their field choices in many cases (Black Africans, Indians, Pakistanis, Bangladeshis, Chinese, Other Asians).

¹⁶ Our analysis on the CHERI data have shown some clear advantages of studying a vocational subject as opposed to a non-vocational one. Furthermore we also showed that in some of the numerous factors investigated in the survey – in the average – science subjects provide better possibilities than “arts”.

Table 12: Type of subject studied by graduates from different ethnic groups (%)

VA= Vocational Arts; VS= Vocational Science; NA= Non-vocational Arts; NS= Non-vocational Science

	Males				Females				All			
	VA	VS	NA	NS	VA	VS	NA	NS	VA	VS	NA	NS
White	22.6	32.2	30.8	14.4	30.2	14.6	43.1	12.0	26.6	23.0	37.3	13.1
Black Caribbean	21.8	39.7	32.6	5.8	30.8	14.1	48.2	7.1	27.7	23.0	42.8	6.5
Black African	28.1	44.5	20.8	6.5	33.1	24.5	33.7	8.7	30.5	35.0	26.9	7.6
Black other	23.4	36.0	32.0	8.6	24.5	20.5	49.3	5.9	24.0	26.7	42.4	6.9
Indian	28.9	42.5	18.0	10.6	36.4	26.3	26.4	10.9	32.6	34.5	22.1	10.8
Pakistani	28.7	44.6	16.4	10.3	33.9	21.6	28.1	16.5	30.9	34.7	21.4	12.9
Bangladeshi	32.2	40.0	18.7	9.1	28.7	20.9	27.8	22.6	31.0	33.6	21.7	13.6
Chinese	25.4	52.0	12.6	10.0	42.7	23.0	22.7	8.4	33.6	38.3	17.4	10.7
Other Asian	25.2	48.1	14.7	11.9	33.1	25.9	28.3	10.8	29.0	37.5	21.2	12.3
Other	22.1	38.3	29.1	10.5	25.9	19.1	44.1	10.5	24.1	28.4	36.8	10.7
Information refused	23.3	35.1	28.2	13.3	33.4	15.0	41.0	10.5	28.2	25.4	34.4	12.0
Not known	12.4	31.8	33.9	21.9	17.0	18.1	46.0	18.6	14.6	25.1	39.7	20.5
Total	19.6	33.1	30.9	16.4	26.8	16.2	43.2	13.7	23.3	24.5	37.1	15.1

3.2.3 Other possible sources of disadvantage: entry age of graduates from various ethnic groups¹⁷

Our detailed analyses of our survey data have shown that the age group with the highest labour market risk is that of those starting higher education studies after the age of 24. Although usually a student with an entry age of 21-24 is also considered to be a mature student, the data showed that a delay in studies of so few years is not likely to affect the later success in the labour market. A later start, however, can lead to serious difficulties. Although the First Destination Survey data do not suggest exactly the same pattern, given the finer measures of employment situation in the survey and also the longer-term nature of that study, we build our analyses on the findings from that survey.¹⁸

In the 1995 graduate cohort, around 15% of white graduates belonged to this “older” (24+) group. The respective figure was twice or three times as high in the various black minorities. It was especially common for black African males to enter university in their late twenties or even at a later age. At least one in two persons in this group had done so. Most Asian groups however tended to start their studies at similar ages or even earlier than white students. Exceptions were Chinese and “other” Asian males, who also delay their studies more often than their white counterparts.

Table 13: Proportion of those who entered HE after the age of 24 (%)

	Males	Females	All
White	13.6	15.4	14.5
Black Caribbean	29.2	38.7	35.4
Black African	51.8	36.0	44.3
Black other	31.4	38.3	35.6
Indian	6.2	5.7	6.0
Pakistani	7.2	6.7	7.0
Bangladeshi	7.4	6.1	7.0
Chinese	17.3	12.5	15.0
Other Asian	20.0	15.2	17.7

¹⁷ Although a major issue, social background of graduates from different ethnic groups can not be analysed from HESA data, because of the enormous proportion of missing cases in the social background variable. This factor however will still be introduced into the final models.

¹⁸ According to the HESA data, not only graduates who started after the age of 24 but also the somewhat younger ones are more likely to be unemployed 6 months after graduation than the youngest ones. The relative disadvantage of the oldest group however is considerably bigger than that of the slightly mature ones. Once employed however, mature students tend to have a graduate job more often than the younger ones.

Other	22.1	20.0	21.0
Information refused	16.5	18.8	17.6
Not known	8.4	9.9	9.1
Total	12.4	14.1	13.3

3.3 Ethnic differences in the labour market when educational factors are equal

In order to identify the *direct effects* of ethnicity a series of multivariate analyses (logistic regressions) were conducted. In these models we were controlling for *social background, age, type- and quality of entry qualification, type of institution, field of study* and also *class of degree*. Keeping all these factors constant, we can investigate how much impact ethnicity in itself has on the likelihood of unemployment and on the quality of job obtained by the graduate 6 months after graduation, i.e. how much *direct effect* ethnicity has on these employment indicators.

3.3.1 Unemployment

Following the usual definition of the *unemployment rate* that relates the number of those seeking employment to the number of those available for employment (i.e. excluding those studying), severe ethnicity-linked differences in the likelihood of unemployment can be found. Compared to white graduates, significant additional difficulties in the labour market were found in almost every ethnic group which are attributable to their ethnicity only. In the table below, coefficients should be interpreted as multipliers of the “odds” that a white graduate will be unemployed 6 months after graduation. The more this coefficient exceeds 1, the bigger the difference between the group in question and the baseline group of white graduates.

In case of males, only Black Caribbeans and “other” Asians seemed to have a probability of unemployment similar to that of whites. Compared to them Bangladeshis and Pakistanis experienced the biggest disadvantage. They were around two and half times as likely as white males to be unemployed – other factors being equal. The next group was that of Indians, Black “others” and Black Africans – all with a risk of unemployment around twice as high as that of white males. Chinese were in a fairly good position but still with a risk around one-third above that of members of the baseline group.

Among females none of the ethnic minority groups enjoyed a similar (similarly low) risk of unemployment to that of whites. Pakistanis seemed to be in the worst position: they were three and half times as likely to be seeking a job (or training) 6 months after graduation than white graduates. The risk Indian and Bangladeshi women face was around twice as big as that of a white female graduate. At the same time black minorities, Chinese and also “other” Asians had a risk of unemployment around one and a half times higher than that of white graduates.

Table 14: Coefficients ($Exp(B)$ -s) and their levels of significance from the logistic regression models

Dependent variable: 1=unemployed; 0=working

Models are controlled for: *social background, age, type- and quality of entry qualification, type of institution, field of study, class of degree*

	Males	Females
White	Baseline	Baseline
Black Caribbean	1.215	1.642***
Black African	1.899***	1.596***
Black other	2.008***	1.575**
Indian	2.016***	2.215***
Pakistani	2.401***	3.523***
Bangladeshi	2.680***	2.120**
Chinese	1.347***	1.745***
Other Asian	1.290	1.669***
Other	1.726***	1.607***
Information refused	0.928	0.945
Not known	0.991	1.039

As we said earlier, the official national rate of graduate unemployment is calculated without those studying being taken into account. The definition of unemployment is based on the idea that only those available for employment, i.e. intending to work should be looked at, and the question of “what is the probability of not being able to find a job?” should be answered. Those who are studying are defined to be out of the labour market and therefore not intending to work.

From the annual first destinations survey data it is impossible to tell whether a graduate studying 6 months after graduation would want to work if he or she could find an (appropriate) job, or whether it is his or her major aim to study. Based on earlier studies we might suspect that there is a mixture of these two reasons among those studying but the exact mix is unknown. At one extreme we can assume that everybody studying or participating in training rather than working is happy with this situation, and therefore further study is a positive outcome of higher education studies in every case. Building on this assumption we can give a lower estimation of the ethnic inequalities in the chances of unemployment in the graduate labour market studied here. This will be done in the following model.

When we include in the model those whose major activity is studying or training almost all the “inequality-coefficients” found in the former model decrease sharply, although most of them still remain significant. This suggests that considering further studies as a positive outcome – or rather a positive continuation – of HE study, ethnic minorities are in a less disadvantageous situation than the previous models suggest. This difference can be attributed to the fact that (as we have seen before) graduates from almost every ethnic minority are more likely to be studying 6 months after graduation than their white counterparts. Consequently, if we include those studying in the model, and consider them as successful (as opposed to those seeking a job) the disadvantage of the ethnic minorities will naturally decrease. It is also worthwhile noting that the rank order of ethnic groups – based on their risk of being unemployed – does not change notably. But the main message remains intact: white graduates are in a privileged position compared to most of the other groups (See Table 15).

This shows that even using a fairly strong assumption about the nature of further study and training and in this way estimating the lowest possible level of inequalities, we still find most ethnic minority groups in a disadvantaged position. This estimation is *lowest* in the sense that it necessarily underestimates the disadvantage of each ethnic minority member who chooses studying as a “getaway strategy” from labour market difficulties.

Nevertheless, if these strong assumptions are applied, in case of males the disadvantage of Chinese as well as “other” Asians diminishes. Groups that still appear to face a disproportional risk of unemployment are Bangladeshis (almost twice the risk of whites), Pakistanis, Black “others” and Indians (a risk increased by around 70%), Black Africans and also “other” ethnic groups (one and a half time as likely as whites to be unemployed).

Among females, Pakistanis continue to be the group with the highest likelihood of unemployment, even when participation in studies forms part of the model. Nevertheless, their relative disadvantage decreases considerably. Indians also seem to face an increased likelihood of being unemployed, and so do (although to a lesser extent) all the black groups and also Chinese compared to British white graduates.

Table 15: Coefficients ($Exp(B)$ -s) and their levels of significance from the logistic regression models

Dependent variable: 1=unemployed; 0=working or studying

Models are controlled for: *social background, age, type- and quality of entry qualification, type of institution, field of study, class of degree*

	Males	Females
White	Baseline	Baseline
Black Caribbean	1.161	1.586***
Black African	1.472***	1.571***
Black other	1.680**	1.464**
Indian	1.684***	1.839***
Pakistani	1.744***	2.391***
Bangladeshi	1.941***	1.454
Chinese	1.139	1.444***
Other Asian	1.087	1.284
Other	1.486***	1.519***
Information refused	0.947	0.969
Not known	0.959	1.018

Built on a somewhat different statistical model¹⁹, the analyses conducted by the HEFCE on the First Destination Survey from 2000 suggest the existence of inequalities similar to those found in the sample of the cohort five years earlier (HEFCE 2001a). Compared to white graduates, a significantly higher proportion of graduates were found without employment among Pakistanis, Black Africans, Bangladeshis, Chinese, Indians, “other” Asians and also Black Caribbeans. (The sequence of this listing reflects the group’s relative distance from whites, with the highest risk of being unemployed for Pakistanis, and with the smallest – but still significantly higher than in case of whites – among Black Africans.) The most remarkable difference between this most recent data and ours is that in the cohort from 5-years earlier no disadvantages of other Asians were apparent (when further studies were included in the model), whereas Black “others” seemed to be in a considerably worse position than white graduates. Besides the possible changes over time from 1995 to 2000 and the differing methods used in the two studies a further source of variances in the results can be the changes (improvements) in the HESA data quality since 1995.

To serve a better understanding of the ongoing processes, a range of subjects of study areas were investigated separately to investigate further how the impact of ethnicity on the risk of unemployment varies from field to field. To achieve this, separate logistic models were estimated with the specifications described earlier but for certain groups of graduates only. In this way, only aggregated ethnic groups could be looked at. The following grouping was applied: black

¹⁹ HEFCE used a random-effects multi-level model, with more and also somewhat different control variables than were applied in this study. Another difference was that they included both genders in the same model rather than estimating two separate ones.

minorities; South Asians (Bangladeshis, Pakistanis and Indians); Chinese; Other Asians and other ethnicity.²⁰

In the case of males, the following fields of study were looked at: medicine and related fields; natural sciences (biological sciences and physics); computing; engineering, technology, agriculture and architecture; social sciences; law; business and administration; arts.²¹

We found that out of these areas, black minority graduates have a higher risk of unemployment than whites if they study computing, engineering or technology, law or business. In these fields, they are around 1.5-2 times more likely to be unemployed 6 months after their graduation than white male graduates – other factors being equal. Although not to a statistically significant extent, their positions seem to be slightly worse than those of others in medicine, but certainly not in natural sciences and arts. The only field of study in which South Asian students are not more likely to be unemployed a half year after their graduation than their white counterparts is medicine and related areas. Otherwise they are more at risk than whites whatever they study, and the difference is in most cases fairly high (2-2.5 times more likely to be unemployed). Chinese males however face a higher risk of unemployment than whites only if they study business and administration. In none of the other investigated fields are they at a disadvantage. “Other” Asians are also at a disadvantage if they go into business. Furthermore, they also risk the likelihood of unemployment if they study engineering.

In contrast to males among females ethnic differences are apparent in medicine and medicine-related subjects as well. Black graduates for example are around 3 times more likely to be unemployed than whites with a similar degree in these subjects. Furthermore, they are also at a disadvantage if they study computing, social sciences, law or business.²² On average, South Asian females’ disadvantages are more severe than those of Blacks and they also appear in a wider variety of fields. Basically, out of the investigated fields the only ones in which they are doing similarly well as whites are arts and education. Chinese women however only face a bigger risk of unemployment than whites if (out of the investigated fields) they study computing, engineering, business studies, languages or humanities. Finally, other Asian women are at a disadvantage in fields such as medicine, sciences, social sciences, languages or humanities.

3.3.2 Having a graduate job

The analyses show that among those actually in a job 6 months after graduation, ethnicity makes very little difference in terms of level of job as measured here. Keeping other background characteristics and also educational factors constant the only ethnic group having a lower probability than their white British counterparts for getting a graduate job is that of *Bangladeshi males*. Members of this group are around 40% less likely to be in a graduate level job than their white British counterparts.

Chinese however seem to be in an even better position than members of the ethnic majority. Both Chinese males and females tend to be more successful in getting a graduate job than the white British. Another group that is more likely to get a job at the level of their educational qualification is Black “other” females.

The picture emerging from the models that investigate the likelihood of having a non-graduate job in the various ethnic groups points out one further ethnicity-related disadvantage. This

²⁰ Results of the models estimated are not included in the report but on request they are available from CHERI.

²¹ Fields with at least 50 graduates in most ethnic minority groups were selected.

²² The following subjects were looked at separately: medicine at related fields; natural sciences (biological sciences and physics); computing; engineering, technology, agriculture and architecture; social sciences; law; business and administration; arts; languages and humanities and also education.

suggests that Black African women are more at risk of ending up in a non-graduate occupation than whites.

Table 16: Coefficients (Exp(B)-s) and their levels of significance from the logistic regression models

	Dependent variable: 1=graduate job; 0=non-graduate job or graduate track		Dependent variable: 1=non-graduate job; 0=graduate job or graduate track	
	Males	Females	Males	Females
White	Baseline	Baseline	Baseline	Baseline
Black Caribbean	1.005	1.090	1.023	0.766*
Black African	1.130	0.803	0.821	1.277*
Black other	1.009	1.430*	1.182	0.450***
Indian	0.985	1.042	1.049	1.012
Pakistani	1.089	1.078	1.167	0.898
Bangladeshi	0.591*	1.440	1.295	1.174
Chinese	1.290**	1.250*	0.692**	0.833
Other Asian	0.985	1.241	1.019	0.890
Other	1.058	1.078	1.084	0.902
Information refused	1.158***	1.190***	0.913	0.974
Not known	1.017	1.027	0.946*	0.946*

An attempt was made to specify ethnic differences further by looking at the various fields of study separately. What we found was that the advantage of Chinese males in finding a graduate job (and avoiding a non-graduate one) is clearest amongst engineers and architects. Other factors being equal, in these areas they are around twice as more likely to work in a graduate post than white males. To a lesser extent, black graduates are also doing fairly well in engineering, being one and a half times more likely to be in a graduate job than whites. At the same time, South Asians do particularly well in medicine, working in a graduate job around twice as often as whites. But in engineering and also hard sciences they seem to do worse than whites. Finally, “other” Asians are less successful in finding a graduate level job in computing than whites.

The more detailed analyses for females also show ethnic minority advantages only, although these are not too numerous and are of moderate extent. In particular we found that black women who studied a social science are doing fairly well in terms of getting a graduate job and avoiding a non-graduate one. Chinese also seem to be at an advantage compared to whites but only if they study an arts subject.

3.4 Summary of this section

Graduates from most ethnic minorities have a worse chance than their white British counterparts of gaining employment within the first 6 months after graduation. This disadvantage is apparent if we compare ethnic minority graduates to white graduates with both similar educational and similar social-demographic characteristics. Groups with the most disproportionate rates of unemployment are Bangladeshis, Pakistanis, Indians and also Black “other” males. Somewhat more moderate but still considerable is the disadvantage of Black Africans, Black Caribbean, and females from “other” Black and Asian groups, and also from the Chinese minority. Chinese males are also in a worse position than whites, but their disadvantage is fairly small. Further analyses have also shown that Chinese males only face increased unemployment if they study business and administration, whereas South Asians and also black minorities have this risk in a range of other fields as well.

The Moving On study (DfEE 1999) also found the risk of unemployment for many ethnic minorities to be above the average in the first two years after graduation. Their results suggest, however, that this difference between ethnic groups disappears by the end of the second year.

Nevertheless, graduates from most non-white ethnic groups show a high level of involvement in studies and training 6 months after graduation. This might also at least partly be a response to labour market difficulties feared or actually experienced. Indeed, the high proportion of those studying improves the overall unemployment risk measures for many ethnic minorities. The most active groups in study and training are Chinese, Pakistanis, "other" Asians and also Black African males and Bangladeshi females.

From our data the advantages of white graduates are apparent in terms of getting a job only. Once they find a job, most ethnic minorities have as good a chance as their white counterparts to be employed in a graduate level job and they are usually not more likely to be employed in non-graduate occupations. The only negative exceptions are Bangladeshi males and Black African females. Both Chinese males and females and also non-African black women tend to be more successful in these terms than the white British graduates. In the case of Chinese males this advantage is the most apparent if they study engineering or architecture whereas for Chinese females arts fields seem to provide exceptional opportunities.

(Appendix VII provides an overview of the main educational and employment differences by ethnic groups introduced in this section.)

4 What factors can improve the position of graduates from disadvantaged backgrounds?

In this section we will discuss a range of characteristics - of the *higher education experience*, of the *job searching process* and of the *employment situation* - which affect the employment success of graduates. The characteristics were selected against two criteria. Firstly, they are all expected to have a separate impact on graduates' employment prospects. Secondly, they can all possibly be objects of policy interventions and can therefore lead to practical actions by higher education institutions and policy makers.

First, we will look at the overall graduate body, and investigate briefly how the selected aspects of student and graduate life can influence graduates' early labour market situation. Second, different disadvantaged groups – mature students and those from disadvantaged socio-economic backgrounds – will be looked at separately.²³ The questions we aim to answer here are (i) what factors can make a difference in the labour market situations of these vulnerable groups and (ii) how these groups differ from the graduate body as a whole in terms of their accessibility to these factors.

Initially, the overall sample of graduates from full-time or sandwich mode of undergraduate courses will be investigated, based on two separate sets of analyses. First, regression analyses were undertaken to show the impacts of the various factors on selected measures of employment success.²⁴ To provide a better general view on the impact of these factors, however, we constructed a combined, 3-category measure of labour market success, grouping graduates into “successful”, “average” and “unsuccessful” categories from the individual success measures introduced earlier. This measure will be applied throughout this section.

Graduates in employment three and a half years after graduation were categorised into “successful”; “average” and “unsuccessful” categories. In the construction of this grouping ten characteristics of the labour market situation were taken into account as signs of labour-market difficulties.²⁵ The number of difficulties experienced was calculated, resulting in a single measure between 0 and 10, called “real success measure”. After this, with the help of the regression models introduced in the earlier sections, for each participant an “estimated success measure” was calculated, based on their socio-biographical and education characteristics. The “estimated” measure was then compared to the “real” one, and from the extent of the difference between the two, a 3-categorical grouping into “unsuccessful”, “average” and “successful” graduates was created. A graduate is categorised as *unsuccessful*, if his or her “real” success measure is considerably worse (by more than 1 Standard Deviation lower) than the measure of success expected on the basis of his or her socio-biographical and educational characteristics. However graduates in a considerably better labour market situation than we would expect are called *successful*. If “real” and “estimated” success are close enough to each other, than we consider the graduate as average.

²³ Because of the low case numbers mentioned earlier, ethnic minorities cannot be analysed separately in this way.

²⁴ The general relationships between the investigated factors and employment outcomes were analysed by the regression models introduced earlier complemented by the relevant HE experience, job searching or employment measures. With this method a selection of the “success” measures – risk of a longer period of unemployment; not feeling overqualified for the job; graduate job; income and job-satisfaction were looked at. In the interest of the better readability of the text, details of these models are not included in this report, but they are available from CHERI.

²⁵ The following characteristics were taken into account as signs of labour-market difficulties. Being unemployed in the early years; being unemployed for more than 5 months; not being in a graduate job (either characterised as graduate by the IER study or being managerial or professional); feeling overqualified for the job; reporting that the job is not challenging (point 1-3 on the 5 point scale); reporting that the job does not requires the skills and knowledge acquired; reporting that the career prospects are poor; expecting neither promotion nor a higher income in the next couple of years; being moderately satisfied or unsatisfied with the job; making less than 15.000 (before tax) a year.

4.1 Factors Examined

4.1.1 Work experience and term-time work during higher education

Temporary work during the vacations has long been a fairly frequent activity among UK undergraduates. Also, many undergraduate programmes build some sort of work experience into the curriculum as a planned part of the studies. Such experiences of students have been viewed as positive for a number of reasons (Brennan and Little 1996; Little 2002). Some period of work experience is usually considered to provide valuable skills and experiences that cannot be acquired through traditional forms of studying. Employers evaluate these skills highly and are sometimes even prepared to pay a premium for them (AGR, 1998). Work experience can also provide useful contacts, or even a later, longer-term career at the scene of the work experience. (A detailed analysis on the impacts of work experience based on the same data can be found in CHERI 2002, forthcoming.)

For this analysis we could not differentiate between work experience planned as part of the higher education studies and work experience gained in the vacations.²⁶ We can however differentiate between work related to the studies and work not related to the studies. We assumed that a more positive influence can be expected from work related to the subject studied and – ideally – also to the later type of employment.

Our findings suggest that spending some months on employment – either related or unrelated to the studies – will usually improve the labour market situation of the graduates to some extent. The exception is a shorter term (1-8 months) employment if it is not related to the studies.

The biggest positive impacts were found to be associated with work done over a longer period (over 8 months during the period of studies) related to the studies. The benefits here include a reduced risk of unemployment, a considerable increase in the likelihood of having a job the graduate does not feel overqualified for and – in the case of males only – an increased likelihood of being in a graduate job, higher salary and also greater satisfaction. If we look at the combined success measures of those with different type of work experiences (in Table 17), we find that the proportion of unsuccessful graduates decreases from 24% (in the case of those who had no work experience or only some months of work not related to study) down to 10% for those with 9 months or more spent on study-related work. A more detailed analysis also shows that the impact of work experience is slightly different across different fields of study. In non-vocational fields a substantial amount of study-related work is very often (31%) associated with exceptional success in the labour market, whereas in vocational areas work experience seems to be more a means of avoiding labour market difficulties.

Term-time work is a financial necessity for many students and has been given particular attention since the introduction of the new student financing system in higher education. Although there is some possibility that term-time work can provide longer term benefits similar to those of work experience (skills, contacts and also improving time-management skills etc.), the risks are likely to be more significant, since the potential of missing out from studies is definitely higher here. Empirical findings suggest this latter group of effects to be overwhelming. Students working term-time report various kinds of difficulties of fitting term-time employment with educational demands and they often describe these difficulties as notable (see e.g. Callender – Kemp 2000; Metcalf 2001). Besides there is some evidence suggesting that term-time work is actually associated with somewhat lower academic achievements. (Paton-Salzberg, R. – Lindsay, R.O. 1993; Barke et. al., 2000) These findings however are based on surveys in individual

²⁶ In the questionnaire the graduates were asked to record the number of months during their degree studies that they had spent mainly on: • Employment/work not related to study/ • Employment/work related to study /• Work placement, internship (as part of your degree course). Using this information we built a hierarchy of work experience, with experience related to study (including placements) taking precedence over work experience not related to study. We also looked at the overall duration of these 'related' and 'not related' work experiences and grouped each of them into periods of 1 - 8 months, and 9 months or more.

institutions rather than on research on a broader student population. Also, on the basis of these studies it is not possible to tell whether there is a real causality between work and lower achievement or there are other factors contributing to the association.

From our models we can see that the only (slight) positive impact of term-time work is that of some decrease in the risk of unemployment in case of male graduates. Otherwise term-time work is associated with a slight increase in the labour market difficulties of graduates. The likelihood of having a graduate job is significantly smaller among those males who had worked more than 10 hours a week term-time and there was a similar (but weaker) tendency among females as well. We should bear in mind here that the effects we found in our analyses control for class of degree. Consequently, the slight negative impact of term-time work found in this study is additional to this and might be due to missing out from other benefits of higher education which are not reflected in the degree classification as such. (See Table 17.)

4.1.2 Extra-curricular activities

Besides working, the other important factor is extra-curricular activities. Being involved in the varied non-academic life that most British higher education institutions offer (student societies, sport etc.) might improve the employability of the potential graduates by helping them to gain a range of valuable skills (e.g. interpersonal, organisational and even managerial skills). Employers seem to believe that involvement in certain extra-curricular activities provides important additional information about the employability of the applicants. Participation in sports for example can be construed as a sign of being a good team-player. The importance employers attribute to participation in a wide range of activities becomes very clear from a range of empirical studies on employers' expectations. (See e.g. Brown and Scase 1994; Purcell and Hogarth 1999). Furthermore, besides looking attractive in a CV, extra-curricular activities can also improve the later career prospects of students by helping them to build useful contacts (other students but also academic staff, civil organisations, professional societies etc.).

Our data suggest that even a couple of hours weekly involvement in extra-curricular activities can result *ceteris paribus* in a significant increase of the quality of the job held 3-4 years after graduation. This association is especially notable among females, who experience extra advantages associated with their extra-curricular activities in terms of having a qualified job, income and also job satisfaction. In our sample we found 22% successful graduates among those who spent more than 10 hours a week on extra-curricular activities, whereas the similar figure is only 13% among those with no involvement in these sorts of activities (See Table 17).

4.1.3 Overseas experiences

In this study the impacts of two types of overseas experiences were investigated. Firstly, we looked at the effects of studying or working abroad *prior to* higher education and tested whether these have any impact on the later career prospects. Secondly, effects of overseas study and work *during higher education* were investigated.

According to our data spending time overseas *before* higher education does not affect the employment success of graduates significantly. Those having received education or having worked abroad prior to their enrolment in higher education do not seem to enjoy any special advantages later on in their career. However, spending some time overseas on studying or work placement/internship *during* the time of higher education study seems to have a slightly positive impact. According to the relevant regression models, female graduates who had studied or worked abroad during this time are somewhat happier with their job, whereas males with such experiences have somewhat better chances to be in a job for which they do not feel to be overqualified. The association with the combined success measure (Table 17) suggests that these kinds of overseas experiences can reduce the risk of labour market failure from around 19% to 14%.²⁷

²⁷ Unfortunately, the low case number does not allow us to differentiate between the impacts of overseas *studies* on one hand and that of overseas *work-placement* on the other.

4.1.4 Job search

Another set of hypotheses related to the association between the job search process and labour market success. Among the characteristics of this process the *timing of the search* and also the *application of a range of techniques* were looked at.

The time when graduates start searching for a job has clear effects on their employment situation even three and a half years after graduation. Those who started searching before their graduation are in many respects in a better position than those who delay the search until the time of graduation or even longer. As the vast majority of the graduates have already left the job they found by the first search process three and a half years ago (70% in our sample did so), the benefits from the early search found here are not likely to indicate a “first comers cream off the best vacancies” effect only. They also suggest the longer-term positive impact of an energetic, strategic approach to job-hunting and of a work-centric value system.

From our data we can see for instance that those who started their search before graduation are more concerned about *social prestige, making money* and also about *work* itself than those searching later. Rating these life goals according to their importance, before graduation job search starters attributed a bigger significance to these than those who started around the time of graduation, whereas those starting after graduation rated these aspects lower than either of the other two groups. If we keep these motivations constant, the positive impact of the timing diminishes, but does not disappear. This shows that timing of job search is an indicator of job values as well as an important element of labour market behaviour, and this in itself can affect labour market success.

The benefits of an early search show themselves in every aspect of the employment situation we investigated and appear among males and females similarly. However, it is also clear that those who start their search after the time of graduation tend to be in somewhat better positions than those who started “around” the time of the end of their studies. This can happen because the latter “strategy” might imply the delay of the decision without any specific reason, whereas a longer break between graduation and starting to seek employment often means having a period for travelling or other activities. These sorts of gap year experiences may count as positive factors in the employers’ eyes.

The proportion of those “unsuccessful” in the labour market sums up these differences very clearly. The respective figures are 13% among those who started their search prior to graduation, 21% among those starting after graduation, and as high as 25% in the group of the “around the time of graduation” job search starters. (See Table 17)

From the job search methods investigated, the applications of the following seem to lead to above-average benefits in the labour market, when other factors are equal. (The sequence of the methods in the list below reflects the extent of the benefits they provide with the ones providing most benefits being at the top of the list.)

- Using contacts established through employment undertaken during the course of study;
- Contacting employers without knowing about a vacancy (especially for males but also for females);
- Seeking assistance from teaching staff of the higher education institution (numerous benefits but only for women);
- Using the Careers Service in the university;
- Using personal connections (friends, parents, other relatives);
- Applying for an advertisement;
- Being approached by an employer.

The other methods investigated (that can be seen in Table 17) do not seem to affect employment success significantly.

4.1.5 The employer's characteristics

Generally, graduates who work for a private employer tend to be in a job classified as “graduate” more often and also earn more than those working in public, non-profit or other type of employment. However, the subjective opinions do not suggest any special benefit from working in a private company. Concerning the perception of the level of job and also job satisfaction, women tend to be even happier in the public sector than the private sector. This is so despite the lower salary they earn in public organisations. These contradictions are reflected in the combined success measure that shows that among those working for a private company, both extreme success and the extreme failure are quite common.

Working for a medium sized (number of employees between 50 and 250) or a large (number of employees over 250) organisation rather than a small one leads to significant advantages in the labour market in terms of level of job and also salary. Nevertheless, those working for a medium sized organisation appear to benefit more than those at bigger organisations. As can be seen from the table, the ratio of the least successful graduates is lower whereas the ratio of successful graduates is higher in the medium sized than in the larger employers.

Table 17: Associations between a selection of HE-, job search and employment factors and success in the labour market. All working graduates (%)

	Successful	Average	Unsuccessful
Months spent mainly on work between the beginning and the end of the HE studies			
None (406)	16	63	21
1-8 months unrelated to study (546)	16	60	24
9+ months unrelated to study (567)	17	68	16
1-8 months related to study (516)	15	67	17
9+ months related to study (597)	17	74	10
Hours spent on work on an average week during term time			
0 hours (1739)	16	68	16
1-10 hours (465)	17	64	20
More than 10 hours (425)	14	67	19
Hours spent on extra-curricular activities on an average week during term time			
None (773)	13	68	19
1-10 hours (1505)	16	67	17
More than 10 hours (352)	22	63	15
Studying or working abroad prior to HE			
No (2447)	16	67	17
Yes (184)	11	69	20
Studying or working abroad during HE			
No (1897)	16	66	19
Yes (643)	16	70	14
Time of beginning of job search			
Prior to graduation (1203)	17	70	13
Around the time of graduation (519)	14	60	25
After graduation (666)	16	64	21
Method applied during the job search			
Applied for an advertised vacancy (1639)	16	66	18
Contacted employers without knowing about a vacancy (982)	18	68	15
Placed own advertisement (20)	10	90	-
Was approached by employer (207)	20	69	11
Contacted a Job Centre (598)	15	55	30
Contacted a commercial employment agency (658)	16	63	21
Used the careers office of the HE institution (902)	19	64	18
Sought assistance from the teaching staff (220)	24	63	14
Used contacts established through employment undertaken during course of study (425)	26	62	12
Used other personal connections (661)	19	65	16
Started own business (40)	15	75	10
Other method (150)	15	67	18
Type of employer			
Public employer (857)	16	70	14
Non-profit organisation (154)	8	71	21
Private employer (1379)	18	64	18
Self employed (92)	8	76	16
Other (35)	9	83	9
Size of company			
Small (623)	11	69	21
Medium size (505)	20	65	15
Large (1319)	17	67	17
All (2631)	16	67	17

In this section we looked at a range of characteristics of student and graduate life and saw how they influence the labour market success of graduates in general. In the following we will concentrate on specific groups of disadvantaged students, first mature students, then students from disadvantaged social backgrounds.

4.2 Mature students

In this report we differentiate between two groups of mature students. Those entering higher education between the ages of 21 and 24 and those who entered higher education at the age of 25

or over. The analyses of the labour market opportunities of these groups justified this divide. They clearly suggested that the disadvantages of those starting their studies before the age of 25 are fairly limited (some increase in the risk of unemployment and only in case of males). Moreover, this middle group can enjoy a range of advantages in terms of level of job, salary and job satisfaction (mainly among males) even compared to the younger graduates. However, entering higher education after the age of 24 puts the graduate in a considerably worse position compared to younger graduates. Besides experiencing a higher risk of unemployment they are likely to get lower level jobs, have poorer career prospects and be less satisfied with their situation than the younger ones.²⁸

Accordingly, in this section we will concentrate on factors that can improve the labour market situation of the oldest graduate group. In the previous section we have seen how different higher education experiences, job search techniques and employment characteristics can influence the graduates' labour market position in general. Now we will investigate their impacts on the "most mature" students in particular. We will also show how mature students compare to others in terms of access to the factors with positive effects and in terms of being able to avoid factors with negative effects. In this, and the following section, only the combined measure of labour market success will be used.

4.2.1 Work experience and term-time work during HE studies

The typically positive association between work experiences during higher education and later employment success found in the overall graduate body is less obvious among graduates who entered higher education after the age of 24 (see the table below). For this group work experience during the period of study is of less importance to the later employment situation and can even reduce the likelihood of success. Only a significant amount of study-related work can improve later employment prospects notably, reducing the risk of being relatively unsuccessful to 3%.

Table 18: Months spent mainly on work between the beginning of higher education and graduation and later success in the labour market

Mature students only (entry age over 24) (%)

<i>Number of months worked</i>	Successful	Average	Unsuccessful
None(93)	18	65	17
1-8 months unrelated to study (51)	10	80	10
9+ months unrelated to study (84)	7	82	11
1-8 months related to study (56)	11	70	20
9+ months related to study (59)	14	83	3
All (343)	12	75	13

If we look at the proportion of mature students working during their studies we find that 29% of this group spent no period in employment, i.e. they were almost twice as likely as the average graduate to finish higher education without work experience during this time. However, 37% of mature students still spent some months on non-study related work, an activity which does not improve (or might even worsen) their later employment prospects.

²⁸ All the differences listed here are ceteris paribus, i.e. they hold when a range of educational and socio-biographical factors are kept constant.

Table 19: Employment during higher education among the different age groups (%)

	None	1-8 months unrelated to studies	9+ months unrelated to studies	1-8 months related to studies	9+ months related to studies
Entry age – 20 (2043)	14	24	20	20	22
Entry age 21-24 (423)	15	16	19	26	24
Entry age 25+ (428)	29	15	22	17	17
All (2894)	16	22	20	20	22

The effects of term-time work on later career prospects are somewhat contradictory, but mainly negative. This negative impact also shows itself among mature students, although only to a moderate extent. (The differences are statistically non-significant here.)

Table 20: Hours spent on work on an average week during term time and later success in the labour market

Mature students only (entry age over 24) (%)

Number of hours worked	Successful	Average	Unsuccessful
0 hours (221)	14	74	12
1-10 hours (47)	11	79	11
More than 10 hours (76)	9	76	15
All (344)	12	75	13

As the table below suggests, mature students are not more likely to work during term-time than younger students. Nevertheless if working, mature students are more likely to work long hours than their younger counterparts, which is very likely to add to their later difficulties in the labour market.

Table 21: Weekly work during term-time in the different age groups (%)

	0 hours	1-10 hours	More than 10 hours
Entry age – 20 (2044)	69	18	13
Entry age 21-24 (424)	62	19	19
Entry age 25+ (428)	66	14	21
All (2896)	67	17	15

4.2.2 Extra-curricular activities

Unlike the majority of graduates, taking part in the varied non-academic student life of the higher education institution does not seem to improve the later career prospects of members of the oldest student group. In the case of those who entered higher education after the age of 24 the table below suggests no clear relationship between extra-curricular activities and success in the labour market. (The reverse association between extra-curricular activities and labour market success is not statistically significant.)

Table 22: Hours spent on extra-curricular activities in an average week during term time and later success in the labour market

Mature students only (entry age over 24) (%)²⁹

<i>Number of hours spent on e-c activities</i>	Successful	Average	Unsuccessful
None (223)	12	78	10
At least one hour (121)	12	71	17
All (344)	12	75	13

From this it follows that mature students' fairly limited involvement in the different student clubs and organisations (that can be seen from the following table) is not likely to be a barrier to their later employment success.

Table 23: Number of hours spent on extra-curricular activities in the different age groups (%)

	0 hours	1-10 hours	More than 10 hours
Entry age – 20	21	64	16
Entry age 21-24	37	53	9
Entry age 25+	62	34	3
All	29	58	13

4.2.3 Overseas experiences

There is no evidence that overseas experience – either before or during higher education – would affect mature students' career opportunities in the labour market.

Table 24: Overseas study or work and success in the labour market

Mature students only (entry age over 24) (%)

<i>Work or study overseas</i>	Successful	Average	Unsuccessful
Prior to HE			
No (308)	12	75	13
Yes (37)	16	73	11
All (345)	12	75	13
During HE studies			
No (266)	12	75	12
Yes (59)	12	73	15
All (325)	12	75	13

Given the (slight) positive impact of time spent abroad during higher education in the overall student body it is worthwhile noting that those who enter higher education after the age of 24 are somewhat less likely to be involved in overseas activities than younger students.

Table 25: Overseas experiences prior to and during higher education in the different age groups (%)

	Worked or studied abroad prior to HE	Worked or studied abroad during HE
Entry age – 20	6	28
Entry age 21-24	9	27
Entry age 25+	10	16
All	7	26

²⁹ Low case numbers do not allow to make the 1-10 hours / more than 10 hours divide.

4.2.4 Job search

The connection between the timing of the job search and the later position in the labour market does not seem to hold for those starting their studies after the age of 24. As Table 26 indicates, members of this age group are more or less equally likely (or unlikely) to succeed in the labour market, whenever they start searching. This suggests that mature students' age at the time of their job search is a big enough disadvantage in itself to which a couple of months (or even years) delay do not add remarkably. (Note: the association between starting the job search around the time of graduation and being relatively unsuccessful is statistically not significant.)

Table 26: Time of beginning of job search and later success in the labour market

Mature students (entry age over 24) (%)

	Successful	Average	Unsuccessful
Prior to graduation (129)	12	78	10
Around the time of graduation (58)	3	78	19
After graduation (84)	17	69	14
All (271)	12	75	13

Table 27: Time of beginning of job search in the different age-groups (%)

	Prior to graduation	Around the time of graduation	After graduation
Entry age – 20 (1855)	49	22	28
Entry age 21-24 (381)	55	21	24
Entry age 25+ (329)	44	26	30
All (2565)	49	23	28

Table 28 looks at the associations between the different job search techniques and employment situation in the early years after graduation in the case of mature students. In this age group the proportion of unsuccessful graduates is lowest among those who contacted employers without knowing about a vacancy (8%) and those who used contacts established through employment undertaken during the course of study (6%). These two strategies proved to be efficient in the graduate body as a whole as well.

Table 28: Method applied during the job search and success in the labour market

Mature students only (entry age over 24) (%)

	Successful	Average	Unsuccessful
Applied for an advertised vacancy (188)	12	74	14
Contacted employers without knowing about a vacancy (103)	11	82	8
Placed own advertisement (4)	25	75	0
Was approached by employer (34)	18	74	9
Contacted a Job Centre (82)	12	70	18
Contacted a commercial employment agency (73)	15	70	15
Used the careers office of the HE institution (89)	16	67	17
Sought assistance from the teaching staff (36)	17	69	14
Used contacts established through employment undertaken during course of study (54)	19	76	6
Used other personal connections (74)	12	74	14
Started own business (12)	8	83	8
Other method (18)	6	83	11

As Table 29 shows, the only method which mature students apply less intensively than others is that of *contacting employers without knowing about a vacancy*. Only 35% of those entering higher education after the age of 24 reported that they approached employers this way, whereas the respective ratio for the whole sample was 41%. Although the difference is not big, taken together

with the benefits of the technique we saw earlier they suggest that *motivating mature students to approach employers freely can be a fruitful strategy.*

However, the implication is not simply that the set of tools mature students apply for job-hunting should be compounded by one more. As we said earlier, most of the graduates have already left their first jobs after graduation by the time of our survey. From this fact and also from the one that the job search technique investigated here is not necessarily the one which actually helped to find the first job after graduation, it follows that the benefits from applying this method are not necessarily direct. In other words, this finding does not necessarily indicate that contacting employers will lead to better jobs *by itself*. Instead it is likely that the application of this strategy is a proxy of a *proactive approach in general*, which characterises the graduates' overall attitudes towards employment, and that this attitude is beneficial in the long term. Indeed, those applying this method tend to attribute a higher importance to life goals such as social prestige, personal development, making money as well as the work itself. So the message here is that *acquiring a proactive, initiative-taking approach, and as part of it, contacting employers on one's own initiative could improve ex-mature students' position in the labour market.*

As far as the other highly effective technique is concerned, i.e. using contacts established through employment during studies, mature students seem just as likely to apply it as anyone else.

It is interesting to note that mature students are somewhat more likely than others to enlist the help of the careers offices of their higher education institutions. Although from our data no clear patterns are evident in relation to how those mature students using the services compare to those not using it in terms of labour market success, their use of this kind of help suggests that careers offices have a particular responsibility but also an exceptional opportunity to help these students.

Table 29: Methods applied during the job searching process by the different age groups

Column %-s, multiple responses

	Entry age -20 (1853)	Entry age 21-24 (380)	Entry Age 25+ (331)	All (2564)
Applied for an advertised vacancy	68	75	68	69
Contacted employers without knowing about a vacancy	41	46	35	41
Placed own advertisement	1	1	2	1
Was approached by employer	9	7	10	8
Contacted a Job Centre	25	27	31	26
Contacted a commercial employment agency	28	28	26	28
Used the careers office of the HE institution	60	64	68	62
Sought assistance from the teaching staff	9	11	13	10
Used contacts established through employment undertaken during course of study	17	18	19	18
Used other personal connections	28	22	25	27
Started own business	1	2	5	2
Other method	7	6	6	6

4.2.5 The employer's characteristics

The contradictory effects of working in different economic sectors is reflected in the ex-mature students' employment characteristics (Table 30). Whereas those working for a public organisation are highly concentrated among those neither particularly successful nor particularly unsuccessful, employees at private companies are more likely to fall into one of the extreme categories.

Table 30: Type of employer and later success in the labour market

Mature students only (entry age over 24) (%)

	Successful	Average	Unsuccessful
Public employer (157)	9	84	7
Non-profit organisation (26)	19	69	12
Private employer (125)	13	70	17
Self employed (16)	6	69	25
Other (6)	17	50	33
All (330)	11	76	12

Table 31 shows that ex-mature students are significantly more likely to work for public organisations than younger graduates. Indeed, among those entering higher education after the age of 24 working for a public employer is a more common option than going to a private company. This finding reflects the fact that mature students are over-represented in subjects like teacher training.

Table 31: Type of employer members of the different age groups are working for (%)

	Public employer	Non-profit organisation	Private employer	Self employed	Other
Entry age – 20 (1821)	32	6	58	3	2
Entry age 21-24 (377)	33	8	53	5	1
Entry age 25+ (350)	47	7	37	7	2
All (2548)	34	6	54	4	2

In the case of ex-mature students, the size of the company they work for influences their overall success in a similar way to the younger graduates. On average there are slight benefits from working in a big company rather than in a small one, whereas those in medium-sized institutions are more likely to succeed than anyone else.

Table 32: Size of company and later success in the labour market

Mature students only (entry age over 24) (%)

	Successful	Middle	Unsuccessful
Small (108)	7	79	15
Medium size (72)	18	75	7
Large (127)	13	74	13
All (307)	12	76	12

From Table 33 below it can be seen that the older the graduate the less likely it is that he/she will be employed in a big company. In spite of this, working for a big organisation is still the most likely option for those who entered higher education after the age of 24.

Table 33: Size of company members of the different age-groups are working for

	Small	Medium size	Large
Entry age – 20 (1754)	24	19	57
Entry age 21-24 (371)	30	22	49
Entry age 25+ (322)	35	24	41
All (2447)	26	20	54

4.2.6 Summary – mature students

In this section we found that the employment success of those entering higher education after the age of 24 is somewhat less influenced by whether they work or not during their studies than it is in the case of younger graduates. However, a significant period (over 8 months) of study-related work experience – which is relatively uncommon in this group – has notable positive effects on these graduates' employment prospects.

Among the characteristics of the job searching process, timing does not seem to have an impact on mature students' careers, but the techniques applied in searching do. Methods providing exceptional labour market opportunities for mature students include contacting employers without knowing about a vacancy and using contacts established through employment undertaken during course of study. Despite the effectiveness of the earlier method, mature students are less likely to apply it than others. Our conclusion was that adopting a pro-active, initiative-taking approach to seeking a job, and as part of this contacting employers on one's own initiative, could improve ex-mature students' position in the labour market. Type of employer and also size of the company affects the labour market situation of mature students in a similar way to that of younger graduates.

4.3 Graduates from disadvantaged social backgrounds

As throughout this study, “disadvantaged social background” will be defined in two separate ways, i.e. by the parents' educational qualifications on the one hand and by parents' occupation on the other.

4.3.1 Work and employment during higher education

A long (over 9 months) period of work related to the higher education studies clearly improves the later career prospects of those from a disadvantaged social background. The ratio of those who do not succeed in the labour market falls back as much as 9% among those with such an extensive and also relevant work experience. A shorter period of study-related employment does not seem to have similar radical effects. In the worst position are those who did not work at all or had only a couple of months work experience, unrelated to their studies.

As we have seen before, there are positive effects deriving from any kind of work experiences (apart from the short-term unrelated types of work) in every student group. Nevertheless these effects are somewhat stronger among the students from disadvantaged backgrounds. Whereas in the whole graduate population having no work experience increases the likelihood of being unsuccessful in the labour market only very slightly (from the average 17% to 21%), this difference is much more significant among graduates from disadvantaged social backgrounds. (The respective figures are 19% and 28% among those with poorly qualified parents and 13% and 16% among those with two graduate parents.) This suggests that work experience can – to some extent at least – compensate graduates from disadvantaged social backgrounds.

Table 34: Months spent mainly on work during higher education and later success in the labour market

Graduates from disadvantaged social backgrounds only (%)

	Parents completed compulsory schooling only			Parents' occupation: clerical or manual		
	Successful	Average	Unsuccessful	Successful	Average	Unsuccessful
None (140, 98)	13	59	28	13	61	26
1-8 months unrelated to study (190, 178)	13	61	27	8	61	30
9+ months unrelated to study (187, 153)	21	63	17	14	67	18
1-8 months related to study (165, 155)	18	65	18	12	72	16
9+ months related to study (204, 165)	16	76	9	12	79	9
All (886, 749)	16	65	19	12	69	20

Although students from lower social backgrounds seem to be involved in work experience to a very similar extent to other students, considering the extra benefits they can derive from this, it can be worthwhile improving their access to relevant work experience.

Table 35: Employment during higher education – students from different social backgrounds (%)

	None	1-8 months unrelated to studies	9+ months unrelated to studies	1-8 months related to studies	9+ months related to studies
Parents' education					
Both parents compulsory (986)	17	21	20	18	23
At least one parent completed secondary (718)	18	19	23	18	22
One parent graduated (705)	16	20	21	20	23
Both parents graduated (527)	14	27	17	24	19
Parents' education unknown (63)	21	10	19	35	16
Parents' occupation					
Clerical or manual (832)	15	23	20	21	22
Managerial or professional (1814)	15	22	21	20	22
No information (355)	29	18	18	18	18
All (3001)	17	21	21	20	22

Labour market difficulties associated with term-time work are even more notable among graduates from disadvantaged social backgrounds than among other groups. For example, among those whose parents who completed only compulsory schooling, the likelihood of lack of success in the labour market for those working over 10 hours a week is double (31%) the figure for those who do not work at all (Table 36).

Table 36: Hours spent on work on an average week during term time and later success in the labour market

Graduates from disadvantaged social backgrounds only (%)

	Parents completed compulsory schools only			Parents' occupation: clerical or manual		
	Successful	Average	Unsuccessful	Successful	Average	Unsuccessful
0 hours (568, 466)	16	69	15	11	72	17
1-10 hours (147, 131)	20	58	22	15	60	25
More than 10 hours (172, 152)	13	56	31	11	67	22
All (887, 749)	16	65	19	12	69	20

Not surprisingly, graduates from lower socio-economic backgrounds reported both a greater incidence of term-time working and they were also more likely to work over 10 hours a week,

although the differences were neither extreme nor systematic.³⁰ More recent data, collected after the introduction of tuition fees and the replacement of grants with loans, however, show that there is a definite tendency for students from low income families to be engaged in term-time work more often than others and to work longer hours (Barke et al, 2000; Connor and Dewson 2001; Metcalf 2001). Also, in recent years the proportion of students working appears to be growing faster in these student groups than in others, according to some studies (Connor and Dewson 2001; Callender and Kemp 2000).

Together with the evidence showing that term-time work affects the careers of graduates from disadvantaged backgrounds more than it affects others, this suggests that any intervention which helps low social class people to avoid term-time work would also contribute to their later success in the labour market.

Table 37: Hours spent on work during an average week during term time – students from different social backgrounds (%)

	0 hours	1-10 hours	More than 10 hours
Parents' education			
Both parents compulsory (987)	65	16	19
At least one parent completed secondary (719)	72	16	12
One parent graduated (705)	64	18	18
Both parents graduated (527)	69	19	11
Parents' education unknown (63)	79	10	11
Parents' occupation			
Clerical or manual (833)	64	17	19
Managerial or professional (1813)	68	18	14
No information (354)	73	14	14
All (3000)	67	17	16

4.3.2 Extra-curricular activities

As in the overall graduate population, extra-curricular activities are associated with increased labour market benefits among graduates from disadvantaged backgrounds. Intensive – over 10 hours a week – involvement in non-academic higher education activities can have particularly advantageous impacts.

Table 38: Hours spent on extra-curricular activities during an average week during term time and later success in the labour market

Graduates from disadvantaged social backgrounds only (%)

<i>Hours per week on extra-curricular activities</i>	Parents completed compulsory schools only			Parents' occupation: clerical or manual		
	<i>Successful</i>	<i>Average</i>	<i>Unsuccessful</i>	<i>Successful</i>	<i>Average</i>	<i>Unsuccessful</i>
None (311, 240)	14	66	20	12	63	25
1-10 hours (467, 425)	15	66	18	11	72	17
More than 10 hours (108, 84)	26	56	19	17	70	13
All (886, 749)	16	65	19	12	69	20

Table 39 indicates that students from disadvantaged social backgrounds – whether in terms of the education or occupation of their parents – have less access to extra-curricular activities in higher education. 65% of those with the least qualified parents reported some involvement in this sphere of student life, whereas the similar figure was 73% among those with two graduate parents. The reasons for these differences are multiple. Very importantly, according to our data the availability of extra-curricular activities for students in post-1992 universities and colleges tends to

³⁰ Interestingly, our data suggest that low social background is only associated with more term-time work among new university and college graduates but not among old university graduates.

be much more limited than in old universities. Out of the old university graduates only 19% said that they were not involved in any activity of this kind, whereas the similar figure was 37% among new university graduates and 46% among college graduates. And since students from disadvantaged backgrounds are (relatively) over-represented in the latter types of institution, it is not surprising that they reported a lower level of involvement in extra-curricular activities.

However, some social background differences still remain if we only look at graduates from the same type of institution. Students from disadvantaged social backgrounds are somewhat less likely to spend any time on extra-curricular activities both in the pre-1992 and post-1992 universities. (In contrast to this, in higher education colleges students from disadvantaged social backgrounds seem to be more active than others in this respect.) Explanations for the differences might be that lower status students have limited time available because of the increased amount of time they spend in term-time jobs. But from other studies we also know (e.g. Archer 2000; NAO 2002) that they are more likely to attend local universities and live with their parents. This can prevent them from taking part in many university activities. It is not only the increased travel time that can hold them back (this holds for those staying out of campus on their own as well) but also their “home” social network and activities.

Another possibility is that – especially in the more prestigious institutions – students from disadvantaged social backgrounds do not feel comfortable in middle-class dominated higher education environments and find it difficult to fit into social institutions such as students unions, societies etc. In fact some evidence from our data seems to support this explanation. When asked to rate some social aspects of university life, those from less educated backgrounds reported slightly less positive experiences than others – *but only if they went to an old university*. They found both the “contacts with fellow students” and the “chance for students to have an impact on university policies” somewhat less positive than other students.

Table 39: Hours spent on extra-curricular activities during an average week during term time – students from different social backgrounds (%)

	0 hours	1-10 hours	More than 10 hours
Parents' education			
Both parents compulsory (987)	35	53	12
At least one parent completed secondary (719)	25	61	14
One parent graduated (705)	26	62	12
Both parents graduated (526)	27	57	16
Parents' education unknown (64)	44	30	27
Parents' occupation			
Clerical or manual (832)	32	57	11
Managerial or professional (1813)	25	60	15
No information (355)	48	44	8
All (3000)	29	57	13

4.3.3 Overseas experiences

There is no clear indication that students from disadvantaged social backgrounds would benefit considerably from overseas experiences. However, the case numbers are insufficient here to make reliable statements.

Table 40: Overseas experiences and later success in the labour market

Graduates from disadvantaged social backgrounds only (%)

	Parents completed compulsory schools only			Parents' occupation: clerical or manual		
	Successful	Average	Unsuccessful	Successful	Average	Unsuccessful
<i>Prior to HE</i>						
No (424)	12	67	22	12	68	20
Yes (20)	5	85	10	6	86	9
All (444)	11	67	21	12	69	20
<i>During HE studies</i>						
No (353)	10	67	22	11	68	21
Yes (75)	12	68	20	12	73	16
All (428)	11	68	22	11	69	20

The following table shows that the overseas experiences of students from the different social backgrounds reflect clear and very significant disadvantages for those from less educated or lower class families. Those with two graduate parents have an exceptional chance of getting abroad, either for studying or for working. Over 40% of students from this group spent some time in a foreign country during their higher education, whereas only 19% of students from the least educated backgrounds did so.

Table 41: Overseas experiences prior to and during higher education – students from different social backgrounds (%)

	Worked or studied abroad prior to HE	Worked or studied abroad during HE
Parents' education		
Both parents compulsory (987)	5	19
At least one parent completed secondary (719)	6	27
One parent graduated (705)	7	27
Both parents graduated (526)	13	41
Parents' education unknown (64)	0	9
Parents' occupation		
Clerical or manual (833)	5	16
Managerial or professional (1811)	8	26
No information (309)	6	22
All (2652)	7	27

4.3.4 Job search

As with other students, an early beginning to the job search is associated with fewer difficulties in the longer-term employment prospects of socially disadvantaged graduates. The effects show themselves mainly by decreasing the risk of significant problems. Only 13-15% of those who started job-hunting prior to graduation in this group succeeded poorly in the labour market. As we mentioned earlier, this relationship between the timing of job search and later labour market prospects is partly because the early searchers tend to be more strongly motivated towards work and consider work as a central aim after graduation. This approach then pays off in the labour market in the longer term.

Table 42: Time of beginning the job search and later success in the labour market

Graduates from disadvantaged social backgrounds only (%)

<i>Timing of job search</i>	Parents completed compulsory schools only			Parents' occupation: clerical or manual		
	<i>Successful</i>	<i>Average</i>	<i>Unsuccessful</i>	<i>Successful</i>	<i>Average</i>	<i>Unsuccessful</i>
Prior to graduation (417, 337)	16	71	13	12	73	15
Around the time of graduation (185, 157)	20	47	34	13	61	26
After graduation (217, 181)	14	65	22	13	62	25
All (819, 675)	16	64	20	12	68	20

Students from socially disadvantaged backgrounds are just as likely to start their job search before the time of graduation than anybody else. (Indeed, those with two graduate parents are more likely than anyone else to delay the beginning of their job search – often with the intention to have a gap year or a couple of months for travel or other activities.)

Table 43: Time of beginning the job search – students from different social backgrounds (%)

	Prior to graduation	Around the time of graduation	After graduation
Parents' education			
Both parents compulsory (897)	50	24	27
At least one parent completed secondary (637)	49	24	27
One parent graduated (594)	52	22	27
Both parents graduated (471)	46	21	33
Parents' education unknown (52)	46	33	21
Parents' occupation			
Clerical or manual (737)	49	24	27
Managerial or professional (1606)	49	23	28
No information (309)	49	23	28
All (2652)	49	23	28

Contacting employers without knowing about a vacancy improves prospects of graduates from socially disadvantaged backgrounds much more moderately than it does for other graduates. An explanation for this can be that those from lower social classes aspire to less prestigious positions, and even if they initiate the contact with an employer, they tend to choose employers from the less prestigious segments of the graduate labour market. This suggests that the relative reluctance of these graduates to apply this method (Table 45) is not in itself a barrier to their employment success.

Seeking the assistance of higher education teaching staff and using contacts established while working during higher education can both improve the opportunities of graduates from socially disadvantaged groups in the same way as for other graduates. Both of these methods are applied with equal frequency by those from lower and higher social positions.

Table 44: Method applied during the job search and success in the labour market

Graduates from disadvantaged social backgrounds only (%) (multiple responses)

<i>Job search method</i>	Parents completed compulsory schooling only			Parents' occupation: clerical or manual		
	<i>Successful</i>	<i>Average</i>	<i>Unsuccessful</i>	<i>Successful</i>	<i>Average</i>	<i>Unsuccessful</i>
Applied for an advertised vacancy (589, 476)	18	62	21	14	68	18
Contacted employers without knowing about a vacancy (337, 251)	18	64	18	15	68	17
Placed own advertisement (5, 8)	-	100	-	-	100	-
Was approached by employer (78, 52)	17	74	9	4	87	10
Contacted a Job Centre (233, 200)	12	52	36	11	54	36
Contacted a commercial employment agency (246, 204)	17	60	23	11	64	25
Used the careers office of the HE institution (301, 240)	19	62	20	13	68	19
Sought assistance from the teaching staff (75, 62)	24	65	11	24	73	3
Used contacts established through employment undertaken during course of study (140, 111)	29	64	6	16	69	15
Used other personal connections (198, 153)	20	61	20	13	67	20
Started own business (11, 7)	9	82	9	-	86	14
Other method (41, 44)	12	71	17	11	73	16
All	16	65	19	12	69	20

Table 45: Methods applied during the job search process – by students from different social backgrounds (Column %) (multiple responses)

<i>Job search method</i>	Parents' education			Parents' occupation			
	<i>Both compulsory (901)</i>	<i>At least one secondary (642)</i>	<i>One graduated (602)</i>	<i>Both graduated (465)</i>	<i>Clerical or manual (748)</i>	<i>Managerial or professional (1606)</i>	<i>All (2655)</i>
Applied for an advertised vacancy	72	66	68	67	70	69	69
Contacted employers without knowing about a vacancy	41	39	40	45	37	42	41
Placed own advertisement	1	1	1	1	1	1	1
Approached by employer	9	8	7	11	8	9	9
Contacted a Job Centre	30	25	23	24	30	25	26
Contacted a commercial employment agency	30	28	26	22	29	26	27
Used the careers office of the HE institution	37	43	37	35	36	39	38
Sought assistance from the teaching staff	10	8	10	12	9	10	10
Used contacts established through employment undertaken during course of study	17	17	18	19	16	18	18
Used other personal connections	23	28	28	32	23	29	27
Started own business	2	2	2	2	1	2	2
Other method	5	6	6	10	6	6	6

Utilising other personal contacts however is a method of much more benefit for those from more advantaged social backgrounds. Using the help of friends, parents, relatives and other acquaintances improves the employment situation of those from a higher social class or more educated background significantly, but it has no similar effect for those from disadvantaged social backgrounds.

Although we have no direct information on socialising activities of the (former) students, having seen the variation in their involvement in extra-curricular activities and also in their views about the social aspects of university life, we have some reason to think that the size of available social networks is different for graduates from different social origins (see also evidence from the interview data.). Furthermore, the number and “value” of the relationships in the parents’

generation is necessarily dependent on social origin. The importance of these effects is probably clearest in a field such as law, where personal relationships very often play a decisive role in making a good training contract. (See Horvat 2001 for a similar argument in the case of the US.)

Although it is impossible to differentiate between the various kinds of personal relationships (inherited or acquired contacts), our data suggest that personal networks as a whole tend to play a bigger role in the job search of those from higher rather than lower status families. This tendency however is clearer among males, where only 12% of those with low qualified parents took advantage of some personal help, whereas 19% of graduates with two graduate parents did so.

Table 46: Proportion of those reporting that using other personal connections/contacts (e.g. parents, relatives, friends) was the most important method in finding their first job after graduation – by social background (%)

	Males	Females	All
Parents' education			
Both parents compulsory (375, 473)	12	7	9
At least one parent completed secondary (263, 345)	14	13	14
One parent graduated (235, 343)	15	10	11
Both parents graduated (185, 265)	19	14	16
Parents' education unknown (13, 27)	23	15	15
Parents' occupation			
Clerical or manual (304, 397)	11	8	9
Professional or managerial (649, 899)	15	12	13
Other or missing (119, 157)	20	9	14

Having no direct information on the nature or “quality” of the connection used from the data available we can only draw some indirect conclusions with regard to this. Among males, those coming from a well-educated background were more likely to have found a graduate job as their first destination if they could utilise personal connections than if they could not. This is not the case however among graduates with less qualified parents. Utilising personal links in their cases did not lead to better employment positions. On the contrary, they were more likely to get a non-graduate job with personal help than without (see Table 47). These findings seem to support our hypothesis suggesting that, in general, graduates from higher status backgrounds can not only expect help from their connections more often but they can also receive more valuable help.

Among females, no similar trend is evident. They were more likely to find a graduate job without personal help than with it, whatever their background.

Table 47: Proportion of those whose first job after graduation was graduate level . By the most important searching method utilised and by parents' level of education (%)

<i>Parents' education</i>	<i>Method of finding the first job</i>	First job = Graduate level		
		Males	Females	All
Both parents compulsory (375, 473)	Any other method	69	55	61
	Personal connections	52	34	44
At least one parent completed secondary (263, 345)	Any other method	65	50	56
	Personal connections	41	48	44
One parent graduated (235, 343)	Any other method	65	56	60
	Personal connections	73	34	55
Both parents graduated (185, 265)	Any other method	64	57	60
	Personal connections	86	43	64
Parents' education unknown (13, 27)	Any other method	80	50	59
	Personal connections	100	25	50
All (1071, 1453)	Any other method	66	54	59
	Personal connections	63	40	51

4.3.5 The employer's characteristics

Type of employer

There are no strong and systematic associations between the type of employer and the overall employment success of graduates from disadvantaged social backgrounds. The only clear pattern here is that those working for non-profit organisations are generally in a worse situation than others. Still, employment in an organisation of this type is a fairly common option for graduates from disadvantaged social backgrounds. At the same time, members of these groups are somewhat less likely than others to be in a job with a private company.

Table 48: Type of employer and later success in the labour market

Graduates from disadvantaged social backgrounds only (%)

<i>Type of employer</i>	Parents completed compulsory schools only			Parents' occupation: clerical or manual		
	<i>Successful</i>	<i>Average</i>	<i>Unsuccessful</i>	<i>Successful</i>	<i>Average</i>	<i>Unsuccessful</i>
Public employer (307, 256)	17	66	17	15	69	18
Non-profit organisation (59, 53)	7	66	27	2	74	25
Private employer (446, 360)	18	64	18	12	70	19
Self employed (22, 26)	-	82	18	-	89	12
Other (10, 17)	-	90	10	6	88	6
All (844, 712)	16	66	18	12	88	18

Table 49: Type of employer – students from different social backgrounds (%)

	Public employer	Non-profit organisation	Private employer	Self employed	Other
Parents' education					
Both parents compulsory (868)	36	7	53	3	1
At least one parent completed secondary (644)	33	6	53	5	3
One parent graduated (624)	35	7	55	3	1
Both parents graduated (445)	32	6	56	5	2
Parents' education unknown (36)	44	-	50	6	-
Parents' occupation					
Clerical or manual (740)	36	8	50	4	3
Managerial or professional (1600)	34	5	56	4	1
No information (277)	36	7	52	4	1
All (2617)	34	6	54	4	2

Size of the organisation

Just like most of the other graduates, those from socially disadvantaged backgrounds also tend to be somewhat more successful if they work for a bigger – especially medium sized – company rather than for a small one. They are neither more nor less likely to work for such organisations.

Table 50: Size of company and later success in the labour market

Graduates from disadvantaged social backgrounds only (%)

	Parents completed compulsory schools only			Parents' occupation: clerical or manual		
	Successful	Average	Unsuccessful	Successful	Average	Unsuccessful
Small (212, 171)	10	67	24	10	70	20
Medium size (178, 140)	21	64	16	15	69	16
Large (436, 389)	16	64	20	12	66	22
All (826, 700)	16	65	20	12	68	20

Table 51: Size of company – students from different social backgrounds (%)

	Small	Medium size	Large
Parents' education			
Both parents compulsory (848)	26	21	53
At least one parent completed secondary (616)	22	23	55
One parent graduated (601)	28	18	54
Both parents graduated (430)	26	19	55
Parents' education unknown (32)	41	25	34
Parents' occupation			
Clerical or manual (725)	25	20	55
Managerial or professional (1525)	25	20	55
No information (275)	31	24	46
All (2525)	26	21	54

4.3.6 Summary – graduates from disadvantaged social backgrounds

In this more thorough analysis of the factors affecting the labour market prospects of graduates from socially disadvantaged backgrounds, we identified a range of factors that can be mobilised in the interests of these students. One of our findings was that this group of graduates tends to realise more benefits from work experience than others. At the same time, labour market difficulties associated with term-time work are even more notable among these graduates. This is a serious problem since students from less affluent families are more likely to work during their studies.

With regards to extra-curricular activities, we found that graduates from socially disadvantaged backgrounds are not involved in them as intensively as other students – although these activities could clearly contribute significantly to their employment success.

Just like other student groups, an early start to the search for a job is associated with fewer difficulties in longer-term employment prospects. However, the application of certain job search methods has slightly different impacts – and provide less advantage – for these students than for others. Both contacting an employer without knowing about a vacancy and using other personal contacts tends to be a less fruitful strategy for graduates from socially disadvantaged backgrounds than for others.

These graduates are slightly more likely to work for non-profit organisations and less likely to work for private companies than others. However, there are no strong and systematic associations between the type of employer and the overall employment success of graduates from disadvantaged social backgrounds.

5 Interviews of a sample of graduates

The above statistical analysis inevitably deals with graduates in the aggregate and this cannot do justice to the complexities of individual experiences. Some of these are illustrated in the extracts from some 20 interviews that were conducted with individual graduates who had participated in the larger postal survey. We have grouped them somewhat arbitrarily as ‘mature students’ or ‘graduates from socially disadvantaged backgrounds’ but of course some of these students belong to both of these categories and some of them are from ethnic minorities. At the level of the individual, categories applied to groups lose some of their force. Brief descriptions of the interviewees are provided in appendix VIII.

5.1 Mature students

5.1.1 Positive aspects of being a mature student

Having a couple of “gap years” between school and university for almost any activity other than studying in an institutionalised form is often considered beneficial by those who have taken such time out of education and also by those who did not. Various advantages deriving from being “mature” in the university were raised in the interviews.

A fairly common positive feeling of older ex-students is that it had been easier for them to cope with the teaching style of the universities than it had been for younger students.

“...In the Art School it really was down to you to learn things. For me it worked. Partly that is age. People who went straight from school to Art school struggled. They wondered where all their teachers had gone.”

(Joseph)

“they made quite clear from the start that they weren’t going to spoon-feed us....you’re very much self-sufficient and we will aid and guide you but we won’t do it all for you.....being a mature student helped as well in lots of ways.....I’d had ten years of working where that (the school-learning experience) was very much in the background, whereas for those who had gone straight from school to university that was very much in the forefront...”

(Annett)

Although not echoing exactly the same issue, some graduates who had entered university directly from school also reported at least slight disadvantages deriving from their young age in higher education. They sometimes regretted the lack of full consciousness in their choice of going to university or in their decision of taking a certain course. They claim that being somewhat more mature at the time of the decision could have led to a more grounded choice.

“It would have helped me with understanding why I was at university....I went ..on the basis of that’s what you do after school.....with university there needs to be more of an informed choice for people because you want to decide why you’re going to do something and what you’re actually doing there...”

(Joshua)

Another problem with immaturity that some younger students recognise is being unprepared for a thorough understanding of the curriculum – although this element can have different importance in different fields of study.

“I think I was quite immature (and retrospectively I would have gone later – 20/21 or something) because I was not mature enough firstly to take it seriously and secondly to gain from a social sciences degree which had quite a lot of sociology – things where a greater understanding of society would have been helpful really.”

(Paul)

In both of these cases this recognition might have played a role in having gap years after the first degree and going back to do a legal course in one case and to do a PGCE in the other a couple of years later.

Both interviewees pointed out the difference between the two higher education experiences – in favour of the later one as far as the academic benefits are concerned.

“I was deliberately there... I was there for a purpose...for 8 hours a day I actually did some work... did the hard work... read the books... finished the essays... then in the evenings I had my time to myself... I treated Huddersfield very much as a job...I wasn't distracted by people saying 'come on let's go to the pub at 12 o'clock”

(Joshua)

“...it was very much focused on doing the qualification and I did not spend any time being a student especially because I did not particularly see myself as being a student and I did not see the activities that the students union put on being relevant to me because I had sort of established myself much more as a person who knew what I wanted to do. I was round about 30 when I went. ... It was almost like a job in some ways.”

(Paul)

Concerning the employment prospects of those starting universities *slightly* after the traditional entry age, the case studies did not suggest any particular difficulties deriving from their age.

5.1.2 The extra-curricular lives of mature students

Not surprisingly, mature students we interviewed reported very little engagement in extra-curricular activities although they usually did make some friends and did not feel lonely while at the university. Most of the ex-mature students we interviewed had fairly positive experiences about the social aspects of their university life although theirs were very different from those of the younger students. They usually reported a socially less active, more work-focused lifestyle than younger students did, in which there was not much place for the usual extra-curricular activities (clubbing, sports, unions etc.) of the “average” university student. However, those mature students who could find other students of similar age in their course, with whom they shared similar problems did make some friends with these fellow students. Overall, they were reasonably happy with the social aspects of their studies even if they admitted that it could have been much more lively had they gone onto university earlier. They often saw younger students as a group distinct from theirs, and they considered this divide between the two groups as a natural phenomenon.

“I did tend to get to know the mature students more, the younger ones seemed to have their own agenda... There was a mix of students – mature and young, 50/50 ... The nice thing about () is that they have a lot of mature students.” “Socially, when it comes to the end of a day, mature students go home – you have a life outside, whereas the youngsters tend to mingle together and are more likely to go for a drink together.”

(Terry)

“Because there were a lot of mature students, I think that made it easier (to fit in). I was much shyer than I am now but not that shy. I learned leadership skills during the playgroup stint. I did quite well on the Access course. I have always been able to get on with most people. So it was alright. In that school everybody goes away on a field-trip the first Easter with faculty and that was very good for building relationships.”

(Susanne)

*“Fine settling into both (universities). Because at college a lot of mature people that go and, in fact, a girl (Jackie) who I am still friendly with now exactly the same age as me who is also English (as opposed to Scottish)...”
“...that you can identify with someone who is your own age and she was studying travel and tourism...”*

(Sally)

Therefore the case of the following woman seems to be more of an exception, but still shows the difficulties a mature student has to face if she finds herself different from the others in many respects. In this case however gender is a problem as well.

“I was the oldest student on the course, the only female on certain subjects, I lived locally and was married so I didn't fit in with social functions etc.”

(Shelly)

5.1.3 Careers advice for mature students

It is important that career advisors recognise that being older than the traditional age students and maybe having a work-history already does not always mean that mature students have better ideas of how to (re-) enter the labour market with a degree in hand. As one of our mature interviewees said regarding type of advice given:

“I cannot really remember. I think it was so insignificant that I just probably hadn’t really just registered. I think they probably think being an older student, you can get on with it you know what you want. I don’t think that’s necessarily true.”

(Terry)

Mature students might not only need help but they might also need a different kind of help from younger students. The usual career paths designed for young graduates do not necessarily fit mature students’ needs.

“I think this is the point at which my age varied me from the others. The career paths that they were looking at, it was definitely geared to the younger student and the development of their management skills, their maturity, etc. And to go into a graduate programme would have been a no-no for me. It would have been wrong for me and wrong for the companies. I had already done most of that – the management techniques, the skills, etc – I had done all of that.”

(Bob)

One of our mature interviewees mentioned that she only realised the need for career advice some time after her graduation. She was delighted to find out (what she had not known in advance!) that the careers office of her university is ready to provide help to former students as well. However, in her case the geographical distance from the university made it too difficult to make use of it.

“I had no idea (how to find a job) – I don’t think I got very much careers advice. It wasn’t till a long time afterwards that I phoned them up and realised that for a year after you have left you can have careers advice – but again it was the distance of going up, there was not a telephone device.”

(Sally)

5.1.4 Labour market difficulties of mature students: 3 case studies

The graduates who had been ‘older’ mature students reported considerable labour market difficulties. Very often they found that their degree did not help them too much when they were looking for a job and in the strong competition with young graduates they were disadvantaged unless they could offer an extra asset – preferably a previous work history relevant for the job they were applying for. Below is a selection of case studies of older mature graduates talking about their experiences during the job search process. As can be seen – although this is an assumption difficult to prove – they all suspected their age being a reason for the many rejections experienced.³¹

Terry

Terry went to study economic and social history in an old university at the age of 33 after an unsuccessful marriage, which had left her with two young children. She found it practically impossible to find a job where she could utilise her degree – neither in terms of subject content nor as a level of qualification. When searching for a job she did not only find that having done a non-vocational subject was a problem, but also that – at her age – it is often not enough to have a degree: employers want experience as well.

“I finished and really thought what can I do – Fine I have this piece of paper which says I have this academic ability but so what. Because it wasn’t a degree in a practical subject (business studies or something like that) – if you have a degree that is in a specific area you can move into that area. History – what do you do with it. There is nothing to do with it!”

“It was all very well having a degree, but I had already worked out that it was useless. That’s the sad thing. It was no good for anything because a degree wasn’t enough. You also need experience.”

³¹ In the below text we are using pseudonyms to identify the graduates. Some basic information of each person quoted here can be found in Appendix VIII.

The sort of experience she had from when she was a housewife was not considered valuable.

“In some respects I am old (although I don’t think I am) I am female, I have been bringing up children and people do not respect that.”

After a couple of months job search and a decision to start a diploma in administrative studies alongside working part-time in a jewellery shop, Terry ended up in a housing group as a purchase ledger clerk with a temporary contract.

“I started work 7 December 1995 as a purchase ledger clerk and I worked out, taking inflation into account, that I was earning as much then as I did when I left work in 1981. I wasn’t earning any more and I felt really hard done by because I have had 14 years experience bringing up children, I have done a degree and it counts for nothing – and that did peeve me off actually quite a bit. It was a bit painful. I was doing a job which you often put people in who have come out of school really.”

She has worked herself up in the same organisation and today works as a senior finance officer. But even in this position, Terry feels that her capacities are under-utilised and is unhappy with her salary level – especially if she compares it to that of other, younger graduates.

“I can’t say it is necessarily where I want to be and I have moments of doubt. I am not being challenged enough.”
“It’s a pittance. Young university leavers are starting on more than that now and it is very unfair and disgusting.”

Susanne

The disappointment from not getting a job relevant to her level and field of education is somewhat smaller in Susanne’s case. This is partly because the employment-purposes were not dominant when she decided to go into higher education at the age of 37. Her major motivation to do a degree in Environmental Sciences was her engagement in Green Party politics and her personal interest in environmental issues. Also, Susanne had had concerns about her age from the very beginning and had never been very optimistic about starting a career at her age. However she did not entirely rule out finding a graduate job in the field.

“That’s partly because I think coming at 40 was necessarily realistic at that time but employment would be enhanced by HE purely because Margaret Thatcher was pushing lots of people through the Access courses, which is fine. I was really doing it for me, for my knowledge about the environmental science and I can use that. If there was paid work it would have been great but that was not very realistic in that field.”

Her efforts in finding such work did not bring any success.

“I kept thinking that I could get a job that was to do with the environment, although I did not particularly think it was all going to be very easy. But I did try. I hadn’t got the urgency to have to go out to go to work. I only got full-time paid employment in October. But I did try to get some environmental kind of jobs and I still get the Guardian on a Wednesday and look through that.”

“I think my age has been a factor against me”.

Age however was not her only drawback as she admits.

“I knew I only had a 2.2 which to go into a direct sort of environmental job was quite difficult and I did not want to move away.”

The job Susanne finally got had not only nothing to do with environment but was also a fairly low-level, non-graduate job where the biggest assets she mobilised were her typing skills and earlier experience in administration. Six years later she is still with the same organisation (local Council) doing various administrative jobs. Although her paid job is still not her first priority in life she still has not entirely given up finding something more rewarding. Susanne keeps trying but with a broadening focus, having accepted

that there is a very little chance of finding something linked to her studies and also that now her work experience since graduation can be more valuable in the job market than the degree itself.

"I mean actually I was 40 and I think increasingly my age is a factor but my aspirations for having a career have had an exponential growth as well – which is really quite difficult."

"I am on a treadmill now and am continuing to apply for jobs."

Annett

Although still falling in our older mature category, Annett was only 29 when she started university. Unlike the interviewees introduced earlier she had spent her years after school on travelling and doing various jobs mainly in overseas countries building to a large extent on her extensive language skills. She worked for various industries, and did a wide range of jobs from doing administrative work for a freight-forwarding company, through working as a holiday representative in various European countries, working in customer services in an Australian restaurant, to being a personal assistant to a company director in Holland. Annett's motivations for going into university were not particularly instrumental either, and she did not have any clear employment objectives in mind.

*"I started to think now was the time to go in to further education.....because ..don't know what sparked it off...just felt that **now** I was away from all this pressure of the academia that I'd experienced in the grammar school. I 'd worked for quite some time....and I felt that I was ready to take on a fresh challenge....and maybe go back to applying myself in a different way to how I'd been doing in the working environment.....it came obviously from within myself.....rather than being pressured...."*

Annett decided to do a joint business and language course, which she completed successfully with a 2.1 degree in 1995. At this time she was still not worrying about getting a permanent job in the UK, rather her plan was to return to Australia. She took up a summer job in a leisure centre, then went back to Australia where she was working "here and there".

After a year she returned to the UK (since Australian immigration rules had changed). This was the first time she actually thought about how her work experiences as well as her degree could be utilised in a job and in an industry that would build on her prior work experiences and recent knowledge and skills developed through her degree.

"...my big plans were to actually go into the hospitality industry...looking for assistant managerial roles in hotels locally... I was being offered ridiculous (low) salaries...money wasn't the most important thing but being offered –8 - 9k for an assistant manager's job working very long hours , working all the holidays etc...if I'd have gone to London... maybe I'd have done a bit better, but then one of the mature students with whom I was very friendly on the course... he was actually working in catering and hospitality in London...he was on £10k.....not very realistic salaries... in line with the cost of living the Eastbourne area ..is notoriously bad for salaries, even though cost of living isn't any lower...."

So instead of accepting such prospects, Annett took up various office-based jobs, where she could use her languages, but not many other of her skills.

"... not using as many skills as I would have liked to have done.....working for managers who don't always give you credit for what you're capable of doing.....sound a bit negative there...but I'm quite capable of doing different things but they don't always want to give you the responsibility. I don't know what their way of thinking is when they do that ...but I've come up against it a few times...seem to want to keep it (the responsibility) at a level that's suitable to them...(not really younger than interviewee)..and I felt quite frustrated by some of that ..."

After a few years with such feelings she decided to fulfil an old plan of hers and do a Teaching English as a Foreign Language Course. Currently she is working in seasonal jobs teaching English to foreigners. Although she is reasonably happy with the work itself she still keeps trying to find something more high profile in the business world and also less seasonal – with not much success so far.

In the interpretation of her failures to achieve the calibre of jobs she would really like, age comes up many times as a barrier. In Annett's arguments being over 30 appears as a disadvantage in different ways. Firstly she feels that older age suggests the lack of flexibility for employers.

"...time is running out.....but not too late to achieve more..maybe just need to find an employer who'll recognise that!..maybe employers looking for new young blood..but new and young not necessarily synonymous....but maybe employers like to take on young people so they can mould them....."

Secondly she reckons that being a married woman and being at her age is also a disadvantage since it can make employers worry about her future plans.

"I've often applied for things that are quite high profile. in the business world...and I've just never really got anywhere with them...I've got a feeling and it's just so subjective it's possibly very unfair to say.....thing is I'm in my late 30s, and I'm married, haven't got any children and am not particularly bothered about not having them, but I don't know what employers are thinking when they meet me....whether they're thinking..you're getting to that age when you're thinking of having a family and we don't particularly want ..know they can't ask that question, but it doesn't stop them thinking it!....."

Some concluding remarks

Although the stories presented here are all examples where ex-mature students faced serious difficulties, or found it even impossible to benefit directly from their degrees in their employment, none of these people regretted that they had gone into university. Without exception they felt that higher education had helped them to improve personally, made them more self-confident and broadened their horizons.

"On a more personal note, I think I had to prove to myself and perhaps some people in my family that I had a brain. It was marvellous. I went on all the field trips, I did subjects that I found difficult and subjects that I have never done before and I just really loved it."

(Susanne)

"...wouldn't have missed for anything! So many benefits I would recommend it to everyone! "

(Joan)

Although this study is concerned about the labour market outcomes of higher education only, benefits of these kinds should not be forgotten when we evaluate the impacts of higher education.

5.2 Graduates from socially disadvantaged backgrounds

5.2.1 The benefits of liking sport

The importance and the widespread positive impacts of an active involvement or even an outstanding performance in a well-chosen extra-curricular activity can be very nicely seen in the story of Catherine. She came from a lower social class family. Her father was an undertaker and her mother a florist. For Catherine the advantages of being quite able in sports – playing hockey at county level – has remained a significant factor in her career from getting a place at the university to her current senior business analyst position at a major international tobacco firm in London.

One of her motivations for choosing her university was its reputation for providing good sports facilities and supporting sporty students. She also suspects that her sporting ability had actually helped her to be offered a place at the university. The advantages of her background in hockey did not stop at this point but are also apparent when it comes to settling down in the university and making friends with fellow students.

".... everybody arrives (at university residential hall - in the first year) their parents dump them off and go....there's a couple of tears... 'cause it's all new and am I going to cope?.....and then an hour later when you all

meet for lunch for the first time.. the hall warden ..welcomed you in ...and after the first hour ...no looking back.....total mix of students (in the hall) all quite sporty... because the three questions (from fellow students??) were 'where do you come from?' 'what A levels did you do?' and 'what sport do you do?'; ...so if you didn't do any sport you'd actually feel quite an outsider.....one student had no interest in sport and she found it hard to mix...the mentality and socialising was all organised around sport..."

Catherine also suspects that her sport activity – along with her university's reputation – has helped her to get a job at her current company and realises the way employers consider sport activity as an indicator of valuable personal attributes.

"(The University) has got quite a good reputation with employers anyway... we were given a talk about how the university has a good name ... and the university is good for developing 'rounded people' with all the sports-stuff.....and this company likes 'team players.....it's a cultural/sport thing ...so experience at (this University) helpedI'm on the (company's name) social and sports committee....."

5.2.2 The consequences of living at home

One obvious reason why students from disadvantaged social backgrounds might participate less in extra-curricular activities is that they often live at home with their parents rather than staying on the campus (e.g. NAO 2002). Out of our four younger interviewees from the disadvantaged socio-economic background group two had done so and they both felt that they had missed out on something important, although they were not quite clear about what it was.

"... I wasn't staying there.. I wouldn't see friends of mine at university as much as you would...in the evening ...'cause I'd just go for me lectures or whatever, and then I'd just come straight home... more a kind of a job in many ways, just go for your lectures and assignments and then come back home..."

(Sunil)

When asked whether he has been involved in any extra-curricular activities, Sunil said:

"...no, just play football... that's what I was in to at the time.....wasn't in to anything (else) like politics or anything like that.....the debate clubs....."

"....looking back.. I suppose I could have done with mixing in a bit more.....getting involved with clubs...."

(what might you have got out of mixing?) "...sharing experiences really...mixing with other groups....about life or the world or whatever... different religions, different sets of people..from different parts of the UK... broaden your horizons really...make you more knowledgeable, less intolerant.....when you're to-ing-and-fro-ing (to university) it makes it difficult... you've got no base to go to..whereas everyone else can go to their flat or wherever ...'cause if do you did (stay around) by the time you got home it would be late and obviously you've got things to do at home as well, just like anyone has things to do in their own home...."

(Sunil)

Another graduate described her experiences the following way:

"I actually stayed at home when I went to university and I travelled everyday.....but if I had child today I would tell them 'leave home, go to university and live your life!'.....I think I missed-out on that.....that living part....not that it's done me any harm particularly, I don't think now.....but I think I would encourage my children to make the break at 16/17/18....."

(Clara)

5.2.3 Making new social networks at University

The job market benefits of the active personal contacts made at university were described by a graduate with very positive experiences of the social side of university life.

"...on a career scale... and that still happens...we keep in touch... and also people help each other out... if someone knows of an opportunity within their organisation, they'll tap a friend on the shoulder and say 'you're looking to move. there's an opportunity..."

(David)

However, for people from disadvantaged socio-economic backgrounds who do not participate actively in extra-curricular activities, work longer hours and lead a life linked to the parents' home's environment rather than to the campus, there is a danger of missing out a lot on the social aspects of higher education and of not being able to make many friends during the university years.

For those coming from a poor, less educated neighbourhood, this can be especially problematic and might have long-term effects. As two of our interviewees pointed out, the personal improvement they went through in higher education had put a considerable distance between themselves and their earlier friends and companies.

"...I picked up as much as a person growing up as I did educationally...friends made at university (are) better friends than friends I've known for 17/18 years back at home... and I'm closer to them. got more in common with them even though we came from very different social backgrounds...so many different clashes of cultures, classes...rather than say the friends I had back home... probably most of them working class with very little foresight or view of what happened outside that (home) area..."

(David)

"...I guess I find it quite difficult to go back home and socialise with my cousins...I think we just got completely different lives, different interests....when we were growing up we were quite similar....I don't have anything in common with them anymore....it's quite sad really....."

(Clara)

When asked whether she had ever felt a need to touch base with a school group, she said:

"...no, the parents of all the people I went to school with... and the people who mattered to me... all stay in the same exact same houses... and if ever I really want to get in contact with them or vice versa then we would ..and I know where to go...but I don't have a great desire ..to keep in constant contact with people.....I think things move on.... I would be interested to hear how they've got on ..school re-union, friends re-union, but not yet.....I'll wait a few years before that happens..."

(Clara)

It is likely that these old friends and acquaintances from childhood could not effectively substitute for those contacts made at university when it comes to personal help in the labour market. And this is not only because these contacts have loosened, but also because these people are obviously not in the social and economic positions to back up a successful graduate career.

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Appendix I: The graduate survey: dataset and indicators used

The analyses presented in Sections 2 and 4 are based on data from the UK sub-sample of a major international survey of graduate employment, funded by the EC in 1999. 16,104 graduates from the 1995 leaving cohort were randomly selected from 27 UK HE institutions stratified by size and type. 4,340 completed questionnaires were returned from the UK graduates (representing a response rate of 34%). Members of the sample were contacted by a mailed questionnaire. Before the analysis stage, the responses were weighted to reflect the subject spread and type of institution for the UK 1994/5 graduating cohort. The resulting database comprised 3461 UK graduates.

For the purposes of the present project, 2,997 full-time or sandwich course students were selected from the sample.

Operationalisation of the key concepts

Socio-biographical background

Socio-economic background

There are difficulties in identifying the social class of parents from the survey data. Firstly, respondents were asked to categorise their mothers'/fathers' occupation in a slightly revised way from the major groups used in the Standard Occupational Classification (SOC90). This coding system however was developed for categorising jobs by the analyst, with the help of a long list of occupations (SOC Manuals) on the basis of job title and job description provided by the respondents and not as a tool of self-categorisation by the respondents themselves. Consequently, reliability of data may be low. Secondly, the question inquired about parents' *current or most recent* job, rather than about the one at a standardised stage of the respondents' life.¹ Thirdly (and not irrespective of the other two problems) the proportion of missing cases was as high as 20% for fathers and 30% for mothers.

However, given the major importance of this measure, at some stages of the analysis it was still applied in the form of the following broad grouping². This categorisation is based on the occupation of the parent with the higher level job, or – when information on one of the parents was missing – on the only information available.

Table 1: Parents' occupation

Parents' occupation	Nos in sample		
	Male	Female	Total
Clerical or manual	349	469	818
Professional or managerial	745	1101	1846
Missing or other	123	210	333
Total	1217	1780	2997

To supplement and in many cases to substitute parents' occupation, the measure of parents' highest level of education was used. Although schooling of parents is not a good proxy of material circumstances in the family, it is a useful indicator of cultural background. However, it must be recognised that the enormous expansion of educational qualifications over the last 50 years poses problems in interpreting this measure as an indicator of broader social and cultural factors. It is of course an excellent measure of whether parents had first hand experience of higher education.

¹ In social mobility studies information collected on parents' characteristics often refer to the time when the respondent was 14 (sometimes 16) years old. In this way not only parents of similar age can be compared but also a crucial period of schooling decisions in the children's life can be captured.

² Originally we hoped to be able to test the distribution found against the HESA data, but in the end that proved to be even more imperfect.

Parents' highest levels of education³

Table 2: Parents' education

Parents' education	Nos in sample		
	Male	Female	Total
Both compulsory or less	397	523	920
At least one completed (upper) secondary	271	414	685
One higher education diploma/degree	292	468	760
Both HE	232	343	575
No answer	25	32	57
Total	1217	1780	2997

Ethnicity

In the graduate survey, the number of cases in most of the important ethnic minority groups was low. For this reason a broad categorisation was applied, and ethnic minority differences were more thoroughly analysed from the HESA dataset.

Table 3: Ethnicity of the graduate survey sample

Ethnicity	Nos in sample		
	Male	Female	Total
Asian	62	63	125
White British	1014	1511	2525
White other	110	160	270
Black	9	8	17
Other ethnic group	5	8	13
Not known	17	30	47
Total	1217	1780	2997

Age at entry into higher education

Three age groups were identified in order to differentiate not only between “traditional” and older entry age groups but also between those who postponed their studies by only a couple of years (entry age 21-24) and those who went back to studying after a longer break.⁴

Table 4: Age at entry into higher education

Age at entry into higher education	Nos in sample		
	Male	Female	Total
Under 21	816	1276	2092
21-24	189	212	401
25-	172	243	415
No response	40	49	89
Total	1217	1780	2997

Measuring employment success

Although participation in higher education can provide a wide range of benefits not only for the individual but also for the society as a whole, equality of outcomes can of course only be studied on the individual level. The study identifies the individual outcomes (benefits) of higher education studies with *opportunities and achievements* in the graduate labour market. Opportunities and achievements are understood in a broad sense and in every case are defined by measures of “success and failure”, i.e. measures which include a clear hierarchical dimension from “worse labour market situation” to the “better labour market situation”. Our analyses distinguished between objective and subjective measures of employment success. Inevitably these dimensions reflect values that might not be shared by the graduates themselves.

Objective measures of success

(question number from the survey questionnaire given in brackets)

³ In cases where only one parent's education was available, that was applied.

⁴ This categorisation is the one applied in HEFCE's report on employment indicators (2001).

Employment status and unemployment experiences:

- having no unemployment experience during the whole period investigated (c10, c11)
- not being unemployed for more than 5 months (c10, c11)
- being unemployed 6 months after graduation (from HESA data)

Income

- total gross annual income earned in the main job three and half years after graduation among those being employed (d11)

Quality of job – objective measure

- being in a graduate job 6 months after graduation, as it is defined in the “Moving On” study (DfEE 1999)⁵ (from HESA data)
- being in a graduate job three and a half years after graduation, as it is defined in the Warwick study (c10)
- being in a graduate job three and a half years after graduation, - graduate job defined as a professional or a managerial job. (c10)

Subjective measures of employment success

The following opinion variables were used

- (1) Do you anticipate that you will be promoted within the next three years? (c12)
- (2) Do you anticipate that you will get a higher income within the next three years? (c12)
- (3) What is the most appropriate level of education for your work? (f3)
- (4) How satisfied overall are you with your current employment status? (g1)
- (5) To what extent does “opportunities to use your knowledge and skills” apply to your work at the moment? (g3)
- (6) To what extent does “challenging tasks” apply to your work at the moment? (g3)
- (7) To what extent does “good career prospects” apply to your work at the moment? (g3)

It was certainly necessary and also sensible to reduce the number of dimensions here. After conducting the technical and statistical preparatory work⁶, the method of principal component analysis (with varimax rotation) was applied.

The first of the two factors explored is referred to as “*qualified job – subjective measure*”, while the second one is called “*middle-term career prospects*”. From the analysis it became apparent that general job satisfaction does not contribute to the separation of the factors, so it was decided to leave this out but to investigate it as a separate indicator. In addition, the question about the most appropriate level of education for the job is used separately as a binary outcome measure.

⁵ In the study by the Institute for Employment Research, jobs were categorised as “graduate”, “graduate track” and “non-graduate “. The categorisation is based on the Standard Occupational Categorisation (SOC). We are grateful to Abigail McKnight and John Thompson for providing us with the precise description of this grouping.

⁶ i.e. Replacing missing values in the case of those who didn't have more than 6 missing answers; excluding from the analysis those not working as their main activity and standardising the measures by calculating their z-scores.

Appendix II: Socio-biographical background and employment situation

		Current Job													
		At least once unemployed (%)		Unemp. for more than 5 Months (%)		Manager / Administrator / Professional (%)		In graduate job (IES) (%)		Does not feel overqualified (%)		Challenging job (points 1-5)		Opportunities to use skills (points 1-5)	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F
<i>Parents' Education</i>															
Both compulsory or less	Mean or %	11%	7%	7%	3%	79%	73%	74%	71%	74%	73%	3.72	3.95	3.64	3.92
	N	422	532	422	532	392	486	392	486	385	465	386	475	383	475
At least one secondary	Mean or %	13%	7%	5%	3%	81%	68%	76%	60%	80%	73%	3.75	3.89	3.69	3.78
	N	279	387	279	387	267	358	267	358	261	359	261	361	261	358
One Higher Education Degree	Mean or %	10%	7%	5%	3%	79%	70%	75%	69%	81%	80%	3.70	3.82	3.81	3.89
	N	263	409	263	409	241	367	241	367	237	366	238	358	238	357
Both Higher Education Degree	Mean or %	11%	9%	6%	5%	75%	69%	80%	69%	82%	84%	3.90	3.81	4.06	3.94
	N	185	307	185	307	180	265	180	265	168	258	175	262	176	259
Missing	Mean or %	18%	19%	16%	7%	74%	48%	95%	54%	68%	64%	4.64	3.43	4.07	3.66
	N	18	33	18	33	12	23	12	23	9	21	10	21	10	20
<i>Parents' Occupation</i>															
Clerical or manual job	Mean or %	15%	8%	9%	2%	77%	69%	74%	65%	76%	73%	3.86	3.87	3.66	3.81
	N	338	452	338	452	317	426	317	426	306	411	313	415	315	416
Professional or managerial job	Mean or %	10%	7%	5%	3%	78%	70%	76%	69%	79%	79%	3.75	3.89	3.81	3.89
	N	704	1036	704	1036	640	913	640	913	631	901	627	900	625	892
Missing	Mean or %	8%	10%	5%	8%	85%	69%	81%	67%	82%	76%	3.57	3.80	3.79	4.00
	N	126	180	126	180	135	161	135	161	122	157	130	161	128	160
All	Mean or %	11%	8%	6%	4%	79%	70%	76%	68%	78%	77%	3.76	3.87	3.76	3.88
	N	1167	1667	1167	1667	1092	1499	1092	1499	1059	1469	1070	1476	1067	1468

<i>Ethnicity</i>															
Asian	Mean or %	13%	8%	9%	3%	88%	85%	84%	80%	81%	89%	3.82	4.06	3.58	4.24
	N	61	63	61	63	63	55	63	55	61	56	56	55	54	56
White British	Mean or %	10%	8%	6%	3%	78%	70%	75%	67%	78%	77%	3.74	3.89	3.73	3.88
	N	995	1417	995	1417	918	1284	918	1284	899	1257	905	1266	904	1259
White others	Mean or %	26%	8%	5%	7%	76%	63%	83%	62%	72%	73%	3.8	3.57	4.03	3.68
	N	89	127	89	127	91	111	91	111	81	109	90	108	90	108
Any other ethnicity	Mean or %	0%	6%	0%	0%	100%	77%	85%	68%	93%	74%	3.97	3.17	4.45	4.17
	N	8	21	8	21	9	16	9	16	9	17	9	16	9	16
Missing	Mean or %	21%	6%	17%	0	85%	52%	1	74%	100%	56%	4.43	4.18	4.45	3.77
	N	14	39	14	39	12	32	12	32	9	31	9	30	10	29
<i>Age of entry into HE</i>															
Below 21	Mean or %	11%	8%	4%	3%	77%	69%	75%	68%	78%	76%	3.80	3.90	3.72	3.83
	N	774	1200	774	1200	723	1069	723	1069	703	1054	709	1058	709	1050
21 - 24 years	Mean or %	10%	6%	9%	3%	80%	71%	86%	68%	84%	83%	3.89	3.97	3.87	4.01
	N	206	201	206	201	189	186	189	186	189	180	186	179	185	179
25 - years	Mean or %	18%	9%	11%	6%	83%	77%	67%	65%	73%	73%	3.39	3.74	3.74	4.10
	N	163	219	163	219	146	192	146	192	143	184	144	189	141	188
Missing	Mean or %	13%	11%	13%	6%	85%	54%	89%	62%	93%	75%	3.82	3.55	4.33	3.62
	N	24	47	24	47	35	53	35	53	24	50	32	51	32	51
All	Mean or %	11%	8%	6%	4%	79%	70%	76%	68%	78%	77%	3.76	3.87	3.76	3.88
	N	1167	1667	1167	1667	1092	1499	1092	1499	1059	1469	1070	1476	1067	1468

		Current Job													
		Graduate job, subjective (princ. comp)		Good career prospects (points 1-5)		Promotion expected (%)		A Higher Income expected (%)		Middle-term career prospects (princ. comp.)		Annual Income from major job (thousand £)		General sat. with emp. situation (points1-5)	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F
<i>Parents' Education</i>															
Both compulsory or less	Mean or %	-0.14	0.05	3.46	3.47	61%	52%	81%	71%	0.08	-0.16	20.66	17.51	3.40	3.50
	N	385	474	380	472	391	478	391	478	385	474	366	425	391	481
At least one secondary	Mean or %	-0.09	0.02	3.47	3.57	68%	65%	83%	69%	0.18	-0.03	22.46	18.52	3.54	3.63
	N	266	361	261	358	267	368	267	368	266	361	248	323	270	361
One Higher Education Degree	Mean or %	-0.03	0.08	3.58	3.60	69%	57%	85%	73%	0.19	-0.08	20.95	18.38	3.56	3.70
	N	240	359	239	356	244	356	244	356	240	359	227	320	239	365
Both Higher Education Degree	Mean or %	0.12	0.09	3.60	3.47	72%	54%	88%	76%	0.24	-0.13	24.08	18.52	3.60	3.56
	N	176	263	173	262	181	267	181	267	176	263	158	238	179	265
Missing	Mean or %	0.30	-0.30	3.52	3.31	49%	45%	76%	66%	-0.27	-0.39	18.20	13.65	3.44	3.34
	N	10	21	9	21	12	23	12	23	10	21	12	22	8	22
<i>Parents' Occupation</i>															
Clerical or manual job	Mean or %	-0.11	-0.03	3.35	3.42	62%	58%	80%	72%	0.04	-0.08	21.11	17.47	3.35	3.51
	N	314	416	310	413	314	414	314	414	314	416	288	370	317	418
Professional or managerial job	Mean or %	-0.04	0.09	3.58	3.60	69%	57%	86%	73%	0.23	-0.10	22.10	18.55	3.56	3.65
	N	631	900	625	894	645	920	645	920	631	900	602	831	637	914
Missing	Mean or %	-0.04	0.03	3.61	3.34	64%	53%	78%	70%	0.05	-0.22	20.87	16.87	3.63	3.48
	N	131	161	129	161	135	157	135	157	131	161	121	128	133	162
All	Mean or %	-0.06	0.05	3.52	3.52	66%	57%	83%	72%	0.15	-0.11	21.67	18.08	3.50	3.59
	N	1076	1477	1063	1468	1094	1491	1094	1491	1076	1477	1011	1328	1087	1494

<i>Ethnicity</i>															
Asian	Mean or %	-0.11	0.41	3.56	3.87	56%	66%	84%	75%	0.09	-0.06	21.69	16.82	3.56	3.64
	N	58	55	56	54	64	58	64	58	58	55	56	44	64	56
White British	Mean or %	-0.09	0.06	3.48	3.54	67%	58%	84%	73%	0.17	-0.08	21.57	18.21	3.50	3.62
	N	910	1267	900	1260	921	1279	921	1279	910	1267	864	1155	916	1280
White others	Mean or %	0.1	-0.17	3.71	3.21	66%	43%	75%	63%	0.03	-0.38	22.99	17.72	3.53	3.39
	N	90	109	89	109	90	106	90	106	90	109	74	87	90	110
Any other ethnicity	Mean or %	0.64	0.04	4.46	3.93	62%	34%	69%	62%	-0.11	-0.29	22.1	19.8	3.04	3.24
	N	9	16	9	16	9	17	9	17	9	16	7	14	9	18
Missing	Mean or %	0.63	-0.16	3.82	3.19	86%	40%	83%	81%	0.21	-0.17	20.28	15.22	3.80	3.23
	N	9	30	9	29	11	31	11	31	9	30	11	28	8	29
<i>Age of entry into HE</i>															
Below 21	Mean or %	-0.09	0.05	3.51	3.61	70%	61%	88%	75%	0.26	0.00	21.86	18.20	3.42	3.63
	N	714	1059	706	1052	728	1073	728	1073	714	1059	683	999	725	1067
21 - 24 years	Mean or %	0.09	0.18	3.67	3.46	66%	53%	86%	70%	0.19	-0.21	22.00	18.05	3.87	3.55
	N	187	178	183	179	191	183	191	183	187	178	171	158	190	184
25 - years	Mean or %	-0.22	0.03	3.19	3.22	46%	36%	59%	57%	-0.42	-0.59	18.89	17.41	3.35	3.50
	N	144	189	143	186	142	190	142	190	144	189	128	133	142	192
Missing	Mean or %	0.46	-0.22	4.16	3.08	73%	56%	77%	61%	0.10	-0.23	27.48	17.99	3.99	3.21
	N	32	51	32	51	33	46	33	46	32	51	29	42	31	51
All	Mean or %	-0.06	0.05	3.52	3.52	66%	57%	83%	72%	0.15	-0.11	21.67	18.08	3.50	3.59
	N	1076	1477	1063	1468	1094	1491	1094	1491	1076	1477	1011	1328	1087	1494

Appendix III: Higher education and employment success

		At least once unemployed (%)	Unemp. for more than 5 Months (%)	Manager / Administrator / Professional (%)	In graduate job (IES) (%)	Does not feel overqualified (%)	Challenging job (points 1-5)	Opportunities to use skills (points 1-5)
By type of institution								
Old universities	Mean or %	9%	4%	77%	73%	82%	3.88	3.90
	N	1356	1356	1193	1193	1170	1180	1176
New universities	Mean or %	9%	4%	71%	71%	76%	3.81	3.77
	N	1121	1121	1060	1060	1025	1033	1027
Colleges	Mean or %	11%	6%	70%	68%	67%	3.66	3.77
	N	356	356	338	338	333	333	333
By type of field								
Vocational art	Mean or %	7%	3%	84%	79%	83%	3.86	4.00
	N	637	637	625	625	601	607	606
Vocational science	Mean or %	6%	3%	77%	75%	87%	3.92	4.02
	N	678	678	631	631	623	625	619
Non-vocational art	Mean or %	12%	6%	67%	62%	67%	3.72	3.58
	N	1095	1095	989	989	968	972	969
Non-vocational science	Mean or %	11%	5%	69%	77%	80%	3.91	3.88
	N	424	424	346	346	336	342	341
All	Mean or %	9%	5%	74%	71%	77%	3.83	3.83
	N	2834	2834	2591	2591	2528	2546	2536

		Graduate job, subjective (princ. comp)	Good career prospects (points 1-5)	Promotion expected (%)	A Higher Income expected (%)	Middle-term career prospects (princ. comp.)	Annual Income from major job (thousand £)	General sat. with emp. situation (points1-5)
By type of institution								
Old universities	Mean or %	0.11	3.64	62%	78%	0.01	20.77	3.63
	N	1186	1171	1215	1215	1186	1100	1200
New universities	Mean or %	-0.05	3.44	61%	76%	0.00	19.23	3.53
	N	1034	1028	1048	1048	1034	941	1047
Colleges	Mean or %	-0.18	3.33	55%	76%	-0.03	16.72	3.38
	N	333	333	322	322	333	299	334
By type of field								
Vocational art	Mean or %	0.13	3.59	62%	77%	0.00	19.43	3.62
	N	612	604	619	619	612	556	613
Vocational science	Mean or %	0.19	3.64	66%	80%	0.06	23.21	3.66
	N	625	619	628	628	625	573	629
Non-vocational art	Mean or %	-0.22	3.38	57%	76%	-0.01	17.67	3.41
	N	977	970	986	986	977	891	994
Non-vocational science	Mean or %	0.08	3.56	61%	75%	-0.05	19.05	3.65
	N	340	339	352	352	340	320	345
All	Mean or %	0.00	3.52	61%	77%	0.00	19.63	3.55
	N	2554	2532	2585	2585	2554	2339	2581

Appendix IV: Regression Models

IV. /1. Males: Logit models for various binary employment outcomes. Exp(B)

	Being unemployed for more than 6 months	Graduate job (IER)	Manager / professional job	Most appropriate level of education is HE
Constant	0.014***	13.244***	5.22***	30.479***
Parents' education: both HE (baseline)				
Parents' education: compulsory	1.348	0.925	1.418	0.715
Parents' education: secondary	1.258	0.999	1.409	1.005
Parents' education: one of them HE	0.837	0.959	1.35	1.074
Parents' education unknown	1.587	9.246	0.882	0.193*
White British (baseline)				
Asian	2.566*	1.466	1.939	0.857
White non-British	1.175	1.577	1.014	0.59*
Black	0.004	2.243	103.935	3.278
Other ethnic group	0.004	1.859	258.119	67.505
Ethnicity unknown	2.173	235.594	1.286	146.224
Entry age: -20 (baseline)				
Entry age 21-24	2.292**	1.952***	1.188	1.616*
Entry age 25-	5.613***	0.438***	1.254	0.864
Entry age unknown	3.335	1.903	2.4	3.389
School-type entry qualification (baseline)				
Vocational / professional qualification	0.826	3.261***	1.461	0.888
Other entry qualification	0.526	1.184	0.529*	0.826
No qualification at entry	5.516	0.414	0.058***	0.141***
Type of entry qualification unknown	0.002	2.267	5.855	0.597
"High" entry grades				
"Medium" or "low" entry grades	0.927	0.781	0.638**	0.378***
Unknown entry grades	0.1	3.038*	8.764**	0.573
Old universities (baseline)				
New university	1.413	0.908	0.733	0.959
College	2.407*	0.566*	0.69	0.567*
Law (baseline)				
Medicine, dentistry, veterinary science	0.005	151.228	294.81	3.547
Subjects allied to medicine	0.002	0.257	0.299*	0.307
Biological sciences	1.84	0.256**	0.353**	0.937
Physical sciences	2.315	0.249**	0.369**	0.333*
Mathematical sciences	1.215	0.7	1.812	0.6
Computing	0.179	2.07	7.29**	1.455
Engineering, technology, agriculture	0.726	0.358**	1.201	0.565
Architecture, building, planning	1.19	0.23**	0.957	0.534
Education	0.626	0.77	1.846	1.719
Social sciences	1.819	0.17***	0.519	0.29**
Business and administration	0.692	0.26**	1.151	0.458
Librarianship and information	0.101	0.041***	1.243	5.387
Languages, humanities	3.846*	0.171***	0.701	0.387
Arts	10.767***	0.396	0.377**	0.182***
Combined studies	0.68	0.22***	0.456*	0.162***
Upper second class degree (baseline)				
First class honours degree	0.153	0.927	1.407	0.91
Lower degree	1.766*	0.767	0.955	0.552***
Class of degree unknown	1.059	0.523**	0.558*	0.457**
-2 log likelihood	421.455	1060.688	1006.387	955.916
Cox & Snell R square	0.091	0.12	0.106	0.131
Nagelkerte R square	0.249	0.18	0.165	0.202

IV./2 Males: Linear regression models for various employment outcomes

	Level of job – subjective	Middle-term carrier prospects	Yearly income (logarithm)	Satisfaction with employment situation
Constant	0.63***	0.61***	3.18***	3.68***
Parents' education: both HE (baseline)				
Parents' education: compulsory	-0.14*	-0.10	-0.08*	-0.17*
Parents' education: secondary	-0.09	-0.05	-0.08	-0.05
Parents' education: one of them HE	-0.06	-0.02	-0.06	-0.02
Parents' education unknown	-0.02	-0.45	-0.28*	-0.30
White British (baseline)				
Asian	-0.15	-0.06	-0.02	-0.03
White non-British	0.03	-0.07	-0.01	-0.13
Black	0.73**	-0.03	-0.21	-0.54
Other ethnic group	0.35	-0.09	0.03	-0.55
Ethnicity unknown	0.46	0.18	-0.05	0.14
Entry age: <20 (baseline)				
Entry age 21-24	0.20**	-0.13	0.07*	0.52***
Entry age 25-	-0.11	-0.69***	-0.04	0.09
Entry age unknown	0.52***	-0.13	0.36***	0.63***
School-type entry qualification (baseline)				
Vocational / professional qualification	-0.03	0.12	-0.05	-0.03
Other entry qualification	0.16	-0.07	-0.09	-0.11
No qualification at entry	-0.89***	0.66**	0.13	-1.25***
Type of entry qualification unknown	-0.58***	0.00	-0.02	-0.26
"High" entry grades				
"Medium" or "low" entry grades	-0.25***	0.08	-0.06*	-0.08
Unknown entry grades	-0.36**	-0.09	-0.21**	-0.09
Old universities (baseline)				
New university	-0.11	0.10	-0.02	-0.14*
College	-0.35***	0.12	-0.04	-0.41***
Law (baseline)				
Medicine, dentistry, veterinary science	0.04	-0.21	0.20*	0.06
Subjects allied to medicine	-0.66**	-0.42	0.11	-0.17
Biological sciences	-0.22	-0.53***	-0.06	0.06
Physical sciences	-0.29*	-0.52***	-0.05	0.09
Mathematical sciences	0.01	-0.23	0.10	0.50**
Computing	0.17	-0.17	0.46***	0.43**
Engineering, technology, agriculture	-0.22	-0.21	0.15**	0.11
Architecture, building, planning	-0.28	-0.43***	0.04	0.20
Education	0.06	-0.61***	-0.13	0.15
Social sciences	-0.64***	-0.41***	-0.01	-0.08
Business and administration	-0.23	-0.15	0.06	0.31*
Librarianship and information	0.47	-0.75***	-0.50***	0.45
Languages, humanities	-0.48***	-0.37**	-0.19**	-0.22
Arts	-0.67***	-0.65***	-0.18*	-0.13
Combined studies	-0.58***	-0.40**	-0.04	-0.05
Upper second class degree (baseline)				
First class honours degree	0.21*	0.06	-0.06	-0.06
Lower degree	-0.20***	-0.15**	-0.22***	-0.26***
Class of degree unknown	-0.08	-0.10	-0.26***	0.01
R Square	0.181	0.124	0.2	0.109
Adjusted R Square	0.151	0.092	0.168	0.077

IV. /3. Females: Logit models for various binary employment outcomes. Exp(B)

	Being unemployed for more than 6 months	Graduate job (IER)	Manager / professional job	Most appropriate level of education is HE
Constant	0.079***	9.499***	3.843***	8.034***
Parents' education: both HE (baseline)				
Parents' education: compulsory	0.637	1.28	1.295	0.494***
Parents' education: secondary	0.472*	0.679**	0.936	0.462***
Parents' education: one of them HE	0.644	1.048	1.084	0.749
Parents' education unknown	3.39	0.295**	0.711	0.389
White British (baseline)				
Asian	0.946	1.693	2.377**	3.106**
White non-British	1.358	0.959	0.858	0.734
Black	0.001	451.431	1.317	0.288
Other ethnic group	0.003	0.373	0.828	0.966
Ethnicity unknown	0	4.428***	1.029	0.441*
Entry age: -20 (baseline)				
Entry age 21-24	0.829	0.755	0.915	1.522*
Entry age 25-	1.822	0.692*	1.244	0.817
Entry age unknown	4.345**	0.718	0.516**	1.672
School-type entry qualification (baseline)				
Vocational / professional qualification	2.831**	0.841	1.111	0.674
Other entry qualification	1.793	0.938	0.856	0.497**
No qualification at entry	0.002	31.975	21.101	0.717
Type of entry qualification unknown	2.817	0.21***	0.818	0.642
"High" entry grades				
"Medium" or "low" entry grades	1.014	1.065	1.015	1.195
Unknown entry grades	0.262	2.018	1.659	2.364
Old universities (baseline)				
New university	0.385***	0.793	0.72**	0.683**
College	0.04***	0.843	0.931	0.555***
Law (baseline)				
Medicine, dentistry, veterinary science	0.001	7.461*	17.141***	13.227**
Subjects allied to medicine	1.053	0.044***	0.106***	10.142***
Biological sciences	1.002	0.332**	0.569	1.1
Physical sciences	0.38	0.295**	0.348**	1.008
Mathematical sciences	0.001	0.909	1.682	2.269
Computing	4.714*	0.781	5.596	3.773
Engineering, technology, agriculture	0.29	0.472	0.937	1.333
Architecture, building, planning	3.949	0.252**	1.202	4.497
Education	0.228	1.534	8.528***	11.281***
Social sciences	0.678	0.125***	0.858	0.923
Business and administration	0.757	0.378**	1.095	0.988
Librarianship and information	0.651	0.142***	1.904	5.491*
Languages, humanities	1.101	0.158***	0.782	0.629
Arts	3.08	0.239***	0.316***	0.746
Combined studies	0.724	0.138***	0.375***	0.372**
Upper second class degree (baseline)				
First class honours degree	0.285	1.885**	2.173**	2.809***
Lower degree	0.902	1.199	0.801	0.572***
Class of degree unknown	1.199	0.783	0.609*	0.485**
-2 log likelihood ***	429.268	1616.694	1554.635	1356.455
Cox & Snell R square	0.046	0.167	0.17	0.15
Nagelkerte R square	0.174	0.233	0.24	0.226

IV./4 Females: Linear regression models for various employment outcomes

	Level of job – subjective	Middle-term carrier prospects	Yearly income (logarithm)	Satisfaction with employment situation
Constant	0.33**	0.05	2.88***	3.71***
Parents' education: both HE (baseline)				
Parents' education: compulsory	0.01	0.02	-0.02	-0.01
Parents' education: secondary	-0.01	0.14*	0.04	0.09
Parents' education: one of them HE	0.01	0.07	0.01	0.16*
Parents' education unknown	-0.21	-0.33	-0.22*	-0.02
White British (baseline)				
Asian	0.44***	0.02	-0.10	0.08
White non-British	-0.26**	-0.38***	-0.13***	-0.27**
Black	-0.54	-0.01	0.05	-0.95**
Other ethnic group	0.15	-0.30	0.11	-0.07
Ethnicity unknown	-0.05	0.13	-0.02	-0.26
Entry age: -20 (baseline)				
Entry age 21-24	0.13	-0.16*	0.02	-0.11
Entry age 25-	-0.06	-0.54***	-0.03	-0.18*
Entry age unknown	-0.12	-0.14	0.02	-0.32**
School-type entry qualification (baseline)				
Vocational / professional qualification	-0.17	0.16	-0.14**	0.13
Other entry qualification	-0.13	-0.03	-0.11*	0.02
No qualification at entry	0.17	-0.06	-0.17	-0.42
Type of entry qualification unknown	-0.08	0.25	-0.04	-0.20
"High" entry grades				
"Medium" or "low" entry grades	-0.22***	-0.25***	-0.05*	-0.12*
Unknown entry grades	-0.18	-0.62***	0.06	0.07
Old universities (baseline)				
New university	-0.03	-0.04	-0.06**	-0.11
College	-0.15*	0.21**	-0.06	-0.19**
Law (baseline)				
Medicine, dentistry, veterinary science	0.36*	-0.46**	0.27***	-0.10
Subjects allied to medicine	0.31*	-0.39**	0.07	0.27
Biological sciences	-0.02	-0.10	-0.04	-0.05
Physical sciences	0.11	0.29	-0.02	0.11
Mathematical sciences	-0.07	-0.14	0.05	0.11
Computing	0.26	0.58**	0.38***	0.66**
Engineering, technology, agriculture	-0.01	0.13	0.17**	-0.07
Architecture, building, planning	0.31	0.12	0.24**	0.28
Education	0.48***	-0.56***	0.12	0.28
Social sciences	-0.20	0.09	0.00	-0.14
Business and administration	-0.09	0.28*	0.12*	-0.04
Librarianship and information	0.16	0.25	0.22*	-0.05
Languages, humanities	-0.25	0.12	-0.08	-0.19
Arts	-0.31*	-0.03	-0.11	-0.18
Combined studies	-0.22	-0.03	-0.02	0.03
Upper second class degree (baseline)				
First class honours degree	0.31***	0.13	0.19***	0.37***
Lower degree	-0.06	0.13**	-0.03	0.10
Class of degree unknown	-0.27***	0.17	-0.09*	-0.11
R Square	0.095	0.122	0.108	0.057
Adjusted R Square	0.071	0.099	0.082	0.032

Appendix V: Employment Success Models with Interaction Effects

V/1 Graduate Job / By type of subject studied

	Males		Females	
	Main effects only	Interaction effects added	Main effects only	Interaction effects added
Constant	4.92***	7.00***	5.01***	6.29***
Parents' education: compulsory	0.81	0.39	1.20	0.75
Parents' education: secondary	0.87	0.57	0.69**	0.43*
Parents' education: one of them HE	0.85	0.84	1.02	0.73
Parents' education unknown	5.78	0.10	0.29**	0.19*
Asian	1.61	1.61	1.92*	1.95*
White non-British	1.42	1.42	0.74	0.78
Black	1.37	0.97	95.24	93.87
Other ethnic group	1.25	0.75	0.53	0.52
Ethnicity unknown	109.65	425.25	3.24**	2.88**
Entry age 21-24	1.80**	3.10**	0.83	1.13
Entry age 25-	0.55**	0.66	0.75	1.37
Entry age unknown	1.93	3.92	0.85	1.15
Vocational / professional qualification	2.94***	2.99***	0.83	0.86
Other entry qualification	1.32	1.40	0.90	0.97
No qualification at entry	0.58	0.22*	22.32	30.24
No information about entry qualification	2.70	1.74	0.24***	0.22***
"Medium" or "low" entry grades	0.67**	0.65**	0.95	0.95
Unknown entry grades	1.76	2.29	1.62	1.59
New university	0.94	0.90	0.74	0.74**
College	0.70	0.68	0.89	0.89
Vocational Science	1.33	0.69	0.38***	0.39*
Non-vocational Art	0.67*	0.53	0.31***	0.26***
Non-vocational Science	0.96	0.69	0.77	0.25**
First class honours degree	0.90	0.88	2.45***	2.45***
Lower degree	0.82	0.83	1.39**	1.37**
Class of degree unknown	0.76	0.72	1.45	1.33
Vocational science - Parents' education: compulsory		3.84*		0.58
Vocational science - Parents' education: secondary		1.74		1.72
Vocational science - Parents' education: one HE		1.70		0.94
Vocational science - Parents' education: unknown		1211.29		0.60
Non-vocational art – Parents' education: compulsory		2.00		2.09
Non-vocational art – Parents' education: secondary		1.93		1.43
Non-vocational art – Parents' education: one HE		0.65		1.34
Non-vocational art – Parents' education: unknown		124.53		2.38
Non-vocational science – Parents' education: compulsory		2.58		3.91*
Non-vocational science – Parents' education: secondary		1.56		4.37**
Non-vocational science – Parents' education: one HE		1.18		5.15**
Non-vocational science – Parents' education: unknown		772.62		6.23
Vocational science – Entry age 21-24		0.32*		1.61
Vocational science – Entry age 25-		2.95		0.71
Vocational science – Entry age unknown		0.09		1.63
Non-vocational Art – Entry age 21-24		1.03		0.42*
Non-vocational Art – Entry age 25-		0.49		0.41*
Non-vocational Art – Entry age unknown		94.95		0.53
Non-vocational Science – Entry age 21-24		0.43		0.82
Non-vocational Science – Entry age 25-		0.48		0.49
Non-vocational Science – Entry age unknown		0.45		0.84
-2 log likelihood	1118.805	1084.529	1751.910	1722.045
Cox & Snell R Square	.072	.101	.089	.107
Nagelkerke R Square	.108	.151	.124	.149

V/2 Most appropriate level of education for your job = HE / By type of subject studied

	Males		Females	
	Main effects only	Interaction effects added	Main effects only	Interaction effects added
Constant	22.71***	0.32	12.65***	12.26***
Parents' education: compulsory	0.70	0.43	0.53***	0.52
Parents' education: secondary	0.95	0.55	0.51***	0.64
Parents' education: one of them HE	1.03	3.30	0.79	0.93
Parents' education unknown	0.20*	1.10	0.40	0.15*
Asian	0.95	0.62	2.75**	2.42*
White non-British	0.58*	3.77	0.66*	0.70
Black	2.87	118.72	0.40	0.38
Other ethnic group	51.78	891.81	2.00	2.19
Ethnicity unknown	125.38	1.05	0.40**	0.26***
Entry age 21-24	1.63**	1.12	1.65**	1.53
Entry age 25-	1.02	7.12	0.97	1.11
Entry age unknown	3.42	0.72	1.60	1.26
Vocational / professional entry qualification	0.77	0.87	0.51**	0.51**
Other entry qualification	0.80	0.16**	0.56**	0.58**
No qualification at entry	0.18**	0.47	0.67	0.63
No information on entry qualification	0.56	0.34***	0.55	0.67
"Medium" or "low" entry grades	0.34***	0.48	1.11	1.13
Unknown entry grades	0.43*	0.89	2.29	2.21
New university	0.92	0.56*	0.70**	0.67**
College	0.60*	0.52	0.63**	0.58***
Vocational Science	0.97	0.11***	2.15***	2.31
Non-vocational Art	0.35***	0.36	0.35***	0.41*
Non-vocational Science	0.69	0.89	0.72	0.37
First class honours degree	0.84	0.58***	2.60**	2.72**
Lower degree	0.56***	0.66	0.63***	0.62***
Class of degree unknown	0.63	2.08	0.65	0.66
Vocational science - Parents' education: compulsory		1.60		0.86
Vocational science - Parents' education: secondary		1.78		0.55
Vocational science - Parents' education: one HE		0.01		1.70
Vocational science - Parents' education: unknown		3.71		542.19
Non-vocational art – Parents' education: compulsory		3.45		1.02
Non-vocational art – Parents' education: secondary		2.28		0.68
Non-vocational art – Parents' education: one HE		0.18		0.66
Non-vocational art – Parents' education: unknown		1.32		0.55
Non-vocational science – Parents' education: compulsory		2.40		1.79
Non-vocational science – Parents' education: secondary		2.21		2.32
Non-vocational science – Parents' education: one HE		10.29		2.51
Non-vocational science – Parents' education: unknown		1.35		523.43
Vocational science – Entry age 21-24		1.00		0.52
Vocational science – Entry age 25-		0.26		1.15
Vocational science – Entry age unknown		3.03		20.39
Non-vocational Art – Entry age 21-24		0.62		1.54
Non-vocational Art – Entry age 25-		109.33		0.84
Non-vocational Art – Entry age unknown		1.98		0.98
Non-vocational Science – Entry age 21-24		1.84		0.39
Non-vocational Science – Entry age 25-		0.30		0.58
Non-vocational Science – Entry age unknown		47.49***		189.20
-2 log likelihood	982.922	968.817	1424.963	1397.338
Cox & Snell R Square	.109	.120	.109	.126
Nagelkerke R Square	.168	.186	.165	.190

V/3 Income / By type subject studied

	Males		Females	
	Main effects only	Interaction effects added	Main effects only	Interaction effects added
Constant	3.18***	3.36***	2.97***	2.90***
Parents' education: compulsory	-0.09*	-0.31***	-0.02	0.08
Parents' education: secondary	-0.08	-0.31***	0.05	0.06
Parents' education: one of them HE	-0.08	-0.13	0.02	0.10
Parents' education unknown	-0.32**	-0.31	-0.25**	-0.36*
Asian	-0.02	0.00	-0.10	-0.08
White non-British	-0.03	-0.06	-0.14***	-0.13***
Black	-0.17	-0.18	0.08	0.03
Other ethnic group	0.12	0.06	0.16	0.18
Ethnicity unknown	0.00	0.11	0.01	0.01
Entry age 21-24	0.07	0.04	0.03	0.08
Entry age 25-	-0.03	0.04	-0.02	-0.03
Entry age unknown	0.38***	0.22	0.04	0.03
Vocational / professional entry qualification	-0.07	-0.07	-0.14**	-0.13**
Other entry qualification	-0.06	-0.05	-0.13**	-0.11*
No qualification at entry	0.17	0.06	-0.19	-0.24
No information on entry qualification	0.00	-0.08	-0.03	-0.06
"Medium" or "low" entry grades	-0.07*	-0.08**	-0.05*	-0.05*
Unknown entry grades	-0.24***	-0.20**	0.03	0.08
New university	-0.02	-0.02	-0.07**	-0.05
College	-0.11**	-0.12**	-0.07*	-0.05
Vocational Science	0.19***	0.05	0.07*	0.16*
Non-vocational Art	-0.08**	-0.38***	-0.15***	-0.07
Non-vocational Science	-0.02	-0.26**	-0.12***	-0.01
First class honours degree	-0.08	-0.08	0.20***	0.20***
Lower degree	-0.20***	-0.21***	-0.02	-0.03
Class of degree unknown	-0.28***	-0.29***	-0.07	-0.09*
Vocational science - Parents' education: compulsory		0.25**		-0.04
Vocational science - Parents' education: secondary		0.15		-0.03
Vocational science - Parents' education: one HE		-0.01		-0.15
Vocational science - Parents' education: unknown		-0.24		0.04
Non-vocational art – Parents' education: compulsory		0.35***		-0.16*
Non-vocational art – Parents' education: secondary		0.40***		-0.03
Non-vocational art – Parents' education: one HE		0.24		-0.06
Non-vocational art – Parents' education: unknown		0.36		0.22
Non-vocational science – Parents' education: compulsory		0.32**		-0.19
Non-vocational science – Parents' education: secondary		0.55***		-0.02
Non-vocational science – Parents' education: one HE		0.10		-0.18
Non-vocational science – Parents' education: unknown		-0.21		0.25
Vocational science – Entry age 21-24		0.06		-0.13
Vocational science – Entry age 25-		0.03		-0.01
Vocational science – Entry age unknown		-0.02		-0.24
Non-vocational Art – Entry age 21-24		0.10		-0.13
Non-vocational Art – Entry age 25-		-0.19		0.03
Non-vocational Art – Entry age unknown		0.46*		0.03
Non-vocational Science – Entry age 21-24		-0.13		0.24
Non-vocational Science – Entry age 25-		-0.24		-0.05
Non-vocational Science – Entry age unknown		0.20		0.04
R Square	.149	.182	.092	.108
Adjusted R Square	.127	.142	.074	.075

V/4 Graduate Job / By type of HE institution

	Males		Females	
	Main effects only	Interaction effects added	Main effects only	Interaction effects added
Constant	4.92***	6.05***	5.01***	6.20***
Parents' education: compulsory	0.81	0.89	1.20	0.62*
Parents' education: secondary	0.87	0.83	0.69**	0.81
Parents' education: one of them HE	0.85	0.63	1.02	0.93
Parents' education unknown	5.78	3.07	0.29**	0.27
Asian	1.61	1.61	1.92*	1.87*
White non-British	1.42	1.35	0.74	0.77
Black	1.37	1.56	95.24	63.36
Other ethnic group	1.25	1.22	0.53	0.54
Ethnicity unknown	109.65	246.75	3.24**	3.40**
Entry age 21-24	1.80**	0.51*	0.83	1.46
Entry age 25-	0.55**	0.40***	0.75	0.41***
Entry age unknown	1.93	3.77	0.85	0.99
Vocational / professional qualification	2.94***	2.97***	0.83	0.87
Other entry qualification	1.32	1.16	0.90	1.00
No qualification at entry	0.58	0.46	22.32	17.93
No information about entry qualification	2.70	2.41	0.24***	0.21***
"Medium" or "low" entry grades	0.67**	0.66**	0.95	0.95
Unknown entry grades	1.76	1.98	1.62	1.54
New university	0.94	0.36**	0.74	0.58
College	0.70	1.53	0.89	0.43**
Vocational Science	1.33	1.33	0.38***	0.35***
Non-vocational Art	0.67*	0.65**	0.31***	0.30***
Non-vocational Science	0.96	0.90	0.77	0.72
First class honours degree	0.90	0.85	2.45***	2.40***
Lower degree	0.82	0.87	1.39**	1.44***
Class of degree unknown	0.76	0.84	1.45	1.43
New university - Parents' education: compulsory		1.79		2.45**
New university - Parents' education: secondary		2.11		0.69
New university - Parents' education: one HE		3.01**		0.93
New university - Parents' education: unknown		208.70		1.05
College - Parents' education: compulsory		0.22*		6.40***
College - Parents' education: secondary		0.14*		1.36
College - Parents' education: one HE		0.53		2.70*
College - Parents' education: unknown		0.01		1.96
New university - Entry age 21-24		5.91***		0.52
New university - Entry age 25-		2.25*		3.96***
New university - Entry age unknown		0.11*		0.70
College - Entry age 21-24		10.45***		0.26**
College - Entry age 25-		1.39		1.15
College - Entry age unknown		96.46		0.68
-2 log likelihood	1118.805	1083.698	1751.910	1706.763
Cox & Snell R Square	.072	.101	.089	.116
Nagelkerte R Square	.108	.152	.124	.161

V/5 Most appropriate level of education for your job = HE / By type of HE institution

	Males		Females	
	Main effects only	Interaction effects added	Main effects only	Interaction effects added
Constant	22.71***	22.89***	12.65***	15.78***
Parents' education: compulsory	0.70	0.94	0.53***	0.41***
Parents' education: secondary	0.95	1.26	0.51***	0.42***
Parents' education: one of them HE	1.03	0.73	0.79	0.75
Parents' education unknown	0.20*	0.27	0.40	0.21
Asian	0.95	0.97	2.75**	1.93
White non-British	0.58*	0.65	0.66*	0.72
Black	2.87	3.41	0.40	0.30
Other ethnic group	51.78	201.07	2.00	1.97
Ethnicity unknown	125.38	7679.19	0.40**	0.47*
Entry age 21-24	1.63**	0.34***	1.65**	0.49*
Entry age 25-	1.02	0.48**	0.97	0.47**
Entry age unknown	3.42	2.69	1.60	1.17
Vocational / professional entry qualification	0.77	0.81	0.51**	0.52**
Other entry qualification	0.80	0.85	0.56**	0.53**
No qualification at entry	0.18**	0.14**	0.67	0.95
No information on entry qualification	0.56	0.61	0.55	0.61
"Medium" or "low" entry grades	0.34***	0.39***	1.11	1.26
Unknown entry grades	0.43*	0.54	2.29	2.23
New university	0.92	1.05	0.70**	0.48
College	0.60*	0.19***	0.63**	0.18***
Vocational Science	0.97	1.03	2.15***	2.16***
Non-vocational Art	0.35***	0.40***	0.35***	0.35***
Non-vocational Science	0.69	0.71	0.72	0.69
First class honours degree	0.84	1.02	2.60**	2.47**
Lower degree	0.56***	0.59***	0.63***	0.73**
Class of degree unknown	0.63	0.51**	0.65	0.70
New university - Parents' education: compulsory		0.47		0.98
New university - Parents' education: secondary		0.34		1.67
New university - Parents' education: one HE		0.95		0.72
New university - Parents' education: unknown		0.01		1.37
College - Parents' education: compulsory		0.70		3.98**
College - Parents' education: secondary		1.24		0.66
College - Parents' education: one HE		10.60**		2.83
College - Parents' education: unknown		626.60		8.49
New university - Entry age 21-24		8.44***		4.99***
New university - Entry age 25-		3.35**		3.03**
New university - Entry age unknown		1.17		2.04
College - Entry age 21-24		13.95***		8.08***
College - Entry age 25-		14.69***		10.60***
College - Entry age unknown		0.85		0.93
-2 log likelihood	982.922	936.153	1424.963	1371.725
Cox & Snell R Square	.109	.147	.109	.141
Nagelkerke R Square	.168	.227	.165	.213

V/6 Income / By type of HE institution

	Males		Females	
	Main effects only	Interaction effects added	Main effects only	Interaction effects added
Constant	3.18***	3.17***	2.97***	2.99***
Parents' education: compulsory	-0.09*	-0.08	-0.02	-0.07
Parents' education: secondary	-0.08	-0.05	0.05	0.07
Parents' education: one of them HE	-0.08	-0.03	0.02	0.02
Parents' education unknown	-0.32**	-0.37**	-0.25**	-0.25
Asian	-0.02	-0.03	-0.10	-0.11
White non-British	-0.03	-0.04	-0.14***	-0.14***
Black	-0.17	-0.16	0.08	0.04
Other ethnic group	0.12	0.13	0.16	0.15
Ethnicity unknown	0.00	0.01	0.01	-0.01
Entry age 21-24	0.07	0.10	0.03	-0.05
Entry age 25-	-0.03	-0.09	-0.02	-0.06
Entry age unknown	0.38***	0.48***	0.04	-0.09
Vocational / professional entry qualification	-0.07	-0.06	-0.14**	-0.14**
Other entry qualification	-0.06	-0.06	-0.13**	-0.11*
No qualification at entry	0.17	0.14	-0.19	-0.14
No information on entry qualification	0.00	-0.03	-0.03	-0.03
"Medium" or "low" entry grades	-0.07*	-0.07*	-0.05*	-0.06**
Unknown entry grades	-0.24***	-0.21**	0.03	0.04
New university	-0.02	0.02	-0.07**	-0.12*
College	-0.11**	-0.04	-0.07*	-0.11
Vocational Science	0.19***	0.18***	0.07*	0.06
Non-vocational Art	-0.08**	-0.10**	-0.15***	-0.16***
Non-vocational Science	-0.02	-0.04	-0.12***	-0.13***
First class honours degree	-0.08	-0.08	0.20***	0.19***
Lower degree	-0.20***	-0.19***	-0.02	-0.01
Class of degree unknown	-0.28***	-0.26***	-0.07	-0.06
New university - Parents' education: compulsory		-0.01		0.10
New university - Parents' education: secondary		-0.04		0.01
New university - Parents' education: one HE		-0.13		0.03
New university - Parents' education: unknown		0.13		-0.03
College - Parents' education: compulsory		-0.08		0.11
College - Parents' education: secondary		-0.21		-0.17
College - Parents' education: one HE		0.07		0.01
College - Parents' education: unknown		0.28		0.21
New university - Entry age 21-24		-0.05		0.16*
New university - Entry age 25-		0.12		-0.01
New university - Entry age unknown		-0.38*		0.19
College - Entry age 21-24		-0.11		0.02
College - Entry age 25-		-0.03		0.22**
College - Entry age unknown		-0.30		0.10
R Square	.149	.161	.092	.107
Adjusted R Square	.127	.126	.074	.079

Appendix VI: The HESA First Destination Survey

For testing some of the findings from CHERI but mainly to gain information on the different ethnic groups additional analysis on the HESA Student and First Destination Survey in 1995 was conducted. Out of this population the 211,581 full-time or sandwich course students were selected for the purposes of the ethnicity-analyses.

Distribution of 1995 Graduates by Ethnicity from HESA

	Males	Females	Total
White	55866	61513	117379
Black Caribbean	495	911	1406
Black African	860	733	1593
Black other	209	303	512
Indian	2150	2062	4212
Pakistani	958	708	1666
Bangladeshi	231	115	346
Chinese	1837	1443	3280
Other Asian	947	785	1732
Other	1266	1250	2516
Information refused	5825	5421	11246
Not known	34191	31502	65693
Total	104835	106746	211581

As indicators of employment success two measures from the First Destination Survey could be used.

- (1) Labour market positions of the graduate 6 months after graduation (Working / Study or training / Seeking employment or training / Seeking employment or training + some other activity / Not available for employment)
- (2) being in a graduate job 6 months after graduation, as it is defined in the Warwick study

Appendix VII: Educational and Employment Differences by Ethnicity

(based on HESA data)

VII./1. Educational differences between ethnic minority and white graduates. Summary table.

(+): significantly higher proportion than among whites (-): significantly lower proportion than among whites

	Non-traditional entry qualification	A Lower levels	New university or college	Lower than upper second degree	Non-vocational subjects	Late-entry graduates
Black Caribbean	Men (+) Women (+)	Men (+) Women (+)	Men (+) Women (+)		Men (+) Women (+)	Men (+) Women (+)
Black African	Men (+) Women (+)	Men (+) Women (+)	Men (+) Women (+)	Men (+) Women (+)		Men (+) Women (+)
Black other	Men (+) Women (+)	Men (+) Women (+)	Men (+) Women (+)		Men (+) Women (+)	Men (+) Women (+)
Indian	Women (+)	Men (+) Women (+)	Men (+) Women (+)			Men (-) Women (-)
Pakistani	Men (+) Women (+)	Men (+) Women (+)	Men (+) Women (+)			Men (-) Women (-)
Bangladeshi			Men (+) Women (+)			Men (-) Women (-)
Chinese	Men (+) Women (+)		Men (-) Women (-)			Men (+)
Other Asian	Men (+) Women (+)	Men (-) Women (-)	Men (-) Women (-)			Men (+)
Other	Men (+) Women (+)		Men (+) Women (+)	Men (+) Women (+)		Men (+)

VII./2. Employment differences between ethnic minority and white graduates – when educational factors are controlled for. Summary table.

(+): significantly higher proportion than among whites (-): significantly lower proportion than among whites

	Seeking employment	In a non-graduate or graduate track job	In a non-graduate job
Black Caribbean	Women (+)		Women (-)
Black African	Men (+) Women (+)		Women (+)
Black other	Men (+) Women (+)	Women (-)	Women (-)
Indian	Men (+) Women (+)		
Pakistani	Men (+) Women (+)		
Bangladeshi	Men (+) Women (+)*	Men (+)	
Chinese	Men (+)* Women (+)	Men (-) Women (-)	Men (-)
Other Asian	Women (+)*		
Other	Men (+) Women (+)		

*: Disadvantage not significant if we assume everybody studying or participating in training rather than working is happy with this situation, and therefore further study is a positive outcome of higher education studies in every case.

Appendix VIII: Characteristics of the Interviewees

(The names listed are pseudonyms.)

Annett was born in 1963. She is White British. His father had A levels, her mother had O levels. They were running a pub together. Annett studied International hospitality management in a post-1992 university.

Anthony was born in 1973. His mother is English, his father was Asian. His father had a medical degree and worked as a doctor. His mother did A levels and was working as a nurse. Anthony studied Computing in a pre-1992 university.

Bob was born in 1944. He is White British. His parents had compulsory education. Bob studied computing in a post-1992 university.

Catherine was born in 1972. She is White British. Her father was an undertaker, her mother a florist. Both her parents had compulsory schooling and a vocational diploma. Catherine went to a pre-1992 university and studied Geography.

Clara was born in 1974. She is White British. Her father worked as a contractor in the building industry and had vocational trade qualification. Her mother had O levels and was a housewife. Clara studied Business information technology in a post-1992 university.

David was born in 1973. He is White British Both of his parents had compulsory schooling. David went to a pre-1992 university and studied Transport management.

Fizar was born in 1971. She is Asian. Her father had a HE degree and had a professional job. Her mother had secondary schooling. Fizar studied Management in a pre-1992 university.

George was born in 1970 to Indian parents. His father worked as an engineer (although had teacher qualification from India). His mother had compulsory schooling only and worked as a supervisor of catering and cleaning for a group of schools. George studied Business and technology in a new university.

Joan was born in 1958. She is White British. Her father was a bank manager, her mother was a housewife. Joan went to a pre-1992 university and studied Art history.

Joseph was born in 1970. He is White British. His father held an HE degree, his mother did A levels. Joseph studied Product design in a college.

Joshua was born in 1970. He defines himself as White British – Welsh. His father: worked in the finance sector (held an HE degree). His mother was a teacher. Joshua studied History and philosophy in a new university then did a legal practice course.

Kate was born in 1972. She is White British. Her parents had completed compulsory education. Kate studied Psychology in an old university.

Linda was born in 1973. She defined herself as “white other”. Her father had compulsory schooling, her mother went to secondary school. She went to an old university and studied Classics.

Paul was born in 1964. His father was Chinese, his mother was Dutch. His father was a university lecturer, his mother had upper secondary education and stayed at home with the children. Paul finished his PGCE in 1995 in a new university.

Sally was born in 1953. She is White British. Her father was a self-employed builder. Her mother did clerical work. They both had compulsory schooling. Sally studied Tourism management in a college.

Shelly was born in 1961. She is White British. Her parents completed compulsory education. Her father was a member of the armed forces, her mother did clerical work. Shelly studied Computer science in an old university.

Sunil was born in 1971. He is Indian. Both his parents had compulsory schooling only. His father worked in textiles factory labouring, his mother was a homemaker, sewing. He studied Geography and Environmental Studies in a new university then did a PGCE.

Susanne was born in 1955. She is White British. Her father was an accountant. Her mother had compulsory education and worked as a social worker. Susanne studied Environmental science in an old university.

Tanya was born in 1950. She is White British. Her father was a bank manager with compulsory schooling and several banking qualifications. Her mother completed compulsory schooling and held a Higher National Certificate. She had secretarial jobs. Tanya studied Business studies and finance in a post-1992 university.

Terry was born in 1959. She is White British. Her father had a diploma and worked as a civil servant. Her mother had a HE degree. Terry studied Economic and social history in a pre-1992 university.