RESEARCH

Post-16 Students and Part-Time Jobs: Patterns and Effects

A Report Based on the England and Wales Youth Cohort Study

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Policy Studies Institute

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ABBREVIATIONS

A level	Advanced Level
AS	Advanced Supplementary
DfE	Department for Education
DfEE	Department for Education and Employment
DfES	Department for Education and Skills
EMA	Educational Maintenance Allowance
FE	Further Education
GCSE	General Certificate of Secondary Education
GNVQ	General National Vocational Qualification
GST	Government Supported Training
OLS	ordinary least squares
s.d.	standard deviation
SIC	Standard Industrial Classification
SOC	Standard Occupational Classification
unwtd	unweighted
wtd	weighted
YCS	Youth Cohort Study

EXECUTIVE SUMMARY

Introduction

Many full-time students in Years 12 and 13 have part-time jobs, and while some educationalists feel that they benefit from this, others take the view that part-time employment should be discouraged. They believe it damages educational performance, and fear that the need to maintain student incomes through part-time work discriminates against students from poor families. Although the issue is of particular relevance at the moment because of the pilots of mandatory Educational Maintenance Allowances (EMAs) for 16-18 year olds, not a lot is known about the topic.

This report answers a number of questions, including:

- How many students work part-time in Years 12 and 13, and how many hours do they spend in jobs and on their studies?
- What factors increase the probability of students taking part-time jobs?
- What kinds of jobs do they do, and how much do they earn?
- What impact does part-time employment have on examination results?

The report is based on Cohorts 9 and 10 of the England and Wales Youth Cohort Study (YCS). Each forms a very large, nationally representative sample of young people reaching the end of compulsory education, Cohort 9 in summer 1997 and Cohort 10 in summer 1999. We have survey data for Cohort 9 in spring 1998, 1999 and 2000, and for Cohort 10 in spring 2000.

How many students have jobs, and how many hours do they work?

A little over two-fifths of full-time students had jobs in the spring of Year 12, some of which may have been holiday jobs. This proportion appeared to be no greater than in 1989. Around two-fifths of full-time Year 12 students had not had a job at all since the end of Year 11, but 3% were doing more than one job. Female students were more likely to have jobs than males, and were also more likely to have more than one job. Around

two in five students with jobs in the spring of Year 12 had started that particular job in Year 11 or earlier.

Year 12 students with jobs worked on average just under 12 hours per week, compared to 21 hours spent in class. More than half of those with jobs worked ten hours or less per week and another quarter worked between 11 and 15 hours. A small number worked more than 20 hours, but some of these may have been in temporary holiday jobs. Female students with jobs worked on average slightly shorter hours than males.

Year 12 students with jobs spent on average slightly less time in class than students without jobs, but for students with jobs there was no association between the number of hours that they worked and the number of hours that they spent in class. There was however a very small but statistically significant negative correlation between the number of hours that they worked in their jobs and the total number of hours that they spent working for their qualifications, when time spent in private study was counted as well. Nevertheless, as a group, students with jobs spent nearly as many hours in total working for their qualifications as students without jobs.

In Year 13, more students had jobs than in Year 12 (59% compared to 45% in YCS Cohort 9). Once more, female students were more likely to have jobs than males. Five out of six Year 13 students who had been in jobs 12 months earlier still had jobs in the spring of Year 13. In total, only 14% of full-time Year 13 students had not had a job at all (term-time or holiday) since the end of Year 11. Students with jobs worked on average slightly longer hours in Year 13 than in Year 12, though females still tended to work slightly shorter hours than males.

Year 13 students spent on average 4.6 hours more per week working for their qualifications than Year 12 students (counting time in both class and private study). In Year 13, students who did not have jobs spent on average three more hours per week working for their qualifications than students with jobs. As in Year 12, students who worked longer hours in their jobs tended to spend slightly fewer hours working for their qualifications than students who worked shorter hours in their jobs.

Which students have jobs?

The factors that increased the probability of students taking a job in Year 12 were explored both through descriptive statistics and statistical modelling, which took account of the fact that many of these were inter-linked. The following findings apply 'other

things being equal'; that is, after holding constant a wide range of variables related to the probability of taking a job.

- Students with poor GCSE results were a lot less likely to have jobs than students with average or top grades. Students with top grades were less likely to have jobs than students with average results.
- Students on Level 3 vocational courses were more likely to have jobs than A level students. Students on low level vocational courses or just doing GCSE re-sits were less likely to have jobs than others.
- Students who spent long hours in class were less likely to have jobs than other students.
- Female students were more likely to have jobs than male students.
- Students of Asian origin were much less likely to have jobs than white students.
- Students in the South East excluding London were more likely to have jobs than students in other regions, especially regions with above average levels of unemployment.
- Students whose parents had degrees were less likely to have jobs than students whose parents were not so well qualified.
- Students who did not have at least one parent in a full-time job were less likely to have jobs than students with a parent in full-time work.
- Students with parents in personal and protective service jobs or in sales occupations were more likely to have jobs than students with parents in other occupations.
- Students who attended an independent school in Year 11 were less likely to have jobs than students who had attended state schools in Year 11.
- Students who received an EMA were less likely to have jobs than students who did not have EMAs.

What kind of jobs do Year 12 students do?

Well over two fifths of full-time Year 12 students with jobs were in sales occupations (mostly sales assistants and check-out operators), around a quarter were in unskilled manual occupations (mostly in sales and services, especially in catering and as shelf fillers), and about a fifth were in personal and protective service occupations (mostly in catering occupations). Together, these three occupational groups made up more than 90% of all student jobs in the 16/17 year old age group. There were differences between the types of jobs held by male and female students, but these were not as pronounced as

in the non-student workforce. The type of jobs that students had also depended to some extent on their GCSE results.

The labour market for Year 12 students was structured quite differently from the labour market for 16/17 year olds who had left full-time education. Young male workers not in full-time education were much more likely than male student workers to be in craft occupations, and while personal and protective service, sales and unskilled manual occupations together accounted for 17 out of 20 male student workers, these three groups accounted for less than a third of male workers who were not in full-time education. Young women workers aged 16/17 who had left full-time education were much more likely than female student workers to be in clerical and secretarial occupations, and just a fifth of them had sales jobs compared to nearly half of female student workers.

Overall, students made up well over 80% of all 16/17 year old workers in sales occupations, well over 70% of all 16/17 year old workers in unskilled manual occupations, and almost 70% of all 16/17 year old workers in personal and protective service occupations. In higher level, clerical and secretarial, and plant and machine operative occupations students formed between a quarter and two fifths of the 16/17 year old workforce. Only in craft and related occupations was the contribution of the students to the total youth workforce fairly insignificant.

Overall mean net weekly pay for Year 12 students with jobs was comparatively modest: £38.40 in spring 1998 and £39.65 in spring 2000. However their mean net hourly pay was £3.24 in 1998 and £3.52 in 2000, both comfortably above the minimum wage for 18-20 year olds introduced in April 1999. Female students with jobs earned on average 14p per hour less than males in 1998 and 16p per hour less in 2000.

The mean hourly take-home pay of Year 12 students was higher than that of 16/17 year old workers who were the same sex and in the same occupational group but who were not in full-time education. This may have been because they were more willing to work unsocial hours, less likely to get benefits such as holiday pay or sick pay, less likely to be trainees, and less likely to be paying tax or National Insurance.

Do part-time jobs mean worse examination results?

In considering the question of whether part-time jobs impair educational performance we need to think about the impact both on the probability of dropping out of full-time education and on the probability of examination success if the student completes the

course. An earlier analysis of YCS data suggested that, other things being equal, students who did not have jobs in Year 12 were more likely to stay in full-time education until the end of Year 13 than students with jobs. The reasons for this are not easy to establish.

The present report focuses on the impact of part-time jobs on examination results. The sample for the analysis was restricted to students who were in full-time education and studying for the relevant qualification in the spring of both Year 12 and Year 13. Separate statistical models were developed for total points score in A and AS level examinations and for achieving Level 3 vocational qualifications, specifically GNVQs or BTECs.

The model for total points score in A/AS levels included a wide range of predictor variables that were significantly associated with examination results, generally in the way that would be expected. The results showed that although all paid employment tended to have a negative impact on examination results, the problem was negligible unless students worked long hours. For jobs in Year 12, this meant more than 15 hours per week; over 15 hours per week the impact on examination results suddenly became much greater. However in Year 13 jobs had a serious impact on examination results if they occupied more than ten hours per week.

The model for achieving Level 3 vocational qualifications had far fewer significant predictor variables than the models for total A/AS points score, possibly because they were based on a much smaller sample. The impact of part-time jobs on examination success was not statistically significant, though it appeared to be generally negative.

Policy implications

The issue of student incomes needs to be tackled if participation in education at age 16-18 is to be increased in the UK. Many students in Years 12 and 13 augment their income by part-time jobs, but the report found clear evidence that working more than 15 hours per week in Year 12 and more than 10 hours per week in Year 13 led to significantly poorer results in A and AS levels. With the new two-stage structure for A levels, the effects in Year 12 could become as serious as in Year 13. There was also some evidence that part-time jobs damaged performance in Level 3 vocational qualifications, though this was less clear.

Nevertheless there are many reasons for supposing that students benefit in a number of ways from working part-time: the issue is rather that of the balance between jobs and

study. It is right for schools and colleges to provide guidance - as many do - on the maximum number of hours that students should spend in part time jobs, and conforming to this guidance could be made a condition of receiving an EMA.

The groups of young people amongst whom there is most scope for increasing educational participation after age 16 - low achievers, and those from poorer families - were also those who had the lowest rates of part-time employment if they did stay in full-time education. There was evidence that this was attributable at least in part to fewer opportunities for getting part-time work. This tends to support the case for EMAs, targeted on poorer families.

There was some evidence that parental contacts helped students get jobs, and that certain groups of students faced discrimination by employers. However there was no evidence that student workers were exploited in terms of pay.

The report highlighted the importance of the student workforce to the UK economy, particularly in sales and other service sector occupations.

1 INTRODUCTION

Background and aims

Part-time employment in Years 12 and 13 of secondary education is widespread: as we shall see in the next chapter, more than two fifths of full-time students have jobs in the spring of Year 12. The issue causes some debate amongst educationalists and policy makers, who, along with parents and teachers, tend to take different positions. Some believe that studying for examinations should take absolute priority, while others hold the view that young people benefit in several ways from contact with the world of work.

The concern about part-time jobs arises in part from a fear that they could impair academic performance, by leaving students with too little time or too tired to do their school or college work properly. In part also it arises from a more general worry about student incomes. The pressures of the consumer culture are driving up students' expectations about the lifestyle that they should be able to support while still in full-time education. At the same time the replacement of maintenance grants in higher education with student loans and the introduction of university tuition fees has meant that many young people can expect to incur large debts should they choose to study for a degree. Some commentators fear that these twin pressures may slow down educational expansion by deterring young people from low income families from prolonging their studies. Part-time employment offers one partial solution to the problem of student incomes, but it would clearly be undesirable if the burden of part-time work fell disproportionately on students from poor families.

Although this debate has been conducted principally in relation to higher education, similar considerations arise in Years 12 and 13 of secondary education. The rapid expansion of post-compulsory education came to a halt in the mid-1990s, and participation rates in post-16 education are currently lower than they were several years ago.[1] The issues are of particular interest for educational policy at the moment because of the current pilots of mandatory Educational Maintenance Allowances (EMAs) for 16-18 year olds, which are designed to increase participation amongst young people from lower income families.

[1] See Department for Education 1994 and Department for Education and Skills 2001.

Despite the relevance of the topic, relatively little is known about part-time employment amongst full-time students in Years 12 and 13. This report tries to fill this information gap. The questions that it addresses include:

- How many full-time students in Years 12 and 13 work part-time?
- Is the proportion of Year 12 students in employment increasing?
- How many hours do students in Years 12 and 13 spend in employment each week?
- Is there any association between the hours that students spend each week in employment and the number of hours that they spend on their studies?
- Is part-time employment more common for students on vocational courses than for students on A level courses?
- What factors increase the probability of students taking part-time jobs?
- Are students who get EMAs less likely to take a part-time job?
- What kinds of jobs do Year 12 students do?
- How much do Year 12 students earn?
- How does the labour market for Year 12 students compare to the labour market for young people who are not in full-time education?
- What impact does part-time employment have on examination results?
- Does part-time employment in Year 13 impair examination performance more than employment in Year 12?
- Does part-time employment cause more problems on A level courses than on vocational courses?

The England and Wales Youth Cohort Study

The report forms part of a long-standing programme of research funded by the Department for Education and Skills (DfES) based on the England and Wales Youth Cohort Study (YCS) into education, employment and training between the ages of 16 and 18. A list of the more recent studies that have been published under this programme is appended to this report.

TABLE 1.1
Sample numbers and response for YCS Cohorts 9 and 10

	Full sample	In full-time education at Sweep 1
YCS 9		
Number of names and addresses issued at Sweep 1 (Spring 1998)	22,498	-
Total number of responses to Sweep 1	14,662	11,086
Response rate at Sweep 1	65%	-
Number of names and addresses issued at Sweep 2 (Spring 1999)	14,662	11,086
Total number of responses to Sweep 2	9,710	8,132
Response rate at Sweep 2	66%	73%
Sweep 2 response as % of the original Sweep 1 issued sample	43%	-
Number of names and addresses issued at Sweep 3 (Spring 2000)	9,710	8,132
Total number of responses to Sweep 3	6,304	5,440
Response rate at Sweep 3	65%	67%
Sweep 3 response as % of the original Sweep 1 issued sample	28%	-
YCS 10		
Number of names and addresses issued at Sweep 1 (Spring 2000)	25,000	-
Total number of responses to Sweep 1	13,698	10,608
Response rate at Sweep 1	55%	-

Note: Response rates take into account all sources of non-response, including wrong addresses.

The YCS is a long-standing series of regular surveys which track young people over the first few years after the end of compulsory full-time education. Each YCS cohort covers a large nationally representative random sample of young people in Year 11 of state and independent schools (but not special schools) in England and Wales. The first YCS cohort reached minimum school leaving age in summer 1984; the eleventh reached school leaving age in summer 2001 and will be surveyed for the first time in spring 2002. The present report is based on the most recent YCS data currently available for analysis, namely Sweeps 1 to 3 of Cohort 9 and Sweep 1 of Cohort 10. Cohort 9 became eligible to leave school in summer 1997 and Cohort 10 in summer 1999. Sweep 1 of both cohorts took place in the spring following the end of compulsory education (spring 1998 and spring 2000 respectively), when cohort members were aged 16 or 17, depending on the date of their birthday. We refer to young people at Sweep 1 as '16/17 year olds'. Sweeps 2 and 3 of Cohort 9 took place at yearly intervals, in spring 1999 (age 17/18) and spring 2000 (age 18/19). Table 1.1 shows the number of respondents and response rates at each of these surveys.

Data for Cohorts 9 and 10 were collected by means of self-completion postal questionnaires supplemented at Sweeps 2 and 3 by telephone interviews with young people who failed to respond to the postal survey. As the table shows, overall response rates were not particularly high, and the postal methodology together with the questionnaire's emphasis on education and training creates a response bias towards academically more able and motivated young people. This bias is partially corrected by a sophisticated weighting matrix that ensures that the Sweep 1 sample is nationally representative in terms of sex, region, school type and GCSE results, and by further weighting processes at Sweeps 2 and 3 that correct for differential sample attrition. The appropriate weights are applied throughout this report, and unweighted sample numbers are reported alongside weighted sample numbers.[1]

Sweep 1 of YCS Cohort 10 was carried out by a different research organization from that responsible for Sweep 1 of Cohort 9, and as a result there were changes to the design of the questionnaire and to the wording of some questions. These changes - made in part in an attempt to meet requests for information on additional topics - increased the length and complexity of the questionnaire. This and other possible factors caused the response rate at Sweep 1 of Cohort 10 to drop to 55%, ten percentage points below the response rate at Sweep 1 of YCS 9, and produced an increase in response bias.[2] This means that there is a degree of discontinuity between Cohorts 9 and 10, because although response bias can be reduced by weighting, it cannot be completely eliminated. Further discontinuities between the two cohorts were created by changes in question wording and order, by an increase in the amount of missing information on specific questions, and by changes in editing and coding procedures. Thus in order to increase confidence in the inferences drawn from the data, when referring to 16/17 year olds this report usually presents figures from both Cohorts 9 and 10 (obviously data on 17/18 and 18/19 year olds can come only from Cohort 9).

At Sweeps 2 and 3 of Cohort 9, only those cohort members who had responded to the previous sweep were re-contacted. Thus although the response rates at Sweeps 2 and 3 were similar to the response rate at Sweep 1, the cumulative effect of sample attrition was to reduce response at Sweep 2 to 43% of the sample originally selected, and at Sweep 3

[1] Full details of the survey methodology, analysis of response and weighting procedures for YCS Cohorts 9 and 10 can be found in the following technical reports: National Centre for Social Research (1999), RSGB (2000), RSBG (2001a) and RSGB (2001b).

[2] Increased response bias can be inferred from the overall range of weights, which is wider in Cohort 10 than in Cohort 9 (0.50 to 2.97 in Cohort 10 compared to 0.62 to 2.57 in Cohort 9). In addition the mean weighting factors for groups which typically have below average response rates are greater in Cohort 10 than in Cohort 9. For example, for males the mean weight is 1.07 in Cohort 9 and 1.10 in Cohort 10, for young people in the bottom third of GCSE results the mean weight is 1.42 in Cohort 9 and 1.56 in Cohort 10, and for persistent truants the mean weight is 1.26 in Cohort 9 and 1.43 in Cohort 10.

to just 28% of the original sample. Though this level of attrition is undesirable, it is not quite so problematic in the present study, which is based on young people who stayed on in full-time education after 16. This group is more likely to respond to YCS than those who leave school at the minimum age, and, as Table 1.1 shows, the response rate for members of Cohort 9 who were in full-time education at Sweep 1 was seven percentage points greater at Sweep 2 and two percentage points greater at Sweep 3 than for the cohort as a whole.[1] As a result, the unweighted sample numbers on which the tables and graphs in this report are based are usually greater than the weighted sample numbers. In Cohort 9, the weighted sample number for young people in full-time education at age 16/17 is 10,359 while the unweighted sample number is 11,086; in Cohort 10 the corresponding figures are 9,753 weighted and 10,608 unweighted.

Structure of the report

The following chapter describes the extent of part-time employment amongst young people in full-time education, both at age 16/17 and age 17/18. It shows the proportion of students with jobs, how this has changed over the last decade, the number of hours that they worked each week, and how these hours related to the time that they spent on their studies. Chapter 3 looks at patterns of part-time employment amongst students on different types of courses. It goes on to explore the factors that increased the probability of part-time employment, looking in detail at sex, results in Year 11 GCSEs, ethnicity, home background and region. A statistical model is fitted to disentangle the separate impact of these variables and to investigate the relevance of others. Chapter 4 describes the nature of the labour market for students aged 16/17. It provides information on occupational and industrial structure and wage levels, and compares the student labour market with the labour market for 16/17 year olds who were not in full-time education. Chapter 5 presents further statistical models that explore the impact of part-time employment in Year 12 and in Year 13 on results in A and AS level examinations and on the achievement of GNVQ Level 3 or BTEC National qualifications. Finally Chapter 6 highlights some of the main findings from the analyses and discusses their relevance to educational policy.

[1] The reason why the difference in response rates between young people who left full-time education at 16 and those who stayed on was narrower at Sweep 3 than at Sweep 2 may have been that some of the latter group spent the third post-compulsory year as a 'gap' year between A levels and university, and so were harder to contact at Sweep 3 than at Sweep 2.

2 HOW MANY STUDENTS HAVE JOBS, AND HOW MANY HOURS DO THEY WORK?

Definitions

This chapter describes how many full-time students in Years 12 and 13 have paid jobs, and how many hours they work each week. However some clarification is needed first on how the figures are derived. Readers who do not need these technicalities should skip on to the next section, which starts on the following page.

The analysis is based on young people in full-time education who answered the Sweep 1 survey questions about whether they had a job.[1] In YCS Cohort 9 this was 97.3% of those in full-time education at age 16/17; in Cohort 10 it was 97.1%. The relevant questions for Cohort 9 were as follows:

'At any time since the end of Year 11, have you had a full or part-time job or been in training?'

Those who answered 'yes' were then asked:

'Are you currently in a full or part-time job or training?'

In Cohort 10 the questions were similar except that they specified 'government supported training'(GST) rather than just 'training'. The analysis also excludes a small number of young people whose status was ambiguous, in that they said that their main activity was full-time education or that they were enrolled on a full-time education course at school or college, but also said either that they were in GST or that they were in training on a full-time college course. The jobs that this report is concerned with are 'ordinary' jobs outside of the GST framework.

A limitation of the analysis is that it cannot distinguish holiday jobs from term-time jobs. The initial mailing of questionnaires for Sweep 1 of Cohort 9 was on March 5th 1998, with completed questionnaires accepted up until June 19th. For Cohort 10 the corresponding dates were February 28th and July 26th 2000. Thus for both surveys the fieldwork period fell largely during term-time, but some questionnaires would have been

[1] Those in full-time education were defined to include those who said that their main activity 'at the moment' was full-time education at school, FE college, sixth form college or tertiary college, plus a few who gave a different answer to this question, but who said later in the questionnaire that they were at present enrolled on and still attending a full-time education course at school or college. These were included because if they had completed the questionnaire during the Easter holidays they may well have described their main activity 'at the moment' as something other than full-time education.

filled in during the Easter holidays or Spring Bank Holiday week. The question, 'Are you currently in a full-time or part-time job?' could thus be taken to refer either to term-time or holiday jobs. Although respondents were asked when they started their current job, this does not necessarily help us to identify holiday jobs: young people may start a job in the holidays and continue it on through the term, or they may return to a holiday job that they first did some time previously.

Proportion of Year 12 students with jobs

Table 2.1 shows that 45% of 16/17 year olds in full-time education in YCS Cohort 9 and 42% in Cohort 10 were in a job in the spring of Year 12. In both cohorts around two-fifths of Year 12 students had not had a job at all since the end of Year 11, while around one in six had held a job since the end of Year 11 but did not have a job at the time of survey. YCS has no further information about these earlier jobs.

TABLE 2.1
Proportion of full-time Year 12 students with jobs,[1] by sex

	Males %	Females %	All %
YCS 9 (spring 1998)			
Currently in job	41	49	45
In job since Year 11, but not currently	18	16	17
No job since Year 11	41	35	38
Total	100	100	100
Weighted base N	*4,818*	*5,262*	*10,080*
Unweighted base N	*4,880*	*5,965*	*10,845*
YCS 10 (spring 2000)			
Currently in job	38	47	42
In job since Year 11, but not currently	17	15	16
No job since Year 11	46	38	42
Total	100	100	100
Weighted base N	*4,496*	*4,971*	*9,467*
Unweighted base N	*4,479*	*5,880*	*10,359*

[1]These may include some holiday jobs; see the section on 'Definitions' at the start of the chapter.

Female students were more likely than male students to be in a job at the time of survey, the difference being similar in both cohorts (eight percentage points in Cohort 9 and nine percentage points in Cohort 10). In both cohorts male students were more likely than their female classmates to have held no job at all since the end of Year 11.

Most students in employment had just one job, but in both cohorts 3% of all full-time Year 12 students had more than one job. Female students were more likely than males to hold two or more jobs concurrently – 4% of female students compared to 3% of male students in Cohort 9, and 4% and 2% respectively in Cohort 10.

Trends over time

The large rise in staying-on rates in full-time education after age 16 during the early 1990s has increased the size of the potential student workforce in absolute terms, while the growth of the service sector of the UK economy and employers' increasing use of part-time labour has provided the jobs to accommodate this increase. However although there is a common perception that students in Years 12 and 13 are now more likely to have part-time jobs than they were previously, trends are not entirely clear.

A recent review of the literature concluded that an increasing proportion of young people in education in GB are engaged in part-time paid employment.[1] However this conclusion is not supported by YCS data, at least in so far as it relates to the last decade. In 1988 less than half of 16 year olds stayed on in full-time education while in 1999 more than 70% did so.[2] Nevertheless the proportion of full-time Year 12 students in YCS Cohort 4 who were in part-time jobs in spring 1989 was almost identical to the proportion in YCS Cohort 10, namely just over two fifths. Even in 1991, in the depths of economic recession, just under two fifths of Year 12 students had jobs (figures from YCS Cohort 5). Unfortunately YCS questions on part-time working have changed over the years, so these comparisons between cohorts must be treated with caution, but as the authors of the literature review point out, differences in definitions and scope also limit the conclusions that can be drawn from the studies to which they refer.

Date started Year 12 job

Returning to YCS Cohorts 9 and 10, we find that most full-time students who had jobs in the spring of Year 12 had held their current job for some time. As Table 2.2 shows, around two in five had started their job in Year 11 or earlier, and around another two in five had started it during the autumn term of Year 12. These figures were similar in both cohorts. In both cohorts also, female students tended to have been in their job for a little longer than male students, but the difference between the sexes was quite small. Of

[1] McVicar and McKee 2001.
[2] DfE 1994 and DfES, 2001.

TABLE 2.2
Date started current job, by sex: full-time Year 12 students with jobs

	Males %	Females %	All %
YCS 9 (spring 1998)			
Before Year 11	8	10	9
Year 11	33	34	34
Year 12 August-December	38	38	38
Year 12 January onwards	17	15	15
No information	4	3	3
Total	100	100	100
Weighted base N	*1,953*	*2,567*	*4,520*
Unweighted base N	*2,070*	*3,026*	*5,096*
YCS 10 (spring 2000)			
Before Year 11	7	9	8
Year 11	31	33	32
Year 12 August-December	44	41	42
Year 12 January onwards	16	15	15
No information	2	1	2
Total	100	100	100
Weighted base N	*1,690*	*2,330*	*4,020*
Unweighted base N	*1,783*	*2,886*	*4,669*

course, some of those who had started their current job fairly recently may also have held jobs in earlier years, but different jobs from their current one – YCS has no data on this.

Hours worked in Year 12 jobs

Table 2.3 shows the number of hours that Year 12 students with jobs usually spent each week in employment (for those with more than one job it shows the total number of hours that they usually worked in all their jobs taken together). The figures were very similar in Cohort 9 and Cohort 10, with a mean of just under 12 hours per week. More than half of students with jobs worked ten hours or less per week and another quarter worked between 11 and 15 hours. A small number - 7% in both cohorts - worked more than 20 hours per week, including 2% who worked more than 30 hours. Some of this group may have been temporarily employed full-time in holiday jobs: as explained at the beginning of this chapter, we have no way of distinguishing holiday jobs from term-time jobs.

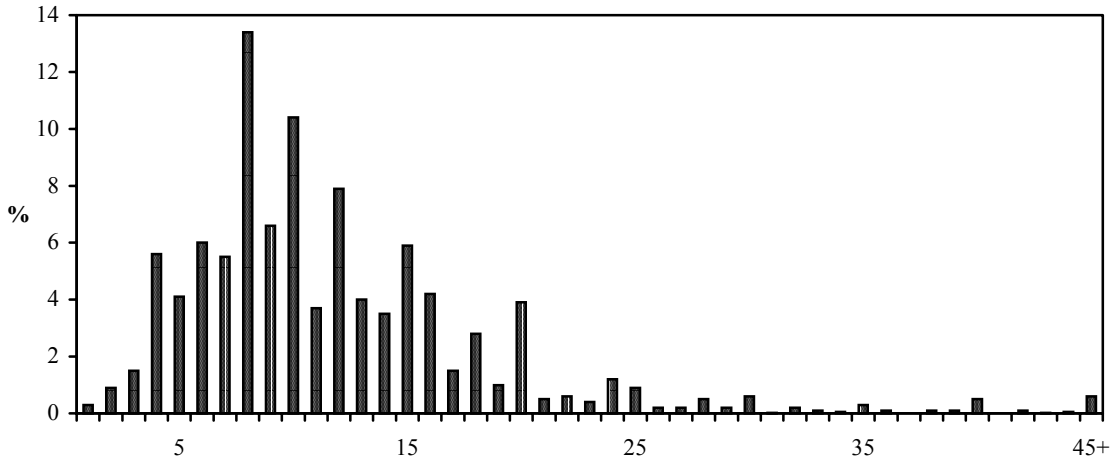
TABLE 2.3
Total number of hours usually worked per week in current job(s): Year 12 students with jobs

	Males %	Females %	All %
YCS 9 (spring 1998)			
1-5	10	14	12
6-10	38	42	40
11-15	26	23	24
16-20	15	11	13
21-30	6	4	5
more than 30	2	2	2
no information	3	4	4
Total	100	100	100
Weighted base N	*1,953*	*2,567*	*4,520*
Unweighted base N	*2,070*	*3,026*	*5,096*
Mean number of hours worked	12.5	11.3	11.8
Standard deviation	7.4	6.7	7.0
YCS 10 (spring 2000)			
1-5	10	13	12
6-10	37	41	39
11-15	27	25	25
16-20	15	12	14
21-30	5	5	5
more than 30	2	1	2
no information	3	3	3
Total	100	100	100
Weighted base N	*1,690*	*2,330*	*4,020*
Unweighted base N	*1,783*	*2,886*	*4,669*
Mean number of hours worked	12.2	11.4	11.7
Standard deviation	7.1	6.6	6.8

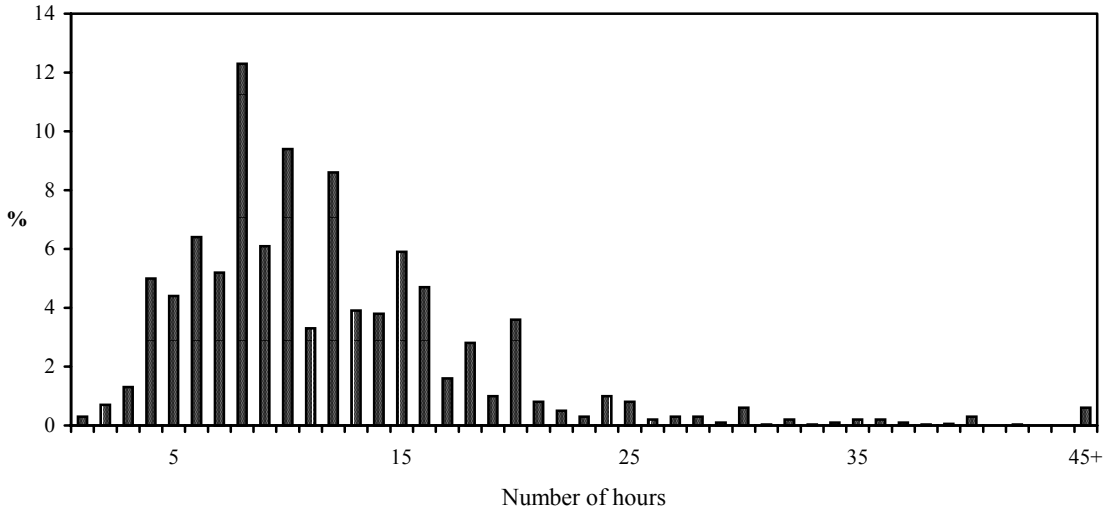
Charts 2.1(a) and (b) present these figures graphically. They show that in both Cohort 9 and 10, the total time usually worked peaked at eight hours per week, the equivalent of one standard working day worked perhaps on a Saturday. The proportion of students with working hours greater than this fell fairly steadily up to 20 hours per week, after which there was a long tail. There was some evidence of rounding effects in the data, with an even number of working hours more likely to be reported than an odd number (15 hours per week being the exception to this). The biggest number of working hours in both cohorts was 70, but such long hours almost certainly belonged to holiday jobs.

Chart 2.1
Total number of hours usually worked per week in current job(s): full-time Year 12 students with jobs

(a) YCS 9



(b) YCS 10



Note: Base Ns as for Table 2.3.

Although female students were more likely to have jobs than male students, female students with jobs worked on average slightly shorter hours. As Table 2.3 shows, in Cohort 9 female students with jobs in Year 12 worked on average 11.3 hours per week while male students with jobs worked 12.5 hours. The difference between these two means was statistically significant. In Cohort 10 the corresponding figures were 11.4 hours for female students and 12.2 hours for males - also a statistically significant difference.

Hours in jobs and hours working for qualifications in Year 12

The balance between the time spent in paid work and the time spent in study for qualifications is clearly critical. Sweep 1 of YCS Cohorts 9 and 10 included the following question designed to collect information on teacher contact hours:

> *'How many hours in total each week (during term-time) do you usually spend in lessons, tutorials, practical work or other time being supervised by a teacher or trainer?'*

Table 2.4 compares the total weekly teacher contact hours of full-time Year 12 students with current jobs with the teacher contact hours of students with previous but not current jobs, and of students who had not had a job at all since the end of Year 11. In Cohort 9, mean teacher contact hours were greater for students who had never had a job than for either of the other two groups: 21.8 hours per week compared to 20.7 hours for students with current jobs and 21.3 hours for students with previous jobs. Though these differences were quite small, they were statistically significant. In addition, students with current jobs appeared to have fewer teacher contact hours than students with previous jobs, though in this case the difference was not statistically significant. Figures for Cohort 10 reproduced this pattern exactly.

Comparing these figures with the total number of hours spent in jobs (Table 2.3), we see that full-time Year 12 students with current jobs spent on average nine more hours per week in contact with teachers and trainers than in their job. This probably underestimates the difference, as the mean number of hours spent in jobs was inflated by full-time working in holiday jobs which we cannot distinguish.

Charts 2.2 (a) and (b) plot total weekly teacher contact hours alongside the total number of hours usually spent in jobs. Teacher contact hours are clearly subject to even more rounding error than hours spent in jobs, with marked peaks at 15, 20, 25 30 and 35 hours. Nevertheless it is clear that most students with jobs spent much more time in class than in paid work.

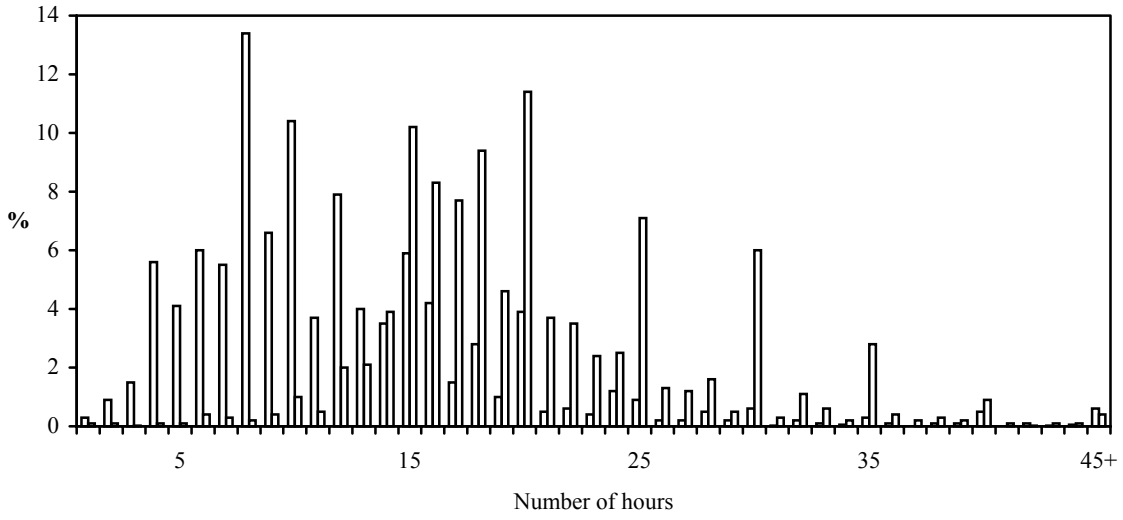
TABLE 2.4
Usual total number of teacher contact hours per week, by whether has a job: full-time Year 12 students

	Currently in full/part-time job %	Full/part-time job since Year 11 %	No full/part-time job since Year 11 %	All full-time Year 12 students %
YCS 9 (spring 1998)				
1-10 hours	3	3	3	3
11-15 hours	17	15	14	16
16-20 hours	38	36	33	36
21-25 hours	19	17	19	18
26-30 hours	10	12	12	11
31-35 hours	5	6	7	6
36 hours or more	3	4	5	4
no information	5	6	7	6
Total	100	100	100	100
Weighted base N	*4,519*	*1,746*	*3,817*	*10,080*
Unweighted base N	*5,096*	*1,851*	*3,898*	*10,845*
Mean number of contact hours	20.7	21.3	21.8	21.2
Standard deviation	6.8	7.4	7.8	7.3
YCS 10 (spring 2000)				
1-10 hours	3	3	3	3
11-15 hours	17	15	14	16
16-20 hours	38	37	33	36
21-25 hours	20	17	18	18
26-30 hours	9	12	13	11
31-35 hours	5	6	6	5
36 hours or more	3	5	5	4
no information	5	6	8	7
Total	100	100	100	100
Weighted base N	*4,027*	*1,493*	*3,947*	*9,467*
Unweighted base N	*4,678*	*1,613*	*4,068*	*10,359*
Mean number of contact hours	20.6	21.5	21.7	21.2
Standard deviation	6.8	7.4	7.6	7.2

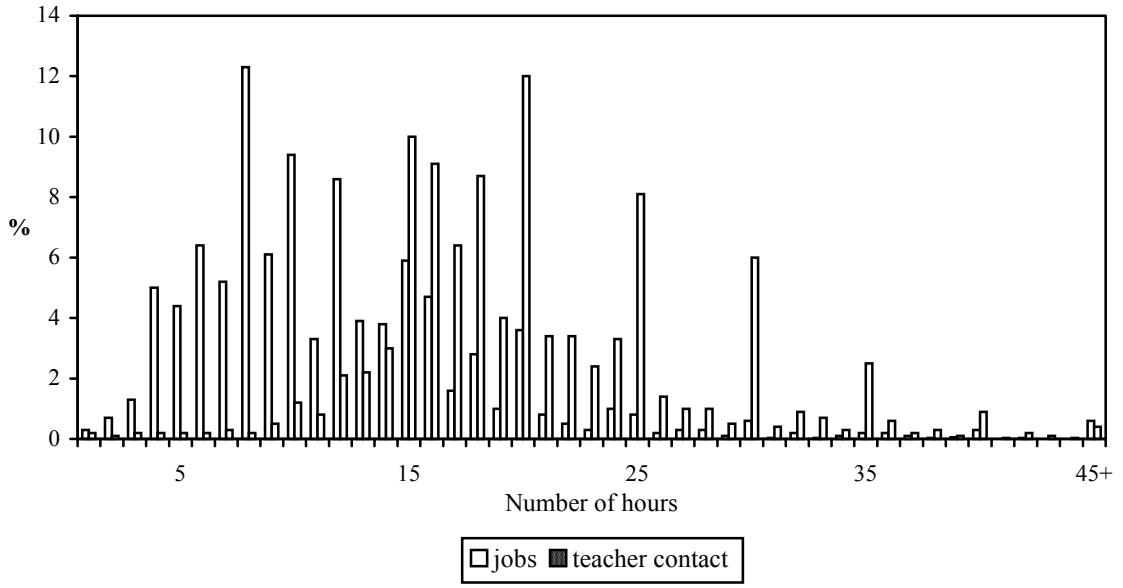
Perhaps surprisingly, for full-time students with current jobs there was no evidence of any association between the total number of hours worked per week and the usual number of teacher contact hours. In both Cohorts 9 and 10 the correlation between these two variables was not significantly different from zero (Pearson's R was 0.025 in Cohort 9 and -0.032 in Cohort 10).

Chart 2.2
Total number of hours usually worked per week in current job(s) and usual number of teacher contact hours per week: full-time Year 12 students with jobs

(a) YCS 9



(b) YCS 10



Base Ns as in Tables 2.3 and 2.4.

TABLE 2.5
Total number of teacher contact plus private study hours per week, by whether has a job: full-time Year 12 students

YCS 10 (spring 2000)

	Currently in full/part-time job %	Full/part-time job since Year 11 %	No full/part-time job since Year 11 %	All full-time Year 12 students %
1-10 hours	3	3	4	3
11-15 hours	5	6	6	6
16-20 hours	17	19	16	17
21-25 hours	21	18	17	19
26-30 hours	19	18	17	18
31-35 hours	9	9	8	9
36 hours or more	13	14	15	14
no information	12	13	17	14
Total	100	100	100	100
Weighted base N	*4,027*	*1,493*	*3,947*	*9,467*
Unweighted base N	*4,678*	*1,613*	*4,068*	*10,359*
Mean number of hours	26.7	26.9	27.0	26.9
Standard deviation	9.9	10.7	11.2	10.5

In Sweep 1 of Cohort 10 there was an additional question that asked about time spent in private study in addition to teacher contact hours:

> *'How many hours <u>in total</u> each week (during term-time) do you spend in lessons, studying or training, including both the time studying on your own <u>and</u> with a teacher, instructor or trainer?'*

One in six full-time students failed to answer this question, probably because the way that the questionnaire was laid out meant that it could easily be overlooked. Those for whom we have information spent on average just under six hours longer in total working for their qualifications than in they spent in contact with teachers, with a mean of 26.9 hours (s.d. 10.5) compared to 21.2 teacher contact hours.

Table 2.5 shows, again perhaps surprisingly, that the difference in total study hours between students with and without jobs was entirely negligible. Students who had never had a job had a mean of 27.0 total study hours per week, compared to 26.7 hours for students with current jobs and 26.9 hours for students with previous jobs. None of these differences was statistically significant. For students with current jobs, there was a very small negative but statistically significant association between the usual number of hours spent each week in jobs and the total number of hours spent working for qualifications (Pearson's R = -0.034).

Proportion of Year 13 students with jobs

Information on full-time students in Year 13 comes from YCS Cohort 9, as Sweep 2 of Cohort 10 is not yet available for analysis. The first chapter of this report described the discontinuities between Sweep 1 of Cohort 9 and Sweep 1 of Cohort 10 that arose from the change of research contractor. This change also affected the comparability of Sweeps 1 and 2 of Cohort 9 in some respects, particularly as regards how full-time students were identified and questions about the jobs that they held.[1] Bearing these problems in mind, there still seemed to be a higher level of paid employment in Year 13 than in Year 12, with 59% of full-time students in Year 13 in jobs at the time of survey compared to 45% in Year 12 (see Table 2.6). In addition, 5% of all full-time Year 13 students had more than one job, compared to 3% of all full-time Year 12 students.

TABLE 2.6
Proportion of full-time Year 13 students with jobs, by sex
YCS 9 (spring 1999)

	Males %	Females %	All %
Has a job	53	65	59
Does not have a job	47	34	40
No information	1	1	1
Total	100	100	100
Weighted base N	*2,618*	*3,003*	*5,621*
Unweighted base N	*2,904*	*4,085*	*6,989*

The sex difference in the probability of having a job observed in Year 12 was also found in Year 13, as the table shows. In Year 13, 65% of female students were in jobs compared to 53% of male students. Female students were also still more likely than

[1] The question on cohort members' main activity was similar in the two sweeps, but the further questions on full-time study were different. In Sweep 1, all cohort members were asked, *'At present are you enrolled on a full-time education course at school or college?'* In Sweep 2, all cohort members were asked, *' At present, are you studying for any qualifications, either vocational (work-related) or academic?'* Only if they answered 'Yes' to this question were they asked further questions about their studies, including, *'Are you studying or training full-time or part-time, or are you on a sandwich course?'* Again in Sweep 1, all cohort members, regardless of their main activity, were asked, *'At any time since the end of Year 11, have you had a full or part-time job or been in training?',* and if they answered 'Yes', they were also asked, *'Are you currently in a full or part-time job or training?'* In Sweep 2, cohort members were only asked these questions if they said that their main activity was a job or GST, while all cohort members were asked, *'Do you have a job at the moment that you would not describe as your main activity?'* See also the footnote on page 12.

males to have more than one job (7% of all full-time female students compared to 4% of males).

Table 2.7 shows that five out of six full-time Year 13 students who had been in jobs in the spring of Year 12 still had jobs in the spring of Year 13. In addition, half of students who had held a job earlier in Year 12 but were not in jobs in the spring had returned to work by the spring of Year 13, while over a third of those who had not worked in Year 12 had taken a job by the spring of Year 13. In total, only 14% of full-time Year 13 students had not had a job at all since the end of Year 11.

TABLE 2.7
Proportion of full-time Year 13 students with jobs, by whether had a job in Year 12: young people who were full-time students in both Years 12 and 13
YCS 9 (spring 1998 and 1999)

	In job in spring of Year 12 %	Previous job in Year 12 %	No job in Year 12 %
Job in spring of Year 13	83	50	37
No job in spring of Year 13	17	49	62
No information	+	1	1
Total	100	100	100
Weighted base N	*2,410*	*879*	*2,063*
Unweighted base N	*3,214*	*1,089*	*2,473*

Number of hours worked in Year 13 jobs

Full-time students with jobs worked slightly longer hours on average in Year 13 than in Year 12, 12.2 hours per week compared to Year 12 means of 11.8 hours for Cohort 9 and 11.7 hours for Cohort 10 (see Table 2.3). As Table 2.8 shows, just under half of Year 13 students with jobs worked ten hours or less per week, and just under three quarters worked no more than fifteen hours. Eight per cent worked over twenty hours per week, but again some of these young people may have been in temporary holiday jobs in the Easter holidays or Spring Bank Holiday week.

As the table also shows, in Year 13 female students still tended to work shorter hours than males (despite being more likely than their male classmates to have more than one job). Female students with jobs worked on average 11.7 hours per week in total; for males the figure was 12.9. This difference was statistically significant.

TABLE 2.8
Total number of hours usually worked per week in current job(s): Year 13 students with jobs

YCS 9 (spring 1999)

	Males %	Females %	All %
1-5 hours	8	12	10
6-10 hours	35	40	38
11-15 hours	26	24	25
16-20 hours	16	13	15
21-30 hours	8	5	6
more than 30 hours	2	2	2
no information	5	3	4
Total	100	100	100
Weighted base N	*1,378*	*1,945*	*3,323*
Unweighted base N	*1,561*	*2,720*	*4,281*
Mean number of hours worked	12.9	11.7	12.2
Standard deviation	7.1	6.6	6.9

TABLE 2.9
Mean number of hours usually worked per week in jobs in Years 12 and 13: young people who were full-time students and had jobs in both years

YCS 9 (spring 1998 and 1999)

	Males %	Females %	All %
Year 12			
Mean total number of hours	11.7	10.8	11.1
Standard deviation	5.9	6.1	6.1
Year 13			
Mean total number of hours	13.1	11.7	12.3
Standard deviation	6.7	6.2	6.2
Weighted base N	*763*	*1,131*	*1,894*
Unweighted base N	*903*	*1,652*	*2,555*

Note: The figures exclude respondents with missing information on the number of hours worked in either Year 12 or Year 13.

Full-time students with jobs in Year 13 who had also had jobs in Year 12 worked on average longer hours in Year 13 than in Year 12. As we see in Table 2.9, young men increased the time that they worked by 1.4 hours per week on average, and young women by 0.9 hours. These differences between Years 12 and 13 were statistically significant.

Hours in jobs and hours working for qualifications in Year 13

The question about the number of hours spent working for qualifications at Sweep 2 of Cohort 9 differed from the question at Sweep 1 of Cohort 9, in that it asked about time spent in private study as well as teacher contact hours. For this reason alone we would expect more hours to be reported at Sweep 2 than at Sweep 1. However we can compare the total number of hours spent in teacher contact plus private study at Sweep 2 of Cohort 9 (in Year 13 in spring 1999) with information from Sweep 1 of Cohort 10 (in Year 12 in spring 2000). This suggests that full-time Year 13 students spent on average 4.6 hours more per week working for qualifications than full-time Year 12 students (means of 31.5 hours in Year 13 and 26.9 hours in Year 12 - see Tables 2.10 and 2.5). An increase in study hours is to be expected, as examination pressures were a good deal greater in Year 13 than in Year 12.[1] In addition, by the spring of Year 13 young people who had stayed on to take GCSE re-sits or one year vocational courses would have left, and those who found that they did not like or could not cope with their two year A level or vocational courses would have dropped out.

TABLE 2.10
Usual total number of teacher contact plus private study hours per week, by whether has a job: full-time Year 13 students

YCS 9 (spring1999)

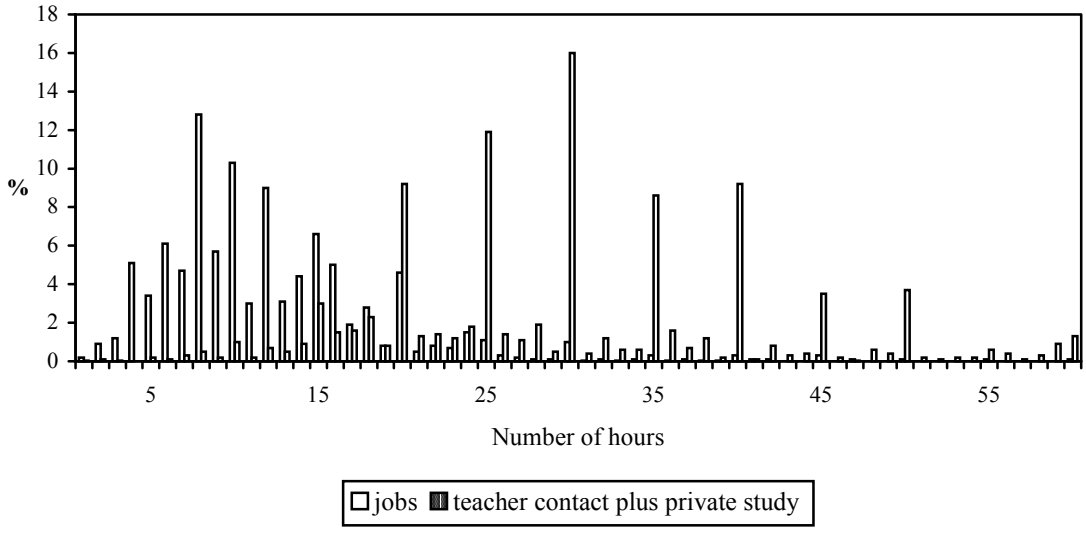
	Job %	No job %	All full-time Year 13 students[1] %
15 hours or less	7	6	7
16-20 hours	14	12	13
21-25 hours	16	12	15
26-30 hours	19	16	18
31-35 hours	11	11	11
36-40 hours	12	12	12
41-45 hours	5	6	5
46-50 hours	5	7	6
51 hours or more	4	8	5
no information	8	10	9
Total	100	100	100
Weighted base N	*3,322*	*2,246*	*5,624*
Unweighted base N	*4,281*	*2,653*	*6,989*
Mean number of hours	30.4	33.3	31.5
Standard deviation	11.5	13.5	12.4

[1]Includes those who did not say whether they had a job.

[1] YCS Cohorts 9 and 10 pre-date the introduction of the 'two-stage' A levels, and AS examinations were usually taken at the end of Year 13.

The difference in the number of hours spent working for qualifications by students with jobs and students without jobs was greater in Year 13 than in Year 12. In Year 13, students without jobs spent on average three more hours per week on their studies than students with jobs, this difference being statistically significant.

Chart 2.3
Total number of hours usually worked per week in jobs and usual number of teacher contact plus private study hours per week : full-time Year 13 students with jobs
(YCS 9, spring 1999)



Note: Hours above 60 are banded together. Base Ns as in Tables 2.8 and 2.10.

Chart 2.3 plots the total number of hours worked per week in Year 13 jobs alongside the total number of hours spent working for qualifications. Once again, rounding effects are substantial, with respondents tending to report the hours they spent working for qualifications rounded to the nearest five. Nevertheless it is clear that most students with jobs spent much more time working for their qualifications than they spent in their jobs. As with Year 12 students in Cohort 10, there was a slight but statistically significant negative association between the total number of hours worked per week in jobs and the total number of hours spent each week working for qualifications (Pearson's R = 0.095). Although small, this correlation was bigger than in Year 12.

3 WHICH STUDENTS HAVE JOBS?

Introduction

As we saw in the last chapter, most young people who stayed in full-time education after 16 took a job at some point in Year 12 or 13. Nevertheless the probability having a job at any one moment in time varied substantially, and this chapter explores the factors that were associated with taking paid work. It reports the employment rate within different subgroups of students defined by the qualifications that they were seeking and the type of institution that they attended, as well as by a range of demographic and family characteristics that affected the chances that they would stay on in full-time education in the first place.

The analysis shows a very strong association between results in Year 11 GCSE examinations and the probability of taking a job, though the shape of this association was different from what perhaps might have been expected. Thus in reporting employment rates within other subgroups, group differences in GCSE results are taken into account.

Many of the factors that were related to the probability of taking a job are inter-correlated, and in order to assess their separate importance we need to use statistical modelling. Thus the chapter concludes with a logistic model of the probability of having a job. This model enables us to look at the impact of some additional factors which there is not space to discuss earlier in the chapter.

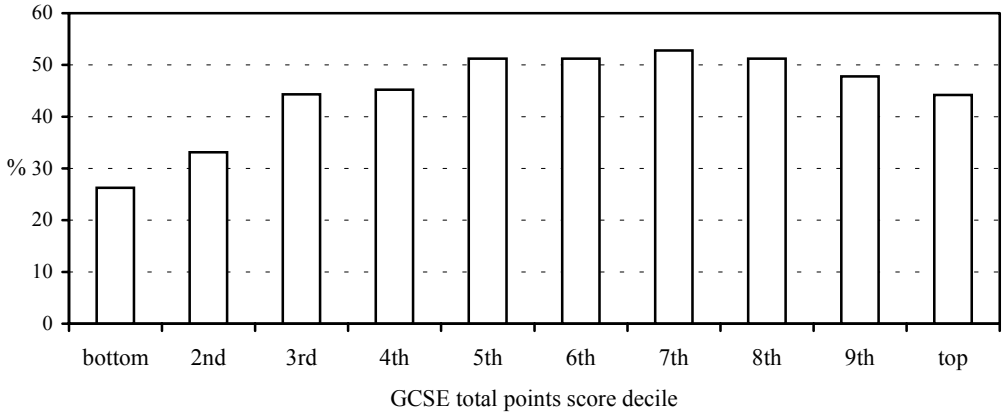
The analysis is based on full-time students in Year 12. This sample is bigger than the sample of Year 13 students (which is reduced by non-response at Sweep 2), and offers the possibility of replicating results in Cohorts 9 and 10.

Year 11 GCSE results

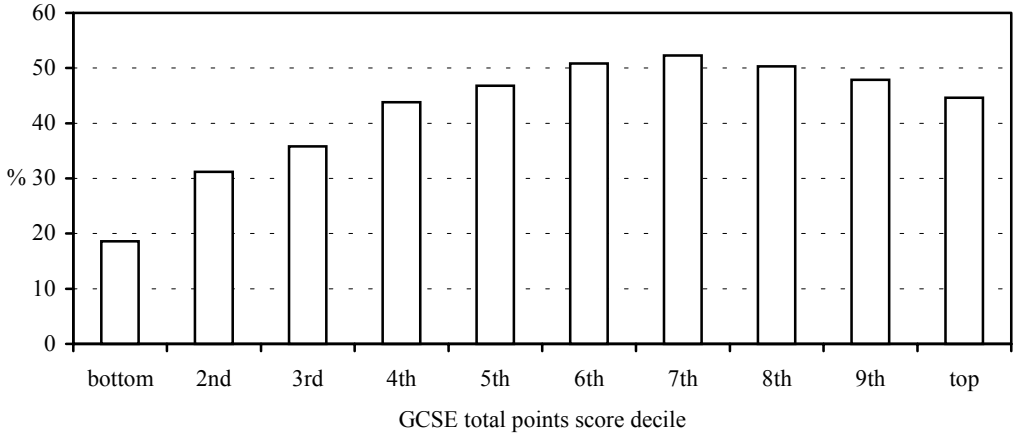
As many previous analyses of YCS data have shown, results in Year 11 GCSEs have a very big impact on the routes that young people take after 16. As such, they are the obvious starting point for exploring the factors that influence whether or not a Year 12 student takes a job. We calculate total GCSE points score by allocating seven points for

Chart 3.1
Percentage of full-time Year 12 students with jobs, by Year 11 GCSE results

(a) YCS 9



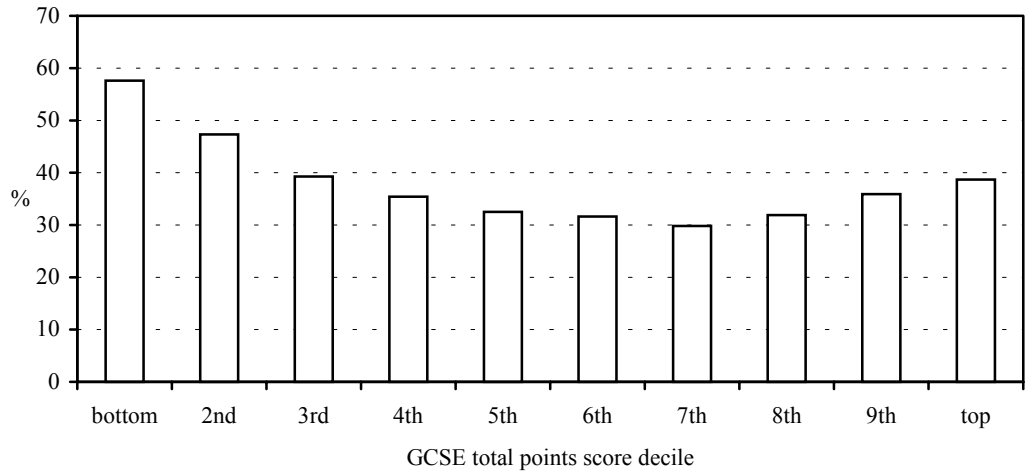
(b) YCS 10



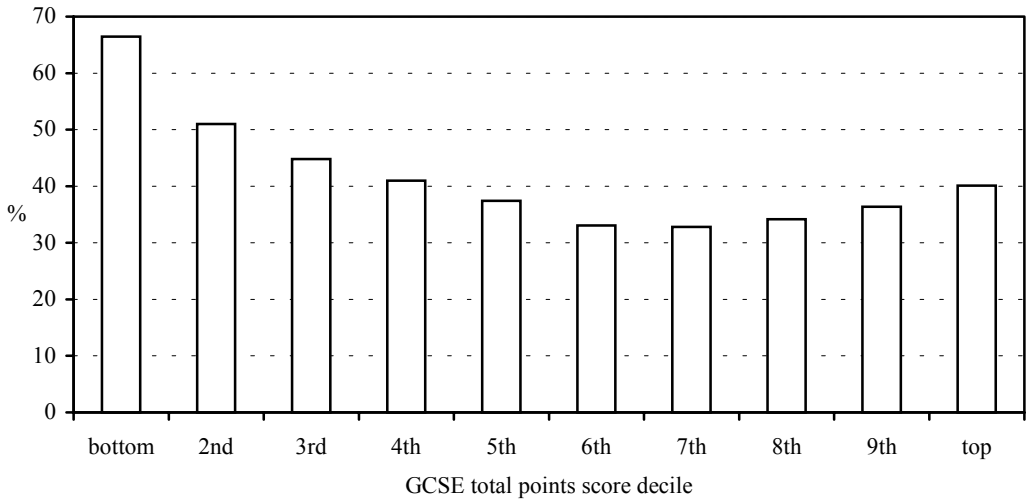
Base Ns	*GCSE total points score decile*									
	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
YCS 9										
weighted	*978*	*953*	*917*	*1,147*	*995*	*1,072*	*919*	*1,124*	*858*	*1,120*
unweighted	*643*	*703*	*814*	*1,178*	*1,167*	*1,339*	*1,157*	*1,401*	*1,066*	*1,377*
YCS 10										
weighted	*853*	*917*	*916*	*1,081*	*968*	*835*	*1,003*	*971*	*999*	*925*
unweighted	*505*	*606*	*735*	*1,074*	*1,174*	*1,067*	*1,311*	*1,287*	*1,345*	*1,255*

Chart 3.2
Percentage of full-time Year 12 students with no job since Year 11, by Year 11 GCSE results

(a) YCS 9



(b) YCS 10



Base Ns as for Chart 3.2.

each A or A* grade,[1] six for each B grade, and so on, and we then compute deciles (groups that each encompass ten per cent of the distribution), quartiles (groups of 25%) and thirds on the basis of the (weighted) distribution of total points score amongst cohort members in full-time education at the Sweep 1 survey. In each of the tables and charts in

[1] YCS Cohorts 9 and 10 do not distinguish A and A* grades.

TABLE 3.1
Total number of hours usually worked per week in current job(s), by GCSE results: full-time Year 12 students with jobs

	GCSE results:			
	Top quartile %	Second quartile %	Third quartile %	Bottom quartile %
YCS 9 (spring 1998)				
1-5 hours	18	11	9	9
6-10 hours	47	43	36	31
11-15 hours	23	26	25	22
16-20 hours	8	12	16	17
21+ hours	3	5	10	13
no information	1	3	4	8
Total	100	100	100	100
Weighted base N	*1,232*	*1,281*	*1,186*	*820*
Unweighted base N	*1,556*	*1,625*	*1,286*	*629*
Mean number of hours	10.0	11.5	12.8	13.7
Standard deviation	5.8	6.6	7.1	8.6
YCS 10 (spring 2000)				
1-5 hours	17	12	9	8
6-10 hours	48	41	33	30
11-15 hours	23	27	29	23
16-20 hours	8	14	17	19
21+ hours	2	4	10	15
no information	2	2	3	6
Total	100	100	100	100
Weighted base N	*1,164*	*1,165*	*1,105*	*596*
Unweighted base N	*1,561*	*1,529*	*1,183*	*405*
Mean number of hours	9.8	11.3	13.0	14.2
Standard deviation	5.5	6.2	7.2	8.1

this chapter, we use the finest breakdown of GCSE points score that sample numbers permit.

Charts 3.1 (a) and (b) show that for full-time Year 12 students the relationship between GCSE results and jobs had the shape of a lop-sided inverted U. In both Cohorts 9 and 10, the students who were most likely to be in a job at the time of the Sweep 1 survey were those in the seventh decile of GCSE points score. Either side of this decile, the probability of having a job fell as GCSE results either improved or got worse. However the fall in the probability of having a job was greater for those with results below the

seventh decile, so that students in the top ten per cent of GCSE results were much more likely to have jobs than students in the bottom ten per cent.

Some of the students who did not have jobs at the time of survey had held jobs earlier in Year 12 which they had since left. Charts 3.2(a) and (b) plot the proportion of students in each decile of GCSE score who had not had a job at all since the end of Year 11. The relationship was the obverse of the one we have just seen, with the seventh decile of GCSE results having the smallest proportion of students who had never had a job, and the bottom decile the biggest proportion.

The relationship between GCSE results and the total number of hours worked had a different shape (we only have information on hours worked for students who had jobs at the time of survey). As Table 3.1 shows, poorer GCSE results were associated with longer working hours in both Cohort 9 and Cohort 10. In Cohort 9, students in the top quarter of GCSE results who had jobs usually worked on average 10.0 hours per week in their jobs, those in the second quartile worked 11.5 hours, those in the third quartile worked 12.8 hours and those in the bottom quartile worked 13.7 hours. All these means were significantly different from each other. Estimates based on Cohort 10 were very similar.

Type of course

It might be assumed that students on vocational courses would be more likely to have jobs in Years 12 and 13 than students on A level courses. In fact the picture is more complicated than this, as Table 3.2 shows. In Cohort 9, students on Level 3 vocational courses were more likely to have jobs than other students, but the difference between them and A level students was quite small. In Cohort 10 there was effectively no difference between these groups. However in both cohorts students on Level 2 vocational courses were much less likely to have jobs than students on either Level 3 vocational courses or A level courses, and students on Level 1 vocational courses or who were taking only GCSE re-sits were even less likely to have jobs. As these groups tended to have poorer GCSE results than either A level or Level 3 vocational students,[1] this pattern reflected the relationship between having a job and GCSE results that was described in the previous section.

[1] See Payne 2001b.

TABLE 3.2
Whether has a job, by qualification aim: full-time Year 12 students

	A/AS level only	A/AS level + any vocational courses or GCSE re-sits	Level 3 vocational	Level 2 vocational	Lower level vocational or GCSE re-sits only
	%	%	%	%	%
YCS 9 (spring 1998)					
Currently in job	47	51	53	40	32
Job since Year 11	17	18	15	19	18
No job since Year 11	36	31	32	41	50
Total	100	100	100	100	100
Weighted base N	*4,316*	*1,328*	*1,190*	*1,878*	*1,055*
Unweighted base N	*5,312*	*1,598*	*1,297*	*1,543*	*826*
YCS 10 (spring 2000)					
Currently in job	48	47	46	36	26
Job since Year 11	16	15	16	17	16
No job since Year 11	36	39	38	47	58
Total	100	100	100	100	100
Weighted base N	*4,053*	*1,393*	*1,120*	*1,624*	*1,021*
Unweighted base N	*5,288*	*1,688*	*1,221*	*1,207*	*718*

Note: Mutually exclusive categories for course types, with vocational courses classified by their highest level. Level 3 and Level 2 vocational qualifications may or may not have been accompanied by GCSE re-sits.

Having a job appeared to have only a very slight relationship with whether or not the course included work experience. In YCS 10, 44% of full-time Year 12 students with a job at the time of survey said that their course included a period of work experience, compared to 42% of those who had held a job since the end of Year 11 but did not have one at the moment, and 41% of students who had never had a job since Year 11. In YCS 9, the corresponding figures were 47%, 43% and 44% respectively. However the statistical model presented later in the chapter suggested that, when other factors were taken into account, being on a course that included a period of work experience increased the chances that a student would take a job.

Although students on Level 1 or Level 2 vocational courses or those only taking GCSE re-sits were less likely than students on A level courses to have jobs, those who were in employment tended to work longer hours. As Table 3.3 shows, these groups worked on average 13 or 14 hours per week in their jobs, compared to the 10 or 11 hours worked by A level students, and nearly twice as many worked more than 15 hours per week. Level 3 vocational students with jobs also tended to work noticeably longer hours than A level students. All these contrasts were statistically significant.

TABLE 3.3
Total number of hours usually worked per week in current job(s), by qualification aim: Year 12 students with jobs

	A/AS level only	A/AS level + any vocational courses or GCSE re-sits	Level 3 vocational	Level 2 vocational	Lower level vocational or GCSE re-sits only
	%	%	%	%	%
YCS 9 (spring 1998)					
1-5 hours	14	12	9	10	10
6-10 hours	46	46	31	33	31
11-15 hours	25	23	27	22	25
16-20 hours	10	11	18	18	16
21+ hours	4	5	10	11	12
no information	2	3	5	7	6
Total	100	100	100	100	100
Weighted base N	*2,026*	*675*	*627*	*748*	*334*
Unweighted base N	*2,543*	*822*	*700*	*644*	*283*
Mean number of hours	10.6	10.9	13.4	13.3	13.8
Standard deviation	5.9	6.3	7.6	7.7	9.1
YCS 10 (spring 2000)					
1-5 hours	14	12	8	8	8
6-10 hours	45	40	34	28	36
11-15 hours	26	27	25	27	21
16-20 hours	10	12	22	19	18
21+ hours	3	6	7	14	12
no information	2	3	4	5	5
Total	100	100	100	100	100
Weighted base N	*1,944*	*649*	*512*	*579*	*265*
Unweighted base N	*2,562*	*798*	*580*	*458*	*203*
Mean number of hours	10.5	11.5	12.9	14.0	13.6
Standard deviation	5.9	6.6	6.5	7.4	8.8

Note: See notes to Table 3.2.

Type of institution

Another factor that could influence whether Year 12 students take jobs is the policy of the institution where they are enrolled, as some schools or colleges may discourage part-time employment. FE colleges tend to take students with poorer GCSE results than school sixth forms or sixth form colleges, and the majority of their students take

TABLE 3.4
Percentage of full-time Year 12 students with jobs, by type of institution attended and GCSE results

	All students %	*GCSE results:* Top third %	Middle third %	Bottom third %
YCS 9 (spring 1998)				
School sixth form	**44**	**45**	**50**	**33**
Weighted base N	*4,995*	*2,308*	*1,686*	*1,001*
Unweighted base N	*5,668*	*2,856*	*2,039*	*773*
Sixth form college	**48**	**54**	**49**	**34**
Weighted base N	*1,397*	*579*	*561*	*256*
Unweighted base N	*1,593*	*722*	*661*	*210*
FE college	**44**	**56**	**50**	**36**
Weighted base N	*3,165*	*359*	*1,147*	*1,658*
Unweighted base N	*3,079*	*450*	*1,331*	*1,298*
YCS 10 (spring 2000)				
School sixth form	**44**	**46**	**50**	**32**
Weighted base N	*4,517*	*2,147*	*1,433*	*937*
Unweighted base N	*5,353*	*2,914*	*1,758*	*681*
Sixth form college	**44**	**53**	**43**	**30**
Weighted base N	*1,623*	*669*	*571*	*384*
Unweighted base N	*1,828*	*871*	*694*	*263*
FE college	**41**	**53**	**53**	**30**
Weighted base N	*2,345*	*328*	*828*	*1,189*
Unweighted base N	*2,251*	*427*	*974*	*850*

Note: The format of the question about the type of institution attended differed between Cohorts 9 and 10, and it is possible that proportion of Year 12 students in FE colleges in Cohort 10 was under-estimated.

vocational courses,[1] so exact comparisons are difficult. However Table 3.4 suggests that differences between school sixth forms, sixth form colleges and FE colleges in the proportion of their students holding paid jobs were fairly small. Only in the top third of GCSE results does it appear that students in schools were less likely to have jobs than students elsewhere, and this could be explained by other differences in student intake. The statistical model presented later in the chapter failed to find any significant difference between school sixth forms, sixth form colleges and FE colleges once allowance was made for a range of other factors.

[1] See Payne 2001b.

Sex

We saw in Chapter 2 that female students were a more likely to have a job than male students, though those with jobs tended to work fewer hours per week. Table 3.5 reports the proportion of male and female students in jobs in each quartile of Year 11 GCSE results. It shows that the sex gap was quite wide for all students except those in the bottom quarter of GCSE results, where it was either very small or disappeared altogether. This pattern held true in both Cohorts 9 and 10. It is possible that this reflects the gendered nature of the labour market for 16-17 year olds, which, for low academic achievers, tends to offer more opportunities to young men than to young women.[1] As we see later, statistical modelling controlling for a number of variables confirmed the overall greater propensity of female students to take jobs.

TABLE 3.5
Percentage of full-time Year 12 students with jobs, by sex and GCSE results

	GCSE results:			
	Top quartile %	2nd quartile %	3rd quartile %	Bottom quartile %
YCS 9 (spring 1998)				
Males	**41**	**47**	**44**	**32**
Weighted base N	*1,087*	*1,174*	*1,223*	*1,333*
Unweighted base N	*1,284*	*1,415*	*1,265*	*916*
Females	**52**	**56**	**51**	**34**
Weighted base N	*1,534*	*1,298*	*1,262*	*1,172*
Unweighted base N	*1,960*	*1,681*	*1,399*	*925*
YCS 10 (spring 2000)				
Males	**41**	**45**	**38**	**27**
Weighted base N	*1,037*	*1,039*	*1,249*	*1,171*
Unweighted base N	*1,266*	*1,253*	*1,238*	*722*
Females	**52**	**56**	**49**	**27**
Weighted base N	*1,423*	*1,235*	*1,270*	*1044*
Unweighted base N	*2,039*	*1,707*	*1,405*	*729*

Ethnicity

Like any nationally representative sample where members of particular subgroups are selected in proportion to their presence in the population as a whole, YCS is not

[1] See Payne, 2000.

TABLE 3.6
Percentage of full-time Year 12 students with jobs, by ethnic group

	White	Black	Indian	Pakistani/ Bangladeshi	Other
YCS 9 (spring 1998)	**48**	**36**	**24**	**15**	**30**
Weighted base N	*8,654*	*238*	*396*	*344*	*338*
Unweighted base N	*9,449*	*211*	*404*	*321*	*346*
YCS 10 (spring 2000)	**46**	**30**	**20**	**11**	**31**
Weighted base N	*8,021*	*256*	*323*	*367*	*331*
Unweighted base N	*8,956*	*222*	*349*	*321*	*349*

particularly well suited for examining issues around ethnicity. Sample numbers for members of ethnic minorities are small, and it is not possible to discriminate adequately between people of different ethnic origins. Nevertheless it is clear in Table 3.6 that full-time students from ethnic minorities were much less likely to hold jobs than students belonging to the white majority. This was true of all the ethnic minority groups that sample numbers permit us to distinguish, and the pattern in Cohort 9 was replicated in Cohort 10. As the table shows, students of Pakistani or Bangladeshi origin were particularly unlikely to hold jobs, with only 15% in jobs in Cohort 9 compared to 48% of white students. Some of this group may however have been doing unpaid work in family businesses. Young people of Indian origin the next least likely to have jobs, with around half as many in jobs as whites. Black students were much more likely to have jobs than students of Asian origin, but even here, the gap between them and white students was quite large.

We have already seen that the probability that students have jobs varies with their GCSE results. There are substantial differences between members of different ethnic groups in average levels of attainment in GCSEs, with some groups doing much better than whites and other groups doing much worse.[1] However differences between the employment rates of white and ethnic minority remained strong even after controlling for differences in GCSE grades, as Table 3.7 indicates. Although sample numbers force us to aggregate figures for members of different minority ethnic groups in this table, the statistical model presented later in this chapter confirms the importance of ethnicity in influencing which students take jobs.

The reasons for the difference in employment rates between students from different ethnic groups require more detailed investigation using data more suitable than YCS.

[1] See Payne 2001b.

TABLE 3.7
Percentage of full-time Year 12 students with jobs, by ethnicity and GCSE results

	GCSE results:			
	Top quartile %	2nd quartile %	3rd quartile %	Bottom quartile %
YCS 9 (spring 1998)				
White	**48**	**55**	**51**	**36**
Weighted base N	*2,371*	*2,171*	*2,120*	*1,985*
Unweighted base N	*2,948*	*2,743*	*2,287*	*1,471*
Ethnic minority	**32**	**30**	**27**	**19**
Weighted base N	*232*	*276*	*334*	*473*
Unweighted base N	*275*	*330*	*344*	*333*
YCS 10 (spring 2000)				
White	**50**	**54**	**47**	**30**
Weighted base N	*2,171*	*1,997*	*2,123*	*1,731*
Unweighted base N	*2,930*	*2,614*	*2,258*	*1,154*
Ethnic minority	**29**	**32**	**22**	**13**
Weighted base N	*262*	*246*	*349*	*305*
Unweighted base N	*341*	*307*	*336*	*257*

Simplifying, there are two possibilities: either fewer ethnic minority students than white students wish to have jobs, or they wish to have jobs but find it harder than white students to get them. Both types of explanation have some plausibility. Some ethnic minority groups, notably here those of Indian origin, place a very high value on academic education: they tend to have outstanding GCSE results, very high rates of participation in post-compulsory education and a preference for A level over vocational courses.[1] It is quite likely that such young people would be discouraged by their parents from getting jobs. However we shall see in Chapter 4 that the labour market for 16 and 17 year old students is dominated by service occupations, many of which bring the employee into contact with customers. Ethnic minority young people may sometimes face discrimination by employers for these jobs.

Region

It is reasonable to expect that students would be less likely to work in areas with above average unemployment rates. As Table 3.8 shows, regional variation in the proportion of Year 12 students with jobs was quite large, with a gap of 26 percentage points in Cohort 9 and 18 percentage points in Cohort 10 between the regions with the biggest and the

[1] See Payne 2001b.

TABLE 3.8
Percentage of full-time Year 12 students with jobs, by region

	YCS 9 (spring 1998)		*YCS 10 (spring 2000)*	
	%	Rank order	%	Rank order
North East	**30**	1	**34**	1
Weighted base N	*475*		*444*	
Unweighted base N	*550*		*507*	
North West	**42**	5	**37**	4
Weighted base N	*1,252*		*1,314*	
Unweighted base N	*1,321*		*1,413*	
Yorks & Humber	**38**	2	**39**	5
Weighted base N	*924*		*862*	
Unweighted base N	*886*		*908*	
East Midlands	**46**	7	**43**	6
Weighted base N	*787*		*725*	
Unweighted base N	*831*		*827*	
West Midlands	**43**	6	**44**	7
Weighted base N	*1,036*		*969*	
Unweighted base N	*1,132*		*1,074*	
Eastern	**51**	9	**49**	9
Weighted base N	*1,102*		*980*	
Unweighted base N	*1,237*		*1,127*	
London	**38**	2	**34**	1
Weighted base N	*1,334*		*1,242*	
Unweighted base N	*1,289*		*1,153*	
South East	**56**	10	**52**	10
Weighted base N	*1,677*		*1,503*	
Unweighted base N	*1,878*		*1,713*	
South West	**50**	8	**48**	8
Weighted base N	*952*		*874*	
Unweighted base N	*1,068*		*1,031*	
Wales	**40**	4	**36**	3
Weighted base N	*542*		*556*	
Unweighted base N	*653*		*606*	

smallest proportions. Although sample numbers were comparatively small in some regions and estimates subject as a result to fairly large sampling error, the rank order of regions was very similar in Cohorts 9 and 10. The regions with low proportions of students in jobs were generally those like the North East, the North West, Yorkshire and Humberside and Wales which had unemployment rates above the national average, whilst high proportions in jobs were found in the more prosperous regions like the South East, the South West and the Eastern. London proved an exception to this pattern, with a very low proportion of students in jobs, which was probably due to the concentration of ethnic minority students there. In YCS 10, for example, 44% of full-time Year 12 students in

London belonged to ethnic minorities, compared to just 5% in the South East. Statistical modelling (presented later in the chapter) confirmed the importance of regional variations.

Family background

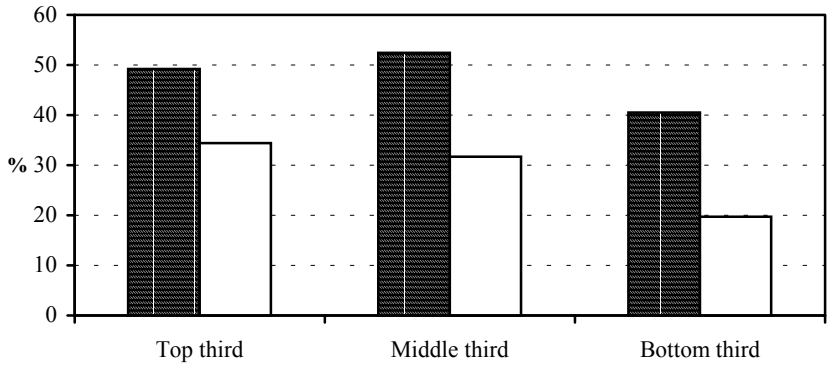
The introductory chapter to this report outlined the concerns that some educationalists have that students from poor families might be forced into paid work in order to support themselves, with possibly damaging effects on their educational performance. It is important therefore to examine the impact that family income has on the probability of taking a job. In general, information on family background in YCS is not greatly satisfactory, as it is collected from young people and not directly from their parents. This means that there is a lot of missing information on variables such as parents' occupations and qualifications, and probably also quite a lot of reporting error. In addition, YCS has no data at all on family income. For these reasons this section looks at a range of proxy measures for family prosperity, none of which is wholly satisfactory in itself, but which together can give some impression of the importance of this factor. They include whether there was at least one parent in full-time employment, household tenure and whether the respondent had attended an independent school in Year 11. These factors all proved to be related to the probability that the student would have a job, but not always in the way that might be expected. There was also a complicated relationship with the Standard Occupational classification of the parent's occupation which is better displayed by statistical modelling than through the comparatively simple charts shown below.

In YCS 9, 48% of full-time Year 12 students who had at least one parent in full-time employment had a job, compared to 26% of those with no parent in full-time employment. In YCS 10, corresponding figures were very similar (46% and 26%). Students with no parent in full-time employment had on average poorer GCSE results than other students, but they had a lower probability of a job even after controlling for this, as Chart 3.3 shows. The difference was particularly marked amongst students in the middle and bottom thirds of GCSE results.

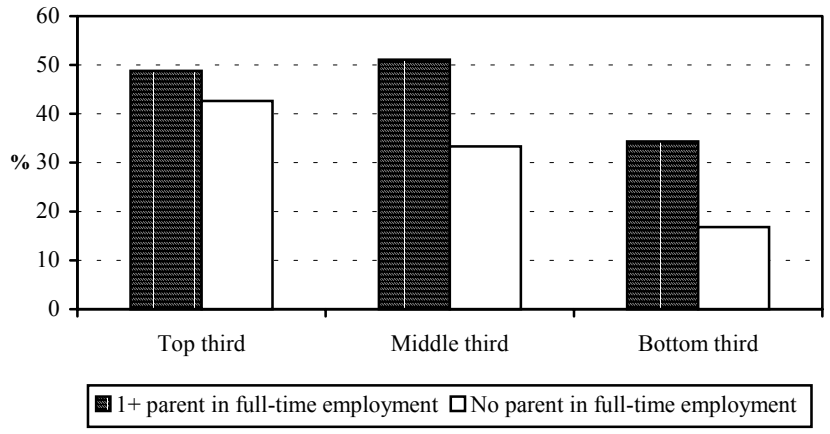
Overall 47% of full-time Year 12 students in Cohort 9 who lived in owner-occupied accommodation had a job, compared to 36% of those living in rented accommodation. In YCS 10 the figures were 45% and 31% respectively. Again, a gap remained after controlling for total GCSE points score (Chart 3.4), and again this gap was bigger in the middle and bottom thirds of GCSE results than in the top third.

Chart 3.3
Percentage of full-time Year 12 students with jobs, by whether has a parent in full-time employment and GCSE results

(a) YCS 9



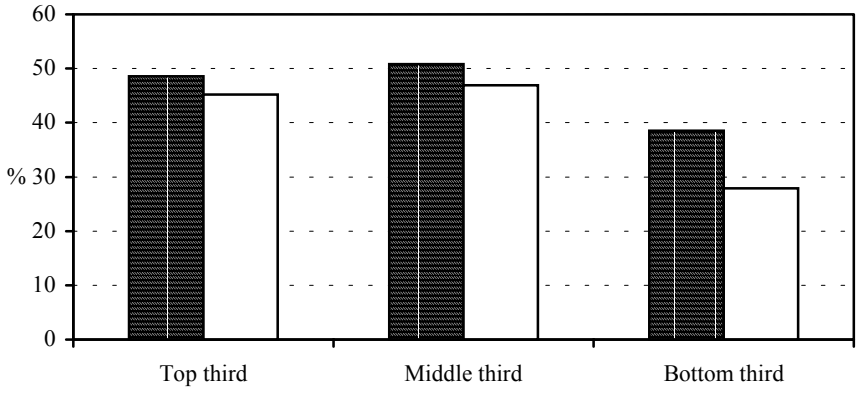
(b) YCS 10



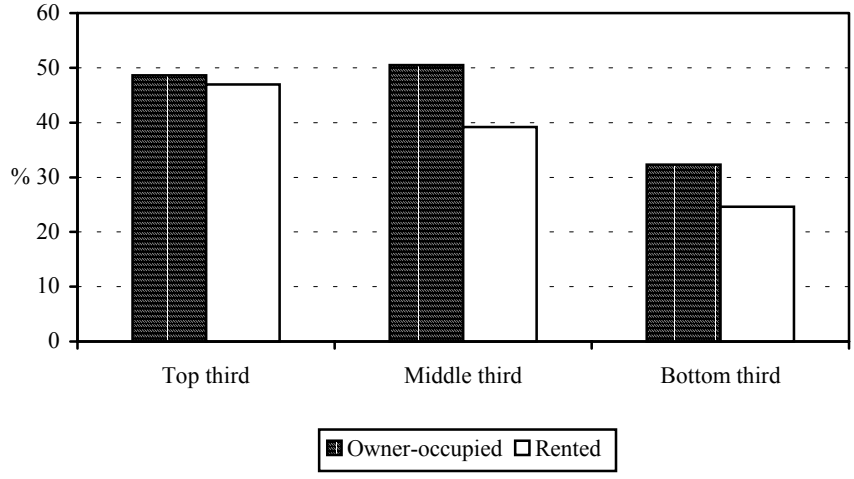
Base Ns		*Top third*		*Middle third*		*Bottom third*	
		Parent in work	*No parent in work*	*Parent in work*	*No parent in work*	*Parent in work*	*No parent in work*
YCS 9	*Weighted*	*3,061*	*221*	*3,135*	*350*	*2,362*	*689*
	Unweighted	*3,801*	*270*	*3,740*	*399*	*1,872*	*515*
YCS 10	*Weighted*	*2,986*	*258*	*2,700*	*363*	*2,161*	*714*
	Unweighted	*4,004*	*340*	*3,279*	*413*	*1,579*	*483*

Chart 3.4
Percentage of full-time Year 12 students with jobs, by housing tenure and GCSE results

(a) YCS 9



(a) YCS 9



Base Ns		*Top third*		*Middle third*		*Bottom third*	
		Owner-occupied	*Rented*	*Owner-occupied*	*Rented*	*Owner-occupied*	*Rented*
YCS 9	*Weighted*	*3,065*	*197*	*3,040*	*426*	*2,195*	*867*
	Unweighted	*3,805*	*240*	*3,628*	*493*	*1,731*	*665*
YCS 10	*Weighted*	*3,031*	*200*	*2,653*	*406*	*2,034*	*883*
	Unweighted	*4,066*	*260*	*3,217*	*470*	*1,492*	*592*

These results suggest that coming from a poor family reduced rather than increased the chances that a Year 12 student would have a job, and the statistical model presented in the last section of this chapter tends to confirm this. Here we can only speculate on the reasons for this association, but they may include a lack of jobs locally and increased competition from adults for the kinds of jobs that full-time students can do, lack of access to transport, and perhaps an unwillingness on the part of some employers to take on young people living in certain areas.

However having attended an independent school in Year 11 would tend to indicate family prosperity, and the relationship between this and having a job ran in the opposite direction. In Cohort 10, 44% of Year 12 students who had been at state schools in Year 11 had a job, compared to 29% of students who had attended independent schools in Year 11. This relationship remained after controlling for GCSE results, and indeed was especially strong in the top third of results, where 53% of students who had come from state schools had a job compared to 27% of those who had come from independent schools.[1] It suggests that, like the relationship with GCSE results, the relationship between having a job and family income may have had an inverted U-shape, with young people from middle income families more likely to take jobs than young people from either very poor or very prosperous families. An alternative interpretation is that that parents who paid for their children's schooling placed a particularly high value on education and were unwilling to let their children take jobs, for fear of distracting them from their studies.

Educational Maintenance Allowances

YCS Cohorts 9 and 10 pre-dated the introduction of the mandatory Educational Maintenance Allowances (EMAs) for 16-18 year olds that are being piloted at the time of writing. However Local Education Authorities had discretionary powers to award EMAs, and 9% of full-time Year 12 students in Cohort 9 received one, the mean value of which was £166 per term.[2] EMAs were targeted on poorer students, who, as we have seen, had in any case a low probability of having a job. In Cohort 9, 30% of full-time Year 12 students with EMAs had a job, compared to 46% of students without EMAs; in

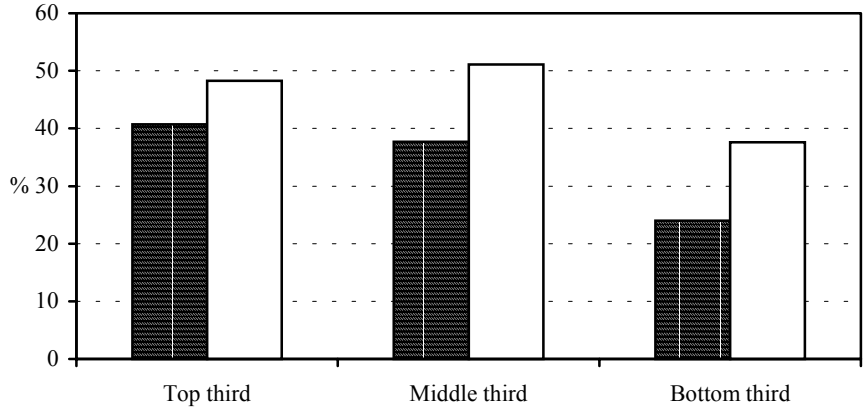
[1] The sample sizes on which these estimates are based are as follows:

	All Year 12 students		*Top 3rd of GCSE results*	
	Weighted	*Unweighted*	*Weighted*	*Unweighted*
State school in Year 11	*8,584*	*9,140*	*2,681*	*3,513*
Independent school in Year 11	*851*	*1,184*	*596*	*872*

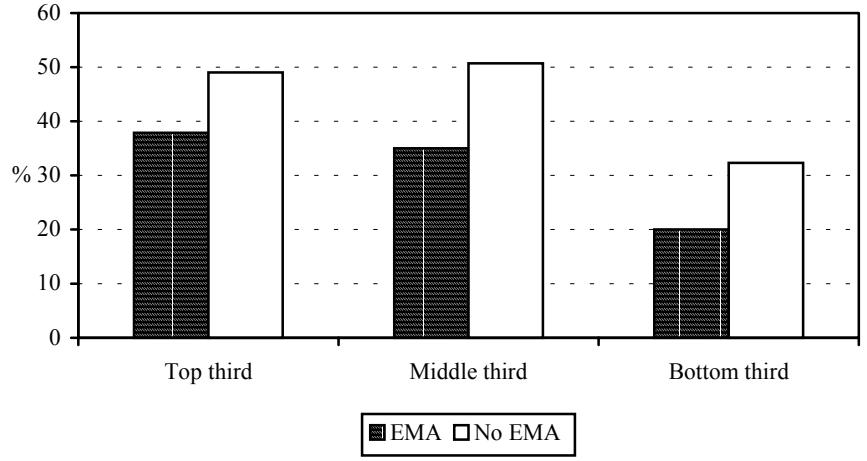
[2] See Payne 2001b.

Chart 3.5
Percentage of full-time Year 12 students with jobs, by whether had an EMA and GCSE results

(a) YCS 9



(b) YCS 10



Base Ns		*Top third*		*Middle third*		*Bottom third*	
		EMA	*No EMA*	*EMA*	*No EMA*	*EMA*	*No EMA*
YCS 9	*Weighted*	*91*	*3,163*	*231*	*3,242*	*516*	*2,566*
	Unweighted	*112*	*3,924*	*266*	*3,858*	*387*	*2,022*
YCS 10	*Weighted*	*219*	*3,068*	*371*	*2,773*	*614*	*2,421*
	Unweighted	*285*	*4,117*	*423*	*3,366*	*418*	*1,750*

Cohort 10, the corresponding figures were 28% and 45%. Students with EMAs tended to have poorer GCSEs than those without, but as Charts 3.5(a) and 3.5(b) show, a difference in the probability of having a job remained between these two groups even after controlling for GCSE points score. The statistical model presented in the next section

shows that receiving an EMA continued to reduce the probability that a student would get a job even after a wide range of associated variables had been taken into account.

A statistical model for taking a job

This chapter has made repeated references to a statistical model for the probability of taking a job; now at last we present this model. It is based on students in full-time education in the spring of Year 12 in Cohort 9, and the dependent variable is whether or not the student had a job at the time of the Sweep 1 survey. The type of model fitted was a logistic regression model and the box below explains how the coefficients should be interpreted.

Interpreting the coefficients of a logistic regression model

The coefficients of a logistic regression model, when exponentiated, represent the multiplicative effect of each predictor variable on the odds of the outcome being modelled - in this case, having a job. The 'base' or 'reference' category of each predictor variable is set to 1.00, and the effects of the other categories are assessed relative to this. Estimates less than 1.00 indicate a reduction in the odds of staying relative to the base category, and estimates greater than 1.00 indicate an increase in the odds, after taking into account the effects of all the other variables included in the model. In the present case, other things being equal, the odds of having a job are estimated to be more than twice as great for someone in the fifth decile of GCSE results as they are for someone in the bottom decile, while the odds that an Indian student has a job are less than two-fifths of the odds for a white student.

Note that we talk about the *odds* of having a job, not the probability. Odds are an alternative way of expressing probabilities; thus

odds = probability/(1-probability)

and *probability = odds/(1+odds).*

For example, if 75 out of 100 students had a job, their probability of working would be 0.75 or 75%, but their odds of working would be three to one on (3/1, or 3.00). If only 25 had jobs, then their probability of working would be 0.25 or 25%, while their odds of working would be three to one against (1/3, or 0.33). It follows that the effect of a predictor variable on odds is different from its effect on percentage probabilities. Consider a hypothetical case where 75 out of 100 female students and 50 out of 100 male students have a job. For females the odds of working would be 75/25 = 3.00, while for males the odds would be 50/50 = 1.00 (evens). Here being female would increase the percentage probability of working by 50% (75/50), but would triple the odds (3.00/1.00).

In developing the model a wide range of potential predictor variables were tested, and only those that were significantly associated with the probability of having a job were included in the final version. Some of these lost significance only because they were correlated with other predictor variables in the model. This applied particularly to the variables measuring family background, which tend to be associated with each other.

TABLE 3.9
Logistic regression model for having a job: full-time Year 12 students

YCS 9 (spring 1998)

	coefficient *(exponentiated)*
Constant	0.61
Year 11 GCSE points score deciles	
Bottom	1.00
Second	1.54****
Third	1.81****
Fourth	1.79****
Fifth	2.28****
Sixth	2.32****
Seventh	2.23****
Eighth	2.30****
Ninth	2.31****
Top	1.96****
Year 12 course	
A level/AS only	1.00
A level/AS with vocational courses or GCSEs	1.12*
Level 3 vocational (including with GCSEs)	1.22**
Level 2 vocational (including with GCSEs)	1.05
Level 1 vocational (including with GCSEs)	0.89
GCSEs only; other	0.79**
No information	0.88
Whether course includes a period of work experience	
Yes	1.00
No	0.87***
No information	0.84***
Number of teacher contact hours per week on course	
1-10 hours	1.00
11-15 hours	1.11
15-20 hours	1.08
21-25 hours	1.02
26-30 hours	0.95
31-35 hours	0.87
36 hours or more	0.75*
No information	0.94
Type of institution attended in Year 12	
School sixth form	1.00
Sixth form college	1.13
FE college (state system)	1.09
Independent/private college	1.42***
Sex	
Male	1.00
Female	1.29****
Truancy in Years 10 and 11:	
None	1.00
Odd days or lessons	1.29****
Particular days or lessons	1.22*
Days or weeks at a time	1.06
No information	1.26

Table continued on following page...

Table 3.9 continued…

		coefficient *(exponentiated)*
Ethnicity		
	White	1.00
	Black	0.84
	Indian	0.37****
	Pakistani/Bangladeshi	0.31****
	Other	0.53****
	No information	0.71
Government Office Region		
	South East	1.00
	North East	0.31****
	North West	0.56****
	Yorkshire & Humberside	0.47****
	East Midlands	0.61****
	West Midlands	0.61****
	Eastern	0.73****
	London	0.63****
	South West	0.72****
	Wales	0.43****
Parental qualifications		
	One or both has a degree	1.00
	One or both has A levels	1.28****
	Neither has degree or A levels	1.24****
	No information	1.23**
Parental employment status		
	One or both has a full-time job	1.00
	Neither has a full-time job	0.56****
	No information	0.94
Parental occupation[1]		
	Managerial/admin.; professional; associate prof../technical	1.00
	Clerical; Craft	1.08
	Personal and protective service; Sales	1.19**
	Operatives; Unskilled manual	1.01
	No information	0.78**
Type of school attended in Year 11		
	Comprehensive to age 16	1.00
	Comprehensive to age 18	1.04
	Selective (state system)	0.91
	Secondary Modern	0.87
	Independent	0.44****
Educational Maintenance Allowance in Year 12		
	No EMA	1.00
	Receives EMA	0.80**
	No information	1.14
	Weighted N	*10,082*
	Unweighted N	*10,845*
	Scaled deviance	*13,868*
	Residual df	*10,844*

[1]Based on the 1990 SOC of the father's job, or the mother's if there is no information on the father's.
Significance levels: * 10% ** 5% *** 1% **** 0.1% (2-tail test)

Variables that were not significant in this data set data included the number of siblings, whether the student lived in a lone parent family, household tenure, whether the student had been excluded from school in Years 10 or 11, attitudes to school, whether the student had got a place in education, training or work that they wanted, and whether the student had a disability or health problem.[1]

The results of the model are reported in Table 3.9. They show that a large number of factors had a statistically significant effect on the probability of having a job.

- Students in the bottom ten per cent of GCSE results were less likely to have jobs than all students with better grades. The probability of having a job increased steadily up to the fifth decile of results, remained fairly uniform between the fifth and ninth deciles, but fell again for those with top results.
- Students on Level 3 vocational courses were more likely to have jobs than students doing A or AS levels, while students who were taking only GCSE re-sits or were on other courses whose level could not be classified were less likely to have jobs than A level students.
- Students who courses included a period of work experience were more likely to have jobs than other students.
- Students who had very long teacher contact hours were less likely to have jobs than other students.
- Students attending independent or private colleges were more likely to have jobs than students in other types of institution. These colleges were likely to have a vocational orientation - they were not the sixth forms of independent or private schools which are included as 'school sixth forms' in the reference category.
- Female students were more likely to have jobs than males.
- Students who had occasionally played truant during Years 10 or 11 were more likely to have jobs than students who had never truanted.
- Students of Indian, Pakistani/Bangladeshi or 'other' ethnic origin were less likely to have jobs than white students.
- Students in all regions (including London) were less likely to have jobs than students in the South East. The North East, Wales and Yorkshire and Humberside had particularly low student employment rates.
- Students whose parents had degrees were less likely to have jobs than students whose parents were not so well qualified.

[1] The question on which this was based was: *'Do you have a disability or health problem, which you expect will last for more than a year, and which affects your ability to carry out normal day to day activities?'* Bear in mind that YCS does not cover special schools, and so young people with severe disabilities would tend not to appear in the sample.

- Students who did not have at least one parent in a full-time job were less likely to have jobs than students with a parent in full-time work.
- Students with parents in personal and protective service jobs or in sales occupations were more likely to have jobs than students with parents in other occupations. As we shall see in the next chapter, these occupations together account for the majority of the student labour market, and students with parents in these occupations may have been able to use their family connections to help them get jobs.
- Students who attended independent schools in Year 11 were less likely to have jobs than students who had attended state schools in Year 11.
- Students who received an EMA were less likely to have jobs than students who did not have EMAs.

4 WHAT KINDS OF JOBS DO STUDENTS DO?

Introduction

This chapter shifts the focus from the characteristics of student workers to the types of jobs that they did. It describes the occupational structure of the student labour market, both in broad terms and in detail, and looks at the different kinds of jobs taken by male and female students and by students with good and poor GCSE results. It goes on to compare the jobs of Year 12 students with the jobs of workers of the same age who were not in full-time education, and to calculate the proportion of 16/17 year old workers in each occupational group who were full-time students. The chapter also maps the industries in which student workers were found, comparing these with the industries in which non-student workers of the same age were employed. The last part of the chapter looks at how much Year 12 students earned in their jobs. It compares the pay of student workers to the pay of non-student workers in the same occupational group and of the same age and sex, and considers some possible explanations for the differences that were found.

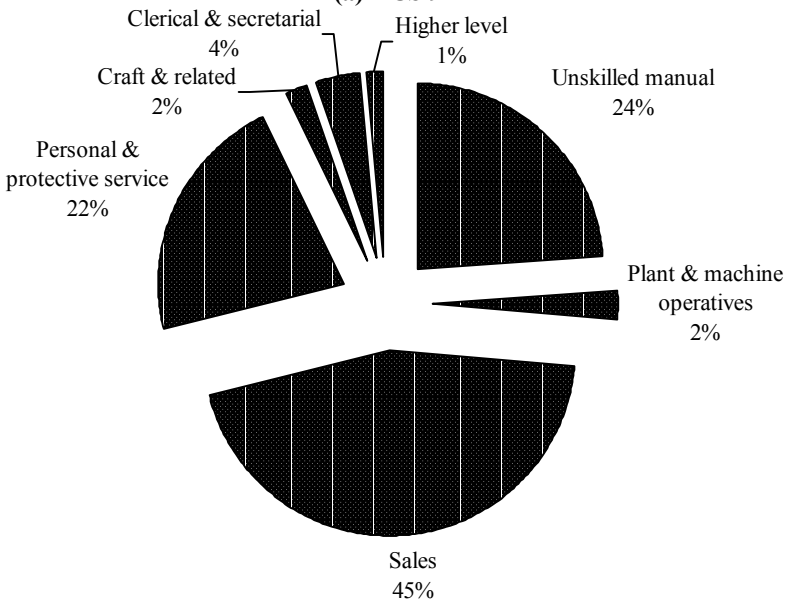
Occupations

Charts 4.1(a) and (b) show the proportion of full-time Year 12 students with jobs who were in each Major Group of the 1990 Standard Occupational Classification (SOC). Well over two fifths - 45% in YCS Cohort 9 and 46% in Cohort 10 - held sales occupations. Unskilled manual occupations were next in importance, accounting for around a quarter in each cohort, followed by personal and protective service occupations, which accounted for about a fifth in each. Together, these three occupational groups made up more than 90% of all student jobs in the 16/17 year old age group.

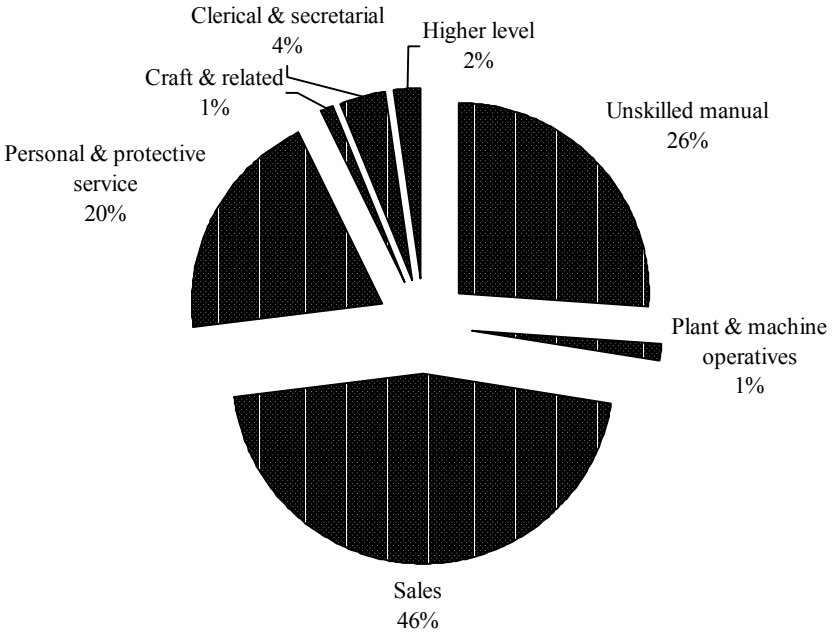
This level of concentration within occupational groups is striking. However, if we look at the specific jobs that Year 12 students did within these broad occupational groups, as in Table 4.1, we find yet more concentration. The majority of student workers in SOC 6 (Personal and protective service) were in catering, and of these, waiters and waitresses

Chart 4.1
SOC Major Group of jobs held by full-time Year 12 students

(a) YCS 9



(b) YCS 10



For base Ns, see next page.

Base Ns for Chart 4.1:	*YCS 9*		*YCS 10*	
	Weighted	*Unweighted*	*Weighted*	*Unweighted*
	4,459	*5,038*	*3,939*	*4,586*

Note: Those with no information on SOC are excluded.

TABLE 4.1
SOC (1990) Major and Minor Groups, by sex: full-time Year 12 students with jobs

	YCS 9 (spring 1998)		*YCS 10 (spring 2000)*	
	Male %	Female %	Male %	Female %
1 & 2: Managers & administrators; Professional	**0.2**	**0.4**	**1.5**	**0.8**
3: Associate professional & technical	**1.3**	**0.9**	**1.4**	**0.9**
38: Literary, artistic & sports professionals	*0.9*	*0.6*	*1.2*	*0.5*
All other occupations in SOC 3(30-37, 39)	*0.4*	*0.3*	*0.2*	*0.4*
4: Clerical & secretarial	**4.4**	**3.4**	**3.7**	**3.7**
43: Clerks (not otherwise specified)	*1.5*	*1.2*	*1.2*	*1.3*
44: Stores & despatch clerks, storekeepers	*1.5*	*0.2*	*0.9*	*0.3*
46: Receptionists, telephonists & related occupations	*0.3*	*1.0*	*0.6*	*1.0*
All other occupations in SOC 4 (40-42,45, 49)	*1.1*	*1.2*	*1.0*	*1.1*
5: Craft & related	**3.9**	**0.3**	**2.3**	**0.3**
50: Construction trades	*0.7*	*0.0*	*0.2*	*0.0*
54: Vehicle trades	*0.6*	*0.0*	*0.4*	*0.0*
58: Food preparation trades	*0.7*	*0.1*	*0.2*	*0.1*
59: Craft & Related n.e.c.	*0.7*	*0.2*	*0.6*	*0.1*
All other occupations in SOC 5 (51-53, 55-57)	*1.2*	*0.1*	*0.9*	*0.1*
6: Personal & protective service	**14.2**	**27.1**	**13.4**	**23.7**
61: Security & protective service occupations	*1.4*	*0.5*	*0.1*	*0.1*
62: Catering occupations	*10.7*	*20.3*	*10.3*	*17.9*
(620: Chefs, cooks)	*(1.8)*	*(0.6)*	*(1.9)*	*(0.5)*
(621: Waiters, waitresses)	*(7.9)*	*(19.1)*	*(7.5)*	*(17.1)*
(622: Bar staff)	*(1.0)*	*(0.5)*	*(1.0)*	*(0.5)*
64: Health & related occupations	*0.3*	*2.3*	*0.3*	*1.8*
(644: Care assistants and attendants)	*(0.2)*	*(1.9)*	*(0.3)*	*(1.6)*
65: Childcare & related occupations	*0.4*	*1.9*	*0.5*	*1.6*
66: Hairdressers, beauticians & related occupations	*0.1*	*1.4*	*0.1*	*1.1*
All other occupations in SOC 6 (60, 63, 67, 69)	*1.3*	*0.7*	*2.1*	*1.2*

Table 4.1 continued on following page…

Table 4.1 continued…

	YCS 9 (spring 1998)		*YCS 10 (spring 2000)*	
	Male %	Female %	Male %	Female %
7: Sales	**39.5**	**47.6**	**38.7**	**48.8**
72: Sales assistants & check-out operators	*37.2*	*45.8*	*37.3*	*47.3*
79: Sales occupations n.e.c.	*0.9*	*1.2*	*0.8*	*1.2*
(792: Telephone salespersons)	*(0.8)*	*(1.0)*	*(0.8)*	*(1.2)*
All other occupations in SOC 7 (70, 71, 73)	*1.5*	*0.8*	*0.6*	*0.3*
8: Plant & machine operatives	**3.1**	**1.9**	**2.4**	**0.7**
80: Food, drink & tobacco process operatives	*0.7*	*0.7*	*0.3*	*0.3*
86: Other routine process operatives	*1.3*	*0.9*	*1.4*	*0.3*
All other occupations in SOC 8 (81-85, 87-89)	*1.1*	*0.3*	*0.7*	*0.1*
9: Other occupations (unskilled)	**31.7**	**17.4**	**34.0**	**19.2**
90: In agriculture, forestry & fishing	*1.1*	*0.8*	*0.9*	*0.9*
93: In transport	*0.9*	*0.0*	*0.5*	*0.0*
(931: Goods porters)	*(0.9)*	*(0.0)*	*(0.5)*	*(0.0)*
94: In communication	*1.1*	*0.4*	*1.6*	*0.3*
95: In sales and services	*27.6*	*16.1*	*27.3*	*17.2*
(952: Kitchen porters, hands)	*(7.0)*	*(3.0)*	*(5.3)*	*(1.8)*
(953: Counterhands, catering assistants)	*(7.0)*	*(7.0)*	*(11.0)*	*(9.8)*
(954: Shelf fillers)	*(7.3)*	*(0.9)*	*(7.6)*	*(1.6)*
All other occupations in SOC 9 (91, 92, 99)	*1.0*	*0.1*	*3.7*	*0.8*
No information	**1.7**	**1.0**	**2.6**	**1.9**
Total	**100.0**	**100.0**	**100.0**	**100.0**
Weighted Sweep 1 N	*1,953*	*2,565*	*1,692*	*2,336*
Unweighted Sweep 1 N	*2,070*	*3,026*	*1,785*	*2,893*

formed by far the biggest group. Almost all Year 12 students in SOC 7 (Sales) were sales assistants and check-out operators. Similarly, nearly all Year 12 students working in SOC 9 ('Other' occupations - all unskilled manual occupations) were in 'sales and services', and within this group they were split between kitchen porters and hands, counterhands and catering assistants, and shelf fillers.

Sex differences in occupations

The youth labour market is quite strongly gendered, and so Table 4.1 gives separate figures for male and female students. It shows a familiar pattern of differences in the

TABLE 4.2
SOC (1990) Major Group by sex and GCSE results: full-time Year 12 students with jobs

	Males			*Females*		
	Top 3rd GCSE %	Middle 3rdGCSE %	Bottom 3rd GCSE %	Top 3rd GCSE %	Middle 3rdGCSE %	Bottom 3rd GCSE %
YCS 9 (spring 1998)						
1-3: Associate prof. & technical/higher occs.	2	1	1	2	1	+
4: Clerical & secretarial	5	5	3	5	3	2
5: Craft & related	2	3	8	+	+	+
6: Personal & protective service	16	13	14	27	27	28
7: Sales	45	40	32	51	48	41
8: Plant & machine operatives	3	3	3	1	2	3
9: Unskilled manual	26	34	35	14	17	23
No information	1	1	4	1	1	2
Total	100	100	100	100	100	100
Weighted base N	*593*	*805*	*553*	*1,009*	*977*	*582*
Unweighted base N	*717*	*930*	*423*	*1,303*	*1,214*	*509*
YCS 10 (spring 2000)						
1-3: Associate prof. & technical/higher occs.	3	3	3	2	2	+
4: Clerical & secretarial	5	4	2	4	4	2
5: Craft & related	1	2	5	+	0	+
6: Personal & protective service	13	15	11	24	22	26
7: Sales	45	39	30	52	48	44
8: Plant & machine operatives	1	2	5	+	1	1
9: Unskilled occupations	31	33	39	16	21	23
No information	1	2	5	2	2	3
Total	100	100	100	100	100	100
Weighted base N	*589*	*659*	*445*	*998*	*878*	*461*
Unweighted base N	*718*	*751*	*316*	*1,411*	*1,115*	*367*

+ 0.5% or less, but not zero.

types of jobs held by young men and young women, though these sex differences were not as pronounced as in the non-student workforce. More males than females were in craft and related occupations (SOC 5), plant and machine operative occupations (SOC 8) and other unskilled manual occupations (SOC 9), while more females than males were in personal and protective service occupation (SOC 6) and sales occupations (SOC 7). These sex differences remained after controlling for Year 11 GCSE results (see Table 4.2).

GCSE results and occupations

The grades that Year 12 students with jobs had obtained in Year 11 GCSEs bore some relationship to the type of job that they had, but, as Table 4.2 shows, the association was comparatively weak. Those in the top third of GCSE results were more likely than those in the bottom third to be in sales occupations (45% compared to 32% amongst males and 51% compared to 41% amongst females in Cohort 9), and less likely to be in unskilled manual occupations (26% compared to 35% amongst males and 14% compared to 23% amongst females in Cohort 9). In addition, male students in the top third of GCSE results were also less likely than those in the bottom third to be in craft and related occupations (2% compared to 8% in Cohort 9). There was also a tendency for students with good GCSE results to be more often found in higher level or clerical and secretarial occupations than those with poorer results, but these occupations formed such a small part of the student labour market that it made little difference to the overall occupational distribution. Similar patterns were found in Cohort 10.

Occupations of students and other young workers compared

The labour market for Year 12 students in full-time education had a quite different structure from the labour market for young people who had left full-time education.[1] Table 4.3 shows that for young men aged 16/17 who were not full-time students, craft and related occupations formed the biggest occupational group, accounting for around two fifths of them, but for very few male student workers. This was due to GST, which is now the standard entry route to craft occupations for young people, but is not available to those who are still in full-time education.[2] Male workers not in full-time education were also much more likely than male student workers to hold higher level occupations (SOC 1-3), clerical and secretarial occupations and routine plant and machine operative occupations. Conversely, personal and protective service, sales and unskilled manual occupations together accounted for 17 out of 20 male student workers, but less than a third of male workers not in full-time education.

Young women workers aged 16/17 who had left full-time education were much more likely than female student workers to be in clerical and secretarial occupations, with around a quarter in these jobs compared to less than one in twenty female student workers. They were also more likely than female student workers to have higher level

[1] Workers aged 16/17 years who had left full-time education include a small number who were on a full-time training course at college as part of a GST programme.
[2] See Payne 2001a.

TABLE 4.3
SOC (1990) Major Group of full-time Year 12 students with jobs, compared with that of 16/17 year old workers not in full-time education,[1] by sex

	Males		*Females*	
	In full-time education %	Not in full-time education %	In full-time education %	Not in full-time education %
YCS 9 (spring 1998)				
1-3: higher occs.	1	3	1	2
4: Clerical & secretarial	4	11	3	27
5: Craft & related	4	42	+	4
6: Personal & protective service	14	6	27	27
7: Sales	40	10	48	20
8: Plant & machine operatives	3	9	2	7
9: Unskilled occupations	32	16	17	10
No information	2	3	1	3
Total	100	100	100	100
Weighted base N	*1,953*	*1,821*	*2,565*	*1,292*
Unweighted base N	*2,070*	*1,442*	*3,026*	*1,198*
YCS 10 (spring 2000)				
1-3: higher occs.	3	7	2	5
4: Clerical & secretarial	4	9	4	25
5: Craft & related	2	37	+	2
6: Personal & protective service	13	6	24	26
7: Sales	39	11	49	21
8: Plant & machine operatives	2	9	1	5
9: Unskilled occupations	34	15	19	14
No information	3	6	2	2
Total	100	100	100	100
Weighted base N	*1,692*	*1,364*	*2,336*	*956*
Unweighted base N	*1,785*	*1,022*	*2,893*	*879*

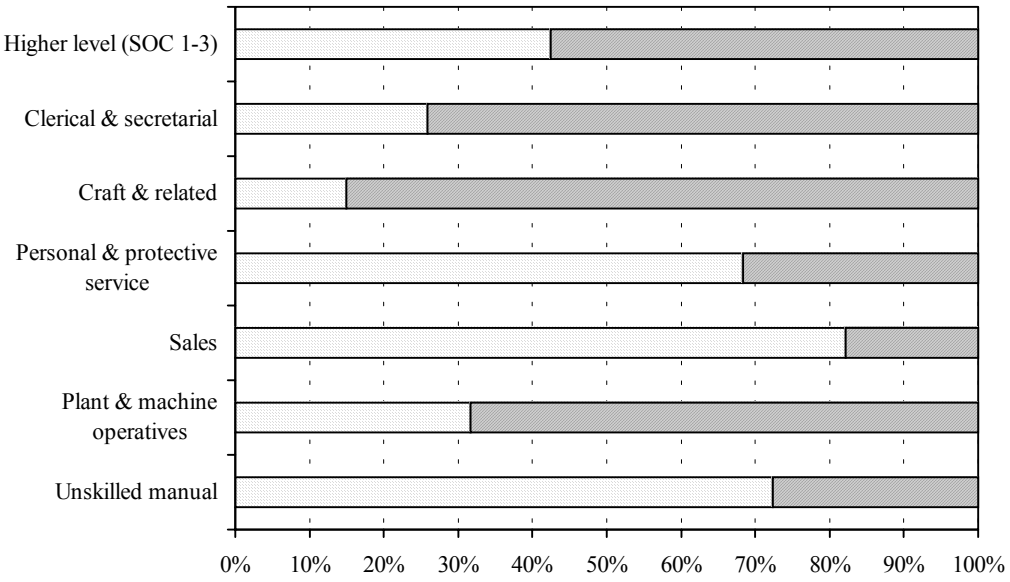
+ 0.5% or less, but not zero.
[1]Includes all not in full-time education, regardless of how they described their main activity, and includes part-time as well as full-time workers.

occupations (SOC 1-3) or to work as plant and machine operatives. Conversely, there were considerably fewer in sales occupations: nearly half of female student workers had sales jobs, compared to just a fifth of female workers who had left full-time education.

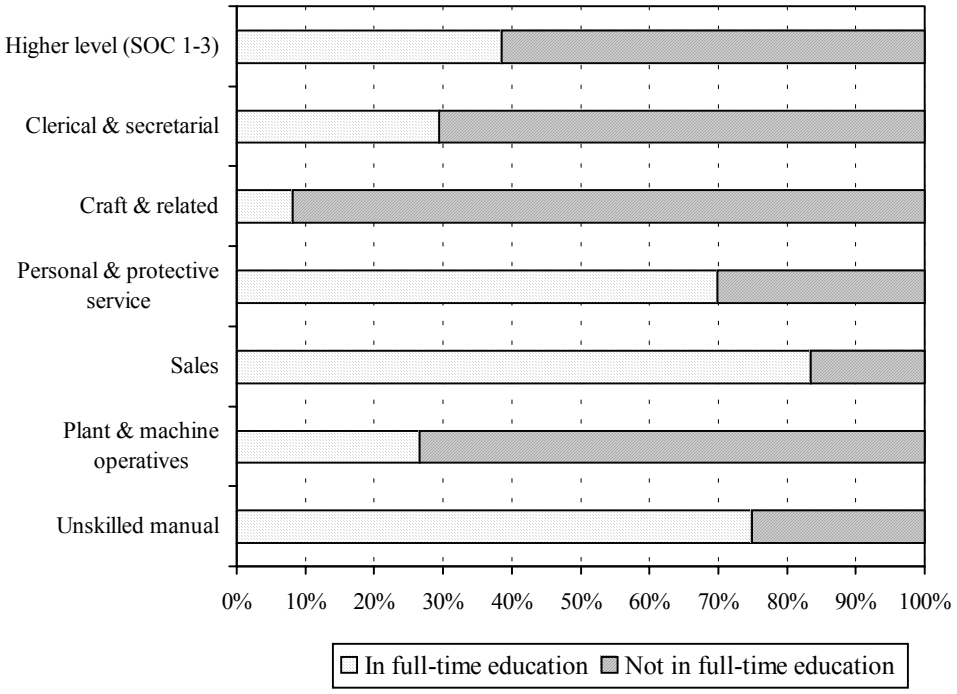
Charts 4.2(a) and 4.2(b) show the contribution that student workers (male and female) made to the total workforce aged 16/17 in each occupational group. In sales occupations, students made up well over 80% of all 16/17 year old workers; in unskilled manual occupations they formed well over 70%, and in personal and protective service occupations they formed almost 70%. In higher level, clerical and secretarial and plant

Chart 4.2
Proportion of 16/17 year olds workers in each SOC Major Group who were in full-time education

(a) YCS 9



(b) YCS 10



See note to Table 4.3. For base Ns, see next page.

Base Ns for Chart 4.2	*YCS 9*		*YCS 10*	
SOC:	*Weighted*	*Unweighted*	*Weighted*	*Unweighted*
1-3: higher occupations	*151*	*163*	*236*	*244*
4: Clerical & secretarial	*741*	*747*	*511*	*522*
5: Craft & related	*969*	*766*	*572*	*448*
6: Personal & protective service	*1,463*	*1,538*	*1,127*	*1,230*
7: Sales	*2,437*	*2,698*	*2,183*	*2,464*
8: Plant & machine operatives	*363*	*318*	*222*	*176*
9: Unskilled occupations	*1,490*	*1,483*	*1,395*	*1,420*

TABLE 4.4(a)
Standard Industrial Classification of full-time Year 12 students with jobs, compared with that of 16/17 year old workers not in full-time education, by sex[1]

YCS 9 (spring 1998)

	Males		*Females*	
	In full-time education %	Not in full-time education %	In full-time education %	Not in full-time education %
A, B & C: Agriculture, hunting & forestry; Fishing; Mining & quarrying	1	3	1	1
D: Manufacturing	4	21	1	12
E: Electricity, gas & water supply	+	+	+	+
F: Construction	1	18	+	2
G: Wholesale/retail trade; repair of motor vehicles etc. & personal/household goods	49	25	49	25
H: Hotels & restaurants	27	7	30	10
I: Transport, storage & communication	1	3	+	3
J: Financial intermediation	1	1	+	3
K: Real estate, renting & business	3	4	2	8
L: Public administration & defence; compulsory social security	+	2	+	2
M: Education	1	1	1	3
N: Health & social work	1	1	5	9
O: Other community, social & personal service	7	3	6	13
P & Q: Other	+	+	+	+
No information	4	10	3	8
Total	100	100	100	100
Weighted base N	*1,953*	*1,821*	*2,565*	*1,292*
Unweighted base N	*2,070*	*1,442*	*3,026*	*1,198*

[1] See note to Table 4.3.
+ 0.5% or less, but not zero.

and machine operative occupations they formed between a quarter and two fifths of the youth workforce. Only in craft and related occupations was the contribution of the students to the total workforce fairly insignificant.

TABLE 4.4(b)
Standard Industrial Classification of full-time Year 12 students with jobs, compared with that of 16/17 year old workers not in full-time education, by sex[1]

YCS 10 (spring 2000)

	Males		*Females*	
	In full-time education %	Not in full-time education %	In full-time education %	Not in full-time education %
A, B & C: Agriculture, hunting & forestry; Fishing; Mining & quarrying	1	2	1	2
1: Agriculture, hunting & related	*1*	*2*	*1*	*2*
D: Manufacturing	3	14	2	6
E: Electricity, gas & water supply	+	+	+	1
F: Construction	1	10	+	1
G: Wholesale/retail trade; repair of motor vehicles etc. & personal/household goods	47	26	46	24
50: Sale, maintenance & repair of motor vehicles & motorcycles	*2*	*11*	*1*	*1*
52: Retail trade	*45*	*14*	*45*	*21*
H: Hotels & restaurants	25	6	26	10
I: Transport, storage & communication	1	2	+	3
J: Financial intermediation	+	1	+	4
K: Real estate, renting & business	2	11	3	9
74: Other business activities	*2*	*9*	*3*	*8*
L: Public administration & defence; compulsory social security	+	2	+	2
M: Education	1	1	1	2
N: Health & social work	2	1	3	7
O: Other community, social & personal service	6	5	6	10
92: Recreational, cultural & sporting activities	*5*	*3*	*4*	*2*
P & Q: Other	0	0	0	0
No information	10	18	11	20
Total	100	100	100	100
Weighted base N	*1,692*	*1,364*	*2,337*	*956*
Unweighted base N	*1,785*	*1,022*	*2,893*	*879*

[1]See note to Table 4.3.
+ 0.5% or less, but not zero.

Industry

Tables 4.4(a) and (b) compare the industries in which Year 12 student workers were employed with the industries in which 16/17 year old workers who had left full-time education were found. In Cohort 9 Standard Industrial Classification (SIC) was coded only to sector level, but in Cohort 10 we also have information on subdivisions within sectors. These are reported in Table 4.4(b) if the sector has subdivisions (several sectors

do not) and if a particular subdivision accounted for a large proportion of 16/17 year old workers in that sector.

The pattern reflects what we have already seen in the analysis of occupations. By far the biggest employer of student workers was SIC Sector G, 'Wholesale and retail trade, repair of motor vehicles *etc.* and of personal and household goods'. This sector accounted for nearly half of Year 12 students with jobs in Cohort 9 and for nearly as many in Cohort 10. Within this sector student workers were employed overwhelmingly in subdivision 52, Retail Trade. In contrast, only around a quarter of workers aged 16/17 who had left full-time education were employed in Sector G, and within this sector many males were employed in subdivision 50, which covers the sale, maintenance and repair of motor vehicles and motorcycles. The other main source of employment for student workers was Sector H, Hotels and Restaurants, in which around a quarter were engaged. Amongst non-student workers this sector accounted for only a tenth of females and for still fewer males. In contrast, Sectors D and F, Manufacturing and Construction, were much more important for non-student workers than for students, particularly males.

Earnings

YCS collects information on net pay in jobs and GST, both for the respondent's main position and, if he or she has more than one job or training place, for all their jobs and training places taken together. The tables in this section report the latter. The information is based on the following question:

> *'How much money do you usually take home each week or each month <u>in total</u>, from all your jobs and training, after deductions but including bonuses or overtime?'*[1]

Table 4.5 shows the total weekly take-home pay of full-time Year 12 students who had jobs. Overall mean weekly pay was comparatively modest: £38.40 in spring 1998 and £39.65 in spring 2000. However 15% of student workers in 1998 and 21% in 2000 earned more than £50 per week. These figures may have been inflated by students who, at the time they responded to the survey, were working full-time in holiday jobs.

[1] In computing the figures for pay, the very small proportion of respondents with apparently very low earnings of 50p per hour or less or with apparently very high earnings of £15.00 per hour or more have been excluded, as these cases probably result from reporting errors and their inclusion distorts the computation of means.

TABLE 4.5
Total weekly take-home pay from all jobs, by sex: full-time Year 12 students with jobs

	Males %	Females %	All %
YCS 9 (spring 1998)			
Up to £15	11	17	14
£15.01 to £20.00	11	14	12
£20.01 to £30.00	22	23	23
£30.01 to £40.00	17	15	16
£40.01 - £50.00	13	11	12
£50.01 and higher	18	12	15
No information	8	8	8
Total	100	100	100
Weighted base N	*1,953*	*2,566*	*4,519*
Unweighted base N	*2,070*	*3,026*	*5,096*
Mean weekly pay	£42.50	£35.24	£38.40
s.d.	44.47	35.93	40.02
YCS 10 (spring 2000)			
Up to £15	7	10	9
£15.01 to £20.00	9	11	10
£20.01 to £30.00	22	25	23
£30.01 to £40.00	19	17	18
£40.01 - £50.00	15	13	14
£50.01 and higher	23	19	21
No information	5	5	5
Total	100	100	100
Weighted base N	*1,690*	*2,337*	*4,027*
Unweighted base N	*1,785*	*2,893*	*4,678*
Mean weekly pay	£42.56	£37.54	£39.65
s.d.	29.97	23.39	26.46

Female students earned on average several pounds per week less than male students. This was partly because they tended to work fewer hours per week (see Table 2.3), but partly also because their hourly pay tended to be lower. As Table 4.6 shows, the mean gender pay gap was 14p per hour in 1998 and 16p per hour in 2000. The mean net pay of all Year 12 students with jobs was £3.24 per hour in the earlier year and £3.52 per hour in the later year. This was comfortably above the minimum wage for 18-20 year olds of £3.00 per hour which was introduced in April 1999, and for which of course Year 12 students were too young to be eligible.

TABLE 4.6
Hourly take-home pay (averaged over all jobs), by sex: full-time Year 12 students with jobs

	Males %	Females %	All %
YCS 9 (spring 1998)			
£0.51 to £2.00	12	13	12
£2.01 to £2.50	14	17	15
£2.51 to £3.00	17	20	19
£3.01 to £3.50	21	19	20
£3.51 - £4.00	12	10	11
£4.01 - £15.00	15	12	13
No information	9	9	9
Total	100	100	100
Weighted base N	*1,953*	*2,566*	*4,519*
Unweighted base N	*2,070*	*3,026*	*5,096*
Mean hourly pay	£3.32	£3.18	£3.24
s.d.	1.74	1.79	1.77
YCS 10 (spring 2000)			
£0.51 to £2.00	5	6	6
£2.01 to £2.50	9	11	10
£2.51 to £3.00	17	19	18
£3.01 to £3.50	21	22	21
£3.51 - £4.00	19	17	18
£4.01 - £15.00	22	18	20
No information	7	7	7
Total	100	100	100
Weighted base N	*1,690*	*2,337*	*4,027*
Unweighted base N	*1,785*	*2,893*	*4,678*
Mean hourly pay	£3.61	£3.45	£3.52
s.d.	1.44	1.32	1.38

Tables 4.7(a) and (b) compare the mean net hourly pay of Year 12 students with jobs with that of cohort members of the same age who had a job or a place in GST but were not in full-time education, holding constant sex and SOC Major Group. Sample numbers in some subgroups are small, but with one exception, the hourly pay of students workers was higher than that of workers who were not in full-time education (the exception being females in unskilled jobs in Cohort 10). There were probably several reasons why students earned more than other workers. They may have been more willing to work unsocial hours in evenings and at weekends, and they may have been less likely to get benefits such as holiday or sick pay. YCS does not have the data to allow us to test either

TABLE 4.7(a)
Mean hourly take-home pay (averaged over all jobs) of 16/17 year olds, by sex and occupation: full-time Year 12 students compared to young people not in full-time education[1]

YCS 9 (spring 1998)

	Males		*Females*	
	in f/t education	not in f/t education	in f/t education	not in f/t education
All				
Mean hourly pay	£3.32	£2.40	£3.18	£2.47
s.d.	1.74	1.39	1.79	£1.63
Weighted base N	*1,778*	*1,647*	*2,322*	*1,153*
Unweighted base N	*1,903*	*2,756*	*1,300*	*1,073*
SOC 4: Clerical & secretarial				
Mean hourly pay	£3.84	£2.67	£3.64	£2.51
s.d.	2.05	1.59	1.93	1.81
Weighted base N	*79*	*181*	*81*	*323*
Unweighted base N	*83*	*160*	*99*	*331*
SOC 5: Craft & related				
Mean hourly pay	£2.55	£2.03	-	£2.62
s.d.	1.42	1.17	-	0.80
Weighted base N	*57*	*715*	*(8)*	*51*
Unweighted base N	*55*	*551*	*(10)*	*44*
SOC 6: Personal & protective service				
Mean hourly pay	£3.34	£2.44	£3.01	£2.02
s.d.	1.76	1.26	1.68	1.42
Weighted base N	*243*	*93*	*620*	*308*
Unweighted base N	*260*	*71*	*741*	*275*
SOC 7: Sales				
Mean hourly pay	£3.28	£2.73	£3.20	£2.53
s.d.	1.73	1.66	1.77	1.57
Weighted base N	*722*	*156*	*1,131*	*230*
Unweighted base N	*793*	*128*	*1,360*	*215*
SOC 8: Plant & machine operatives				
Mean hourly pay	£3.51	£2.84	£3.27	£3.24
s.d.	1.53	1.39	2.12	1.78
Weighted base N	*56*	*148*	*44*	*83*
Unweighted base N	*60*	*116*	*49*	*64*
SOC 9: Unskilled occupations				
Mean hourly pay	£3.33	£2.70	£3.24	£2.94
s.d.	1.66	1.20	1.81	1.59
Weighted base N	*581*	*250*	*403*	*117*
Unweighted base N	*611*	*186*	*455*	*103*

[1] See note to Table 4.3.

of these explanations. In addition, student workers working only a few hours per week would have been less likely than other workers to be paying income tax or National Insurance contributions, which would have boosted their take-home pay. A fourth

TABLE 4.7(b)
Mean hourly take-home pay (averaged over all jobs) of 16/17 year olds by sex and occupation: full-time Year 12 students compared to young people not in full-time education[1]

YCS 10 (spring 2000)

	Males		*Females*	
	in f/t education	not in f/t education	in f/t education	not in f/t education
All				
Mean hourly pay	£3.61	£2.81	£3.45	£2.81
s.d.	1.44	1.36	1.32	1.64
Weighted base N	*1,570*	*1,232*	*2,180*	*871*
Unweighted base N	*1,670*	*923*	*2,715*	*803*
SOC 4: Clerical & secretarial				
Mean hourly pay	£3.84	£3.12	£3.92	£2.99
s.d.	1.26	1.51	1.30	2.04
Weighted base N	*57*	*113*	*84*	*213*
Unweighted base N	*64*	*88*	*108*	*221*
SOC 5: Craft & related				
Mean hourly pay	£3.66	£2.30	-	-
s.d.	1.90	0.97	-	-
Weighted base N	*36*	*457*	*(5)*	*(16)*
Unweighted base N	*30*	*349*	*(7)*	*(17)*
SOC 6: Personal & protective service				
Mean hourly pay	£3.45	£2.79	£3.48	£2.18
s.d.	1.11	1.23	1.20	1.30
Weighted base N	*207*	*72*	*504*	*241*
Unweighted base N	*228*	*55*	*631*	*211*
SOC 7: Sales				
Mean hourly pay	£3.57	£3.32	£3.40	£2.91
s.d.	1.38	1.71	1.36	1.13
Weighted base N	*609*	*149*	*1,083*	*175*
Unweighted base N	*673*	*107*	*1,356*	*156*
SOC 8: Plant & machine operatives				
Mean hourly pay	£5.15	£3.27	-	£3.31
s.d.	3.30	1.46	-	0.52
Weighted base N	*37*	*108*	*(17)*	*42*
Unweighted base N	*33*	*77*	*(20)*	*34*
SOC 9: Unskilled occupations				
Mean hourly pay	£3.51	£3.29	£3.39	£3.56
s.d.	1.21	1.35	1.24	1.94
Weighted base N	*549*	*183*	*427*	*124*
Unweighted base N	*568*	*131*	*512*	*103*

[1]See note to Table 4.3.

TABLE 4.8
Training received during previous four weeks by 16/17 year olds with jobs, by sex: full-time Year 12 students compared to young people not in full-time education

YCS 9 (spring 1998)

	Males		*Females*	
	in f/t education	not in f/t education	in f/t education	not in f/t education
% getting on-the-job training	17	45	17	37
% getting off-the-job training	4	18	4	14
Weighted base N	*1,953*	*1,821*	*2,566*	*1,293*
Unweighted base N	*2,070*	*1,442*	*3,026*	*1,198*

Notes: See note to Table 4.3. The questions on off-the-job training in YCS Cohort 10 were structured differently from the questions in Cohort 9, and it seems likely that the proportion getting off-the-job training was under-estimated in Cohort 10. Hence Table 4.8 gives figures for Cohort 9 only.

probable reason is that trainees tend generally to have lower pay than non-trainees,[1] and, as Table 4.10 shows, student workers were less likely to receive training in their jobs than workers not in full-time education.

[1] See Payne 2001a.

5 DO PART-TIME JOBS LEAD TO WORSE EXAMINATION RESULTS?

Introduction

One of the biggest concerns about students in secondary education who take part-time jobs is that they may be too tired to study effectively, or simply not have enough time left to do the amount of homework necessary to get good examination results. Alternatively, it is possible that holding down a part-time job makes students more self-disciplined and teaches them how to organise themselves better, as well as making them more self-reliant and giving them a wider view of the world. A recent study reviewed existing research on this topic and reported that empirical findings were mixed.[1] There was, however, evidence that long working hours led to poorer examination results, while students who worked just a few hours per week suffered no ill effects. Analysis of data for Northern Ireland led to the same conclusion, more specifically that part-time work up to 15 hours per week did not harm educational performance, but that working more than 15 hours had a detrimental effect.[2]

YCS offers particularly appropriate data to investigate this issue, as it has detailed information on both qualifications and jobs together with very large sample numbers. There is some plausibility in the hypothesis that part-time work might be damaging for A level results but positively helpful for vocational qualifications, and a particular benefit of the large sample numbers in YCS is that they allow us to look separately at these two types of qualification. The data also offer a useful set of background variables, allowing us to control for the impact of other factors on examination results. In addition the data are longitudinal, with the information on part-time working collected at the time to which it relates, making it more likely to be accurate than data collected retrospectively. This longitudinal structure also allows us to measure both the impact of part-time work in Year 12 and the impact of part-time work in Year 13 on results at the end of Year 13.

Whether or not students go on to gain the qualifications that they start to study for in Year 12 depends on two things: whether they complete the course (usually referred to in the jargon as 'the retention rate'), and whether, given that they do complete the course,

[1] McVicar and McKee 2001.
[2] *Ibid.*

they are successful in the final examinations (usually referred to as the 'achievement' rate). The proportion of students who succeed in gaining any particular qualification that they have started in Year 12 is the proportion who complete the course multiplied by the proportion of completers who pass their final examinations. In looking at the impact of part-time jobs on educational performance we need therefore to consider both retention and achievement.

A recent analysis of YCS data indicated that, other things being equal, Year 12 students who had not held a job since the end of Year 11 were more likely to stay in full-time education until the end of Year 13 than students who did casual or part-time paid work in Year 12.[1] It is possible that taking a part-time job could encourage a student to drop out from full-time education: this might happen, for example, if the student had stayed on in full-time education mainly because he or she could not find a job and if the part-time job opened up the possibility of being taken on full-time, or if the experience of part-time work and a weekly wage packet made the prospect of entering the labour market full-time more enticing. However the analysis result should not necessarily be interpreted as demonstrating this. It is also quite plausible that Year 12 students who already had a comparatively low commitment full-time education were more likely to take part-time jobs than students whose commitment was high. For other students, staying on at all might only have been possible financially if they took a part-time job, and this group may have been in any case more vulnerable to dropping out. To test these alternative hypotheses properly we would need good data on students' and parents' attitudes to education at an earlier stage, before the decision about whether or not to stay on in full-time education after 16 is made, and this kind of data is not currently collected in the YCS.[2]

The difficulty of measuring the impact of part-time jobs on retention make it desirable to simplify the research question addressed in this chapter, and to deal solely with the impact of part-time jobs on achievement. We do this by focussing on qualifications for which courses typically last two years, and restricting the analysis to young people who were in full-time education both in the spring of Year 12, at the time of the Sweep 1 survey, and in the spring of Year 13, at the time of the Sweep 2 survey. We also restrict the sample to students who were studying for the relevant qualification at both points in time, thus excluding students who switched courses as well as those who left full-time education before the end of their course.

[1] Payne 2001b.
[2] Hopefully such data will become available in due course if the DfES goes ahead with proposals for a new longitudinal study that follows a cohort of 14 year olds into early adulthood.

The rest of this chapter presents statistical models designed to measure the association between part-time jobs and results, first in A and AS level examinations, and second in examinations for GNVQ and BTEC qualifications of Level 3. In these models, part-time jobs are entered as the total number of hours usually worked per week at the time of survey, with students who did not have a job at that time coded as working zero hours.[1] The models incorporate a wide range of predictor variables which are significantly associated with examination results. It is however possible that there are other factors not measured in the YCS data that both increase the probability of taking a part-time job and also impact on examination results - in particular these might include ambitions, motivation and commitment to education. Caution is therefore needed in interpreting the model results, as not all of the observed associations may be attributable to the direct impact of part-time jobs on examination results.

The models are parsimonious, in the sense that although many potential predictor variables were tested in the development stages, only those that were significantly associated with results were included in the final version. The samples are drawn from YCS Cohort 9, as this is the most recent cohort for which information is currently available for Sweeps 1, 2 and 3.

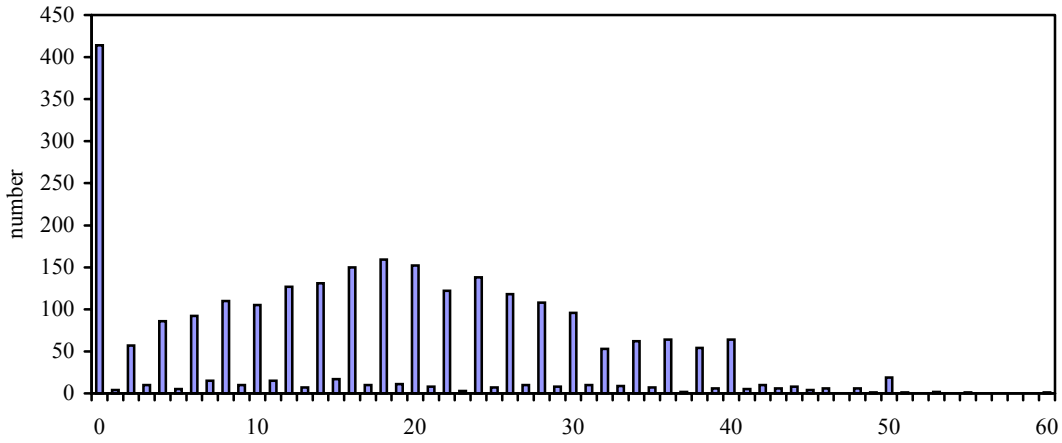
Modelling total points score in A and AS levels

In YCS Cohort 9, 57% of full-time Year 12 students were studying for at least one A or AS level. The data relate to the spring of 1998 and thus pre-date the introduction of the new structure for post-16 qualifications, whereby AS examinations are normally taken at the end of Year 12 and A levels in a smaller number of subjects are taken at the end of Year 13. In Cohort 9, AS courses normally lasted two years and the examinations were taken at the same time as A level examinations.

In calculating UCAS score for university admissions, AS examinations counted as half an A level. Thus for the present analysis, total points score in A and AS examinations was computed by allocating ten points for each A grade at A level and five points for each A grade at AS, eight points for each B grade at A level and four points for each B grade at AS, and so on, with zero points allocated to fail grades. This gives an interval level scale for total A/AS points, with range 0 to 60. The distribution of the analysis sample on this scale is shown in Chart 5.1. It is approximately normal apart from the fact that a large

[1] See Chapter 2 for definitions and distributions.

Chart 5.1
Frequency distribution for total points score in A and AS level examinations: young people who were full-time students in Years 12 and 13 who were studying for A/AS levels in both years
(YCS 9)



number of students - 15% of the analysis sample - failed to report any passes and apparently gained zero points.[1] It is unlikely that all or even most of these students actually gained F grades in every examination that they took: it is more plausible either that they withdrew from their course before taking the examinations or that they filled in the Sweep 3 questionnaire incorrectly.[2] For this reason two separate models were developed. The first (Table 5.1) excludes sample members with zero A/AS points score and uses OLS regression to test the association between part-time jobs and total points score gained. The second (Table 5.2) includes those with zero points score, and uses logistic regression to explore the relationship between part-time jobs and failing to gain any A/AS passes.

The interpretation of an OLS regression model is rather simpler than the interpretation of a logistic regression model like the one used in Chapter 3. Each coefficient represents the

[1] In addition, because relatively few students took AS levels, there are many more respondents with an even number of points than with an odd number of points; this, however, does not cause any particular statistical problems.

[2] We got rid of some of those who filled in the questionnaire incorrectly by excluding Sweep 3 respondents who failed to answer the question on whether they had gained any academic qualifications, on which the detailed questions on results were filtered. However, given the way that the questionnaire was designed, it would have been quite easy for respondents to enter their A or AS level results in the column intended for results in GCSE re-sits. If they did this, it would appear as though they had not passed any A or AS levels. Note that the YCS questionnaire asks only about qualifications gained since the end of Year 11, not for grades achieved in examinations taken, so fail grades are not reported.

TABLE 5.1
OLS regression model for total points score achieved in A and AS levels (excluding those with zero points score) [1]

YCS 9

	Estimate
Constant	-0.57
Total number of A and AS levels studying in Year 12[2]	2.24****
Took at least one AS level	-0.68*
Year 11 GCSE points score	-0.31****
Year 11 GCSE points score squared	0.008****
Type of school attended in Year 11:	
Comprehensive to age 16	0.00
Comprehensive to age 18	-0.07
Selective (state system)	1.74***
Secondary Modern	-0.88
Independent	1.98****
Parental qualifications:	
One or both has a degree	0.00
One or both has A levels	-0.82*
Neither has degree or A levels	-1.06***
No information	-1.36*
Parental occupation:[3]	
Managerial/admin.; professional; associate prof../technical	0.00
Clerical	-0.05
Craft	-1.80****
Personal and protective service; Sales	-1.43***
Operatives; Unskilled manual	-0.93*
No information	-1.10
Government Office Region:	
South East	0.00
North East	0.33
North West	1.41***
Yorkshire & Humberside	2.76****
East Midlands	1.71***
West Midlands	1.55***
Eastern	0.26
London	0.09
South West	0.95*
Wales	-1.25
Truancy in Years 10 and 11:	
None	0.00
Odd days or lessons	-0.22
Particular days or lessons	0.62
Days or weeks at a time	5.46**
No information	-7.27*
Got a place that you wanted? (asked in Year 12):	
Yes	0.00
To some extent	-2.04****
No	-1.43
No information	-0.09

Table 5.1 continued on following page...

Table 5.1 continued…

	Estimate
Total number of hours of paid work per week in Year 12:	
None (no paid job)	0.00
1-5	-0.82
6-10	-0.38
11-15	-0.20
16-20	-2.50****
21 or more	-1.03
Has job but no information on hours worked	1.08
Total number of hours of paid work per week in Year 13:	
None (no paid job)	0.00
1-5	0.33
6-10	-0.08
11-15	-1.69****
16-20	-0.81
21 or more	-1.57
Has job but no information on hours worked	-0.39
Weighted N	*1,724*
Unweighted N	*2,837*
Deviance	*95,504*
Residual df	*2,792*

[1]The sample is defined as follows: in full-time education in spring of both Year 12 and Year 13 and studying for A or AS levels in both years; gave information at Sweep 1 on whether or not they had a job and at Sweep 3 on whether or not they had obtained any academic qualifications since Year 11; had a total A/AS level points score above zero.
[2]See accompanying text for how this is calculated.
[3]Parental occupation is based on the 1990 Standard Occupational Classification of the father's occupation, or the mother's occupation if there is no information on the father's.
Significance levels: * 10% ** 5% *** 1% **** 0.1% (2-tail test)

estimated effect of a unit increase in the predictor variable on the value of the dependent variable. Thus for an interval level predictor variable such as the number of A and AS levels that the respondent was studying for in Year 12, the estimate of 2.24 in Table 5.1 indicates that, after taking acount of the other variables in the the model, each extra AS level studied in Year 12 on average increased the total points score finally achieved by 2.24. This is equivalent to something a little above a D grade in one AS subject.[1] Coefficients for categorical predictor variables such as parental qualifications are relative to a base or reference category. They give the estimated difference in the average value of the dependent variable, adjusted for the effects of the other predictor variables

[1] In computing the number of A and AS levels that the respondent was studying for in Year 12, each A level was counted as two and each AS level as one. This was done for consistency with the way that total points score in A and AS levels was calculated, Thus according to the model results, each extra A level being studied increased total points score by 4.48.

included in the model, between respondents in the category of interest and those in the base category, the coefficient for which is effectively constrained to be zero. Thus according to Model 1, other things being equal, students whose parents did not have qualifications of degree or A level standard were estimated to achieve on average total A/AS points scores that were just over one point lower than the scores of students with parents educated to degree level - this is equivalent to one grade at AS or half a grade at A level.

As already discussed, the sample for the models is restricted to young people who were in full-time education and studying for A or AS levels in the spring both of Year 12 and Year 13. In addition the sample excludes cohort members who failed to give information at Sweep 1 on whether or not they had a job, and at Sweep 3 on whether or not they had obtained any academic qualifications since Year 11. The final sample is therefore somewhat smaller than that used in analyses in earlier chapters of this report, but still very large - 2,837 unweighted and 1,724 weighted in Table 5.1 and 3,331 unweighted, 2,044 weighted in Table 5.2.

Factors affecting grades in A and AS levels

Table 5.1 shows that a wide range of factors were significantly associated with results in A and AS levels. Though these variables are of interest in themselves, they are not discussed in great detail because their main function in the present context is to act as controls on the association between part-time jobs and examination results. In general, their relationship with total A/AS points score was much as would be expected.

Other things being equal, the total points score achieved in A and AS levels increased with the number of subjects being studied in Year 12. As already described, each extra AS level was estimated to bring an increase of 2.24 points, and thus each extra A level an increase of 4.48 points.

Results in GCSEs gained by the end of Year 11 were a very important predictor of results in A/AS levels. The relationship was curvilinear, with total points score in A/AS levels increasing at a gently accelerating rate as GCSE results improved.[1]

[1] GCSE points score was entered as a quadratic term, so the negative coefficient for the linear term does not mean that A/AS results got worse as GCSE results improved.

A/AS results were significantly better for students who had attended state selective schools or independent schools in Year 11 than for students who had attended comprehensive schools in Year 11. Most of these students had stayed on in the sixth form of the same school,[1] so this result effectively means that sixth forms in selective and independent schools gained better A/AS results than comprehensive school sixth forms, sixth form colleges and FE colleges.

The children of parents who had degrees gained on average better A/AS results than the children of parents who held A levels but not a degree, while students whose parents had neither degrees nor A levels did worse than either group.

The children of parents SOC Major Groups 5-9 did significantly worse than the children of parents in white collar occupations. The negative effect was particularly marked for the sons and daughters of people in craft occupations, but was also found for the children of workers in personal and protective service and sales occupations and the children of routine machine operatives and unskilled manual workers.

A/AS results also varied between different regions of England and Wales, with students in the North West, Yorkshire and Humberside, the East Midlands and the West Midlands all getting significantly better results than students in the South East. The explanation is likely to be complex. These four regions all had lower rates of participation in post-compulsory education than the South East,[2] and it may be that students who chose to stay on in these regions tended to be better motivated towards their studies than students in the South East. However the North East had a particularly low participation rate, and yet A/AS results in the that region tended to be worse than in the South East (although the coefficient did not reach statistical significance).

The results for truancy in Years 10 and 11 were rather odd. Although all young people who had played truant were much less likely to stay on in full-time education after 16 than those who had not,[3] there was no significant difference between the A/AS results of students who had indulged in a minor or moderate degree of truancy in earlier years and the results of students who had never truanted. However students who had played truant for days or weeks at a time appeared to have *better* A/AS results than those who had never played truant. Although this result is statistically significant, it is based on a very

[1] See Payne 2001b.
[2] *Ibid.*
[3] See Payne 1998.

small sample (unweighted N = 9) and has a very big standard error. Thus it may simply be the product of a chance fluctuation in this particular data set.[1]

Sweep 1 of Cohort 9 (in the spring of Year 12) included the following question:

> *'Looking back over the past year, do you feel that you got a place in education, work or training that you wanted?'*

Those who answered 'Yes' went on to get significantly better A/AS results than those who ticked the reply 'To some extent', presumably because they were better motivated towards their studies. There was no significant difference with those who answered 'No', but the sample for this group was very small (unweighted N = 11).

Other potential predictor variables that were examined during the development of Models 1 and 2 but which proved to be insignificant were sex, ethnic origin, number of siblings, whether the student lived in a lone parent family, housing tenure, whether the student had a parent in full-time employment, whether the student had a long-standing and limiting disability or health problem, whether the student had been excluded from school in Year 10 or 11, whether the student was in a school sixth form, sixth form college or FE college in Year 12, whether the student was taking GCSEs or vocational qualifications in addition to A and AS levels, whether the course included a period of work experience, the total number of teacher contact hours in Year 12, and the student's attitudes towards schooling in Years 10 and 11 (reported retrospectively in Year 12).[2]

Association between jobs and results in A and AS examinations

Having examined the control variables in Table 5.1, we now turn to the main question of interest, namely whether having a job led to poorer results in A and AS examinations. The results suggest that paid employment in Year 12 was generally negatively associated with A/AS results. However the association was statistically insignificant if students worked under 16 hours per week. At 16 hours per week or more there was a sudden and large jump, with the impact on examination results suddenly becoming much more serious. Other things being equal, students who worked 16 or more hours were estimated to lose on average 2.5 points from their total A/AS points score, the equivalent for instance of losing one grade in one A level (for example, getting a C rather than a B) plus a 50:50 risk of losing another grade in an AS level.

[1] In the kind of exploratory modelling that is being described here, one in twenty associations between a predictor variable and the dependent variable will be significant at the 5% level purely by chance. Thus not all apparently significant associations between variables reflect real associations in the population from which the sample is drawn.

[2] For more information on the definitions of these variables, see Chapters 2 and 3.

The coefficient for working more than 20 hours per week was also negative and large, but did not reach statistical significance despite being based on a reasonably large sample (unweighted N = 44). This may be because this group included some students who at the time of the Sweep 1 survey were working full-time in Easter holiday jobs - as explained in Chapter 2, we cannot distinguish holiday jobs from term-time jobs in the YCS data. These holiday jobs would be unlikely to have the same impact on examination results as working more than 20 hours per week during term time would have.

For jobs in Year 13, the findings were slightly different. Jobs that took up ten hours or less per week had no implications for examination results. However while in Year 12 there was a big jump in impact if jobs occupied 16 or more hours per week, in Year 13 this jump occurred earlier, when the number of hours worked per week exceeded ten. This suggests that Year 13 was more critical for examination success than Year 12, and that working part-time had a bigger impact on performance. Working between 11 and 15 hours per week in Year 13 was associated with an estimated average loss of 1.69 A/AS points, the equivalent almost of one grade in an A level. Students who worked between 16 and 20 hours in Year 12 and between 11 and 15 hours in Year 13 would be estimated to lose on average 2.50 plus 1.69 A/AS points, making a total estimated loss of over four points, which could be easily enough to lose them their university place.

Model for achieving any A or AS passes

Table 5.2 presents the logistic regression model for reporting non-zero points in A or AS levels (see the box on page 44 for a guide to interpreting the coefficients in this model). As explained earlier, here the sample includes the 15% of A/AS students who failed to report any passes. The dependent variable is a simple binary which is scored 0 if the respondent did not report any passes and 1 if at least one pass was reported . There are far fewer significant predictor variables in this model than in Table 5.1 and the significant associations are not all easy to interpret, suggesting perhaps that there was indeed quite a large degree of error in the dependent variable. Students were more likely to report passes if they were studying for more subjects and if they had better GCSE scores, but, curiously, less likely to report passes if they had attended an independent school in Year 11. There was also a marginally significant association with one of the attitude questions asked in Year 12. No significant association was found with jobs in Year 12. However there was a link between working long hours in Year 13 and failing to report any passes, suggesting perhaps that some young people dropped out of their examinations at a late stage because they had found jobs that they liked.

TABLE 5.2
Logistic regression model for achieving any passes in A and AS levels[1]

YCS 9

	Estimate
Constant	0.84
Total number of A and AS levels studying in Year 12[2]	1.24****
Year 11 GCSE points score	1.02***
Type of school attended in Year 11:	
Comprehensive to age 16	1.00
Comprehensive to age 18	0.94
Selective (state system)	0.92
Secondary Modern	0.89
Independent	0.34****
Whether school helped give confidence to make decisions (asked in Year 12)	
Agree	1.00
Disagree	0.76*
Not answered	1.91
Total number of hours of paid work per week in Year 12:	
None (no paid job)	1.00
1-5	1.36
6-10	1.11
11-15	1.40
16-20	1.57
21 or more	0.74
Has job but no information on hours worked	1.41
Total number of hours of paid work per week in Year 13:	
None (no paid job)	1.00
1-5	1.11
6-10	0.91
11-15	0.67*
16-20	0.47***
21 or more	0.69
Has job but no information on hours worked	1.50
Weighted N	*2,044*
Unweighted N	*3,331*
Deviance	*1,657*
Residual df	*3,305*

[1]See notes to Table 5.1. The sample is defined as for Table 5.1, but includes those with zero points score. Estimates are presented in their exponentiated form.
Significance levels: * 10% ** 5% *** 1% **** 0.1% (2-tail test)

Level 3 GNVQs and BTECs

The final model, in Table 5.3, looks at the association between jobs in Years 12 and 13 and the achievement of Level 3 vocational qualifications. The sample is limited to

TABLE 5.3
Logistic regression model for achieving Level 3 GNVQ or BTEC qualifications[1]

YCS 9

	estimate
Constant	7.46
Number of siblings:	
None	1.00
One	0.42**
Two	0.49
Three or more	0.24***
No information	-[2]
Number of teacher contact hours per week(Year 12)	
1-10	1.00
11-15	2.01
16-20	2.91
21-25	1.91
26-30	7.27*
31-35	1.07
36 or more	0.54
No information	0.86
Parental occupation[3]	
Managerial/admin.; professional; associate prof../technical	1.00
Clerical	1.66
Craft	0.45**
Personal and protective service; Sales	0.79
Operatives; Unskilled manual	0.87
No information	0.68
Got a place in education, work or training that you wanted?	
Yes	1.00
To some extent	0.45***
No	0.10****
No information	-[2]
Total number of hours of paid work per week in Year 12:	
None (no paid job)	1.00
1-5	1.01
6-10	0.60
11-15	0.73
16-20	0.69
21 or more	0.63
Has job but no information on hours worked	0.72
Total number of hours of paid work per week in Year 13:	
None (no paid job)	1.00
1-5	1.12
6-10	0.85
11-15	0.67
16-20	0.51
21 or more	0.63
Has job but no information on hours worked	1.31
Weighted N	*389*
Unweighted N	*494*
Scaled deviance	*391.9*
Residual df	*462*

Notes to table on following page.

[1]The sample for on which this model is based is defined as follows: in full-time education in spring of both Year 12 and Year 13 and studying for either Advanced GNVQ or BTEC National in both years; gave information at Sweep 1 on whether or not they had a job and at Sweep 3 on whether or not they had obtained any qualifications since Year 11.
[2]The estimate is extremely large and has a very large standard error.
[3]See note to Table 3.8.
Significance levels: * 10% ** 5% *** 1% **** 0.1% (2-tail test)

students who were studying for Advanced GNVQs or the BTEC National Certificate or Diploma. These two qualifications accounted for 87% of full-time students in Year 12 who were taking Level 3 vocational qualifications, and defining the sample in this way avoids any possible confusion with young people on full-time college courses within the GST framework, who usually do NVQs, City and Guilds or RSA qualifications. Otherwise the sample is restricted in a similar way to the sample for Table 5.1 (see the notes to Table 5.3 for full details). However it is much smaller: weighted N = 389, unweighted N = 494. The dependent variable in the model is a simple binary, indicating whether or not the respondent had achieved a Level 3 GNVQ or BTEC by the time of the Sweep 3 survey (73% had done so), and the appropriate modelling technique is logistic regression.[1]

The model has far fewer significant predictor variables than Table 5.1, and results are generally not as clear. This may be because the sample size was smaller, or it may be because success in Level 3 vocational qualifications is harder to predict than success in A and AS levels. Significant control variables included the number of siblings, with students from large families less likely to be successful than students with no brothers or sisters living at home, parental occupation, with students with parents in craft occupations less likely to be successful than students with parents in higher level or white collar occupations, and having got a place in education, work or training that they wanted, with students who were dissatisfied with their place less likely to be successful than those who said they had got the place they wanted. Interestingly, results in Year 11 GCSEs appeared to make no difference to the chances of success.

Neither the total number of hours of paid work in Year 12 nor the total number of hours of paid work in Year 13 was significantly associated with achieving a Level 3 GNVQ or BTEC, though the coefficients for working longer than five hours per week were all negative.

[1] See the box on page 44 for how to interpret the model coefficients.

Conclusion

The results of our models tend to confirm the finding from Northern Ireland, quoted in the introduction to this chapter, that part-time jobs do not seriously impair educational performance unless they involve working long hours.[1] The Northern Ireland study was based on a data set which had a different structure from the YCS and used different modelling techniques to those employed here. The similarity in the results therefore gives particular confidence in the validity of the findings. However the Northern Ireland study had too small a sample to model the separate impact of jobs on A levels and on vocational qualifications, and did not have the data needed to examine the separate impacts of jobs in Year 12 and jobs Year 13. The large sample size and longitudinal structure of the YCS makes it possible for us to explore these more detailed questions. The results suggest that Year 13 is more critical than Year 12 for examination success, and that while more than 15 hours per week in Year 12 has a serious impact on A and AS level results, in Year 13 working more than 10 hours per week is damaging. They also suggest that part-time jobs may be less of a problem for students on vocational courses than for students on A/AS level courses, though the findings here are not quite so clear cut.

[1] McVicar and McKee 2001.

6 POLICY IMPLICATIONS

The UK has a low rate of educational participation at age 16-18 compared to other advanced industrial nations, and has made little progress on this front since the great surge in post-16 participation came to a halt in the mid 1990s. Raising participation rates involves tackling a range of issues and the question of student incomes is important amongst these, as is evident in the current pilots of mandatory Educational Maintenance Allowances (EMAs).

Many young people in Years 12 and 13 at school or college augment their income by taking a part-time job, and we have seen in this report that all but a small minority of Year 13 students have had a part-time or a holiday job at some point. This would be of no concern to anyone but themselves if part-time jobs had no impact on their educational performance. However the report provides clear evidence that students who work long hours in their jobs do worse in A and AS level examinations than other students. In Year 12, this means working more than 15 hours per week, and in Year 13, which is a more critical time for students, it means working more than 10 hours. The difference in A/AS level results attributable to long hours spent in jobs could easily be big enough to lose someone their offer of a university place. The evidence of damage to the performance of students on Level 3 vocational courses is less clear, but here too long hours in part-time jobs appear to be inadvisable.

These conclusions are reinforced by a number of other findings in the report. More students have jobs in Year 13 than in Year 12, and they work on average longer hours. Students who work in both Year 12 and Year 13 tend to increase their hours in Year 13. Year 13 students with jobs spend fewer hours each week working for their qualifications than students without jobs, and for those with jobs, the correlation between the number of hours that they spend in their jobs and the number of hours that they spend working for their qualifications is bigger in Year 13 than in Year 12.

However we should not paint too negative a picture. There are many reasons for maintaining that young people in full-time education benefit from part-time work. Jobs broaden their horizons and teach them self-reliance and the value of money. They bring young people into contact with the adult world and give them work experience that may prove valuable later on. Divisions of gender and ability are less pronounced in the

student labour market than in the labour market at large, and this also may increase students' tolerance and understanding of their fellows. The issue is not whether students should have jobs at all, but rather one of the balance between jobs and study.

In view of all these considerations, it is appropriate for schools and colleges to provide guidance on the maximum number of hours of part-time work students should undertake in Years 12 and 13 - many of course already do this. Conforming to this guidance could be made one of the conditions for receiving an EMA. The data in this report relate to the period before the current pilots of mandatory EMAs began. Nevertheless the findings add to the evidence for the value of EMAs by showing that, other things being equal, young people were less likely to take a part-time job if they received a discretionary EMA.

There is also quite another set of issues about part-time jobs in Years 12 and 13, concerning how easy it is for students to get jobs. Here our findings have provided some surprises. It is the children of financially comfortable parents (though perhaps not the richest) who are most likely to have jobs, not students from poor families. Similarly, it is the academically more successful (though not the highest flyers) who are most likely to have jobs, not low achievers. Students living in regions with high unemployment rates are less likely to have jobs than students in more prosperous regions, and students from ethnic minorities are much less likely to have jobs than white students. Though the explanations for all these findings are complex, there is some evidence that parental networking helps students find work. In addition, the overwhelming concentration of the student labour market in the service sector of the economy, where employees are often in close contact with the public, may make it harder for certain groups of students to get jobs. It is worth noting that the groups of young people amongst whom there is most scope for increasing educational participation after age 16 - low achievers, and those from poorer families - are also amongst those who have the lowest rates of part-time employment if they do stay on. This again adds to the case in support of EMAs.

Our findings showed that part-time jobs in Year 13 were more likely to damage results in A and AS levels than jobs in Year 12. When the data were collected the new two-stage structure for A levels had not yet been introduced, and AS levels were typically taken at the same time as A levels, at the end of Year 13. The new structure means that A level students now have important examinations in Year 12 as well as Year 13, and this in turn may mean that part-time work in Year 12 will be discouraged. If young people do gain increased social maturity from part-time jobs with moderate hours, this would be a pity.

The report provided no evidence that student workers were exploited as a group - on the contrary, their average hourly rate of pay was well above the minimum wage for which they were too young to be eligible, and greater than the hourly rate of pay of young people of the same age in the same kinds of jobs who were not in full-time education. However it did show the importance of the student workforce to the UK economy, particularly in sales and other service sector occupations, where it formed the bulk of the youth workforce. If part-time work in Years 12 and 13 were to decline, employers would need to seek out other sources of labour supply to fill the gap.

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