

Longitudinal Surveys of Australian Youth

Research Report 49

The Transition to Full-time Work of Young People Who Do Not Go to University

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Contents

Tables	iv
Figures.....	iv
Executive Summary	v
1. INTRODUCTION.....	1
General Labour Market Situation.....	1
Social Background Influences.....	2
Educational Factors	3
Prior Labour Market Experiences	4
Data and Analysis.....	5
Chapter Outline	6
2. MAJOR ACTIVITY AFTER LEAVING SCHOOL	7
Major Activity Each Year since Leaving School.....	7
Characteristics of Full-time and Part-time Work	9
The Unemployed.....	13
Main Activity of ‘Other’ Group.....	15
3. PATHWAYS OF MAIN ACTIVITY	18
Pathways between Major Activities	18
Stability of Activity across Years.....	23
Summary	25
4. CORRELATES OF MAIN ACTIVITY.....	27
Demographic and Social Background Characteristics	27
Educational Background Factors	30
Prior Labour Market Experiences	33
Summary	36
5. INFLUENCES ON THE TRANSITION TO FULL-TIME WORK	37
The Base Model and Gender Differences	37
The Base Model Augmented with Additional Factors	39
Activities in Second and Third Years after Leaving School.....	41
6. DISCUSSION AND CONCLUSIONS.....	42
APPENDIX 1: DATA, SAMPLING AND WEIGHTS.....	46
APPENDIX 2: MEASURES.....	47
APPENDIX 3: INTERPRETING ODDS RATIOS	53
APPENDIX 4: THE MULTINOMINAL LOGIT MODEL.....	54
APPENDIX 5: SUPPLEMENTARY TABLES.....	60
REFERENCES.....	68
NOTES.....	70

Tables

TABLE 1	MAIN ACTIVITY IN FIRST FIVE YEARS SINCE LEAVING SCHOOL	8
TABLE 2	OCCUPATIONAL GROUPS OF FULL-TIME AND PART-TIME WORKERS, IN YEARS 1 TO 5 SINCE LEAVING SCHOOL.....	10
TABLE 3	CHARACTERISTICS OF FULL-TIME AND PART-TIME JOBS IN YEARS 1 TO 5 SINCE LEAVING SCHOOL.....	11
TABLE 4	UNEMPLOYMENT AND WORK EXPERIENCES OF THOSE LOOKING FOR WORK, YEARS 1 TO 5 SINCE LEAVING SCHOOL.....	14
TABLE 5	MAIN ACTIVITY OF THOSE CLASSIFIED AS ENGAGED IN ‘OTHER ACTIVITY’	16
TABLE 6	PERCENTAGE OF THOSE CLASSIFIED AS ENGAGED IN ‘OTHER ACTIVITY’ LIVING WITH THEIR OWN CHILDREN	16
TABLE 7	PERCENTAGE OF ANNUAL INTERVIEW TIME POINTS IN EACH ACTIVITY	24
TABLE 8	SOCIAL BACKGROUND AND MAIN ACTIVITY IN FIRST YEAR AFTER LEAVING SCHOOL	28
TABLE 9	SOCIAL BACKGROUND AND MAIN ACTIVITY IN FOURTH YEAR AFTER LEAVING SCHOOL	28
TABLE 10	EDUCATIONAL BACKGROUND AND MAIN ACTIVITY IN FIRST YEAR AFTER LEAVING SCHOOL	31
TABLE 11	EDUCATIONAL BACKGROUND AND MAIN ACTIVITY IN FOURTH YEAR AFTER LEAVING SCHOOL.....	32
TABLE 12	PART-TIME WORK AT SCHOOL AND MAIN ACTIVITY IN FIRST AND FOURTH YEAR AFTER LEAVING SCHOOL.....	34
TABLE 13	LABOUR MARKET EXPERIENCES SINCE LEAVING SCHOOL AND MAIN ACTIVITY IN FOURTH YEAR AFTER LEAVING SCHOOL	34
TABLE 14	TESTS OF SIGNIFICANCE FOR TERMS IN THE BASE MODEL	37
TABLE 15	EFFECTS OF BASE MODEL FACTORS ON ACTIVITY IN FOURTH YEAR AFTER LEAVING SCHOOL	38
TABLE 16	TESTS OF SIGNIFICANCE FOR ADDITIONAL TERMS IN THE BASE MODEL.....	40

Tables in Appendices

TABLE A 1	FREQUENCIES AND PERCENTAGES OF MAIN ACTIVITY BY YEAR SINCE LEFT SCHOOL	47
TABLE A 2	FREQUENCIES AND PERCENTAGES OF THE FIVE MAIN ACTIVITY GROUPS USED IN THE ANALYSIS, BY YEAR SINCE LEFT SCHOOL	47
TABLE A 3	FREQUENCIES AND PERCENTAGES OF SOCIO-DEMOGRAPHIC VARIABLES BY YEAR SINCE LEFT SCHOOL.....	49
TABLE A 4	FREQUENCIES AND PERCENTAGES OF EDUCATION VARIABLES BY YEAR SINCE LEFT SCHOOL ...	51
TABLE A 5	EXAMPLE FOR MULTINOMINAL LOGIT: CROSS-TABULATION OF ACTIVITY BY GENDER.....	55
TABLE A 6	EXAMPLE FOR MULTINOMINAL LOGIT FOR GENDER AND ACTIVITY: ESTIMATES AND ODDS-RATIOS.....	57
TABLE A 7	EXAMPLE FOR MULTINOMINAL LOGIT FOR GENDER, ACHIEVEMENT AND ACTIVITY: ESTIMATES AND ODDS-RATIOS.....	58
TABLE A 8	EXAMPLE FOR MULTINOMINAL LOGIT FOR GENDER, ACHIEVEMENT AND ACTIVITY: ESTIMATES AND ODDS-RATIOS.....	59
TABLE A 9	EFFECTS OF DEMOGRAPHIC AND SOCIAL BACKGROUND FACTORS ON MAIN ACTIVITY IN FIRST AND FOURTH YEAR AFTER LEAVING SCHOOL	60
TABLE A 10	EFFECTS OF EDUCATIONAL FACTORS ON MAIN ACTIVITY IN FIRST AND FOURTH YEAR AFTER LEAVING SCHOOL.....	61
TABLE A 11	EFFECTS OF LABOUR MARKET EXPERIENCES ON MAIN ACTIVITY IN FIRST AND FOURTH YEAR AFTER LEAVING SCHOOL.....	62
TABLE A 12	EFFECTS OF ADDITIONAL FACTORS TO BASE MODEL ON ACTIVITY IN THE FOURTH YEAR AFTER LEAVING SCHOOL	63
TABLE A 13	EFFECTS OF BASE MODEL AND SUBSEQUENT ACTIVITIES ON ACTIVITY IN FOURTH YEAR AFTER LEAVING SCHOOL	64
TABLE A 14	EFFECTS OF BASE MODEL AND ACTIVITIES IN SECOND YEAR (CONTRAST WITH UNEMPLOYMENT) ON ACTIVITY IN FOURTH YEAR.....	65
TABLE A 15	EFFECTS OF BASE MODEL AND ACTIVITIES IN THIRD YEAR (CONTRAST WITH UNEMPLOYMENT) ON ACTIVITY IN FOURTH YEAR	66

Figures

FIGURE 1	PATHWAYS OF MAIN ACTIVITY OF MALES IN YEARS SINCE LEAVING SCHOOL	20
FIGURE 2	PATHWAYS OF MAIN ACTIVITY OF FEMALES IN YEARS SINCE LEAVING SCHOOL.....	21

EXECUTIVE SUMMARY

This report focuses on the transition to full-time employment of young people who do not go to university. The majority of Australia's school leavers do not enrol in university, and it is important to better understand the pathways that they follow. The report uses a substantial longitudinal dataset to map the dynamics of the youth labour market, and identify the factors that are important in securing full-time work.

The group analysed were part of a national sample of 13,613 young people who were first surveyed in Year 9 in 1995. The report follows them through to 2002 when their average age was 21 and they had been out of school for between four and six years.

The study reports on their main education and labour market activities in each year since leaving school. It then analyses the influences of social and demographic factors, school and other educational factors, and initial experiences in the labour market on their post-school activity four years after leaving school. The particular focus is on the factors that influence being in full-time employment four years after leaving school. Separate analyses were performed for males and females as their post-school experiences differ in a number of ways.

Main activity one and four years after leaving school

In the first year after leaving school, 61 per cent of young men were working full-time at the time of the annual survey, which was much higher than the proportion of young women working full-time (45 per cent). A little over half of young male full-time workers were also studying part-time, as were just over one-third of young women. In the first year after leaving school young women were more likely than young men to be working part-time only (12 per cent and 6 per cent, respectively), or studying full-time (27 per cent and 20 per cent, respectively). About 9 per cent of both sexes were 'looking for work' (unemployed). Around 2 per cent of young men and 4 per cent of young women were not in either education or the labour force at that stage.

By the fourth year 77 per cent of males and 64 per cent of females were working full-time. Not only did the proportion working full-time increase, but the type of work changed: higher proportions of males moved into professional/managerial and other skilled jobs, and earnings rose. Young people also reported generally high levels of satisfaction with their jobs.

Participation in full-time study declined to about 7 per cent for females and 5 per cent for males by the fourth year after leaving school. The proportions in part-time work only did not change much by the fourth year (12 per cent among females and 6 per cent among males), although the particular people did. The proportion looking for work declined slightly from 9 per cent in the first year to 7 per cent in the fourth year. In most years the proportion of young women looking for work was lower than that for young men. The proportion of young women not involved in study, work or looking for work increased from 4 per cent in the first year to over 10 per cent in the fourth year, while the proportion of males in this category increased only slightly to 3 per cent.

Movement between full-time work, part-time work and unemployment

About 15 per cent of young men and 22 per cent of young women were not in full-time work at the time of any of the annual post-school interviews. A further 6 per cent of males and 9 per cent of females were in full-time work at only one in four or one in five interviews. Very few were in part-time work at each interview (2 per cent of males and 3 per cent of females) or looking for work at each interview (2 per cent of both males and females). Such findings indicate that the youth labour market is highly dynamic and that misleading impressions can be obtained from analysing single years in isolation.

Full-time work, however, shows a very high degree of stability. Approximately 90 per cent of young men in full-time work at the time of the survey in one year were in full-time work the next year. For young women the stability of full-time work was lower, but still very high, at around 80 per cent.

Most part-time workers are not 'stuck' in part-time work. The year-to-year stability of part-time work was less than 30 per cent for males and about 30 to 40 per cent for females. Over 50 per cent of male part-time workers were in full-time work the following year. Among females this figure

was between 37 and 50 per cent. However, part-time work does not confer the same advantages as full-time work, as increases in status and earnings over time are smaller; and substantially fewer part-time workers see their job as a career job. Over half of those with part-time jobs would prefer to be working full-time.

Unemployment is a much more problematic experience than part-time work. Of the young men unemployed, between 30 and 40 per cent were also unemployed the following year. The comparable figures for young women were between 15 and 30 per cent. About 40 to 50 per cent of young men looking for work one year were in full-time work the next. For unemployed young women there was less movement to full-time work (about 30 to 40 per cent) and more movement to part-time work (at around 20 per cent in most years). Among those looking for work at the time of the survey, a high proportion of the past year to the time of the survey had been spent looking for work.

The situation of those who are not studying or in the labour market is more complex. The results suggest that those in this group, often referred to as being engaged in 'other' activities, should not be understood as tantamount to being in unemployment. 'Other' activities often include travel, and in the later years comprise a high proportion of young women looking after their own children. Some disillusioned job-seekers are also likely to be in this category.

The analysis shows that there is quite a high degree of entry (or re-entry) from 'other' activities into work and education, and the majority express an intention to return to study or work within the next few years. Although some of them may need particular assistance to do so, as a group they are likely to experience fewer long-term difficulties than those who are currently in the labour market but are unable to find work.

Factors impacting on attaining full-time work four years after leaving school

Post-school activity varies according to demographic and social background factors, but apart from Indigenous status and to a lesser extent language background, differences by social group in post-school activity are small. Similarly, many educational factors are associated with post-school activity – strong achievements in literacy and numeracy, holding a part-time job while at secondary school, and participating in VET at school help to obtain full-time employment, but few of these factors lead to large impacts. An important exception is participation in apprenticeships, which among young men strongly promote full-time work. Traineeships also promote full-time work, especially among young women, but to a lesser extent than apprenticeships.

The effects of post-secondary vocational education other than apprenticeship and traineeship were mixed. Full-time study in the first year after leaving school did not increase the odds of being in full-time work in the fourth year. Among males it increased the odds of further full-time study, part-time work, participation in 'other' activities and unemployment. Among females, it increased the odds of full-time study and part-time work. However among those already in full-time work, a TAFE certificate or diploma tended to further increase the likelihood of staying in full-time work.

In contrast to the modest influence of most social and educational background factors, post-school destinations are strongly associated with previous labour market experiences. Obtaining full-time work soon after leaving school substantially increases the chances of remaining in full-time work. Similarly, initial experiences of unemployment are associated with an increased likelihood of being unemployed later on. Gaining full-time employment early in the school-to-work transition is critical.

Size and nature of the group experiencing transition difficulties

'Crisis' accounts of the youth labour market are not supported by this report. This is not to say that there are not young people who are experiencing severe difficulties in the transition from school to full-time work but this group probably comprises considerably less than 10 per cent of non-university bound school leavers.

The results from this report also suggest that treating those who are not in full-time work or study in the initial period after leaving school as being the "at risk" group is simplistic. Young people not working or studying full-time are quite diverse and face markedly different circumstances, not all of which are likely to lead to problems in securing full-time employment in the future. Therefore there is a need to develop a more sophisticated measure of "at risk" which takes into account a broader range of factors.

1. INTRODUCTION

This report is about the transition to full-time work among young people in Australia who did not attend university in the initial years after leaving school. It focuses on the main activities of the group up to four or five years after leaving secondary school, that is until 2002. The primary purpose of this report is to identify the factors that promote full-time work.

In investigating the influences on the transition to full-time work, this report addresses several general research and policy issues:

- The general labour market situation of young people
- The influence of social background factors
- The effects of education, including school leaving status and vocational education
- The role of prior labour market experiences

General Labour Market Situation

A common view of the labour market outcomes of young people who do not pursue a university education is usually pessimistic. This view is exemplified by the ‘milling and churning’ thesis, which argues that the great majority of school leavers who do not pursue a university education are excluded from ongoing full-time work and continually move between unemployment, lowly paid full-time work, part-time work, and ‘other’ activities that do not include work or study. The milling and churning thesis has its origins in analyses of the youth labour market in the United States (Klerman & Karoly, 1994, 1995). Other terms such as *casualisation*, *marginalisation* and *polarisation* are also used to pessimistically describe the youth labour market in Australia (Gaston & Timcke, 1999). It is argued that increases in part-time and casual employment, the change from a manufacturing to a service economy, the lack of adequate training, and a secondary school system focusing mainly on academic pursuits, have made it very difficult for young people without university qualifications to obtain and secure appropriate full-time work. They are marginalised from full-time work, it is argued, and the full-time work they obtain is generally of low status and poorly paid, and therefore cannot be considered as career jobs.

From one perspective long-term trends in the youth labour market in Australia tend to support the pessimistic view. It is increasingly characterised by part-time and casual work (Wooden & Vanderheval, 1998). Furthermore, young people who left school in the late 1980s and early 1990s did enter a recessed labour market and many had difficulties securing full-time work (Lamb, Dwyer & Wyn, 2000).

However, recent work analysing data from the *Longitudinal Surveys of Australian Youth* (LSAY) project suggests that the milling and churning thesis is overstated. A report on the initial labour market outcomes of early school leavers found that over 70 per cent had full-time jobs (Marks & Fleming, 1998a). A more recent report confirms the high levels of full-time work among school leavers and estimated that only a small proportion (less than 10 per cent of school leavers) could be described as milling and churning (McMillan & Marks, 2003). Analyses of an older youth cohort, 20 to 24 years of age, show high levels of full-time work and little evidence of milling and churning (Marks, Hillman & Beavis, 2003). More generally, casual and part-time work is mainly performed by students (Lewis & McLean, 1999). The milling and churning thesis may be more characteristic of the Australian youth labour market during the early 1990s when overall unemployment was substantially higher than it has been recently.

Although not all aspects of the milling and churning thesis can be addressed in this report, it informs debate on the thesis by focusing on the medium-term outcomes of school leavers. It examines the proportion in full-time work and fully engaged, that is, either in full-time study or full-time work. It also reports on the movement into full-time work from full-time study, part-time work, unemployment and ‘other’ activities. It estimates the proportion of young people who since leaving school have spent time looking for work, in part-time work and not in full-time work.

Social Background Influences

An important policy focus is the importance of social background on the school-to-work transition. Differences in youth labour market outcomes by social background characteristics such as gender, region, Indigenous status and ethnicity have long been of interest to both researchers and policy makers.

Collins et al. (2000) argue that the higher participation rates of young women in both Year 12 and university are more than offset by the superior labour market outcomes of young men compared to young women. They argue that young men have greater access to apprenticeships and other forms of training that enhance their labour market situation whereas young women have far more limited opportunities. Furthermore, young women are more likely to gain part-time rather than full-time work. They extend this argument by contending that female participation rates in Year 12 and university are higher *because* both sexes are cognizant of the labour market opportunities open to them. However, this argument assumes that students can accurately assess their 'gendered' labour market fortunes but are unaware of the generally superior labour market outcomes of a university education. Furthermore, higher participation rates in education of women compared to men are common across industrialised countries, many of which have very different labour markets to Australia's (OECD, 1997; Shavit & Blossfeld, 1993). One major focus of this report is on gender differences in labour market outcomes in the years after leaving school. It will investigate those who do not pursue a university education and establish if there are substantial and consistent gender differences favouring young men.

Regional differences in educational and labour market outcomes of young people often appear on the political agenda. The general argument is that young people living outside the major metropolitan areas are disadvantaged. There are a variety of reasons why they might be disadvantaged, such as the quality of schooling, distance from institutions of post-secondary education and training and a much more limited labour market. McMillan & Marks (2003:55), found that living in a regional area was associated with an increased likelihood of being in marginal activities, especially among young women.

A similar argument to that for gender could be applied to ethnic differences. Students with language backgrounds other than English (LBOTE) show higher participation rates in both Year 12 and university than English-speaking background students. However, those who do not go to university may be qualitatively different from those who do. They may be more recent immigrants, have greater difficulty with the English language or their social networks are less established. There is some evidence that LBOTE young persons have more difficult labour market experiences (McMillan & Marks, 2003). Therefore, part of this report is the investigation of ethnic differences in labour market outcomes; whether there are substantial differences and if so, can they be accounted for by educational and other factors.

Unarguably, the largest social divide in Australian society is between Indigenous and non-Indigenous Australians. Large inequalities exist between Indigenous and non-Indigenous Australians in the transition from school-to-work (Long, Frigo & Batten, 1999). Although the numbers of Indigenous Australians in this sample are small, this report will examine the relationship between Indigenous status and post-school activities.

Inequities according to socioeconomic background are a perennial issue in studies on the educational and labour market outcomes of young people. The major research question addressed here concerns whether higher socioeconomic background is associated with more favourable labour market outcomes. It may be the case that the influence of socioeconomic background is minimal among this group of young people since the major influence of socioeconomic background is on educational attainment. However, those from high socioeconomic backgrounds may be able to provide greater protection for their children from undesirable labour market outcomes, such as unemployment. This report will examine the importance of socioeconomic background and whether it has an effect when focusing on only non-university bound youth.

Another issue is the role of school sector. Are there differences in post-school activities according to the type of school attended? One view is that there are differences that can be attributed to the different socialisation experiences of government, Catholic and independent schools. The alternative view is that differences in outcomes between groups who attended the different types of schools can be attributed to other factors associated with school sector, such as socioeconomic background.

Educational Factors

The major policy response to the high levels of youth unemployment that surfaced in the mid-1970s was to increase education and training. Across the OECD world, higher initial levels of education reduce unemployment and increase the chances of obtaining a full-time job (OECD, 1998a:81) In most countries, unemployment is lower among those with an upper secondary school education compared to those with a lower secondary school education (OECD, 2000:34-35). However, there is debate about which forms of education and training are most beneficial. For example, the problems in Australia in the school-to-work transition can be contrasted with apprenticeship-based countries such as Germany, which on most indicators shows better outcomes for young people (OECD, 1996; see OECD, 2000:168, 2002).

The rise in school completion in Australia has been dramatic. In the early 1980s, only about 30 per cent of young people completed school. By the early 1990s this figure was over 70 per cent (ABS, 2004:18; Fullarton, Walker, Ainley & Hillman, 2003; Marks, Fleming, Long & McMillan, 2000). Governments of both political persuasions agree that increasing Year 12 participation and vocational training will alleviate problematic school-to-work transitions. In April 1999, Federal and State governments agreed to the set of *National Goals for Schooling in the Twenty-first Century* which included the statement:

all students have access to the high quality education necessary to enable the completion of school education to year 12 or its vocational equivalent and that provides clear and recognised pathways to employment and further education and training.

However, school completion is not necessarily associated with substantial labour market improvements among non-university students. Marks et al. (2003:26-28, 34) found that completion did not significantly increase time spent in full-time work among 24 year-olds but did reduce time spent looking for work, confirming an earlier study on older cohorts (Marks & Fleming, 1998b). Dockery (2005) used a variety of statistical methods with a range of outcomes but could not identify benefits for extra years at school for non-university bound students.

The increase in school completion has been accompanied by increases in school-based vocational education. The largest increase has been in computer studies and hospitality (Fullarton, 2001). The proportion of students in VET-in-schools courses has increased substantially from less than 20 per cent in 1996 to nearly 50 per cent in 2003 (Long, 2004:18).

There is no strong evidence that vocational education at school improves labour market outcomes. Fullarton (2001:23) found that there was no difference in subsequent unemployment levels between VET-in-schools and comparison groups.¹ Furthermore, it can be costly to provide school-based vocational education. Psacharopoulos (1987) makes the same point regarding the high cost of vocational school education in the United States.

It is generally assumed that participation in post-school training (other than at university) has substantial positive effects on labour market outcomes. Alternatively, full-time participation in education and training in the initial post-school years may not be as beneficial as full-time work. Furthermore, selection effects may be at work; it may be the case that young people who are facing difficulties in obtaining suitable work pursue non-university full-time study.

There is evidence that full-time vocational study (other than university courses) is not particularly beneficial in terms of labour market outcomes for at least some types of courses. Analyses of the

three older Youth in Transition (YIT) cohorts born in 1961, 1965 and 1970, the youngest YIT cohort born in 1975 and the 1995 Year 9 cohort have not found strong positive effects for vocational education and training on labour market outcomes (Long, McKenzie & Sturman, 1996; Marks et al., 2003; McMillan & Marks, 2003; but see Ryan 2002). The exception is apprenticeships, which do substantially improve labour market outcomes. According to Long (2004:20-21) the benefits of TAFE qualifications are at least equivocal:

In the year after completing their qualification, 25 percent of TAFE graduates were not in full-time work and were not enrolled in further study. For those TAFE graduates not studying (47 percent of all graduates), some form of marginal attachment or no attachment to the labour force is a more likely outcome in the short term than is full employment.

Previous LSAY reports on educational outcomes have documented the importance of skills in literacy and numeracy on educational outcomes such as, school completion, participation in Year 12 and at university, and performance in the final years of school. In addition, achievement in literacy and numeracy may also affect post-school activities. Employers may value higher literacy and numeracy skills or alternatively, higher skills may be associated with other characteristics that promote full-time work.

Similar arguments can be raised concerning the ENTER scores obtained in Year 12. Employers may use ENTER score as quick and simple screening device to limit the number of applicants to a more manageable number. Alternatively, higher ENTER scores may reflect other influences such as socioeconomic background and prior achievement.

Prior Labour Market Experiences

This report also examines the role of prior labour market experiences on subsequent activities.

There is evidence that the experience of part-time work at school is positive for initial labour market outcomes (Robinson, 1999; Vickers, Lamb & Hinkley, 2003). This study will extend that work by investigating if part-time work still has positive effects as long as four years after leaving school.

Earlier LSAY reports have emphasised the importance of a good start in the labour market, that is, securing full-time work soon after leaving school (Marks & Fleming, 1998b, 1998c; Marks et al., 2003). A five-country OECD (1998b:105) study, that included Australia, concluded that, irrespective of education or gender, getting a job in the first-year after leaving school is associated with a substantially higher probability of being employed in subsequent years. A part-time job in the first year was not as effective as a full-time job, but was substantially more effective than unemployment or not being in the labour force.

An important question is the consequences of part-time work. There are two opposing arguments, part-time work as a 'millstone' or as a 'stepping-stone'. The millstone argument contends that part-time employment is a trap and leads not to full-time work but to further part-time work, unemployment or withdrawal from the labour market. Therefore, part-time workers cannot enter the housing market nor fully participate in adult society as full-time workers can. The stepping-stone view contends that part-time work is considerably better than no work and employees' experiences in part-time work provide them with skills that enable them to gain full-time work. Generally, the Australian evidence supports the stepping stone view. Gaston & Timcke (1999) in analysing the Australian Youth Survey conclude that casual and part-time employment is more a stepping stone than a 'dead end'. Similarly, (McMillan & Marks, 2003) found substantial year-to-year movement from part-time to full-time work and little indication that part-time workers were 'trapped'. This report contributes to this debate by examining movement from part-time to full-time work and the impact of part-time work on the odds of obtaining subsequent full-time work.

Finally, do initial experiences of unemployment have long-term, detrimental consequences on subsequent labour market outcomes: the so-called 'scarring' effect? The OECD (1998b:106) notes that overseas studies, on balance, suggest there is a scarring effect from initial experiences of

unemployment. This report examines the extent to which this effect operates in the Australian youth labour market.

Data and Analysis

The data used for this report are derived from the longitudinal survey of the 1995 Year 9 cohort. This cohort is one of several that comprise the Longitudinal Surveys of Australian Youth (LSAY) project (Marks & Rothman, 2003). The sample is representative of all Year 9 students at school in Australia in 1995. The initial sample comprised 13,613 students from all States/Territories and school sectors. At initial contact, the students undertook reading comprehension and numeracy tests and completed a questionnaire about themselves and their families. In the next year the sample was surveyed by a mail questionnaire and in each subsequent year by telephone interviews. Further details on the data, sampling and weighting to compensate for differential sample attrition are provided in Appendix 1.

Longitudinal data from projects such as LSAY are especially valuable for tracking the education, training and labour market pathways undertaken by young people from year to year, and linking this information to their social and educational backgrounds. Because the same young people are surveyed from year to year, a detailed picture can be built of their changing circumstances, and how the experiences at one point in time influence what subsequently happens. The LSAY variables used in the report are described in Appendix 2.

This report excludes those who left school and entered higher education. The group of school leavers who did not pursue university education is of more concern since the labour market outcomes of graduates are known to be superior to those of non-graduates (Lamb, 2001; Lamb & McKenzie, 2001). This report uses data up until and including the 8th wave (2002) of the longitudinal survey, at which stage their average age was 21 years. For most of the sample the first year out of school was 1999 and the fourth year since leaving school was 2002. For non-completers who left school in 1997, 2002 was the fifth year since leaving school. A much smaller group left school before 1997. Another small group finished school in 1999, so 2000 was their first year out of school and 2002 the third year since leaving school.

Analysis

Post-school activities do not constitute a 'natural' ordering. It may be claimed that full-time work is the most desirable outcome, but in this context full-time study may be more desirable. Greater problems arise in trying to order full-time study, part-time work, looking for work and engagement in 'other' activities. The nominal nature of these activities substantially complicates the statistical analysis of post-school activities. It is not possible to use Ordinary Least Squares regression because the 'outcome' does not constitute an interval or interval-like ordinal variable. Logistic regression is appropriate for the analysis of dichotomous outcomes but in this context cannot be used because the contrast groups would be too heterogenous. For example, if the outcome of interest is full-time work then the contrast group includes all those in full-time study, part-time work, unemployment and other activities. Thus the contrast group is too heterogenous to provide reliable conclusions on what factors promote full-time work. The appropriate statistical procedure for a categorical outcome with more than two categories is multinomial logit, which for multivariate analysis is used throughout this report.²

Apart from enabling simultaneous analyses of each outcome, a major advantage of this procedure is that it provides greater understanding of where the effects lie. For example, is the main effect of higher socioeconomic background on increasing the likelihood of full-time time study or on decreasing the likelihood of unemployment? Like logistic regression, the multinomial logit procedure controls for differences in the distributions of variables. This is especially relevant when analysing the relationship between activity in (say) the first and fourth year since leaving school as a much higher proportion in the fourth year were in full-time work and a much lower proportion in full-time study.

Multinomial logit modelling is described in Appendix 4. The models have been parameterised so that the comparison is always with full-time work. Therefore for a factor to have strong effects on increasing the odds of full-time work relative to 'other' activities, all the coefficients associated with the factor should be negative, sizable and statistically significant. Background for interpreting odds ratios is provided in Appendix 3.

Chapter Outline

Chapter 2 sets the scene for subsequent analyses. It categorises major activity into five broad groups: full-time education, full-time work, part-time work, unemployment, and 'other'. It shows the profile of activities from the first to the fifth year after leaving school. The chapter also provides information on the nature of the activities. It reports on the occupations and other job characteristics of both full- and part-time workers for each year. For those looking for work, it presents data on the length of time spent looking for work and prior experiences of unemployment and work. Finally, the chapter details the activities of the group classified as engaged in 'other' activities, that is, not studying, working or looking for work.

Chapter 3 focuses on the pathways of young people in the years after leaving school. Its purpose is to examine how much year-to-year movement there is in and out of activities. It analyses the extent of stability in activity in successive years and the destinations of those who change activities. The chapter also provides estimates of the proportion of the group that at each interview were always or never engaged in particular activities.

Chapter 4 focuses on the correlates of activities in the first and fourth years after leaving school. Three groups of factors are investigated: social and socioeconomic background; educational and training; and labour market experience. This chapter also discusses which factors within each group have statistically significant effects on subsequent activity, net of other factors considered.

Chapter 5 begins by introducing the core or base analytical model, which comprises those factors found in the previous chapter to have important and statistically significant effects on activity in the fourth year. The effects of factors in the core model are discussed. The core model is subsequently used to test whether other factors have effects on fourth year activity, net of the factors in the core model. It is also used to test a range of hypotheses on the transition to full-time work.

The report concludes with Chapter 6, which addresses the policy and research questions introduced in this chapter.

Appendix 1 details the data, sampling and weights. Appendix 2 describes the measures used in this report and presents their distributions. Appendix 3 provides an interpretation of the odds ratios used in the report. Appendix 4 summarises the multinomial logit statistical procedure used for multivariate analyses of activities. Appendix 5 comprises additional tables, which were not included in the main body of the report but referred to in the text.

2. MAJOR ACTIVITY AFTER LEAVING SCHOOL

This chapter is the basis for subsequent chapters. The first part presents the activity profiles of the group of school leavers who did not enrol at university, from the first to the fifth year after leaving school. The second part of the chapter examines the nature of the activities.

The main research questions addressed in this chapter are:

- What were the main activities each year since leaving school?
- Are there differences in main activity by gender and completion of Year 12?
- How does the profile of major activity change with time since leaving school? Are there increases in the proportions in full-time work and declines in the proportions in part-time work, looking for work and in 'other' activities?
- Are there substantial differences between full- and part-time workers in the type of jobs they have?
- Are full- and part-time workers in 'better' jobs the longer they have been out of school?
- How severe are the spells of unemployment? Are those unemployed looking for full- or part-time work? Is unemployment more or less severe, the longer the time since leaving school? Are there gender differences in the severity of unemployment? How much time have the unemployed spent looking for work or working since leaving school?
- What are those engaged in 'other' activities doing?
- Are there substantial differences between young men and young women in their post-school activities?

Major Activity Each Year since Leaving School

Table 1 shows the main activities of the group of young people who did not attend university in each of the five years after leaving school. Note that the fifth year consists of a much smaller group so the estimates for the fifth year are less reliable than those for the fourth. Furthermore, since in these data only early school leavers had a fifth year, they are not representative of the experiences of all non-university bound youth five years after leaving school. Therefore, less emphasis is placed on the fifth year than on earlier years.

In the first year out of school, about three-quarters were fully engaged in full-time work or full-time study. About a quarter of school leavers were working full-time and studying part-time. An additional 10 per cent were working part-time. Very few school leavers were combining part-time study with part-time work and about 1 per cent were only engaged in part-time study. About 9 per cent were looking for work and about 3 per cent were engaged in 'other' activities.

In the first year after leaving school the proportion of males in full-time study or work was around 80 per cent: about 10 percentage points higher than that for females. However, the proportion of males looking for work was slightly higher. Young women show a much higher level of participation in part-time work at around 14 per cent compared to 7 per cent for young men. Young women also show higher proportions engaged in 'other' activities, 4 compared to 2 per cent.

In subsequent years, the proportions of both sexes in full-time study declined substantially. In the fourth year after leaving school, about 5 per cent were in full-time study compared to around 20 per cent in the first year. Over the same period the proportion in full-time work increased to around 70 per cent. So the proportion of school leavers fully engaged in either full-time study or full-time work remained constant at around three-quarters. The proportion in part-time work remained broadly constant at about 10 per cent in the four years since leaving school, while the proportion looking for work declined slightly from 9 to 7 per cent.

The major gender difference in main activity in later years remained the higher proportions of males in full-time work. In the fourth year, 77 per cent of males were in full-time work compared to 64 per cent of females. Correspondingly, a higher proportion of females were engaged in part-time work, 12 per cent in the fourth year compared to 6 per cent of males. In most years males showed higher levels of unemployment. A striking gender difference is the substantial increase in the proportion of young women in 'other' activities. The proportion of young women classified as engaged in 'other' activities rose from 4 per cent in the first year to 10 per cent in the fourth year. Of those young women who had been out of school for five years — a much smaller group — over 20 per cent were engaged in 'other' activities in the fifth year. The nature of 'other' activities is discussed later in this chapter.

Table 1 Main activity in first five years since leaving school (%)

		Years since leaving school				
		First	Second	Third	Fourth	Fifth
Number of cases		5468	4702	3944	3280	839
All	FT Study	23	14	7	5	1
	FT Work & PT Study	25	26	23	15	13
	FT Work	29	36	47	56	58
	PT Work & PT Study	2	2	1	1	1
	PT Work	9	9	10	9	10
	PT Study	1	1	1	1	<0.5
	Looking for work	9	9	8	7	7
	Other	3	4	5	6	10
		100	100	100	100	100
Males	FT Study	19	13	6	5	1
	FT Work & PT Study	32	34	32	19	15
	FT Work	29	34	43	58	66
	PT Work & PT Study	1	1	<0.5	1	<0.5
	PT Work	6	7	7	6	6
	PT Study	1	1	1	<0.5	--
	Looking for work	9	9	9	8	8
	Other	2	3	2	3	4
		100	100	100	100	100
Females	FT Study	27	17	7	7	1
	FT Work & PT Study	17	15	13	11	11
	FT Work	28	39	51	53	45
	PT Work & PT Study	2	3	1	1	1
	PT Work	12	11	13	12	15
	PT Study	1	1	1	1	1
	Looking for work	9	9	7	6	7
	Other	4	5	8	10	19
		100	100	100	100	100

Note: Excludes those enrolled in a Bachelor Degree in 1999 or 2000 or 2001. The activity is that recorded at the time of the annual interview.

Table 1 shows that the part-time work and part-time study group, and the part-time study only group, are very small. They are too small to be analysed as separate groups (see Appendix 2). In addition, preliminary analyses showed that little is gained by splitting full-time workers into two groups based on whether or not they were in part-time study. Research questions on the benefits of further education and training are better addressed by distinguishing the type of post-secondary education or training. Therefore, in all subsequent analyses, five mutually exclusive activity groups

are used: full-time study; full-time work; part-time work; looking for work; and 'other'. The full-time work group includes all those working full-time. The small group in both part-time work and part-time study has been combined with those in the part-time work only group. The very small group of school leavers (one per cent or less) whose main activity was part-time study only has been excluded from subsequent analyses. The frequency counts and percentages of these broader groups are presented in Table A 2 in Appendix 2 which provides further information on how these categories are derived by aggregating the categories in Table 1.

Characteristics of Full-time and Part-time Work

The purpose of this section is to assess the degree to which part-time work is 'inferior' to full-time work, and the extent that employed males hold 'better' jobs than their female peers. Furthermore, this section investigates if with the passage of time both groups gain better jobs. The criteria used to assess differences are occupational group, work satisfaction, whether their present job is one they would like as a career, occupational status and weekly earnings. Also examined is preference for full-time work among part-time workers. Measures of these factors are detailed in Appendix 2.

Occupational Group

Table 2 presents the percentages of male and female full-time and part-time workers by broad occupational group. Four occupational groups were defined: professional (including paraprofessional) and managerial; clerical, sales and service; trades and skilled manual work; and semi- and unskilled manual work. Obviously, the professional/managerial group does not include professions requiring a university degree.

There were strong gender differences in occupational group. In the first year after leaving school, of young men who gained full-time work, about 40 per cent were working in the trades or skilled manual occupations. The next most common type of occupation was semi-skilled or unskilled manual work (about 30 per cent) followed by clerical, sales and service jobs (about 20 per cent). About 8 per cent were working in a professional or managerial occupation. In contrast over 70 per cent of young women worked in clerical, sales or service occupations, 11 per cent in semi-skilled and unskilled work, 9 per cent in trades or skilled manual work and 7 per cent in professional or managerial work.

There are indications that on average full-time workers of both sexes held 'better' jobs the longer the time since leaving school. In the fourth year after leaving school 23 per cent of young men and 30 per cent of young women working full-time held professional or managerial jobs. This compares with 8 and 7 per cent respectively in the first year after leaving school. Furthermore, the proportion of young men in semi- or unskilled work declined from 30 per cent in the first year to 20 per cent in the fourth year after leaving school and from 11 to 7 per cent among young women. Among young men the proportions in the trades (or other skilled manual work) and clerical, sales or service work remained steady and the proportion in semi- or unskilled manual work declined from 31 per cent in the first year to 20 per cent in the fourth year. Among young women, the proportion in clerical, sales or service declined from 70 per cent in the first year to 57 per cent in the fourth year.

The occupational distributions of part-time workers were very different. Among young men working part-time, about 40 per cent worked in semi- or unskilled manual work in the first year after leaving school. This compares with 30 per cent of full-time male workers. Similarly, a much smaller proportion was in trades or similar occupations (10 compared to 40 per cent) and a much higher proportion in clerical, sales or service occupations (44 compared to 20 per cent). Among young women working part-time, nearly 80 per cent worked in clerical, sales or service occupations in the first year after leaving school. This compares with about 70 per cent of female full-time workers. About 14 per cent were in semi- or unskilled work, 3 per cent in trades and 5 per cent in professional/managerial occupations.

Like full-time workers, there were improvements over time in the type of jobs held by part-time workers, but the improvements were more marked for young men than young women. The proportion of young men in semi- or unskilled work declined (from 40 per cent in the first year to 24 per cent in the fourth year) and the proportion in professional/managerial increased from 6 per

cent in the first year to 22 per cent in the fourth year. Among young women, the proportion in professional/managerial occupations rose to 12 per cent in the fourth year, a less dramatic rise than among male part-time workers. There was little change in the proportions in other types of work performed by part-time women with about 10 to 14 per cent in semi- or unskilled manual work.

Table 2 Occupational groups of full-time and part-time workers, in years 1 to 5 since leaving school (%)

Year	Occupational group	Full-time workers		Part-time workers	
		Males	Females	Males	Females
First	Professional/Manager	8	7	6	5
	Clerical/Sales/Service	20	72	44	78
	Trades	40	9	9	3
	Semi-/Unskilled	31	11	40	14
		100	100	100	100
Second	Professional/Manager	12	15	10	6
	Clerical/Sales/Service	20	69	40	75
	Trades	40	7	16	2
	Semi-/Unskilled	27	9	35	16
		100	100	100	100
Third	Professional/Manager	15	16	16	8
	Clerical/Sales/Service	19	69	41	81
	Trades	42	8	8	<0.5
	Semi-/Unskilled	24	6	36	11
		100	100	100	100
Fourth	Professional/Manager	23	30	22	12
	Clerical/Sales/Service	20	57	49	72
	Trades	37	6	6	1
	Semi-/Unskilled	20	7	24	14
		100	100	100	100
Fifth	Professional/Manager	14	16	5	7
	Clerical/Sales/Service	11	60	35	70
	Trades	49	13	20	7
	Semi-/Unskilled	25	10	40	16
		100	100	100	100

Note: Excludes those enrolled in a Bachelor Degree in 1999 or 2000 or 2001

Work Satisfaction

All groups are reasonably satisfied with their jobs. The measure of work satisfaction ranges from 0 to 100 and the mean levels of work satisfaction for all groups hovers around 70. Among full-time workers, there are no consistent gender differences in work satisfaction and no clear trends over time (Table 3).

Part-time workers initially show lower levels of work satisfaction than full-time workers. In the first year, the work satisfaction scores of part-time workers were about 5 score points lower. However, in later years, there was little difference in work satisfaction between full- and part-time workers. Among male part-time workers there was little change in mean work satisfaction but among male full-time workers the average score declined. Among females working part-time, work satisfaction increased whereas it declined among full-time workers.

Type of Job as a Career

Full-time and male workers are more likely to see their present job as the type of job they would like as a career than are part-time and female workers, especially in the initial post-school years. In the first year, 60 per cent of males working full-time indicated that they see their job as part of their career. This compares with 43 per cent of full-time female workers and about 20 per cent of male part-time workers (Table 3).

Table 3 Characteristics of full-time and part-time jobs in years 1 to 5 since leaving school

Characteristic	Year	Full-time workers		Part-time workers	
		Males	Females	Males	Females
Work satisfaction (range 0-100) <i>Mean</i>	First	77	75	70	72
	Second	74	75	70	71
	Third	74	74	70	72
	Fourth	73	74	72	75
	Fifth	74	73	67	76
Type of job like as a career <i>Per cent 'Yes' about current job</i>	First	60	43	21	19
	Second	57	50	32	19
	Third	58	49	28	30
	Fourth	61	51	35	38
	Fifth	61	54	29	46
Occupational status -ANU3 (range 1-100) <i>Mean</i>	First	23	25	18	21
	Second	24	27	20	21
	Third	25	29	21	23
	Fourth	27	32	24	24
	Fifth	24	28	20	23
Weekly earnings <i>Mean \$</i>	First	320	295	197	172
	Second	408	383	264	215
	Third	501	457	264	244
	Fourth	592	522	316	280
	Fifth	626	493	392	224
Weekly earnings <i>Median \$</i>	First	285	280	195	165
	Second	380	373	250	200
	Third	470	450	250	225
	Fourth	550	520	270	280
	Fifth	570	500	350	220
Prefer full-time work <i>Per cent 'Yes'</i>	First	-	-	67	60
	Second	-	-	66	62
	Third	-	-	64	56
	Fourth	-	-	64	50
	Fifth	-	-	58	37

Note: Excludes those enrolled in a Bachelor Degree in 1999 or 2000 or 2001

In the fourth year after leaving school males working full-time showed the highest proportion working in career jobs, followed by females working full-time and females working part-time. Males working part-time showed the lowest level of 'career' jobs. The gender difference among full-time workers decreased and higher proportions of part-time workers saw their job as part of their career. This is especially marked among young women with an increase from 19 per cent in the first year to 38 per cent in the fourth year. So an increasing proportion of young women working part-time see their present job as one they would like as a career.

Occupational Status

Generally, occupational status is higher among full-time than part-time workers and higher among young women than men. The findings for occupation status correspond to the findings for occupational group with higher proportions of males and part-time workers in semi and unskilled manual work. Occupation status is a more sensitive measure since it differentiates jobs (by status) within the broad occupational groups analysed above.

The occupational status of the jobs of full-time workers increases with years since leaving school. Among young men working full-time occupational status rose from an average score of 23 in the first year to 27 in the fourth year. Among young women working full-time there was a larger increase from 25 to 32. Among part-time workers, mean occupational status was lower for both sexes and the increase over time was much smaller among female part-timers. However, in most years female part-time workers showed a higher mean occupational status than male part-time workers (Table 3).

Weekly Earnings

Table 3 shows the mean and median weekly earnings of the four groups. The medians are presented because the means are sensitive to the small numbers with very high weekly earnings which exaggerate group differences. These figures are restricted to employees, and exclude the small numbers of non-employee workers. Both mean and median earnings show that full-time workers earn more than part-time workers, males have higher earnings than females, and all groups show increases greater over time than the inflation rate. Generally, differences are smaller with median rather than weekly earnings.

Between the first and fourth years the mean weekly earnings of males working full-time increased from \$320 to \$626, a rise of nearly 100 per cent. Over the same time period, mean weekly earnings among female full-time workers rose by nearly 80 per cent. Median weekly earnings rose by 93 per cent among males and 86 per cent among females. Part of the substantial increase in weekly earnings can be attributed to the change from apprenticeship to award wages.

Among part-time workers there is less growth in weekly earnings. Between the first and fourth years, mean weekly earnings among males rose by 60 percent and among females 63 per cent. Median weekly earnings rose by 38 per cent among males and 70 per cent among females.

It is noteworthy that males in their fifth year after leaving school have higher mean and median earnings than those in the fourth year. This finding contrasts with their lower occupational status, and similar levels of work satisfaction and career jobs. The higher earnings finding probably can be attributed to the greater time spent in the workforce.

Prefer to Work Full-Time

In the first year since leaving school, about 67 per cent of males and 60 per cent of females working part-time indicated they would prefer to work full-time. By the fourth year, this proportion had fallen to 50 per cent among females but declined only slightly among males. This finding is consistent with the pattern discussed earlier of young women workers becoming more satisfied with part-time work in contrast to male part-time workers. In the fourth year after leaving school 64 per cent of males working part-time would prefer full-time work compared to 50 per cent of young women. In the fifth year only 37 per of female part-time workers preferred to work full-time (Table 3).

Summary

Generally, it can be concluded that full-time workers are in a superior work situation than part-time workers. They are more likely to be professional or managerial occupations. They exhibit higher levels of work satisfaction, are substantially more likely to be in 'career' jobs, hold higher status jobs and have higher weekly earnings. Male full-time workers are less likely to be in semi- or unskilled jobs than their part-time peers, and for females, full-time workers are less likely to be in clerical, service or sales jobs. Furthermore, increases over time in occupational status and earnings

are stronger among full-time workers. The rather positive outcomes of full-time workers in the four to five years after leaving school contrasts sharply with the situation of the unemployed who are examined in the next section.

The work situation of part-time workers is by no means dire. They show high levels of work satisfaction. Increasing proportions regard their present job as constituting a career job, and over time, they are working in higher status jobs and earning more money. A decreasing proportion of female part-time workers would rather be working full-time. Furthermore, the next chapter shows that each year a high proportion move into full-time work.

It is more difficult to draw conclusions about the relative labour market situation of male and females. Males enjoy higher earnings, and are more likely to be in jobs that they consider as part of their career. They are more likely to be working full-time. On the other hand, among full-time workers in the second and subsequent years, a higher proportion of young women were in professional and managerial occupations. Also they were considerably less likely to be working in semi- and unskilled manual jobs. These gender differences in occupational group are also reflected in females' higher mean levels of occupational status. Among part-time workers, work satisfaction among females was higher in the later years and an increasing proportion considered themselves to be working in career jobs. Therefore, the work situation of young women without university qualifications is not substantially and consistently worse than that among comparable groups of young men.

The Unemployed

The purpose of this section is to document the situation of the unemployed defined as not working and looking for work. Although the proportion unemployed declined in the years since leaving school it may be the case that those unemployed in the later years are experiencing more severe bouts of unemployment and their overall labour market position may be deteriorating. The results discussed in this section are presented in Table 4.

Looking For Full- or Part-time Work

The first indicator examined is the proportion looking for full-time work. A lower proportion looking for full-time work may indicate weakening attachments to the labour force. The overwhelming majority of those looking for work were seeking full-time rather than part-time employment. This was especially the case for unemployed males with nearly 90 per cent preferring full-time work in each of the first four years after leaving school. However, a slightly lower and declining proportion of unemployed young women were seeking full-time work. In the first year, 84 per cent were seeking full-time work, declining each year so that by the fourth year 75 per cent were looking for full-time work and 25 per cent part-time work. Among the small group of females unemployed in the fifth year after leaving school, just over 60 per cent were seeking full-time rather than part-time work. The comparable figure for males was 85 per cent.

Time Spent Looking For Work

Unfortunately, those looking for work spent considerable periods unemployed. In the later years, young men tended to spend a greater proportion of time than young women looking for work.

In the first year after leaving school unemployed males spent on average 65 per cent of the time since leaving school, not working but looking for work. By the fourth year this figure had declined to under 50 per cent, still a considerable period of time. A steeper decline was found among unemployed females, who on average spent 65 per cent of time in the first year looking for work (the same as for males) but about a third of the time in the fourth year.

The substantial time spent looking for work among the unemployed was also reflected in the proportion that spent more than 30 per cent of the year (between 3 and 4 months) looking for work. In the first year nearly 80 per cent of both males and females had spent more than 30 per cent of the

year looking for work. By the fourth year, this proportion had declined to around 60 per cent for unemployed males and to 40 per cent for unemployed females.

The small group looking for work in the fifth year since leaving school are experiencing severe difficulties. Unemployed males had spent, on average, 55 per cent of that year looking for work and females 48 per cent. Over three-quarters of unemployed males and about half of unemployed females had spent more than 30 per cent of the year looking for work.

Table 4 Unemployment and work experiences of those looking for work, years 1 to 5 since leaving school

	Year	Males	Females
Looking for full-time or part-time work <i>Per cent answering 'full-time'</i>	First	89	84
	Second	93	78
	Third	83	79
	Fourth	90	75
	Fifth	85	63
Percentage of time between beginning of year to time of interview spent looking for work. <i>Mean per cent</i>	First	65	65
	Second	61	49
	Third	53	52
	Fourth	47	33
	Fifth	56	49
Percentage looking for work for more than 30% of time since beginning of year <i>Per cent</i>	First	79	79
	Second	76	59
	Third	71	64
	Fourth	62	39
	Fifth	77	52
Percentage of time between leaving school to time of interview in previous year spent looking for work <i>Mean per cent</i>	First	-	-
	Second	47	39
	Third	37	30
	Fourth	37	29
	Fifth	31	24
Percentage of time between beginning of year to time of interview spent working (full or part-time) <i>Mean per cent</i>	First	35	33
	Second	31	29
	Third	39	46
	Fourth	49	49
	Fifth	60	58
Percentage of time between leaving school to interview in previous year spent working (full or part-time) <i>Mean per cent</i>	First	-	-
	Second	50	51
	Third	53	50
	Fourth	54	61
	Fifth	57	48

Note: Unemployed at the time of the annual interview.

Prior Experience of Unemployment and Work

Generally those looking for work in one year had spent considerable proportions of the time since leaving school looking for work up until the end of the previous year. In the second year unemployed males spent on average 47 per cent of the time since leaving school, not working but looking for work. The comparable figure for unemployed females was 39 per cent. In the third year

unemployed males had spent, on average, nearly 40 per cent of the time (nearly 10 months) since leaving school looking for work. For females, the average proportion was closer to 30 per cent. Among those unemployed in their fifth year, the average time spent was less although still considerable. So in later years the unemployed had spent a smaller, but still considerable, time unemployed since leaving school.

In each year the unemployed show only modest proportions of time working full or part-time in the year prior to interview. However, (proportional) experience of work was greater among those unemployed in later years. In the first year since leaving school, unemployed males had spent, on average, 35 per cent of the previous year working. By the fourth year, the comparable figure was closer to 50 per cent. The comparable figures for young women are almost identical. The group looking for work in their fifth year had spent nearly 60 per cent of the previous year working.

Similarly, among those looking for work, the proportion of time since leaving school up until the previous year spent working (either full-time or part-time) was modest. In the second year unemployed males and females had spent, on average, only about half that time working. In the fourth year unemployed males had spent, on average, 54 per cent of time since leaving school working. Females show a greater increase, from 51 per cent in the second year to 61 per cent in the fourth year. However on average, young women looking for work in their fifth year since leaving school had spent less than half the time since leaving school working.

Summary

Although, each year after leaving school, the proportion looking for work was less than 10 per cent and declining, those unemployed are facing severe difficulties. The time spent looking for work both in the year they were unemployed and since leaving school, was excessively long (over 50 per cent) and they have had only moderate amounts of experience working. The long periods of unemployment are likely to have psychological repercussions and damage their prospects for subsequent full-time work.

The positive news is that the unemployed remain strongly attached to the labour market—evidenced by the high proportion seeking full-time work—and unemployment appears less severe the more time that has elapsed since leaving school. Furthermore, the later the bout of unemployment, the greater experience they have had working which improves their chances of moving back into employment. Another point is that those looking for work in a given year are largely different people from those looking for work in the previous and following years. The pathways analyses presented in the next chapter show that only 30 to 40 per cent of the males looking for work in one year are also looking for work the next year. For young women less than 30 per cent remain unemployed in successive years.

Gender differences among the unemployed indicate that males are worse off. They show greater proportions of time looking for work both during the year of interview and since leaving school, and higher proportions were looking for work for more than 30 per cent of the year. Furthermore, in the third and fourth years since leaving school higher proportions of young men were looking for work than young women.

Main Activity of ‘Other’ Group

The increasing percentage of young women whose main activity was classified as ‘other’ raises the question of what this group are actually doing. Table 5 summarises the main activities of this group for the third, fourth and fifth years after leaving school.³ In the first and second year, the ‘other’ group was too small, comprising only 3 or 4 per cent, to perform more detailed analyses. For the later years, it was not possible to classify the activities of all of those in ‘other’ activities.

Table 5 shows that the main activity of the ‘other’ group was home duties. ‘Home duties’ includes looking after children or other relatives. The proportion in home duties increased with years since leaving school and was far more common among young women than young men. In the fourth and fifth years, 59 and 81 per cent of young women not in full- or part-time study or work, or looking

for work, were engaged in home duties. Travel or holidays was the next most common activity and was the commonest activity among young men whose main activity was classified as other.

Table 5 Main activity of those classified as engaged in ‘other activity’ (%)

Main activity		Year since leaving school		
		Third	Fourth	Fifth
All	Study/training (non-formal; short courses)	8	3	5
	Home duties	44	40	66
	Travel or holidays	13	16	6
	Ill/unable to work	7	5	10
	Other	11	12	6
	Unable to ascertain	17	23	8
			100	100
Males	Study/training (non-formal; short courses)	14	8	X
	Home duties	15	3	X
	Travel or holidays	19	27	X
	Ill/unable to work	4	5	X
	Other	24	21	X
	Unable to ascertain	23	35	X
			100	100
Females	Study/training (non-formal; short courses)	6	1	-
	Home duties	57	59	82
	Travel or holidays	10	11	2
	Ill/unable to work	8	5	3
	Other	5	7	4
	Unable to ascertain	14	17	10
			100	100

Note: ‘X’ indicates that the sample is too small for analysis.

Table 6 presents the percentages of the ‘other’ activity group who were living with children of their own. Among young women, this proportion increased from 45 per cent in the second year to 54 per cent in the fourth year and to nearly 80 per cent in the fifth year. In contrast, none or very few young men were living with children of their own.

Table 6 Percentage of those classified as engaged in ‘other activity’ living with their own children

	Years since leaving school			
	2 years	3 years	4 years	5 years
All	30	30	36	65
Males	0	0	0	4
Females	45	43	54	79

Summary

It is often assumed that young people not in full-time study and not in the labour force are not productively engaged. However, these analyses indicate that most are young women raising children. Of the 10 per cent of young women classified as engaged in 'other' activities in the fourth year since leaving school, more than half are raising children. Similarly, the initially alarming finding that in the fifth year after leaving school, 20 per cent of young women who did not go to university, or were not in study or the labour force, is tempered by the fact that 80 per cent were looking after children of their own. The data indicate that most have aspirations to re-enter study or work at a later date. In 2002, 62 per cent indicated they were likely to pursue study in the next five years and 86 per cent indicated that they were likely to look for work within the next five years.

3. PATHWAYS OF MAIN ACTIVITY

This chapter examines the dynamics of the cohort, that is, the extent to which there is movement in and out of activities in the years since leaving school. The first section focuses on the pathways to and from the activities presented in the previous chapter. The second section summaries the activity pathways, by calculating the percentage of time that respondents were engaged in particular activities. These analyses are performed separately for males and females.

The analyses presented in this chapter address the following research and policy questions:

- Is full-time study usually followed by full-time work?
- Once full-time employment is secured, is it a relatively stable activity or is there considerable movement out of full-time employment?
- Do part-time workers tend to remain in part-time work, or move into full-time work, unemployment or 'other' activities?
- Similarly, to what extent do those looking for work continue to do so, or move into full-time or part-time work?
- How much stability is there in the 'other' group? Do young people not studying full-time and not in the labour force, remain in this situation or move to full- or part-time work?
- Over the five years since leaving school, what proportions were always in full- and part-time work, looking for work or engaged in 'other' activities? What proportion has never been in full- or part-time work?

Pathways between Major Activities

Figures 1 and 2 present the year-to-year pathways of major activity at the time of the annual interview for males and females, respectively. The major activities used are the same as that used throughout this report, full-time study, full-time work, part-time work, looking for work (or unemployed) and other. In Figures 1 and 2 the percentages within boxes are the proportion in the particular activity of those in which data were available for the two adjacent years.⁴ Arrows and the associated outflow percentages indicate year-to-year stability within, and movement between, major activities.

It should be noted that activity is measured at the time of annual interview so it is possible for some respondents to be engaged in the same activity at the time of successive interviews but be engaged in different activities during the intervening period. For example, it is possible for a respondent to be in full-time work at the first interview, lose their job, look for work, work part-time but be in full-time work at the time of the next year's interview. However, the data does not support such a detailed analysis and would add far more complexity. Therefore, these pathway diagrams provide a general overview of the stability of activities and movement to and from activities for successive years.

Full-time Study

Figure 1 shows that for males over 40 per cent of those in full-time study in the first year were in full-time study the following year. The year-to-year constancy in full-time study declined substantially with increased time since leaving school. Of those in full-time study in the second year, only 28 per cent were in full-time study the next year. The corresponding figure for the third to fourth years was 17 per cent; and for fourth to fifth years only 13 per cent. The decline in constancy most likely reflects course completion or withdrawal.

The most common destination among males from full-time study was full-time work. About 40 to 50 per cent of those males in full-time study in one year were in full-time work the subsequent year. This percentage is higher in later years. The second most common destination was part-time work,

and the third was unemployment. The proportion of males in full-time study one year but looking for work the next increased with time since leaving school. Between years 1 and 2, 8 per cent of those in full-time study were looking for work the next year, but between years 4 and 5 this increased to 25 per cent. However, only 3 per cent of the group was in full-time study in the fourth year since leaving school.

For young women the pathways from full-time study are similar to those for young men (Figure 2). The year-to-year stability of full-time study declines steeply from 45 per cent in the first two years, 24 per cent for the third and fourth years and only 5 per cent for the fourth and fifth years. Most of the movement from full-time study was to full-time work. However, a higher percentage of young women than young men in full-time study were in part-time work the following year. The percentage looking for work the following year is generally less than that for young men.

Full-time Work

Full-time work shows a very high degree of constancy from year-to-year. For young men, approximately 90 per cent of those in full-time work in one year were in full-time work the next. For young women the figure is slightly lower, but still high, over 80 per cent. The high constancy of full-time work suggests that most young people are in long-term jobs or have skills that enable them to move from one full-time job to another.

Given the very high stability of full-time work there was little year-to-year movement to 'other' activities. Very few moved to full-time study and no one activity stands as the major destination. However, there are some gender differences. A higher proportion of young women than young men were in part-time work in the subsequent year. However, this percentage was small; it was highest at 12 per cent between the fourth and fifth years. Only about 5 per cent of young men in full-time work were looking for work the following year. For young women movement into unemployment was very small, particularly between the third and fourth years.

Part-time Work

There was much less constancy in part-time work than in full-time work. For young men, at the most 32 per cent were in part-time work in adjacent years and between the fourth and fifth years constancy was very low at 16 per cent. The constancy of part-time work for young women was higher at between 28 and 37 per cent. The low stability of part-time work indicates that part-time work is usually only of short duration.

Only small percentages of those in part-time work moved into full-time study. The most common destination from part-time work was full-time work. Of the young men in part-time work in the first year after leaving school, nearly 60 per cent were in full-time work the following year. In subsequent years the corresponding figure was between 50 and 56 per cent. Movement from part-time work to full-time work was slightly less common among young women. Between the first and second years, 60 per cent moved into full-time work (the same as for men) but in subsequent years around 40 per cent moved to full-time work.

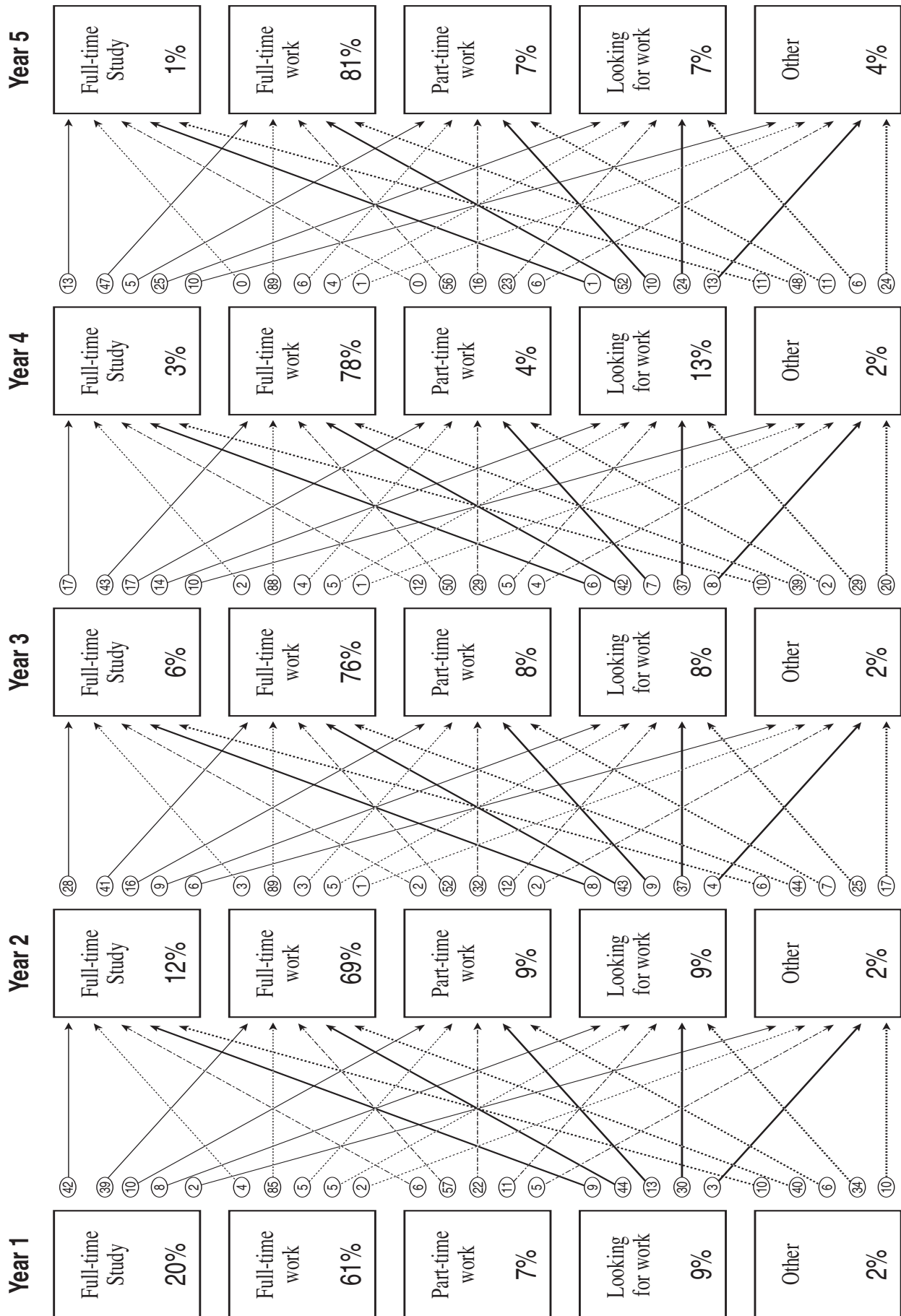


Figure 1: Pathways of main activity of males in years since leaving school (Bachelor Degree participants 1999-2001 excluded)

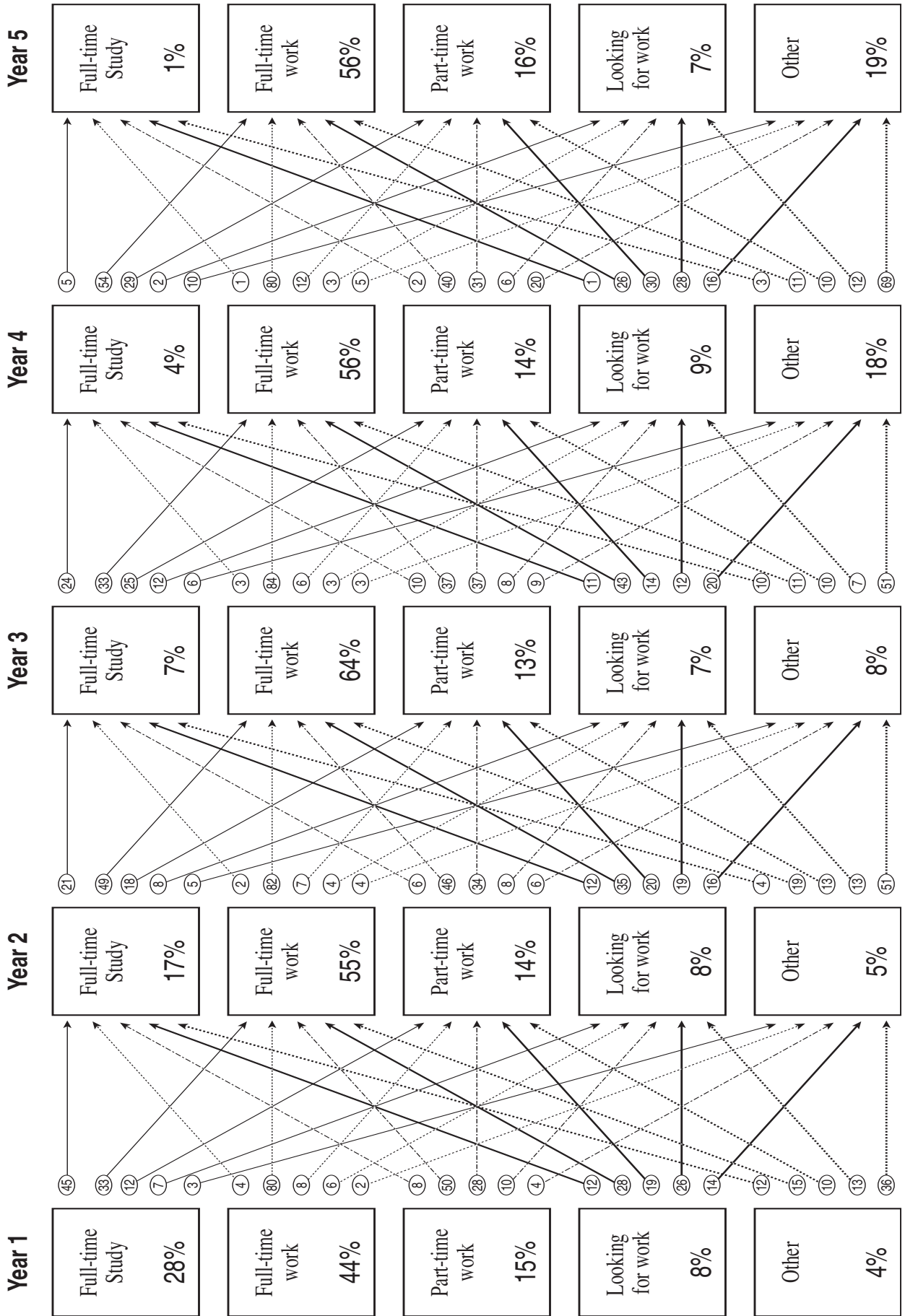


Figure 2: Pathways of main activity of females in years since leaving school (Bachelor Degree participants 1999-2001 excluded)

There was little movement from part-time work to unemployment. Of the males working part-time in the first year, 11 per cent were looking for work in the following year. Among males, movement from part-time work to unemployment was highest between the fourth and fifth years at around 23 per cent, but this figure is based on only a small number of respondents. Similarly, young women in part-time work were unlikely to be looking for work in the following year. Only between 6 and 10 per cent of females in part-time work were looking for work the following year.

Similarly, there was little movement from part-time work to 'other' activities. Among young men this proportion was 6 or less per cent. Among young women in the first three years after leaving school, less than 10 per cent moved from part-time work to 'other' activities. Between the fourth and fifth year the figure rises to 20 per cent, although it is based on a small number of cases.

Looking for Work

Of young men looking for work in the first year after leaving school, 30 per cent were looking for work at the time of interview in the second year after leaving school. In the second and third years after leaving school, nearly 40 per cent were looking for work in the following year. For young women, there is less year-to-year stability in looking for work. Of young women looking for work in the first year since leaving school, 26 per cent were looking for work the next year. In the second and third years, the corresponding figures were lower at 19 and 12 per cent respectively.

The main destination of those looking for work was full-time work. Among young men looking for work in the first year after leaving school, 44 per cent were in full-time work in the second year. The corresponding figures for subsequent year-to-year movements were 43, 42 and 52 per cent. Among young women, movement from unemployment to full-time work was weaker, with only 28 per cent of those looking for work in the first year employed full-time in the second year. In the second and third years, movement by young women from unemployment to full-time work was 35 and 43 per cent respectively or about 10 percentage points less than that for males.

In contrast to movement from unemployment to full-time work, there is greater movement of young women to part-time work. Of females unemployed who were in part-time work in the year after leaving school, 19 per cent were in part-time work the following year. For the second and third years, 20 and 14 per cent respectively made this transition. The corresponding figures for men were 13 per cent for the first year and 9 and 7 per cent for the second and third years.

Only small percentages of young men looking for work in any one year are engaged in 'other' activities the following year. In most years less than 10 per cent made this transition. The proportion of young women moving from unemployment to 'other' activities is larger, between 14 and 20 per cent. So there is some evidence that young people disillusioned with their employment prospects disengage from both study and work. However, other factors are also at play: a high proportion of young women not in study or the labour force are bringing up children, and a sizable proportion of young men are on holiday or travelling. Longer-term data are needed to assess the effects of moving from unemployment to not being in study or the labour force.

'Other' Activities

Among young men engaged in 'other' activities in the first year only 10 per cent were similarly engaged in the second year. Between the third and fourth years, the stability rises to 20 per cent. However, the numbers are small: only 2 per cent of young men were engaged in 'other' activities in the third year, and 20 per cent of 2 per cent is a very small proportion of young men. For young men movement from 'other' activities was mostly to full-time work. Between the first and second years, 40 per cent made the transition to full-time work. For later years, between 39 and 48 per cent of the 'other' group were in full-time work the next year. The second most common destination for these young men was 'looking for work', with between 6 and 34 per cent looking for work the next year. Again, caution should be exercised in interpreting these figures since the group of young men engaged in 'other' activities is very small.

The pathways from 'other' activities for young women are quite different. The levels of stability from year-to-year are much higher. Of young women engaged in 'other' activities in the first year, 36 per cent were similarly engaged the following year. The corresponding figure for young men was 10 per cent. In subsequent years the constancy of 'other' activities among young women increased, rising to 50 per cent for the second to third years and nearly 70 per cent for the fourth to fifth years. In contrast to young men, a much smaller proportion of the young women engaged in 'other' activities move into full-time work. The proportion that made this move was around 15 per cent between the first and second years and 19 per cent between the second and third years. The corresponding figures for young men were 40 and 44 per cent.

Overview of Pathways between Major Activities

The most common destination from full-time study is full-time work. Approximately 40 and 50 per cent of males in full-time study in one year are in full-time work the next. For women, this proportion is more variable at between 33 and 54 per cent. One of the most striking results of this analysis of pathways was the high stability of full-time work (from one year to the next) at around 80 per cent for young women and 90 per cent for young men. Furthermore, there was strong movement into full-time work from 'other' activities. These are positive findings indicating the importance of gaining full-time work. Full-time work allows young people to develop a range of skills that substantially increase their labour market prospects.

In contrast to the stability of full-time employment, those in part-time employment are far more likely to move out of part-time work by the time of the next interview. Of males in part-time work in one year, only 15 to 30 per cent were in part-time work the next year. For women the proportion was higher, at between 25 and 40 per cent. The most common destination from part-time employment was full-time work, although more so for young men than young women.

Generally, the year-to-year stability of unemployment was low, but of some concern, given the consequences of prolonged unemployment. In the first three years after leaving school, 30 to 40 per cent of males looking for work in one year were looking for work the next. Among females, the figure is lower, and after the first year declines. So there is a small group of young people who are unemployed in successive years and are likely to have great difficulty in obtaining full-time work. This seems to apply more to young men than young women.

Overall, the results run counter to the milling and churning thesis about the youth labour market. There is considerable stability of full-time work and much of the movement from part-time work and even unemployment is to full-time work.

Stability of Activity across Years

The previous section showed the year-to-year stability and movement between main activities. However, it did not show the extent to which young people remain in the same activity, for example those who were always unemployed throughout the five years since school.

This section documents the proportion of respondents who at all time points were engaged in the same activity, the proportion that had no experience of a particular activity, and the proportions in between. The results are presented in Table 7. Note that activity is measured by activity at the time of the annual interview so it is possible that respondents who were in the same activity at all interviews were in different activities during the intervening periods. However, activity at the time of interview is a reasonable approximation of activity for the whole year.

Table 7 Percentage of annual interview time points in each activity

Main activity	Frequency	Males	Females
Full-time Study	At no interview	75	66
	1-25 per cent of interviews	10	12
	26-50 per cent of interviews	9	14
	51-74 per cent of interviews	1	2
	75-90 per cent of interviews	2	2
	At all interviews	4	4
Full-time Work	At no interview	15	24
	1-25 per cent of interviews	6	8
	26-50 per cent of interviews	13	19
	51-74 per cent of interviews	6	5
	75-90 per cent of interviews	14	13
	At all interviews	47	31
Part-time Work	At no interview	81	68
	1-25 per cent of interviews	10	14
	26-50 per cent of interviews	6	11
	51-74 per cent of interviews	1	3
	75-90 per cent of interviews	1	1
	At all interviews	1	3
Looking for Work	At no interview	79	79
	1-25 per cent of interviews	9	10
	26-50 per cent of interviews	7	7
	51-74 per cent of interviews	2	1
	75-90 per cent of interviews	1	1
	At all interviews	3	2
Other	At no interview	93	86
	1-25 per cent of interviews	4	6
	26-50 per cent of interviews	3	5
	51-74 per cent of interviews	<0.5	1
	75-90 per cent of interviews	0	1
	At all interviews	<0.5	2
Either Full-time or Part-time Work	At no interview	10	13
	1-25 per cent of interviews	4	5
	26-50 per cent of interviews	12	17
	51-74 per cent of interviews	5	6
	75-90 per cent of interviews	14	14
	At all interviews	56	45
Fully Engaged: Full-time Study or Full-time Work	At no interview	7	13
	1-25 per cent of interviews	3	4
	26-50 per cent of interviews	10	14
	51-74 per cent of interviews	5	5
	75-90 per cent of interviews	14	15
	At all interviews	61	49

Note: The proportions were calculated by summing the number of interview time points that respondents were in each activity and dividing by the number of times they were interviewed. These proportions were then categorised in five groups: at no interview; 1 to 25% (1 out of 4 or 5 interviews); 26 to 50% (1 out of 2 or 3 interviews, 2 out of 4 or 5), 51 to 74% (2 out of 3 interviews, 3 out of 5 interviews), 75 to 90% (3 out of 4 interviews, 4 out of 5 interviews); or at all interviews. The data were weighted by weight of last year in survey.

Most had little experience being in full-time study after school, and males were less likely to have been in full-time study. About three-quarters of young men and two-thirds of young women were not in full-time study at the time of any post-school interview. Therefore, a quarter of males and a third of females were in full-time study at the time of at least one annual interview.⁵ However, less than 5 per cent were in full-time study at the time of each interview.

The bulk of the school leavers who did not go to university had had considerable experience in full-time work. Nearly 50 per cent of young men and one-third of young women were in full-time work at every post-school annual interview. About 60 per cent of males and 45 per cent of females were in full-time work in 3 out of 4, or 4 out of 5, or at all interviews. On the other hand, 6 per cent of males and 8 per cent of females were not in full-time work at the time of any interview.

The great majority of both young men and women who did not go to university did not work part-time during their post-school years. Over 80 per cent of young men and nearly 70 per cent of young women had no experience of part-time work in this period. Very few (about 1 per cent of males and 3 per cent of females) were in part-time work at every interview. Less than 5 per cent were in part-time work at more than half the annual interviews.

Very few (about 2 to 3 per cent) were looking for work at every interview. Less than 5 per cent were looking for work at 3 or more interviews. However, about 20 per cent of both males and females were unemployed during at least one of the annual interviews.

About 93 per cent of males and 86 per cent of females were in full-time study, working or looking for work at every interview. Only about 8 per cent of males were engaged in an 'other' activity at one or more interview. This compares with about 15 per cent of females.

Summary

The main conclusion of these analyses is that, of those young people who do not enrol in university, there are only small proportions who were permanently looking for work, permanently in part-time work or permanently engaged in 'other' activities in the 4 to 5 years after leaving school. However, less than 50 per cent of males and less than a third of females were permanently in full-time work during this period. Including part-time work with full-time work, some 56 per cent of young men and 45 per cent of young women were at work at the time of each annual interview. These findings reflect the considerable movement across activities in the initial years after leaving school.

The results presented here allow estimates of the proportion of the young people who did not go to university who are 'at risk' of an unsuccessful to school-to-work transition. These estimates depend on the criteria used. Table 7 indicates that around 40 per cent of males and 50 per cent of females were not 'fully engaged' in full-time work or study at each of the annual interviews. However, such a definition assumes that part-time work and 'other' activities are just as deleterious as unemployment, and the results show that there is considerable movement from these activities into full-time employment. If the criterion used is being in full-time work, then the focus is on the proportion that at no interview were working full-time minus the proportion that was always in full-time study. Under this criterion, 10 per cent of males and 19 per cent of females among non-university youth could be considered 'at risk' of struggling to find full-time work.

If the focus is on those who do not work at all (either full or part-time) then 6 per cent of males and 8 per cent of females would be 'at risk'. If the criteria were tightened further to focus on only those who experience substantial unemployment, then the estimates are much smaller. For example, if the criterion is not working and looking for work more than 50 per cent of the time since leaving school, then about 5 per cent of males and 4 per cent of females would be considered as facing severe difficulties in finding work. Note that on some criteria young women appear worse off than young men, while on stricter criteria there was little difference between the sexes.

The criteria used to classify 'at-risk' individuals are debateable and require longer-term data to assess the consequences of being in one type of activity rather than another. For example, 'other'

activities could be considered as an 'at risk' activity, but the high proportion on holiday or looking after children means that not all (or most) can necessarily be considered 'at risk', especially as high proportions indicate an intention to return to study or work in the next few years. However, the 'other' group is likely to include a proportion of disillusioned job seekers, as well as those who for a variety of reasons may not wish to work or are unable to do so. Similarly, there are part-time workers earning high incomes or in professional and managerial occupations who cannot be considered 'at risk'. On the other hand, there are young part-time workers with poor future employment prospects.

So it is not possible from these data to provide an unequivocal estimate of the proportion 'at risk' of severe difficulties in securing full-time employment. However, it is possible to conclude that in the current labour market the majority of school leavers have had considerable experience working in the first four to five years after leaving school, and very few are permanently unemployed or in part-time work. This conclusion is contrary to 'crisis' accounts of the youth labour market.

4. CORRELATES OF MAIN ACTIVITY

This chapter examines the correlates of main activity in the group of non-university bound youth. It addresses the following research questions.

- How does main activity relate to social and demographic characteristics such as, gender, region, Indigenous status, ethnicity, and socioeconomic background?
- How does main activity relate to educational factors such as type of school attended, achievement in literacy and numeracy, school leaving status, tertiary entrance score, and participation in post-school education and training?
- How does main activity relate to prior labour force experiences such as part-time work while at school, and prior experiences of work and unemployment?

Demographic and Social Background Characteristics

Table 8 presents main activity in the first year after leaving school classified by demographic and social background factors. Table 9 is the corresponding table for the fourth year after leaving school. Details on the measurement and distributions of demographic and social background factors can be found in Appendix 2.

Although gender differences in activities were highlighted in the first chapter, they are included here to compare with other socio-demographic characteristics. (The percentages differ very slightly for those in Table 1 because of the exclusion of those only studying part-time.) In the first year since leaving school, higher proportions of young women than young men were in full-time study and part-time work, and lower proportions in full-time work. A slightly higher proportion of young women were engaged in ‘other’ activities and a slightly lower proportion looking for work.

Region was defined by place of residence—metropolitan or non-metropolitan—when the sample was first contacted in 1995 (Year 9). On this measure there were only small regional differences in post-school activity. A higher proportion of metropolitan than non-metropolitan school leavers were studying full-time in the first year—26 compared to 20 per cent—and a slightly higher proportion were working. In the fourth year there were again few regional differences in the major activities. Similar proportions were in full-time or part-time work (around 80 per cent). Differences in the proportions in part-time work had reversed by the fourth year with the metropolitan group showing a higher proportion. Of note is the slightly higher proportion of metropolitan students looking for work in the fourth year. This difference is offset by the higher proportion of non-metropolitan youth in ‘other’ activities.

Although the sample of Indigenous youth analysed was small, these data indicate that they have substantially worse outcomes than non-Indigenous young people. In the first year nearly 17 per cent of the Indigenous group were looking for work compared to 9 per cent of the non-Indigenous group.⁶ The proportion of the Indigenous youth fully engaged in either study or work was 64 per cent compared to nearly 80 per cent of the non-Indigenous group. A substantial 7 per cent of the Indigenous group were classified as engaged in ‘other’ activities compared to only 3 per cent of the non-Indigenous group. By the fourth year the relative situation of Indigenous youths had deteriorated. Unemployment among the non-Indigenous group has declined slightly to 6 per cent whereas it was around 18 per cent for the Indigenous group. The proportion of Indigenous young people in full-time work was about 20 percentage points less than that for non-Indigenous youth. The proportion of Indigenous youth classified as engaged in ‘other’ activities had by the fourth year increased to over 11 per cent compared to 6 per cent for the non-Indigenous group. It should be noted that sample attrition among the Indigenous group was relatively high so that their outcomes one and four years after leaving school may be worse than these figures indicate.

Table 8 Social background and main activity in first year after leaving school (%)

Variable	Category	Full-time study	Full-time work	Part-time work	Looking for work	Other	Total
Gender	Male	20	62	7	10	2	100
	Female	28	45	15	9	4	100
Region	Metropolitan	26	52	10	9	3	100
	Non-metropolitan	20	56	11	9	3	100
Indigenous status	Indigenous	16	48	13	17	7	100
	Non-Indigenous	23	55	11	9	3	100
Father's country of birth	Australia	21	57	11	9	3	100
	Other English-speaking	22	52	12	10	3	100
	Non-English-speaking	36	42	10	10	2	100
Language background	English	22	56	11	9	3	100
	Other than English	40	34	8	16	3	100
Parental occupation	Managerial/professional	27	54	11	7	2	100
	Clerical/service	23	56	9	10	2	100
	Trades	23	56	10	7	3	100
	Semi-skilled manual	19	56	12	11	3	100
Parental education	University	29	50	12	7	2	100
	Other post-secondary	21	60	9	8	2	100
	School only	23	55	10	9	3	100

Note: Excludes those enrolled in a Bachelor Degree in 1999 or 2000 or 2001

Table 9 Social background and main activity in fourth year after leaving school (%)

Variable	Category	Full-time study	Full-time work	Part-time work	Looking for work	Other	Total
Gender	Male	5	77	7	8	3	100
	Female	7	65	14	6	10	100
Region	Metropolitan	7	71	11	7	5	100
	Non-metropolitan	5	72	9	7	8	100
Indigenous status	Indigenous	6	53	12	18	11	100
	Non-Indigenous	6	72	10	6	6	100
Father's country of birth	Australia	5	73	10	6	6	100
	Other English-speaking	7	74	7	8	4	100
	Non-English-speaking	8	68	11	7	7	100
Language background	English	5	73	9	6	6	100
	Other than English	9	59	16	10	5	100
Parental occupation	Managerial/professional	6	75	10	5	4	100
	Clerical/service	4	69	12	6	8	100
	Trades	4	73	9	8	6	100
	Semi-Skilled manual	7	71	8	7	7	100
Parental education	University	9	71	11	4	5	100
	Other post-secondary	8	77	7	4	4	100
	School only	5	72	10	7	6	100

Note: Excludes those enrolled in a Bachelor Degree in 1999 or 2000 or 2001

Among school leavers who did not pursue a university education, the activities of youths with fathers born in a non-English speaking country differ from those with Australian-born fathers or

with fathers born in another English-speaking country. In the first year, higher proportions of youths with fathers born in a non-English speaking country were in full-time study and lower proportions in full- or part-time work. A lower proportion of the group with Australian-born fathers were looking for work compared to the other two groups. In the fourth year, the group with fathers born in a non-English speaking country show lower levels of full-time work but higher levels of full-time study and part-time work. There was little difference between these groups in the proportion looking for work. However, the proportion of the group with fathers born in a non-English speaking country engaged in 'other' activities was higher than the proportions in the two other groups.

The alternative measure of ethnicity based on the main language spoken at home shows stronger differences between groups. As was the case with the measure based on father's country of birth, the language background other than English (LBOTE) group shows higher levels of full-time study in the initial year after leaving school and correspondingly lower levels of full-time or part-time work. However, the differences are greater with the language background measure. Unemployment is particularly severe in the LBOTE group at around 15 per cent, compared to 9 per cent for the English-speaking background group. In the fourth year, substantial differences according to language background remain. The proportion of the LBOTE group in full-time study was around 9 per cent compared to 5 per cent of those with English-speaking backgrounds. A substantially higher proportion of LBOTE youths were in part-time work (16 compared to 9 per cent) and a smaller proportion in full-time work (59 compared to 73 per cent). About 10 per cent of the LBOTE group were looking for work compared to 6 per cent of the comparison group.

There are only small and unsystematic differences in activity according to parental occupational background. In the first year after leaving school, higher proportions of those from professional, and at a lesser extent, trade backgrounds were studying full-time. However, in the fourth year these differences were not repeated. There was little difference in the proportion in full-time work by occupational background and those with trade backgrounds showed the highest employment level. Similarly, there are no sizable or systemic differences in part-time work across occupational background. Those with professional/managerial backgrounds show the lowest proportion looking for work, followed by those with clerical or sales occupational backgrounds.

Parental education showed similar patterns to parental occupational background. Having parents with a university education is associated with higher levels of participation in full-time study. A non-university post-secondary education background is associated with higher levels of full-time work. Unemployment, and participation in 'other' activities', is highest amongst those with the least educated backgrounds. These findings probably reflect more educated parents influencing their children to pursue further study and the greater emphasis parents in the trades place on obtaining an apprenticeship or full-time work.

Statistical Model

Although Tables 8 and 9 indicate that there are many differences in activity according to demographic and social background factors, there are few statistically significant differences. Table A 9 in Appendix 5 presents the results from modelling activity in the first and fourth years after leaving school by gender, region, Indigenous status, language background and parental occupation. (Father's country of birth and parental education could not be included since they are too highly correlated with language and occupational background, respectively. The multinomial logit procedure is described in Appendix 4.)

Gender has significant effects. Young women were nearly twice as likely as young men to be in full-time study rather than full-time work in both the first and fourth years, other factors equal. Similarly, young women were substantially more likely than young men to be in part-time work than full-time work. The odds ratios were 2.6 in the first year and 2.2 in the fourth year. Young women were significantly more likely to be looking for work rather than in full-time work in the first year although the difference was small (an odds ratio of 1.2). There was no significant gender difference in the fourth year in the odds of looking for work rather than being in full-time work. Compared to young men, young women were increasingly likely to be engaged in 'other' activities.

The only statistically significant regional difference was that those from non-metropolitan areas were more likely to be engaged in 'other' activities in the fourth year. In the fourth year, the Indigenous group were over four times more likely to be looking for work than in full-time work compared to the non-Indigenous group. This effect is net of regional and socioeconomic differences. In the first year, the LBOTE group were three times more likely to be in full-time study rather than full-time work than the comparison group. They were also significantly more likely to be looking for work and engaged in 'other' activities in both the first and fourth years.

There were few significant differences according to parental occupational group. Those from a manual background were about 0.7 times more likely (or 1.4 times less likely) to be in full-time study in the first year compared to those with professional-managerial backgrounds. Those with trade backgrounds were less likely to be unemployed in the first year than those with professional/managerial backgrounds. (The odds ratio was around 0.7). In the fourth year, those with clerical, sales or service backgrounds were 1.6 times more likely than those with professional/managerial backgrounds, to be in part-time rather than full-time work, and twice as likely to be engaged in 'other' activities.

Educational Background Factors

In this section education factors are examined as possible influences on main activity after leaving school. The educational factors include school sector, achievement in Year 9 literacy and numeracy, participation in vocational education and training (VET) courses at school, school leaving status (early school leaving and school completion), ENTER score gained in Year 12, and participation in several types of post-secondary education and training. Appendix 2 provides details on these measures.

Cross-tabulations of main activity by these educational factors in the first and fourth years after leaving school are presented in Table 10 and Table 11 respectively. Prior participation in apprenticeships, traineeships, TAFE diplomas and certificates was analysed only for the fourth year after leaving school (Table 11).

Those who attended an independent school were more likely to be in full-time study in both the first and fourth years. They were also less likely to be looking for work but did not show substantially higher levels of participation in full-time work. Of the three groups, those who attended Catholic schools show the highest levels of full-time work. They also show lower levels of unemployment than government school students.

Young people who achieved well in Year 9 literacy and numeracy were generally more likely to be in full-time study or full-time work after leaving school. The higher achievement quartiles show lower levels of unemployment in both the first and fourth years. In the first year only 21 per cent of the lowest achievement quartile were in full-time study, and in the fourth year they show the lowest level of participation in full-time work. In both the first and fourth years, a higher percentage of the lowest quartile is engaged in 'other' activities.

Participation in VET at school was associated with slightly higher levels of full-time study, full-time work and lower unemployment in the first year. Unemployment was nearly 3 percentage points lower among those who had participated in VET at school. In the fourth year differences in full-time work and unemployment were in the same direction but smaller.

School completers (those who completed Year 12) were substantially more likely to be in full-time study in the first and fourth years. School completers were also substantially less likely to be unemployed than the other two groups or engaged in 'other' activities. In the fourth year they were more likely to be in part-time work than non-completers. Of the two groups of non-completers, early leavers who left school before the beginning of Year 11, show better outcomes than the later leavers (those who left school after the beginning of Year 11 and before August of Year 12). Compared to later leavers, early leavers had higher participation in full-time work and lower levels of unemployment in the first year; and in the fourth year lower levels of engagement in 'other' activities.

Table 10 Educational background and main activity in first year after leaving school (%)

Variable	Value	Full-time study	Full-time work	Part-time work	Looking for work	Other	Total
School sector	Government	22	54	11	10	3	100
	Catholic	25	56	10	8	2	100
	Independent	29	50	12	7	3	100
Year 9 achievement quartile	Lowest quartile	21	53	10	12	4	100
	Second lowest quartile	25	54	9	9	2	100
	Third quartile	25	53	13	7	3	100
	Highest quartile	24	57	11	5	3	100
VET in schools	VET	26	56	10	7	2	100
	No VET	23	53	11	10	3	100
School leaving status	Early leaver	14	61	10	10	5	100
	Later leaver	15	56	11	13	4	100
	Year 12 completer	29	51	11	6	2	100
ENTER score (Year 12 completers only)	90-100	19	57	15	4	5	100
	80-89	19	59	13	8	2	100
	70-79	31	55	11	3	1	100
	60-69	38	48	9	4	1	100
	50-59	37	47	10	4	1	100
	<50	34	45	12	8	1	100
	No score but Year 12	22	56	11	8	3	100

Note: Excludes those enrolled in a Bachelor Degree in 1999 or 2000 or 2001.

Those with ENTER scores between 50 and 70 showed higher rates of participation in full-time study. (It should be noted that there are few students with high ENTER scores who did not go to university). In the fourth year higher ENTER scores were associated with lower levels of unemployment.

Participation in an apprenticeship had a strong relationship with activity in the fourth year after leaving school. Nearly 90 per cent of those who had participated in an apprenticeship were in full-time work compared to an average of 72 per cent for the whole group. This is the highest percentage in full-time work of any of the social or educational groups examined. Very few of those with an apprenticeship were in full-time study, part-time work or engaged in 'other' activities; only 4 per cent were looking for work in the fourth year after school compared to 6 per cent overall.

Traineeships were less effective than apprenticeships in promoting full-time work. Of those who had participated in traineeships, 77 per cent were in full-time work in the fourth year. Only 8 per cent were in part-time work but 7 per cent were looking for work.

Participation in TAFE diplomas and certificates were associated with higher proportions in full-time study in the fourth year, reflecting continuing participation. Therefore, their levels of participation in full-time work were lower than for those who had participated in apprenticeships or traineeships. TAFE diplomas were associated with lower levels of unemployment than TAFE certificates. TAFE diplomas and certificates appear beneficial since those without any post-secondary education showed much high proportions looking for work (10 per cent) and engagement in 'other' activities (10 per cent).

Table 11 Educational background and main activity in fourth year after leaving school (%)

Variable	Value	Full-time study	Full-time work	Part-time work	Looking for work	Other	Total
School sector	Government	5	70	10	8	7	100
	Catholic	5	76	9	4	6	100
	Independent	7	74	9	3	7	100
Year 9 achievement quartile	Lowest quartile	6	67	10	10	8	100
	Second lowest quartile	5	74	9	6	7	100
	Third quartile	6	75	10	6	4	100
	Highest quartile	6	72	11	4	6	100
VET in Schools	VET	5	73	10	5	8	100
	No VET	6	71	10	8	6	100
School leaving status	Early leaver	2	72	8	10	8	100
	Later leaver	3	67	7	12	11	100
	Year 12 completer	7	73	11	5	5	100
ENTER score (Year 12 completers only)	90-100	24	59	13	--	3	100
	80-89	11	76	8	1	4	100
	70-79	13	74	7	4	2	100
	60-69	8	73	10	3	7	100
	50-59	8	75	9	5	4	100
	<50	7	73	12	4	4	100
	No score but Year 12	4	73	13	5	6	100
Post-secondary education and training	Apprenticeship	1.1	90	2	4	3	100
	Traineeship	4.1	77	8	7	4	100
	TAFE Diploma	12.8	65	13	4	5	100
	TAFE Certificate	10.0	66	14	6	5	100
	None	4.5	64	12	10	10	100

Note: Excludes those enrolled in a Bachelor Degree in 1999 or 2000 or 2001.

Statistical Model

The next step is to investigate if these differences in post-school activity by educational factors are statistically significant. It may be that some of the differences observed, for example by school leaving status, can be attributed to prior factors such as school type and Year 9 achievement. The model for first year activity comprised school type, school leaving status, and achievement in Year 9 literacy and numeracy. Achievement was entered as a continuous variable with a mean of zero and standard deviation of one. The ENTER score was not included since it is too highly correlated with achievement and only applies to school completers. In modelling the influences on activity in the fourth year, participation in an apprenticeship, traineeship, TAFE diploma or TAFE certificate were added. The results are presented in Table A 10 in Appendix 5.

The only statistically significant difference for school type was the finding that those who attended an independent school were more likely to be in full-time study rather than full-time work in the first year, compared to those who attended a government school. This effect was small with those who attended an independent school 1.5 times more likely to be in full-time study rather than full-time work compared to those who went to a government school, other factors equal. Other effects associated with school type were not significant.

Higher achievement in literacy and numeracy reduced the odds of unemployment. In the first year, a one standard deviation increase in achievement score was associated with a reduction of 1.8 times in the odds of looking for work rather than being in full-time work. In the fourth year the effect was slightly higher, at 2.0 times.

Participation in VET at school increased the odds of being in full-time work in the first year after school. VET in school increased the odds of being in full-time work rather than full-time study by 1.2 times, of being in full-time work rather than part-time work by 1.3 times, and of being in full-time work rather than looking for work by 1.4 times. Although these effects are modest, they do indicate that VET in school is beneficial in obtaining full-time work. In the fourth year, VET in school had no significant effects apart from VET in school being associated with increased odds of engagement in 'other' activities. The lack of significant effects of VET in school in the fourth year suggests that it promotes full-time work in the first year which in turn increases the chances of further full-time work.

Early school leaving appears to promote full-time work rather than participation in study. Compared to school completers, early leavers were significantly less likely to be in full-time study than full-time work in the first year after leaving school. Weaker effects were found for part-time work and for unemployment. Early school leavers were more likely than completers to be in full-time work than in part-time work or unemployment.

Compared to completers, later leavers were 2.1 times more likely to be looking for work than completers in the first year and 2.7 times more likely in the fourth year. Later leavers were also significantly more likely to be engaged in 'other' activities especially in the fourth year. Later leavers were also less likely than completers to be in full-study in the first year. These results suggest that later leavers (those who leave after starting Year 11 but before completing Year 12) face greater transition risks than either early school leavers (who tend to leave school for full-time employment) or Year 12 completers (who have more defined pathways into further study or full-time work).

Apprenticeships were strongly associated with being in full-time work in the fourth year after leaving school. Participation in an apprenticeship increased the odds of being in full-time work rather than full-time study by 5.7 times, full-time work rather than part-time work by 6.3 times, full-time work rather than unemployment by 3.8 times and full-time work rather than 'other' activities by 6.6 times.

Participation in a traineeship also promoted full-time work in the fourth year after school. However, its effects were weaker than for apprenticeships. Traineeships increased the odds of being in full-time work rather than part-time work or looking for work by 1.6 times, and in full-time work rather than 'other' activities by 2.9 times.

Participation in a TAFE diploma course increased the odds of being in full-time study rather than full-time work by 2.3 times. This finding probably reflects continuing enrolment in a TAFE diploma course. A TAFE diploma did not have significant effects on looking for work or engagement in 'other' activities in the fourth year after school.

Participation in a TAFE certificate course increased odds of full-time study rather than full-time work by 1.6 times. It also slightly increased the odds of part-time rather than full-time work but significantly reduced the odds of full-time work rather than 'other' activities by 1.6 times.

Prior Labour Market Experiences

In the first year after leaving school the only labour market experience that was possible to examine was part-time work while at school. The relationships between part-time work and activity in the first and fourth years are presented in Table 12. Part-time work at school is associated with higher levels of full-time employment and substantially lower unemployment. Of those who had part-time work in Years 11 or 12 at school, 58 per cent were employed full-time and 3 per cent were looking for work. Among the group who did not have part-time work, the comparable percentages were 51 and 13 per cent respectively.

Part-time work at school also appears to substantially promote full-time work in the fourth year. Of those who worked part-time at school, 78 per cent were in full-time work compared to 67 per cent of those who did not work part-time at school. Unemployment among this group was low at 3 per cent compared to 10 per cent of those who did not work part-time at school.

Table 12 Part-time work at school and main activity in first and fourth year after leaving school (%)

		Full-time study	Full-time work	Part-time work	Looking for work	Other	Total
<i>Year 1</i>							
Part-time work at school	None	22	51	10	13	4	100
	In Year 11 or 12	25	58	11	3	2	100
<i>Year 4</i>							
Part-time work at school	None	5	67	10	10	8	100
	In Year 11 or 12	6	78	9	3	5	100

Note: Excludes those enrolled in a Bachelor Degree in 1999 or 2000 or 2001

Table 13 presents the relationships between other forms of labour market experience and activity in the fourth year after leaving school. The variables examined were labour market activity in the first and second years, and the percentage of time spent working and looking for work. (The relationships between activity in the third and fourth years has already been presented in Figures 1 and 2.)

Table 13 Labour market experiences since leaving school and main activity in fourth year after leaving school (%)

		Main activity in fourth year					Total
		Full-time study	Full-time work	Part-time work	Looking for work	Other	
Activity first year	Full-time study	10	65	13	8	5	100
	Full-time work	4	83	5	5	4	100
	Part-time work	3	62	17	7	11	100
	Looking for work	5	45	15	19	15	100
	Other	6	37	11	9	38	100
Activity second year	Full-time study	15	55	16	8	6	100
	Full-time work	3	84	5	4	3	100
	Part-time work	6	59	21	9	7	100
	Looking for work	7	42	17	21	14	100
	Other	7	24	9	15	45	100
Experience in work prior to Year 4	0-30 per cent of time	11	24	17	24	24	100
	31-60 per cent of time	5	52	20	10	13	100
	61-80 per cent of time	4	72	10	9	6	100
	81-100 per cent of time	5	79	7	4	4	100
Experience of unemployment prior to Year 4	0-30 per cent of time	5	77	8	4	6	100
	31-60 per cent of time	7	53	16	15	9	100
	61-80 per cent of time	6	39	14	26	15	100
	81-100 per cent of time	10	23	22	31	13	100

Note: Excludes those enrolled in a Bachelor Degree in 1999 or 2000 or 2001

About 10 per cent of those in full-time study in the first year were in full-time study in the fourth year. There is some indication that those not working pursued study in order to improve their labour market situation. Of those looking for work or in 'other' activities in the first year about 5 per cent were in full-time study in the fourth year. Among those unemployed or in 'other' activities in the

second year about 7 per cent were in full-time study in the fourth year. This compares with less than 3 per cent of those in full-time work in the second year.

Of those in full-time work in the first year, 83 per cent were in full-time work in the fourth year. This compares with between 60 and 65 per cent of those in full-time study or part-time work in the first year. Unemployment in the first year was associated with substantially lower levels of full-time work. Only 45 per cent of those looking for work in the first year were in full-time work in the fourth year. Only 37 per cent of those in 'other' activities in the first year were in full-time work in the fourth year. Similar but stronger patterns were found for activity in the third year.

Part-time work in the first year was associated with slightly higher levels of part-time work in the fourth year. About 17 per cent of those in part-time work in the first year were in part-time work in the fourth year. This compares with 13 per cent of those in full-time study and 15 per cent of those looking for work. Only 5 per cent of full-time workers in the first year were in part-time work in the fourth. Of those in part-time work in the second year, 21 per cent were in part-time work in the fourth year. These findings are further evidence that only a minority of part-time workers are 'stuck' in part-time work.

Unemployment in prior years is only moderately associated with unemployment in the fourth year. Of those looking for work in the first year or second year, about 20 per cent were looking for work in the fourth year. In both instances over 40 per cent of the unemployed had moved into full-time work and a further 15 per cent into part-time work.

There was a higher correspondence in 'other' activities. Of those engaged in 'other' activities in the first year, 40 per cent were in 'other' activities in the fourth year. Of those in 'other' activities in the second year, the proportion was higher at 45 per cent.

Prior experience in work was associated with a higher incidence of full-time work. Of those who had worked (either full-time or part-time) 80 to 100 per cent of the time since leaving school until the third year, 80 per cent were in full-time work in the fourth year and a further 7 per cent were in part-time work. Only 4 per cent were looking for work in the fourth year. In contrast, of those who had been working less than 30 per cent of the time, only 24 per cent were in full-time work and 17 per cent in part-time work in the fourth year.

Prior experience of unemployment was associated with an increased likelihood of being unemployed in the fourth year and a substantially decreased likelihood of being in full-time work. Of those unemployed for 80 to 100 per cent of the time since leaving school, 31 per cent were looking for work in the fourth year and only 23 per cent were in full-time work. Over 10 per cent were in full-time study.

Statistical Model

The statistical model of labour market experience on activity in the first year includes only part-time work at school. For activity in the fourth year the model comprises part-time work at school and activity in the first year after leaving school. The results are presented in Table A 11 in Appendix 5.

Part-time work at school significantly reduced the odds of unemployment and 'other' activity relative to full-time work. Those who worked part-time in school were 4.3 times more likely to be working full-time than unemployed in the first year, compared to those who had not worked part-time at school. They were also 2.1 times less likely to be engaged in 'other' activities.

Part-time work at school also reduced the odds of unemployment and engagement in 'other' activity in the fourth year, net of activity in the first year after leaving. Those who worked part-time were 2.7 times more likely to be in full-time work rather than unemployed compared to those who did not work part-time while at school. They were 1.8 times more likely to be working full-time rather than engaged in 'other' activities.

The effects of labour market activity in the first year on activity in the fourth year are dominated by the strong correspondence between full-time work in the first and fourth years. Full-time study in the first year significantly decreased the odds of being engaged in 'other' activities in the fourth year. However, full-time study in the first year did not improve the odds of full-time employment in

the fourth year relative to part-time work or unemployment. Part-time work in the first year had no significant effect on full-time work in the fourth year. Unemployment in the first year significantly increased the odds of working part-time or looking for work in the fourth year. Looking for work in the first year increased the odds of working part-time rather than full-time by 2.5 times compared to those in full-time work in the first year. Its effect on looking for work in the fourth year was stronger. Unemployment in the first year increased the odds of being unemployed rather than in full-time work in the fourth year by 5.1 times compared to those already in full-time work. Unemployment in the first year was also associated with increased odds of being engaged in 'other' activities in the fourth year. Unemployment in the first year increased the odds of being in 'other' activities by 2.6 times compared to those in full-time work. This finding suggests that a proportion of the unemployed become disillusioned job seekers and opt out of the labour market.

'Other' activity in the first year was strongly associated with 'other' activities in the fourth year. The odds ratio compared to full-time work was very substantial at 34.5. 'Other' activity in the first year was also associated with unemployment in the fourth year.

Summary

These analyses show that many social, educational and labour market background factors are correlated with the main activity after leaving school. However, most factors do not have strong effects on full-time work. The factors with the strongest effects on being in full-time work in the fourth year are participation in an apprenticeship and prior experience in full-time work.

The effects of social and socioeconomic background factors are generally weak. The major exceptions are Indigenous status where the effects are strong; and ethnicity where they are moderate. Gender differences did not indicate that one sex is consistently worse off. Metropolitan/non-metropolitan differences are weak and not significant except in relation to 'other' activities in the fourth year. The effects of socioeconomic background appear to be limited to promoting full-time study among those from higher socioeconomic backgrounds.

Similarly, most educational factors do have strong effects on post-school activities. Nevertheless, such factors are noteworthy because they are subject to policy influences in ways that demographic and social background factors are not. School type had little or no effect on post-school activities. However, strong achievement in literacy and numeracy in Year 9 was associated with reducing the odds of unemployment. Participation in VET in schools programs moderately promoted securing full-time work in the first year. Compared to school completion, early school leaving slightly reduced the odds of full-time study and part-time work rather than full-time work. Later school leavers were more likely than completers to be unemployed or engaged in 'other' activities. The strong effects of an apprenticeship and to a lesser extent, traineeships, on being in full-time work in the fourth year after school were noted above. The effects of TAFE diplomas were confined to increased odds of being in full-time study. They did not increase participation in full-time work in the fourth year, net of achievement and other factors. Similarly, TAFE certificates promoted full-time study and part-time work, rather than full-time work, and increased the odds of full-time work relative to 'other' activities. However, all the effects associated with participation in a TAFE certificate course were weak.

Prior experiences in the labour market had much stronger effects on main activity. Part-time work at school reduced the odds of being unemployed or in 'other' activities. However, full-time study or part-time work (relative to full-time work) in the first year did not significantly promote full-time work in the fourth year. Looking for work in the first year was associated with part-time work in the fourth year and more strongly associated with unemployment. There was a high correspondence of engagement in 'other' activities in the first and fourth years. A key message from these findings is that the strongest influence on being in full-time work several years after leaving school is obtaining full-time work in the first year after school.

5. INFLUENCES ON THE TRANSITION TO FULL-TIME WORK

The purpose of this chapter is to further explore the influences on securing full-time work. The analyses of the previous chapter established a number of factors as influences on being in full-time work in the fourth year after leaving school. These factors comprise the base model that is explored in this chapter. This model includes all of the variables shown in the previous chapter to influence the likelihood of being in full-time work, whereas in Chapter 4 the groups of variables were analysed separately from each other.

This base model is used to perform more detailed analyses concerning the following issues.

- Gender differences in the effects of the variables associated with full-time work. For example, it can be hypothesised that apprenticeships have stronger effects among males than females, since apprenticeships are more established in occupations which are male dominated. Similarly, prior part-time work may have a stronger effect on subsequent part-time work among females than males since part-time work for males is less common.
- The effects of factors on full-time work not included in the base model, but which may have important effects for one sex but not for the other. In the combined sample the effects for males and females may cancel each other out. One example is region, where its effects are significant for young women but not for young men.
- The effects of activity in the second and third year on activity in the fourth year. Several hypotheses on obtaining full-time work are tested. The hypotheses include. ‘Is part-time work a stepping stone to full-time work among those initially unemployed?’ and ‘Does TAFE participation promote full-time work among part-time workers?’

The Base Model and Gender Differences

The base model comprises factors that in the previous chapter were found to have statistically significant effects on full-time work in the fourth year (Table 14). Gender is not included since males and females are analysed separately. Table 14 also includes the results of chi-square tests showing statistical significance. Among males all factors have significant effects. Among females all factors were statistically significant except apprenticeships. Table 15 shows the effects of the coefficients for the base model separately for males and females.

Table 14 Tests of significance for terms in the base model

Term	Male	Female
Intercept	509(4)***	375(4)***
Achievement in Year 9	17(4)**	12(4)*
Part-time work at school	33(4)**	27(4)***
Full-time study in first year	37(4)***	30(4)***
Part-time work in first year	15(4)***	53(4)***
Unemployed in first year	39(4)***	61(4)***
Other activity in first year	-	70(4)***
Apprenticeship	76(4)***	5(4)
Traineeship	15(4)**	9(4)*

Note: Excludes those enrolled in Bachelor Degree in 1999 or 2000 or 2001. Chi-square(Degrees of Freedom)

*** P<0.001, ** 0.001<P<0.01, * 0.01<P<0.05

Table 15 Effects of base model factors on activity in fourth year after leaving school

Variable		Male	Female
Intercept	FT Study/FT Work	-2.71***	-2.57***
	PT Work/FT Work	-2.28***	-2.22***
	Looking for Work/FT Work	-2.12***	-2.85***
	Other/FT Work	-3.55***	-1.98***
Achievement in Year 9	Achievement (FT Study/FT Work)	0.01	-0.09
	Achievement (PT Work/FT Work)	0.04	-0.04
	Achievement (Looking for Work/FT Work)	-0.36***	-0.40**
	Achievement (Other/FT Work)	-0.19	-0.15
Part-time work at school	PT Work in School/None (FT Study/FT Work)	-0.05	0.08
	PT Work in School/None (PT Work/FT Work)	0.02	-0.47**
	PT Work in School/None (Looking for Work/FT Work)	-1.55***	-0.69**
	PT Work in School/None (Other/FT Work)	0.03	-0.78***
Activity in first year after leaving school	FT Study/FT Work (FT Study/FT Work)	1.10***	0.69**
	FT Study/FT Work (PT Work/FT Work)	0.77***	0.96***
	FT Study/FT Work (Looking for Work/FT Work)	0.73**	0.30
	FT Study/FT Work (Other/FT Work)	0.87*	-0.26
	PT Work/FT Work (FT Study/FT Work)	0.03	-0.42
	PT Work/FT Work (PT Work/FT Work)	0.53	1.50***
	PT Work/FT Work (Looking for Work/FT Work)	0.57	0.52
	PT Work/FT Work (Other/FT Work)	1.40***	0.94***
	Looking for Work/FT Work (FT Study/FT Work)	-0.08	1.11***
	Looking for Work/FT Work (PT Work/FT Work)	1.07***	1.78***
	Looking for Work/FT Work (Looking for Work/FT Work)	1.27***	1.46***
	Looking for Work/FT Work (Other/FT Work)	1.47***	1.95***
	Other/FT Work (FT Study/FT Work)	0.74	0.48
	Other/FT Work (PT Work/FT Work)	x	1.83***
Other/FT Work (Looking for Work/FT Work)	1.07	1.21***	
Other/FT Work (Other/FT Work)	1.04	2.85***	
Post-secondary Education and training	Apprenticeship (FT Study/FT Work)	-2.55***	-0.60
	Apprenticeship (PT Work/FT Work)	-1.97***	-0.28
	Apprenticeship (Looking for Work/FT Work)	-1.30***	0.59
	Apprenticeship (Other/FT Work)	-0.66	-0.40
	Traineeship (FT Study/FT Work)	-0.49	-0.35
	Traineeship (PT Work/FT Work)	-1.04**	0.15
	Traineeship (Looking for Work/FT Work)	-0.33	0.26
Traineeship (Other/FT Work)	-0.75	-0.60*	

Note: Excludes those enrolled in a Bachelor Degree in 1999 or 2000 or 2001. Coefficient is the logit of ratio of odds. *** P<0.001, ** 0.001<P<0.01, * 0.01<P<0.05. 'X' indicates that the coefficient was not able to be estimated (zero cell)

Table 15 indicates that the effect of Year 9 achievement on activity in the fourth year is similar for males and females: higher achievement in literacy and numeracy reduces the odds of unemployment. A one standard deviation increase in achievement reduces the odds of unemployment relative to full-time work by 1.4 times among young men and 1.5 times among young women.

Part-time work at school reduces the odds of unemployment in the fourth year. Its effects are larger among young men. Among males, working part-time at school increases the odds of full-time work relative to unemployment by 4.7 times whereas its effect among females is 2 times.

For both sexes, full-time study in the first year increases the chances of being in full-time study or part-time work in the fourth year. It does *not* increase the chances of full-time work. Compared to those in full-time work in the first year, full-time study in the first year increases the odds of being in full-time study rather than full-time work in the fourth year by 3 times for males and 2 times for females. It increases the odds of being in part-time rather than full-time work in the fourth year by 2.1 among males and 2.6 times among females. Perhaps surprisingly, full-time study in the first year is associated with a greater likelihood of unemployment and ‘other’ activities in the fourth year. However, these effects are limited to males.

Among young women part-time work in the first year increases the odds of being in part-time rather than full-time work in the fourth year. Compared to full-time work in the first year, part-time work increased the odds of being in part-time rather than full-time work by 4.5 times. There was no significant effect among males. In both sexes, part-time work in the first year increased the odds of ‘other’ activities in the fourth year. This effect was stronger among women.

Looking for work in the first year reduced the odds of being in full-time work in the fourth year. Its effect on full-time study rather than full-time work in the fourth year was limited to young men. However, in both sexes, unemployment in the first year substantially increased the odds of part-time work, looking for work and ‘other’ activities in the fourth year. Its negative effects tended to be higher among females. Such findings reinforce the importance of a good start in the labour market.

Among young women, engagement in ‘other’ activities in the first year increased the odds of part-time work, unemployment, and ‘other’ activities in the fourth year. Thus it substantially decreased the odds of full-time work. There were no significant effects among young men.

Among males apprenticeships very strongly promoted full-time work. Young men who participated in an apprenticeship were nearly 13 times more likely to be in full-time work than in full-time study in the fourth year, than those who did not participate in an apprenticeship. They were 7 times more likely to be in full-time work than part-time work, and 3.7 times more likely to be in full-time work than looking for work. Apprenticeships had no significant effects among young women.

Among young men, traineeships promoted full-time rather than part-time work. The odds ratio was large at 2.8. Among young women participation in a traineeship increased the odds of being in full-time work relative to ‘other’ activities, but had no effect on the likelihood of other activities.

The Base Model Augmented with Additional Factors

In this section the other effects of factors on full-time employment, net of the base model, are investigated. Table 16 summarises the chi-square statistics testing whether these factors have additional effects. For variables that made significant contributions to the base model, their parameter estimates are described in the text and presented in Table A 12 in Appendix 5. Variables that do not make a statistically significant contribution to explaining activity in the fourth year are not discussed nor are their respective parameter estimates presented.

Work satisfaction with the job (either full- or part-time) in the first year after leaving school made a significant contribution to activity in the fourth year but only among young women. It increased the odds of being in full-time work rather than part-time work or unemployment.

Weekly earnings of the job in the first year also influenced activity in the fourth year. Again this effect was limited to young women. Higher earnings increased the odds of being in full-time work rather than part-time work or unemployment.

Region had significant effects among young women but not among young men. Young women from non-metropolitan areas were 1.7 times more likely to be in ‘other’ activities rather than full-time work in the fourth year compared to women from metropolitan areas.

Table 16 Tests of significance for additional terms in the base model

Term	Male		Female	
	Chi-square (df)	P	Chi-square (df)	P
Work satisfaction (1 st year)	7.6(4)	0.11	16.9(4)	<0.01
Occupational status (1 st year)	9.2(4)	0.06	8.0(4)	0.09
Earnings (1 st year)	3.4(4)	0.50	16.5(4)	0.003
Career job (1 st year)	8.7(4)	0.07	8.6(4)	0.06
Region	4.6(4)	0.32	31.3(4)	<0.001
Indigenous status	No estimate possible		4.2(4)	0.37
Non-English speaking background	9.8(4)	0.04	2.1(4)	0.72
Socioeconomic background (SES)	17.5(4)	<0.01	5.1(4)	0.27
School type (3 categories)	14.2(8)	0.07	11.4(8)	0.18
School type (2 categories)	12.5(4)	0.01	9.7(4)	0.04
School type (2 categories) net of SES	11.2(4)	0.02	9.7(4)	0.04
School leaving status	26.3(8)	0.0009	51.9(8)	>0.0001
ENTER score	18.2(4)	0.001	29.3(4)	>0.0001
TAFE Certificate	18.4(4)	0.001	23.3(4)	0.001
TAFE Diploma	20.5(4)	0.004	36.6(4)	>0.0001

Note: P= Probability of the Null Hypothesis. Excludes those enrolled in a Bachelor Degree in 1999 or 2000 or 2001.

Language background had significant effects among young men but not young women. Young men from a non-English speaking background were more likely to be in full-time study than full-time work in the fourth year than were those from an English-speaking background. The odds ratio was 2.5.

Similarly, socioeconomic background had significant effects net of the base model for males but not for females. However, the effects were not large. A one standard increase in parental occupational status increased the odds of young men being in full-time study rather than full-time work in the fourth year by a factor of 1.3. In addition, higher parental occupational status reduced the odds of young men being unemployed rather than in full-time work by 1.4 times.

The three-category measure of school type had no significant effect on activity in the fourth year. However a two- category measure distinguishing attendance at government and non-government (Catholic or independent) schools was significant for both sexes. Attendance at a government school was associated with higher odds of unemployment in the fourth year, other factors equal. The odds of unemployment for government school attendance were about twice that for attendance at a non-government school.

School leaving status made significant contributions to the base model for both sexes. Among males, 'later school leaving' increased the odds of unemployment rather than full-time work in the fourth year by 2.9 times, compared to school completers. Later school leaving also increased the odds of being in 'other' activities. Among females, early school leaving substantially increased the odds of being in full-time work rather than in full-time study in the fourth year. Relative to school completion, later school leaving among females substantially increased the odds of being unemployed or in 'other' activities rather than full-time work. In both instances the odds ratios were large (3.3 and 2.9, respectively).

The ENTER score earned in Year 12 had significant effects for both sexes. A 10 unit increase in the ENTER score increased the odds of being in full-time study rather than full-time work in the fourth year by 1.2 times for males and 1.3 times for females. For a 20-unit difference these effects are larger (1.4 and 1.6). However, relative to the other variables analysed, these effects are not particularly large. Among males, a higher ENTER score decreased the odds of unemployment in the

fourth year but no significant effect was found among females. A higher ENTER score increased the odds of full-time work rather than ‘other’ activities among young women but not young men.

Participation in TAFE certificate and diploma courses also made statistically significant contributions among both males and females. Among males the effect of a TAFE certificate increased the odds of full-time study (not full-time work) in the fourth year and reduced the odds of unemployment. Among females, its effect was limited to reducing the odds of being engaged in ‘other’ activities. A TAFE diploma increased the odds of full-time study in the fourth year in both sexes, and among young women reduced the odds of unemployment and ‘other’ activities’. Analyses presented later in this chapter show that participation in TAFE did not increase the odds of being in full-time work in the fourth year among those initially in part-time work or unemployed. Therefore, its positive effects were limited to those already in full-time work.

Activities in Second and Third Years after Leaving School

Table A 13 in Appendix 5 presents the results of analysis of the effects of intervening activities on activity in the fourth year. Intervening activities in either the second or third years are contrasted with full-time work.

Activities other than full-time work in the second or third year reduced the odds of being in full-time work in the fourth year. Full-time study promotes further full-time study and among males also promotes ‘other’ activities. However, it reduces the odds of being engaged in ‘other’ activities in the fourth year among young women. Part-time work in the second or third year is associated with full-time study, part-time work and, among males, ‘other’ activities in the fourth year. ‘Looking for work’ in the second or third year is associated with unemployment and ‘other’ activities in the fourth year. Among young women it is also associated with part-time work and full-time study in the fourth year. In contrast, in both sexes ‘other’ activities in the second or third year increased the odds of full-time work in the fourth year. These findings may reflect those who took a ‘gap’ year (re-)entering the labour force.

Table A 14 and Table A 15 present the effects of activity in the second or third year on activity in the fourth year together with the variables comprising the base model. In these analyses activity in the second or third year is relative to unemployment rather than full-time work as in previous analyses. This allows investigation of whether compared to unemployment, full-time study or part-time work in the second or third year substantially promotes full-time work in the fourth year.

Being in full-time work rather than unemployment in either the second or third year has strong effects on full-time work in the fourth year. All the estimates are large and statistically significant.

In the second year, being in full-time study rather than unemployment reduced the odds of unemployment (relative to full-time work) among males and reduced the odds of ‘other’ activities among females. In the third year it increased the odds of being in part-time rather than full-time work. Among males part-time work rather than unemployment in the second year increased the odds of full-time study rather than full-time work in the fourth year. It also reduced the odds of unemployment and ‘other’ activities.

Part-time work in the third year (rather than unemployment) was associated with part-time work in the fourth year and strongly reduced the odds of unemployment among males. Among females it was more strongly associated with part-time work in the fourth year.

‘Other’ activities in the second and third year were strongly associated with ‘other’ activities in the fourth year but only among females.

6. DISCUSSION AND CONCLUSIONS

The analyses presented in this report contribute to our understanding of the transition from school-to work among those school leavers who did not pursue a university education. It allows conclusions to be drawn on several of the issues concerning the school-to-work transition.

Generally Positive Employment Outcomes

'Crisis' accounts of the youth labour market are not supported by this report. In the fourth year after leaving school about 75 per cent of males and 65 per cent of females were in full-time work. About 5 per cent of males and 7 per cent of females were studying full-time in the fourth year. About 8 per cent of males and 6 per cent of females were looking for work. Each year after leaving school, the job situation of both full-time and part-time workers improved with increases in occupational group and status, and earnings. Furthermore, there is a very high year-to year stability of full-time work, and considerable movement each year to full-time work from full-time study, part-time work, unemployment and 'other' activities. Very few young people were in part-time work or unemployed for most of the time since leaving school.

This is not to say that there are not young people who are experiencing severe difficulties in the transition from school to full-time work but this group probably comprises considerably less than 10 per cent of non-university bound school leavers. Young people with an Indigenous background, tended to experience much greater difficulties than other young Australians. Those with relatively low levels of literacy and numeracy or with a non-English-speaking background experienced greater problems on some indicators.

Nevertheless, it should be acknowledged that Australia has experienced strong economic growth and a gradual reduction in unemployment over the last 15 years or so. Milling and churning may be more characteristic of the youth labour market during times of high unemployment when the probability of retrenchment is much higher and it is far more difficult to move into full-time work. Therefore, it is fundamental to the health of the youth labour market not to allow overall unemployment rates to increase.

Labour Market Experiences

The most striking result from this report is the importance of prior experiences of work in securing full-time employment. Part-time work at school promoted full-time work in both the first and fourth years after leaving school. Obtaining a full-time job in the first year after leaving school almost guaranteed subsequent full-time work. Time spent since leaving school in either full- or part-time work had strong effects on obtaining full-time work by the fourth year. In contrast, substantial prior experience of unemployment was associated with much lower levels of full-time work and higher levels of unemployment. Relative to unemployment, part-time work tended to reduce the chances of unemployment and engagement in 'other' activities, but did not substantially improve the odds of full-time work rather than part-time work.

Educational Factors

There were differences in post-school activity according to type of school attended (school sector). Attendance at a government school was associated with higher levels of unemployment especially in the fourth year after leaving school. This difference was also found in the statistical modelling which indicated that attendance at a government school increased the odds of unemployment in the fourth year relative to attendance at a non-government school, other factors equal. The effect was larger than that for socioeconomic background and only changed marginally after adding socioeconomic background as a control. This result suggests that government school systems should do more to reduce the chances of their students experiencing unemployment after leaving school.

Previous LSAY reports on educational outcomes have documented the importance of skills in literacy and numeracy. The effect of achievement on post-school activities was moderate and limited to reducing the odds of unemployment. However, it remained after controlling for post-school activity indicating that those with better literacy and numeracy skills were more able to avoid unemployment. The rather moderate effects for achievement may indicate that many entry-level jobs do not require especially high levels of literacy and numeracy.

Participation in VET at school increased the odds of being in full-time work in the first year after school, other factors equal. This in turn increased the chances of securing full-time employment in the fourth year after school, although there was no direct effect of VET in schools by that point.

The results presented here indicate that higher rates of school completion may not be the panacea for problems in the school-to-work transition. Early school leaving (before Year 11) was not associated with weaker labour market outcomes in the first four to five years after leaving school. However, it was the later school leavers (after Year 11 but before completing Year 12) who showed significantly higher odds of unemployment or engagement in 'other' activities. This result may reflect several processes. First, early school leavers may be particularly keen to enter the labour market and seem to be able to obtain full-time work quite quickly. Second, they benefit from more experience in the labour market, since labour market experience is associated with better outcomes. Third, the later leavers do not seem to have the pathways to either full-time work or full-time study that either early leavers or school completers do. The policy implication of these findings is that early school leaving is not necessarily undesirable, but it is important that those not completing school are well prepared for the labour market and preferably have a job to go to.

The results indicate the critical role that participation in apprenticeships, and to a lesser extent traineeships, play in securing full-time employment. The findings for participation in other forms of post-school education and training are not so clear-cut.

The findings for full-time post-school training are disappointing. There was no indication that full-time study in the initial post-school years substantially promotes subsequent full-time work. Positive effects were identified for TAFE certificates and diplomas among those already in full-time work. Participation in TAFE diplomas and certificate courses reduced the odds of unemployment in the fourth year after school (certificates among boys and diplomas among girls). These positive effects were not found among those unemployed or in part-time work in the initial years after leaving school.

Demographic and Socioeconomic Factors

Demographic and socioeconomic factors impact significantly on post school activities four years after leaving school.

There are gender differences in post-school activities. Young men are more likely to be in full-time work and less likely to be in full-time study, part-time work or 'other' activities. In regard to unemployment, slightly higher proportions of males are looking for work and they tend to spend more time looking for work both during the year of interview and since leaving school. On the other hand, more young women are in part-time work, which is not as well-paid or as high status as full-time work. Therefore, it cannot be concluded that one sex is substantially worse off than the other. The most fruitful policy response is to focus on those young men and women who wish to secure full-time work but are unable to do so.

There also slight regional differences in post-school activities. Those from non-metropolitan areas were less likely to be in full-time study and in 'other' activities in the fourth year after leaving school. The only statistically significant difference was that young women from non-metropolitan areas were more likely to be engaged in 'other' activities in the fourth year after leaving school. It may reflect more traditional societal norms in country areas regarding young women's roles.

The Indigenous group had much poorer labour market outcomes than the non-Indigenous group. In the first year the proportion of the Indigenous group looking for work was more than twice that of non-Indigenous young people. In the fourth year the gap had widened to nearly three times as many. This effect was large and survived controls for socioeconomic background and region. Unfortunately, the number of Indigenous young people in the sample was too small for further detailed analyses but the results do point to continuing and substantial disadvantage.

A language background other than English (LBOTE) was associated with poorer labour market outcomes. Lower proportions were in full-time work, and higher proportions were in part-time work and unemployment. However, substantially higher proportions of the LBOTE group were in full-time study in both the first and fourth year since leaving school. Controlling for other social background characteristics, they showed significantly higher odds of unemployment and engagement in 'other' activities. However, after controlling for activity in the first year and other factors in the core model, the only significant difference was the higher odds of LBOTE young men being in full-time study.

Differences according to socioeconomic background were not striking. A professional/managerial parental background was associated with higher levels of full-time study and lower unemployment. However, few large and statistically significant differences were found after controlling for other social background factors. A higher status socioeconomic background increased the odds of full-time study and decreased the odds of unemployment in the fourth year. However, this effect was small and found only among young men. This finding only partially supports the argument that higher socioeconomic background does provide some protection against unemployment.

The Role of Part-Time Work

Most part-time workers are not 'stuck' in part-time work. The year-to-year stability of part-time work is less than 30 per cent for males and about 30 to 40 per cent for females. Over 50 per cent of male part-time workers were in full-time work the following year. Among females this figure was between 37 and 50 per cent. However, part-time work does not confer the same advantages as full-time work, as increases in status and earnings over time are smaller; and substantially fewer part-time workers see their job as a career job. Over half of those with part-time jobs would prefer to be working full-time.

Further, part-time work is not a 'dead-end' activity for most young people. The proportion of part-time workers in professional and managerial work is substantially higher in the fourth year after leaving school than in the first year. Correspondingly, the proportion of male part-time workers in semi- or unskilled work in the fourth year is nearly half the proportion in such work in the first year after leaving school. Among female part-time workers both occupational status and earnings are higher in the fourth year and a larger proportion views their part-time job as part of their career.

A More Targeted Definition of 'At Risk'

Some commentators have tended to refer to all those young people who are not in full-time study or work as being at risk in the labour market. However, the analyses in this report indicate that those young people who are not working or studying full-time are quite diverse and face markedly different circumstances. The situation of the unemployed contrasts starkly with that of part-time workers. The latter are more likely to move into full-time work and enjoy increases in job status and earnings over time. Although much youth unemployment is transient, there is a group of youth unemployed people who face a particularly difficult situation characterised by lengthy periods of unemployment.

A group that is particularly hard to characterise are those engaged in 'other' activities, that is, where they are neither in education nor in the labour market (either working or looking for work). In the first year after school 2 per cent of males who did not go to university, and 4 per cent of females, were in this category. By the fourth year 3 per cent of males and 10 per cent of females were engaged in 'other' activities. Such groups are commonly referred to as at risk in the transition

process. However, the results presented here suggest that engagement in ‘other’ activities should not be understood as tantamount to unemployment. ‘Other’ activities often include travel, and in the later years comprise a high proportion of women looking after their own children. Some disillusioned job-seekers are also likely to be in this category. There is quite a high degree of entry (or re-entry) from ‘other’ activities into work and education, and the majority express an intention to return to study or work within the next few years. Although some of them may need particular assistance to do so, as a group they are likely to experience fewer long-term difficulties than those who are currently in the labour market but are unable to find work.

Finally, the term ‘fully-engaged’ applied to those who are in full-time study or full-time work tends to suggest that full-time students and full-time workers can be treated as being the same. However the results from the analysis in this report show that participation in full-time work straight after school leads to somewhat different outcomes than participation in full-time study. In this group of school-leavers who not did pursue university, full-time study in the first, second or third years after leaving school is not associated with increased odds of being in full-time work in the fourth year. Rather, it appears to promote part-time work and further full-time study at this stage of young people’s lives. The most direct pathway to full-time employment in the fourth year after leaving school is to have a full-time job in the first year. These initial differences in the outcomes of the full-time work and full-time study pathways may also have ramifications later in working life. An overall message from the analyses is that school-leavers’ experiences should be analysed in as disaggregated a form as possible.

Main Policy Implications

The policy message from these analyses is clear. Obtaining a full-time job soon after leaving school is the best pathway to successful and rapid transitions to ongoing full-time work for school leavers. The longer that full-time employment is delayed, the more transition problems young people face. Improving the prospects of young people finding full-time work requires attention in policies to both the supply and demand sides of the youth labour market. Post-secondary education and training is important in the transition, and it is much more effective if it is linked to employment, as is exemplified by apprenticeships and traineeships. Those who start their post school period by being unemployed for lengthy periods face the greatest transition problems. It is important therefore to minimise the level and severity of youth unemployment, with the best assistance for the unemployed being helping them to secure full-time work as soon as possible rather than further education and training unconnected to the workplace.

APPENDIX 1: DATA, SAMPLING AND WEIGHTS

The data for this report are drawn from the *Longitudinal Surveys of Australian Youth* (LSAY) project, which follows the experiences of young people as they move from school into post-secondary education, training and work. A number of cohorts of young people have been surveyed as part of the LSAY program. The data for this report focus on the cohort of students who were in Year 9 in 1995, and follow their experiences up until late 2002. The initial sample included 13 613 students from all States/Territories and school sectors, with approximately equal numbers of males and females. The students were initially surveyed in their school in 1995, where they completed a questionnaire about themselves and their families, and undertook reading comprehension and numeracy tests. Further data have been collected from this cohort on an annual basis. Data collected up to and including 2002 are analysed.

The sample is a national representative sample of Year 9 students in 1995. It is a stratified random sample. The major stratum in the design was State (or jurisdiction) of schooling. Students from smaller States were over-sampled and, correspondingly, students from larger States were under-sampled. Selection of students within States was proportional by school sector. Three sectors were used as strata: government schools, Catholic schools and non-government, non-Catholic (referred to as independent) schools. The population data for strata were taken from the *Schools Australia* series (ABS). Within strata, schools were selected proportional to their size. Information on the number of Year 9 students in each school came from ACER's Sampling Frame which, in turn, was based on information provided by the relevant State authorities and, in the case of non-government schools, by the then Federal Department of Educational, Employment and Training (DEET). These figures were from the 1994 annual school census. Within schools two classes were randomly selected (again, proportional to their size). Schools were asked for a list of the number of students enrolled in each of their Year 9 classes for a subject studied by all Year 9 students in the school (usually English classes).

Sample Weights

All analyses are weighted to adjust for differences between the sample and the population the sample was drawn from, and attrition over the years of the study. Those who drop out of the study tend to have less successful outcomes than those who remain in the study and weighting largely corrects this bias.

The weights comprise two components. The first component (the stratification weights) accounts for differences in the distribution of respondents by State, school sector and gender in the original Year 9 sample and these distributions for the Year 9 population in 1995 as reported in the ABS publication *Schools Australia*. These weights are necessary to account for the sample design whereby the smaller States and Territories were over-sampled. In addition there are small differences between the sample and 1995 population distributions of school sector by gender within the States and Territories that are corrected by this component. The second component of the weights adjusts for sample attrition. The attrition from the sample is not random, but is associated with Year 9 achievement and gender. Further details on the calculation of weights for this sample are provided in LSAY Technical Paper Number 15 (Marks & Long, 1996).

APPENDIX 2: MEASURES

Main Activity

Main activity was assessed by the respondent's major activity at the time of interview, usually conducted between September and November. Main activity was categorised into five groups: full-time study, full-time work, part-time work (with and without part-time study), looking for work (unemployed) and 'other'. Full-time study includes study at a TAFE or private institution. (University degree participants were excluded from these analyses). Apprentices are classified as full-time workers. Full-time work is defined as working 30 or more hours per week, and part-time work less than 30 hours. Unemployed status is defined by looking for work in the four weeks prior to the interview and not engaged in full-time study or either full- or part-time work. 'Other' is defined residually comprising those not allocated to any of the other four categories. The main activities of this group include 'ill unable to work', 'travel and holidays' and 'home duties'. Respondents were allocated hierarchically according to this ordering of activities. For example, those working full-time and studying part-time were categorised as working full-time. Similarly, respondents working part-time but looking for work were defined as working part-time.

Table A 1 presents the frequencies and percentages of main activity for both males and females for each year since leaving school. Table A 2 presents the frequencies and percentages for the collapsed categories used throughout the report. Numbers of cases in the fifth year is small because most of the sample left school in 1998.

Table A 1 Frequencies and percentages of main activity by year since left school

	Year 1		Year 2		Year 3		Year 4		Year 5	
	N	%	N	%	N	%	N	%	N	%
FT Study	1261	23.1	688	14.6	268	6.8	190	5.8	14	1.7
FT Work & PT Study	1354	24.8	1200	25.5	901	22.8	491	15.0	101	12.0
FT Work, no study	1587	29.0	1714	36.5	1844	46.8	1845	56.3	499	59.5
PT Work & PT Study	80	1.5	78	1.7	25	0.6	25	0.8	4	0.5
PT Work, no study	507	9.3	410	8.7	394	10.0	298	9.1	78	9.3
PT Study, no work	52	1.0	44	0.9	34	0.9	17	0.5	4	0.5
Looking for work, and no work or study	472	8.6	390	8.3	283	7.2	210	6.4	63	7.5
Other	155	2.8	178	3.8	195	4.9	204	6.2	76	9.1
	5468	100	4702	100	3944	100	3280	100	839	100

Note Excludes those enrolled in a Bachelor Degree in 1999 or 2000 or 2001 and not missing on Activity variable; unweighted data.

Table A 2 Frequencies and percentages of the five main activity groups used in the analysis, by year since left school

	Year 1		Year 2		Year 3		Year 4		Year 5	
	N	%	N	%	N	%	N	%	N	%
FT Study	1261	23.3	688	14.8	268	6.9	190	5.8	14	1.7
FT Work	2941	54.3	2914	62.6	2745	70.2	2336	71.6	600	71.9
PT Work	587	10.8	488	10.5	419	10.7	323	9.9	82	9.8
Looking For work	472	8.7	390	8.4	283	7.2	210	6.4	63	7.5
Other	155	2.9	178	3.8	195	5.0	204	6.3	76	9.1
	5416	100	4658	100	3910	100	3263	100	835	100

Note: based on the categories in Table A, excluding those in the 'part-time study only' group.

Social and Demographic Variables

This section describes the measures of the social and demographic variables. The frequencies and percentages are presented in Table A 3.

Gender: Information on the sex of the respondents was obtained from responses to the 1995 questionnaire. In cases where this information was not provided, the students' names were used to infer the students' sex. This information was confirmed in subsequent telephone interviews.

Indigenous status: In the 1995 interview, students were asked: 'Are you an Aboriginal person or Torres Strait Islander person?' A dichotomous measure was constructed from responses to this question, permitting contrasts between Aboriginal and Torres Strait Islander students, and other students.

Father's Country of Birth comprised three categories: Australia, another English-speaking country (Canada, Ireland, New Zealand, South Africa, the United Kingdom and the United States), and non-English-speaking country. If information on father's country of birth was not available, information on mother's country of birth was used.

Language Background was measured by asking students in the 1995 survey 'What language does your family mostly speak at home?' A distinction was drawn between households where the main language spoken at home was English, and households where English was not the main language spoken. This is the measure of language background used in the majority of analyses in this report.

Region was measured by two categories (metropolitan and non-metropolitan based on the number of people in the locality of the student's place of residence in 1995 (Year 9). Metropolitan centres were defined as centres with populations of 100 000 persons or more. Non-metropolitan regions were defined as centres with populations less than 100,000 persons.

Parental occupation: is a categorical measure. The responses were classified into four groups: professional/managerial (including paraprofessionals); clerical/sales/personal service; skilled manual; and semi/unskilled manual.

Sample members were asked in 1995 to report the occupations of their father (or male guardian) and mother (or female guardian), and to describe their work. If a parent was not employed at the time of the interview, respondents were asked to describe that parent's last job. Respondents were asked to provide information on both parents, even if their mother or father was not living with them. The information provided by respondents was coded to the four-digit level of the Australian Standard Classification of Occupations (ASCO).

To simplify presentation and to make best use of the available information, the occupation of the male parent was taken as the basis for both the categorical and continuous occupational measures. When information on the occupation of the male parent was not available, the occupation of the female parent was substituted. This approach was taken because a large proportion of the respondents indicated that the occupation of the female parent was 'home duties', an occupation for which there is no occupational class or occupational prestige score.

Parental Educational Qualification is based upon the highest qualification attained by either the mother or father. It is a categorical variable comprised of three levels: higher education qualifications (university), other post-secondary qualifications; and secondary school or less. It is based on data collected in 1995 when respondents were asked to report the highest level of education completed by each parent.

Table A 3 Frequencies and percentages of socio-demographic variables by year since left school

		Year 1		Year 2		Year 3		Year 4		Year 5	
Variable	Value	N	%	N	%	N	%	N	%	N	%
Gender	Male	2892	52.7	2483	52.5	2073	52.2	1718	52.1	474	56.1
	Female	2593	47.3	2248	47.5	1901	47.8	1581	47.9	371	43.9
Region	Metropolitan	2787	50.8	2394	50.6	2001	50.4	1683	51.0	508	60.1
	Non-metropolitan	2697	49.2	2336	49.4	1972	49.6	1616	49.0	337	39.9
Indigenous status	Indigenous	154	3.0	132	3.0	107	2.9	83	2.7	35	4.4
	Non-Indigenous	4992	97.0	4303	97.0	3629	97.1	3025	97.3	760	95.6
Father's country of birth	Australia	3746	72.1	3219	71.8	2731	72.5	2284	72.8	615	77.3
	Other English speaking	666	12.8	591	13.2	486	12.9	392	12.5	97	12.2
	Non-English speaking	787	15.1	672	15.0	552	14.6	460	14.7	84	10.6
Language background	English speaking	4957	93.5	4283	93.7	3610	93.9	3002	94.0	791	96.9
	Other than English	342	6.5	289	6.3	235	6.1	192	6.0	25	3.1
Parental occupation	Managerial/professional	1826	37.9	1577	38.0	1350	38.4	1136	38.7	230	31.2
	Clerical/service	1102	22.9	965	23.2	836	23.8	700	23.8	221	30.0
	Trades	705	14.6	603	14.5	493	14.0	415	14.1	98	13.3
	Semi/unskilled manual	1182	24.5	1007	24.3	837	23.8	686	23.4	188	25.5
Parental education qualifications	University	659	17.0	573	17.0	481	16.9	393	16.6	71	11.9
	Other Post-secondary	361	9.3	318	9.5	271	9.5	233	9.9	58	9.7
	School only	2862	73.7	2472	73.5	2100	73.6	1735	73.5	468	78.4

Note: Excludes those enrolled in Bachelor Degree in 1999 or 2000 or 2001 and not missing on Activity variable. Unweighted Data. The sums for the different variables may differ slightly because of missing data.

Education Variables

This section describes the measures of the education variables. The frequencies and percentages are presented in Table A 4.

School sector: This measure refers to the school attended at the time of sample selection (Year 9, 1995), and the data for this measure were obtained from the sample design. Three categories are used – government schools, Catholic non-government schools, and non-Catholic non-government schools – identified respectively as government, Catholic and independent.

Achievement measures were based on students' performance in ACER administered tests of literacy and numeracy conducted in 1995 when the students were in Year 9. Each test comprised 20 short answer or multiple answer tests. The tests included many items used in previous national studies of literacy and numeracy (the 1975 and 1980 Australian Studies in School/Student Performance) and in longitudinal studies of Australian young people (the 1989 *Youth in Transition* study and the *Australian Youth Survey*).

In the literacy test students were asked to read some text and then to answer several questions about what they had read. The text comprised short newspaper articles and longer textual passages. The material from newspapers included stories about a tug of war with a camel, a hang gliding flight, an armed robbery, birds trapped by dumped oil, scientific explanations of floating, and the flight of

bees. The longer textual passages were on diverse topics such as the birth of a volcano, a railway worker's near fatal experience with an express train, and a dispute between two motorists.

In the numeracy test three broad types of questions were asked. The first type dealt with mathematical operations (mainly computations) with little or no practical component. This included simple operations such as addition and subtraction, and more complex operations such as long division, fractions, squares, cubes, and square roots. The second type of questions required practical applications of numerical skills. Examples are questions about buying things, reading scales, tables and graphs, and calculating interest. The third type of questions required the application of abstract mathematical concepts. These were mainly logical and spatial problems.

Two measures of achievement were developed from student's test scores. For both measures, the literacy and numeracy test results were combined in order to provide an overall measure of achievement. The scores for the literacy and numeracy tests were centred about the means and summed to produce a combined measure.

The measure achievement quartile was based upon quartiles of achievement, was employed in order to extend the analysis reported by Marks et al (2000). The highest quartile represents the top 25 per cent of students, the next quartile represents the next 25 per cent of students and so forth.

The combined measure was then standardised to a mean of zero and a standard deviation of one. This measure was used in the multivariate analyses.

School completion status: This measure of school completion status distinguishes between school completers, and two groups of non-completers, early school leavers and later school leavers. It is the same as that used in an earlier LSAY report on school leavers (McMillan & Marks, 2003). School non-completers were identified by questions in the 1996, 1997, 1998 and 1999 survey instruments on whether respondents were at school and if they were not, the year level (grade) and month in which they left school. The surveys clearly distinguished between students who changed schools and those who had permanently left school. Non-completers were subdivided into early school leavers and later school leavers. Early school leavers left school before the beginning of Year 11, the distinction used by Marks and Fleming (1998a) which focuses on the early school leaver sub-group.

Early school leavers were defined as persons who left school on or before the end of Year 10. For the majority of early school leavers, this refers to the period from the time of first contact in 1995 to December 1996.

Later school leavers were defined as persons who left school between the commencement of Year 11 and August of Year 12. For the majority of later school leavers, this refers to the period from 1997 to August 1998. The August threshold was chosen so as to be consistent with the Australian Bureau of Statistics' census date for the National Schools Statistics Collection (ABS, 2000) and an analysis of school non-completions based upon LSAY data (Ball & Lamb, 1999-2000).

Completers were defined as persons who commenced Year 12 and remained in school until at least August of that year.

ENTER Scores

In Australia, students applying for admission to university and other post-secondary institutions are ranked according to their performance in state-wide assessments. The *ENTER* (Equivalent National Tertiary Entrance Rank) scores are self-reports obtained from telephone interviews with participants in the 1999 wave of the study. The tertiary entrance scores in all States except Queensland are understood as equivalent. For Queensland students who obtained an overall position, their position was converted to an *ENTER* score according to the equivalence scales constructed by the Taskforce on an Australian Tertiary Admissions System. Further details on the measure of tertiary entrance score can be found in LSAY Research Report no. 22 (Marks, McMillan & Hillman, 2001).

Two measures of ENTER score were used in this report. The first used in Chapter 4 categorised scores into bands (see Table A 4). For Chapter 5, ENTER scores were entered into the model as a continuous variable, because of the small numbers in the high score categories. Those who participated in Year 12 but do not apply for tertiary entrance and those who left school before Year 12 were assigned a score of 30, the lowest possible score on this measure. To facilitate interpretation ENTER scores were divided by 10 so the coefficients reflect a change of 10 ENTER score points.

VET at school subjects: A dichotomous variable was constructed distinguishing between respondents who indicated they took a VET in school subject or course in 1997 or 1998.

Participation in post-secondary education and training: In each annual interview, respondents were asked to indicate any current participation in post-secondary education and training, and to provide details of qualifications completed since the last interview. A series of dichotomous variables were constructed indicating whether the respondent had participated in an apprenticeship, traineeship, a TAFE diploma course or a non-apprenticeship TAFE certificate course by 2001.

Table A 4 Frequencies and percentages of education variables by year since left school

Variable	Value	Year 1		Year 2		Year 3		Year 4		Year 5	
		N	%	N	%	N	%	N	%	N	%
School sector	Government	4037	73.6	3512	74.2	2958	74.4	2455	74.4	679	80.4
	Catholic	863	15.7	728	15.4	609	15.3	501	15.2	92	10.9
	Independent	585	10.7	491	10.4	407	10.2	343	10.4	74	8.8
Year 9 achievement quartile	Lowest quartile	1630	29.8	1352	28.7	1096	27.7	893	27.1	330	39.1
	Second lowest quartile	1610	29.4	1388	29.4	1170	29.5	961	29.2	231	27.4
	Third quartile	1297	23.7	1146	24.3	973	24.6	812	24.7	158	18.7
	Highest quartile	934	17.1	833	17.7	724	18.3	626	19.0	125	14.8
School leaving status	Early leaver	607	11.9	607	13.2	596	15.0	497	15.1	389	46.0
	Later leaver	1136	22.2	1080	23.4	894	22.5	711	21.6	422	49.9
	Year 12 completer	3369	65.9	2928	63.4	2484	62.5	2091	63.4	34	4.0
ENTER score	90-100	54	2.0	41	1.8	36	1.8	32	1.9	.	.
	80-89	139	5.2	121	5.2	104	5.3	93	5.4	3	17.6
	70-79	249	9.4	224	9.7	196	10.0	177	10.3	1	5.9
	60-69	294	11.1	260	11.3	219	11.2	188	11.0	1	5.9
	50-59	350	13.2	300	13.0	259	13.3	233	13.6	1	5.9
	<50	493	18.5	445	19.3	369	18.9	325	19.0	3	17.6
	No score but reached Year 12	1081	40.6	918	39.8	770	39.4	664	38.8	8	47.1
Participation in Post-secondary education and training since school	Apprenticeship	127	2.7	671	14.2	762	19.2	667	20.2	287	34.0
	Traineeship	72	1.6	538	11.4	683	17.2	693	21.0	209	24.7
	TAFE Diploma	317	8.5	595	14.9	698	17.6	697	21.1	45	5.3
	TAFE Certificate	350	7.6	802	17.0	984	24.8	940	28.5	182	21.5
	No participation	4435	80.9	2459	52.0	1932	48.6	1389	42.1	356	42.1

Note: Excludes those enrolled in a Bachelor Degree in 1999 or 2000 or 2001 Unweighted Data. The sums for the different variables may differ slightly because of missing data.

Labour Market Variables

Part-time work at school: The variable indicating part-time work at school was based on responses to the questions asking respondents what year they were in at school and whether they worked. If students in Year 11 in 1997 or Year 12 in 1998 and currently in work at the time of interview then they were classified as working part-time at school.

Occupation: In each annual interview, data on the jobs of employed respondents were collected and coded in accordance with the Australian Standard Classification of Occupations (ASCO) (ABS, 1997). Jobs that were obtained before the 1999 interview were coded in accordance with ASCO (first edition), while jobs obtained between the 1999 and 2002 interviews and were coded in accordance with ASCO (second edition). This information was used to develop measures relating to first job held since leaving school, and job at the time of the most recent data collection in 2002. Two types of occupational classifications were used to describe each of these jobs: occupational group and occupational status.

The first type of measure, *occupational group*, is categorical. Occupations were classified into four groups: managerial/professional/para professional; clerical/sales/personal services; skilled manual; and semi/unskilled manual.

The second type of measure, *occupational status*, is a continuous measure ranging from zero to 100. It is based upon the ANU3 scale (Jones, 1989; Jones & McMillan, 2001).

Proportion of time worked since leaving school: In each annual interview, respondents were asked to indicate during which months they had worked. Information on the number of months spent in employment since leaving school, and the number of months that had elapsed since leaving school were used to create a measure of the proportion of time worked since leaving school. If the respondent left school prior to 1997, the measure was based upon the proportion of time worked since January 1997.

Earnings: Information on current earnings from all jobs and frequency of pay was collected at each annual interview. For each year between 1997 and 2002, *weekly income* was generated from this information:

Type of Job like as a Career Dichotomous variables were generated from response to the following question: 'Is the job you have now the type of job you would like as a career?'

Work satisfaction: Respondents were asked to indicate whether they were very satisfied, fairly satisfied, fairly dissatisfied or very dissatisfied with each of the following aspects of their work: the kind of work they did; the people they worked with; their immediate boss/supervisor; pay; opportunities for training; tasks assigned; recognition; and opportunities for promotion. The items were summed and scaled onto a scale ranging from zero to 100.

APPENDIX 3: INTERPRETING ODDS RATIOS

Odds ratios are used to provide an indication of the association between an independent variable and a dependent variable. An odds ratio is simply a ratio of odds. For example, the following table shows the proportion of males and females with full-time work up to 4 years after leaving school.

Gender	In full-time work	Not in full-time work
Males	40	60
Females	35	65

The odds ratios are calculated as the odds of males being in full-time work rather than not in full-time work compared to the ratio for females. For year 1, 40 per cent of males were in full-time work compared to 60 per cent not in full-time work, so the odds for males in full-time work are 40/60 or 0.67. For females the odds are 35/65 or 0.54. Therefore the odds ratio is 0.67/0.54 or 1.24. The interpretation of the odds ratio is that the odds of males being in full-time work rather than not in full-time work is 1.24 times greater than that for females. This is sometimes shortened to the odds for males obtaining full-time work are 1.24 times that for females.

Odds ratios are always positive. An odds ratio equal to 1 signifies no effect of the variable concerned on group membership. Odds ratios above 1 indicate an increased likelihood of participation and odds ratios below 1 indicate a decreased likelihood. The further an odds ratio is from 1, the stronger the effect of the variable.

In a logistic/multinomial regression the exponent (inverse of the natural logarithm) of the coefficient equals the odds ratio.

APPENDIX 4: THE MULTINOMINAL LOGIT MODEL

The multinomial logit model has been used extensively in this report. This appendix provides some background to the model and several worked examples using the data analysed in this report. The multinomial logit model is used to analyse nominal or categorical dependent variables. Main activity is a good example of a nominal dependent variable. Multinomial logit is an extension of logistic regression which is used to analyse dichotomous dependent variables.

The generalized logits model is another form of the general linear model:

$$Y = \beta_0 + \sum_1^k \beta_k x_k$$

where Y is the dependent variable, β_0 is the intercept and $\sum_1^k \beta_k x_k$ represents the effects of k independent variables $\beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 \dots + \beta_k x_k$,

where $\beta_1, \beta_2, \beta_3 \dots \beta_k$ are the effects of $x_1, x_2, x_3 \dots x_k$, on the dependent variable Y .

In the multinomial logit model, Y has j categories and $x_1, x_2, x_3 \dots x_k$ are either continuous or nominal. For example, x_1 is continuous and x_2 is categorical with m categories.

Then,

$$Y_1^j = \sum_1^{j-1} \beta_{1,j}^{j-1,j} + \sum_1^{j-1} \beta_{1,j}^{1,0} x_1 + \sum_1^{m-1} \sum_1^{j-1} \beta_{1,j}^{j-1,j} x_2 \dots \dots \dots (1)$$

where $\sum_1^{j-1} \beta_{1,j}^{j-1,j}$ represents the $j-1$ intercept terms, $\beta_{1,j}, \beta_{2,j}, \beta_{3,j}, \dots, \beta_{j-1,j}$. These are the effects of the marginal distribution of Y_1^j .

where $\sum_1^{j-1} \beta_{1,j}^{1,0} x_1$ represents the $j-1$ effects $\beta_{1,j}^{1,0}, \beta_{2,j}^{1,0}, \beta_{3,j}^{1,0}, \dots, \beta_{j-1,j}^{1,0}$ of the continuous variable x_1 . These parameter estimates can be converted to odds ratios which reflects the change in the odds of being in $Y_1, Y_2, Y_3 \dots Y_{j-1}$ relative to category Y_j for a one unit change in x_1 .

And where $\sum_1^m \sum_1^j \beta_{1,j}^{j-1,j} x_2$ are $(j-1)(m-1)$ effects, representing the following,

$$\begin{aligned} & \beta_{1,j}^{1,m} x_{2_1} + \beta_{2,j}^{1,m} x_{2_1} + \beta_{1,j}^{1,m} x_{2_1} + \beta_{3,j}^{1,m} x_{2_1} \dots + \beta_{j-1,j}^{1,m} x_{2_1} \\ & + \beta_{1,j}^{2,m} x_{2_2} + \beta_{2,j}^{2,m} x_{2_2} + \beta_{1,j}^{2,m} x_{2_2} + \beta_{3,j}^{2,m} x_{2_2} \dots + \beta_{1,j}^{2,m} x_{2_2} \\ & + \beta_{1,j}^{3,m} x_{2_3} + \beta_{2,j}^{3,m} x_{2_3} + \beta_{1,j}^{3,m} x_{2_3} + \beta_{3,j}^{3,m} x_{2_3} \dots + \beta_{1,j}^{3,m} x_{2_3} \\ & + \dots \dots \dots \\ & + \beta_{1,j}^{m-1,m} x_{2_{m-1}} + \beta_{2,j}^{m-1,m} x_{2_{m-1}} + \beta_{1,j}^{m-1,m} x_{2_{m-1}} + \beta_{3,j}^{m-1,m} x_{2_{m-1}} \dots + \beta_{1,j}^{m-1,m} x_{2_{m-1}} \end{aligned}$$

$x_{2_1}, x_{2_2}, x_{2_3} \dots x_{2_{m-1}}$ are categories 1, 2, 3... $m-1$ of the nominal variable x_2 with m categories.

$\beta_{1,j}^{m-1,m}, \beta_{2,j}^{1,m}, \beta_{1,j}^{1,m}$ etcetera are logit parameter estimates. These coefficients can be tested for statistical significance against the null-hypothesis that the parameters are significantly different from zero.

The exponents of the logits are again odds ratios. For example, the exponent of $\beta 2_{1,j}^{1,m}$ is the ratio of odds for those in category 1 of x_2 of being in category Y_1 rather than category Y_j compared or relative to, the odds for those in category m of x_2 (of being in category Y_1 rather than category Y_j). These odds ratios are independent of the marginal distributions of x_2 and Y , and the effects of other independent (either continuous or nominal) variables in the model. Due to the parameterization of the model the odds ratio is equivalent to twice the logit.

With even a moderate number of nominal variables, the multinomial logistic model becomes very complex.

An Initial Worked Example

Take for example, the following cross tabulation of activity by gender.

Table A 5 Example for multinomial logit: cross-tabulation of activity by gender

	Activity in Year 1					Total
	FT study	PT work	Looking for work	Other	FT work	
<i>Females</i>						
Frequency	698	376	214	95	1176	2559
Row percentage	27.3	14.69	8.36	3.71	45.96	
Column percentage	55.4	64.05	45.34	61.29	39.99	
<i>Males</i>						
Frequency	563	211	258	60	1765	2857
Row percentage	19.7	7.4	9.0	2.1	61.8	
Column percentage	44.7	36.0	54.7	38.7	60.0	
Total	1261	587	472	155	2941	5416

These data are from the data used in this report and they are presented in the first two rows of Table A 1. The data in Table A 1 is weighted but in this example the data is unweighted so there are slight differences in the row percentages. Note that the order of the categories has been changed so that the Full-Time work and Male categories are the last categories. These are the contrast categories for this example.

So,

Y is the dependent variable, major activity in first year after leaving school.

Y_1 is the activity Full-Time Study

Y_2 is the activity Part-Time work

Y_3 is the activity Looking for work

Y_4 is Other activity

Y_5 is the activity Full-time work. It is the contrast category, Y_j in the nomenclature presented above.

X_2 is the independent variable, gender.

X_{2_1} denotes females

X_{2_3} denotes males. It is the contrast category X_{2_m} in the nomenclature presented above.

Inserting into equation 1:

$$Y_1^5 = \sum_1^4 \beta_{1.5}^{4.5} + \sum_1^1 \sum_1^4 \beta_{1.5}^{4.5} x_2 \text{ as there is no continuous variable } X_1.$$

This model can be expanded to:

$$Y_1^5 = \beta_{1.5} + \beta_{2.5} + \beta_{3.5} + \beta_{4.5} + \beta_{1.5}^{1.2} x_{2_1} + \beta_{2.5}^{1.2} x_{2_1} + \beta_{3.5}^{1.2} x_{2_1} + \beta_{4.5}^{1.2} x_{2_1}$$

where $\beta_{1.5}, \beta_{2.5}, \beta_{3.5}, \beta_{4.5}$ are the intercept terms contrasting the marginals or column totals for Full-time Study, Part-Time Work, Looking for work with Full-time work

and

$\beta_{1.5}^{1.2}$ is half the logit of the ratio of the odds of being in full-time study rather than full-time work for females compared to the same odds for males

$\beta_{2.5}^{1.2}$ is half the logit of the ratio of the odds of being in part-time work rather than full-time work for females compared to the same odds for males

$\beta_{3.5}^{1.2}$ is half the logit of the ratio of the odds of looking for work rather than full-time work for females compared to the same odds for males

$\beta_{4.5}^{1.2}$ is half the logit of the ratio of the odds of engaged in 'other' activities rather than full-time work for females compared to the same odds for males

Table A 6 Example for multinomial logit for gender and activity: estimates and odds-ratios

Effect	β	Comparable mathematical calculation from cross-tabulation	Estimate	Odds ratio Exp (2 β)
Intercept FT Study/FT work	$\beta_{1.5}$	Log (1261/2941)	-0.83 ^{***}	
Intercept PT Work/FT work	$\beta_{2.5}$	Log (587/2941)	-1.63 ^{***}	
Intercept Looking for Work/FT work	$\beta_{3.5}$	Log (472/2941)	-1.81 ^{***}	
Intercept Other/FT work	$\beta_{3.5}$	Log (155/2941)	-2.95 ^{***}	
Female/Male (FT Study/FT Work)	$\beta_{1.5}^{1.2}$	$\frac{1}{2} \text{Log} \left[\frac{(698/1176)}{(563/1765)} \right]$	0.31 ^{***}	1.86
Female/Male (PT Work/FT Work)	$\beta_{2.5}^{1.2}$	$\frac{1}{2} \text{Log} \left[\frac{(376/1176)}{(211/1765)} \right]$	0.49 ^{***}	2.66
Female/Male (Looking for Work/FT Work)	$\beta_{3.5}^{1.2}$	$\frac{1}{2} \text{Log} \left[\frac{(214/1176)}{(258/1765)} \right]$	0.11 [*]	1.24
Female/Male (Other/FT Work)	$\beta_{4.5}^{1.2}$	$\frac{1}{2} \text{Log} \left[\frac{(95/1176)}{(60/1765)} \right]$	0.43 ^{***}	2.36

Note:*** P<0.001, ** 0.001<P<0.01, * 0.01<P<0.05

The model was analysed using the statistical program SAS. Gender was found to have a significant effect on activity in the first year after leaving school with a chi-square of 171 with four degrees of freedom. Table A 6 summarises the parameters estimated. Column one labels the parameter denoted in column 2. Column 3 presents the comparable mathematical calculation based on the cross-tabular data. Column 4 contains the logit estimate and the final column presents the corresponding odds ratios. This analysis shows sizable and statistically significant gender differences in activity in the first year after leaving school. The odds of young women studying full-time rather than working full-time were 1.86 times the corresponding odds for young men. The female to male odds ratios for part-time work, looking for work and engaged in ‘other’ activities relative to full-time work were 2.66, 1.24, and 2.36 respectively. Note that the odds ratios can be calculated from the cross-tabulation.

Adding a Continuous Variable

The advantage of the multinomial logit model is that it is multivariate. Two or more independent variables can be specified as influencing the outcome or dependent variable. With cross-tabular analyses adding additional nominal variables is cumbersome and difficult to interpret and adding continuous variables is not really possible. In this second example, achievement in literacy and numeracy in Year 9 is added to test the hypothesis that higher levels of achievement are associated with more positive labour market outcomes. Achievement is a continuous variable.

Analysis indicated that achievement in Year 12 has a significant impact on activity with a chi-square of 43 with 4 degrees of freedom. Its impact is weaker than that for gender. Focusing on the parameter estimates, achievement only has an impact on the odds of looking for work rather than working full-time. Each increase of one standard deviation in achievement changes the odds of looking for work rather than working full-time by 0.6 times. In other words, a one standard

deviation increase achievement reduces the odds of looking for work rather than working full-time by 1.7 times (1/0.6). The parameter estimates and associated odds ratios for gender remain unchanged since there is little or no association between gender and combined achievement score.

Table A 7 Example for multinomial logit for gender, achievement and activity: estimates and odds-ratios

Effect	β	Estimate	Odds ratio Exp(2 β)
Intercept FT Study/FT work	$\beta_{1.5}$	-0.82***	
Intercept PT Work/FT work	$\beta_{2.5}$	-1.62***	
Intercept Looking for Work/FT work	$\beta_{3.5}$	-1.93***	
Intercept Other/FT work	$\beta_{3.5}$	-3.00***	
Achievement (FT Study/FT Work)	$\beta_{1.5}^{1.0}$	0.07	-
Achievement (PT Work/FT Work)	$\beta_{2.5}^{1.0}$	0.03	-
Achievement (Looking for Work/FT Work)	$\beta_{3.5}^{1.0}$	-0.29***	0.60
Achievement (Other/FT Work)	$\beta_{4.5}^{1.0}$	-0.15	-
Female/Male (FT Study/FT Work)	$\beta_{1.5}^{1.2}$	0.31***	1.86
Female/Male (PT Work/FT Work)	$\beta_{2.5}^{1.2}$	0.49***	2.66
Female/Male (Looking for Work/FT Work)	$\beta_{3.5}^{1.2}$	0.12*	1.27
Female/Male (Other/FT Work)	$\beta_{4.5}^{1.2}$	0.43***	2.36

Note:*** P<0.001, ** 0.001<P<0.01, * 0.01<P<0.05

Adding an Interaction Term

Another advantage of the multinomial logit model is that interactions between independent variables can be easily tested. In this final example an interaction term for gender and achievement is added. It tests the proposition that the effects of achievement on activity in the first year after leaving school differ between male and females.

The interaction between gender and achievement was just statistically significant with chi-square of 9.9 (4 degrees of freedom) and P=0.04. Table A 8 shows the only significant parameter estimate concerned with the odds of being in part-time work rather than full-time study. A one standard deviation increase in achievement has less impact on these odds for young women than young men. However, the effect of achievement of the odds being in part-time work rather than full-time work overall was not significant. Therefore higher achieving females are less likely to be in part-time rather than full-time work but this is not indicated for males. There is no gender difference in the effects of achievement on the odds of looking for work relative to working full-time.

Note that the estimates for the non-interaction parameters are very similar across models. The exception is the small gender differences in the odds of looking for work rather than in full-time work, which in the third model slipped out of statistical significance.

Table A 8 Example for multinomial logit for gender, achievement and activity: estimates and odds-ratios

Effect	Estimate	Odds ratio $\text{Exp}(2\beta)$
Intercept FT Study/FT work	-0.82 ^{***}	
Intercept PT Work/FT work	-1.63 ^{***}	
Intercept Looking for Work/FT work	-1.94 ^{***}	
Intercept Other/FT work	-3.00 ^{***}	
Achievement (FT Study/FT Work)	0.06	-
Achievement (PT Work/FT Work)	0.04	-
Achievement (Looking for Work/FT Work)	-0.31 ^{***}	0.54
Achievement (Other/FT Work)	-0.16	-
Female/Male (FT Study/FT Work)	0.30 ^{***}	1.82
Female/Male (PT Work/FT Work)	0.47 ^{***}	2.56
Female/Male (Looking for Work/FT Work)	0.08	
Female/Male (Other/FT Work)	0.42 ^{***}	2.31
Female/Male, Achievement (FT Study/FT Work)	-0.07	2.66
Female/Male, Achievement (PT Work/FT Work)	-0.13 [*]	0.77
Female/Male, Achievement (Looking for Work/FT Work)	-0.10	-
Female/Male, Achievement (Other/FT Work)	-0.06	-

Note: ^{***} $P < 0.001$, ^{**} $0.001 < P < 0.01$, ^{*} $0.01 < P < 0.05$

APPENDIX 5: SUPPLEMENTARY TABLES

Table A 9 Effects of demographic and social background factors on main activity in first and fourth year after leaving school

Variable	Contrasts	Year 1	Year 4
Intercepts	FT Study/FT work	-0.44**	-2.13***
	PT Work/FT work	-1.53***	-1.59***
	Looking for Work/FT work	-1.15***	-1.48***
	Other/FT work	-2.70***	-2.15***
Gender	Female/Male (FT Study/FT Work)	0.34***	0.29***
	Female/Male (PT Work/FT Work)	0.47***	0.40***
	Female/Male (Looking for Work/FT Work)	0.11*	-0.12
	Female/Male (Other/FT Work)	0.43***	0.66***
Region	Non-Metro/Metro (FT Study/FT Work)	-0.10	-0.11
	Non-Metro/Metro (PT Work/FT Work)	0.09	-0.08
	Non-Metro/Metro (Looking for Work/FT Work)	0.02	-0.03
	Non-Metro/Metro (Other/FT Work)	0.10	0.28***
Indigenous	ATSI/Non-ATSI (FT Study/FT Work)	-0.02	0.36
	ATSI/Non-ATSI (PT Work/FT Work)	0.09	0.13
	ATSI/Non-ATSI (Looking for Work/FT Work)	0.27	0.72***
	ATSI/Non-ATSI (Other/FT Work)	0.00	0.27
Language background	Not English/English (FT Study/FT Work)	0.55***	0.21
	Not English/English (PT Work/FT Work)	0.09	0.41***
	Not English/English (Looking for Work/FT Work)	0.59***	0.35**
	Not English/ English (Other/FT Work)	0.40*	0.23*
Parental occupation	Manual/Profess/Mang (FT Study/FT Work)	-0.16*	0.33
	Manual/Profess/Mang (PT Work/FT Work)	0.12	-0.17
	Manual/Profess/Mang (Looking for Work/FT Work)	0.16	0.12
	Manual/Profess/Mang (Other/FT Work)	0.03	0.17
	Trades/Profess/Mang (FT Study/FT Work)	-0.01	-0.30
	Trades/Profess/Mang (PT Work/FT Work)	-0.04	-0.09
	Trades/Profess/Mang (Looking for Work/FT Work)	-0.20*	0.22
	Trades/Profess/Mang (Other/FT Work)	0.21	-0.13
	Lower Non-man/Profess/Mang (FT Study/FT Work)	-0.02	-0.18
	Lower Non-man/Profess/Mang (PT Work/FT Work)	-0.18	0.25*
	Lower Non-man/Profess/Mang(Looking for Work/FT Work)	0.20	-0.08
	Lower Non-man/Profess/Mang (Other/FT Work)	-0.09	0.34*

Note: Coefficient is half the logit of the ratio of odds. *** P<0.001, ** 0.001<P<0.01, * 0.01<P<0.05

Table A 10 Effects of educational background factors on main activity in first and fourth year after leaving school

Variable	Contrasts	Year 1	Year 4
Intercepts	FT Study/FT work	-1.11 ^{***}	-3.60 ^{***}
	PT Work/FT work	-1.72 ^{***}	-2.86 ^{***}
	Looking for Work/FT work	-2.08 ^{***}	-3.39 ^{***}
	Other/FT work	-3.11 ^{***}	-3.25 ^{***}
School type	Independent/Government (FT Study/FT Work)	0.21 ^{**}	0.08
	Independent/Government (PT Work/FT Work)	0.17	-0.06
	Independent/Government (Looking for Work/FT Work)	0.06	-0.38
	Independent/Government (Other/FT Work)	0.17	0.04
	Catholic/Government (FT Study/FT Work)	-0.09	-0.19
	Catholic/Government (PT Work/FT Work)	-0.15	-0.08
	Catholic/Government (Looking for Work/FT Work)	-0.06	-0.04
	Catholic/Government (Other/FT Work)	-0.29	0.02
Achievement (one standard deviation)	Achievement (FT Study/FT Work)	-0.06	-0.13
	Achievement (PT Work/FT Work)	0.00	-0.04
	Achievement (Looking for Work/FT Work)	-0.30 ^{***}	-0.35 ^{***}
	Achievement (Other/FT Work)	-0.22	-0.14
VET in schools	VET in schools (FT Study/FT Work)	-0.11 ^{**}	-0.18
	VET in schools (PT Work/FT Work)	-0.13 [*]	-0.02
	VET in schools (Looking for Work/FT Work)	-0.16 [*]	-0.08
	VET in schools (Other/FT Work)	-0.17	0.23 [*]
School leaving status	Early Leaver/Completer (FT Study/FT Work)	-0.37 ^{***}	-0.43
	Early Leaver/Completer (PT Work/FT Work)	-0.24 [*]	0.09
	Early Leaver/Completer (Looking for Work/FT Work)	-0.21 [*]	0.06
	Early Leaver/Completer (Other/FT Work)	0.08	0.11
	Later Leaver/Completer (FT Study/FT Work)	-0.21 [*]	0.07
	Later Leaver/Completer (PT Work/FT Work)	0.08	-0.09
	Later Leaver/Completer (Looking for Work/FT Work)	0.37 ^{***}	0.49 ^{***}
	Later Leaver/Completer (Other/FT Work)	0.26 [*]	0.55 ^{***}
Post- secondary education and training	Apprenticeship (FT Study/FT Work)	.	-0.87 ^{***}
	Apprenticeship (PT Work/FT Work)	.	-0.92 ^{***}
	Apprenticeship (Looking for Work/FT Work)	.	-0.67 ^{***}
	Apprenticeship (Other/FT Work)	.	-0.94 ^{***}
	Traineeship (FT Study/FT Work)	.	-0.16
	Traineeship (PT Work/FT Work)	.	-0.24 ^{**}
	Traineeship (Looking for Work/FT Work)	.	-0.23 ^{**}
	Traineeship (Other/FT Work)	.	-0.54 ^{***}
	TAFE Diploma (FT Study/FT Work)	.	0.42 ^{***}
	TAFE Diploma (PT Work/FT Work)	.	0.04
	TAFE Diploma (Looking for Work/FT Work)	.	-0.13
	TAFE Diploma (Other/FT Work)	.	-0.03
	TAFE Certificate (FT Study/FT Work)	.	0.23 ^{**}
	TAFE Certificate (PT Work/FT Work)	.	0.16 [*]
	TAFE Certificate (Looking for Work/FT Work)	.	-0.03
	TAFE Certificate (Other/FT Work)	.	-0.23 [*]

Note: Coefficient is half the logit of the odds ratio. *** P<0.001, ** 0.001<P<0.01, * 0.01<P<0.05

Table A 11 Effects of labour market experiences on main activity in first and fourth year after leaving school

Variable	Contrasts	Year 1	Year 4
Intercepts	FT Study/FT work	-0.85 ^{***}	-2.22 ^{***}
	PT Work/FT work	-1.61 ^{***}	-1.59 ^{***}
	Looking for Work/FT work	-2.13 ^{***}	-2.14 ^{***}
	Other/FT work	-3.04 ^{***}	-1.82 ^{***}
Part-time work	PT Work in School/None (FT Study/FT Work)	-0.02	-0.01
	PT Work in School/None (PT Work/FT Work)	0.01	-0.16
	PT Work in School/None (Looking for Work/FT Work)	-0.73 ^{***}	-0.50 ^{***}
	PT Work in School/None (Other/FT Work)	-0.37 ^{***}	-0.29 ^{***}
Activity in first year after leaving school	FT Study/FT Work (FT Study/FT Work)	.	0.29
	FT Study/FT Work (PT Work/FT Work)	.	-0.06
	FT Study/FT Work (Looking for Work/FT Work)	.	-0.27
	FT Study/FT Work (Other/FT Work)	.	-0.82 ^{***}
	PT Work/FT Work (FT Study/FT Work)	.	-0.47 [*]
	PT Work/FT Work (PT Work/FT Work)	.	0.25
	PT Work/FT Work (Looking for Work/FT Work)	.	-0.31
	PT Work/FT Work (Other/FT Work)	.	-0.10
	Looking for Work/FT Work (FT Study/FT Work)	.	0.23
	Looking for Work/FT Work (PT Work/FT Work)	.	0.46 ^{**}
	Looking for Work/FT Work (Looking for Work/FT Work)	.	0.82 ^{***}
	Looking for Work/FT Work (Other/FT Work)	.	0.47 ^{**}
	Other/FT Work (FT Study/FT Work)	.	0.71
Other/FT Work (PT Work/FT Work)	.	0.43	
Other/FT Work (Looking for Work/FT Work)	.	0.67 [*]	
Other/FT Work (Other/FT Work)	.	1.77 ^{***}	

Note: Coefficient is half the logit of the ratio of odds. *** P<0.001, ** 0.001<P<0.01, * 0.01<P<0.05

Table A 12 Effects of additional factors to base model on activity in the fourth year after leaving school

Variable		Male	Female
Work satisfaction	Work Satisfaction (FT Study/FT Work)	-	-0.04
	Work Satisfaction (PT Work/FT Work)	-	-0.25**
	Work Satisfaction (Looking for Work/FT Work)	-	-0.30***
	Work Satisfaction (Other/FT Work)	-	-0.06
Weekly earnings \$100s	Earnings (FT Study/FT Work)	-	-0.15
	Earnings (PT Work/FT Work)	-	-0.18*
	Earnings (Looking for Work/FT Work)	-	-0.39***
	Earnings (Other/FT Work)	-	-0.10
Region	Non-Metro/Metro (FT Study/FT Work)	-	-0.03
	Non-Metro/Metro (PT Work/FT Work)	-	0.00
	Non-Metro/Metro (Looking for Work/FT Work)	-	0.12
	Non-Metro/Metro (Other/FT Work)	-	0.55***
Language background	Non-English/English (FT Study/FT Work)	0.91**	-
	Non-English/English (PT Work/FT Work)	0.43	-
	Non-English/English (Looking for Work/FT Work)	0.24	-
	Non-English/English (Other/FT Work)	-0.53	-
Socioeconomic background	Parental Occupational Status (FT Study/FT Work)	0.28*	-
	Parental Occupational Status (PT Work/FT Work)	0.14	-
	Parental Occupational Status (Looking for Work/FT Work)	-0.35**	-
	Parental Occupational Status (Other/FT Work)	-0.21	-
Government vs non-govt. School	Gov/Non-Gov (FT Study/FT Work)	0.06	-0.05
	Gov/Non-Gov (PT Work/FT Work)	-0.31	0.47
	Gov/Non-Gov (Looking for Work/FT Work)	0.72**	0.68*
	Gov/Non-Gov (Other/FT Work)	-0.41	-0.23
Government vs non-govt. school (net of SES)	Gov/Non-Gov (FT Study/FT Work)	0.19	-0.08
	Gov/Non-Gov (PT Work/FT Work)	-0.27	0.47
	Gov/Non-Gov (Looking for Work/FT Work)	0.63*	0.69*
	Gov/Non-Gov (Other/FT Work)	-0.50	0.18
School leaving status	Early Leaver/Completer (FT Study/FT Work)	0.26	-2.08*
	Early Leaver/Completer (PT Work/FT Work)	0.53	0.42
	Early Leaver/Completer (Looking for Work/FT Work)	-0.19	-0.20
	Early Leaver/Completer (Other/FT Work)	-0.40	-0.16
	Later Leaver/Completer (FT Study/FT Work)	-0.40	0.50
	Later Leaver/Completer (PT Work/FT Work)	0.19	-0.50
	Later Leaver/Completer (Looking for Work/FT Work)	1.06***	1.19***
	Later Leaver/Completer (Other/FT Work)	0.37***	1.09***
ENTER score	10 unit Increase (FT Study/FT Work)	0.16*	0.25***
	10 unit Increase (PT Work/FT Work)	-0.15	-0.06
	10 unit Increase (Looking for Work/FT Work)	-0.31**	-0.09
	10 unit Increase (Other/FT Work)	-0.08	-0.20*
TAFE Certificate	TAFE Certificate (FT Study/FT Work)	0.91***	0.34
	TAFE Certificate (PT Work/FT Work)	0.02	-0.07
	TAFE Certificate (Looking for Work/FT Work)	-0.56*	-0.11
	TAFE Certificate (Other/FT Work)	-0.28	-1.09***
TAFE Diploma	TAFE Diploma (FT Study/FT Work)	0.99***	1.07***
	TAFE Diploma (PT Work/FT Work)	0.34	-0.37
	TAFE Diploma (Looking for Work/FT Work)	-0.53	-1.02***
	TAFE Diploma (Other/FT Work)	0.52	-0.73***

Note: Effects are net of the effects of the factors in the base model *** P<0.001, ** 0.001<P<0.01, * 0.01<P<0.05

Table A 13 Effects of base model and subsequent activities on activity in fourth year after leaving school

Variable		Male	Female
Intercept	FT Study/FT work	-2.40***	-2.23***
	PT Work/FT work	-1.37***	-0.65*
	Looking for Work/FT work	-2.10***	-1.89***
	Other/FT work	-3.50***	-1.19***
Achievement In Year 9	Achievement (FT Study/FT Work)	0.02	-0.04
	Achievement (PT Work/FT Work)	0.06	0.02
	Achievement (Looking for Work/FT Work)	-0.30**	-0.31*
	Achievement (Other/FT Work)	-0.17	-0.08
Part-time work	PT Work in School/None (FT Study/FT Work)	0.18	0.29
	PT Work in School/None (PT Work/FT Work)	0.11	-0.32
	PT Work in School/None (Looking for Work/FT Work)	-1.27***	-0.51*
	PT Work in School/None (Other/FT Work)	0.37	-0.48*
Activity in first year after leaving school	FT Study/FT Work (FT Study/FT Work)	0.02	-0.11
	FT Study/FT Work (PT Work/FT Work)	0.21	0.59*
	FT Study/FT Work (Looking for Work/FT Work)	0.33	-0.10
	FT Study/FT Work (Other/FT Work)	0.00	-0.26
	PT Work/FT Work (FT Study/FT Work)	-0.22	-0.86
	PT Work/FT Work (PT Work/FT Work)	0.31	1.14***
	PT Work/FT Work (Looking for Work/FT Work)	0.32	0.13
	PT Work/FT Work (Other/FT Work)	1.19***	0.51
	Looking for Work/FT Work (FT Study/FT Work)	-0.74	0.25
	Looking for Work/FT Work (PT Work/FT Work)	0.66*	1.19***
	Looking for Work/FT Work (Looking for Work/FT Work)	0.80***	0.73
	Looking for Work/FT Work (Other/FT Work)	0.84	1.38***
	Other/FT Work (FT Study/FT Work)	0.42	-0.83
	Other/FT Work (PT Work/FT Work)	X	1.01*
Other/FT Work (Looking for Work/FT Work)	0.42	0.16	
Other/FT Work (Other/FT Work)	0.64	1.32**	
Activity in second or third years after leaving school	FT Study/FT Work (FT Study/FT Work)	1.74**	1.36***
	FT Study/FT Work (PT Work/FT Work)	0.59*	-0.12
	FT Study/FT Work (Looking for Work/FT Work)	0.46	0.24
	FT Study/FT Work (Other/FT Work)	1.51***	-0.91**
	PT Work/FT Work (FT Study/FT Work)	1.16***	0.70*
	PT Work/FT Work (PT Work/FT Work)	0.42	-0.03
	PT Work/FT Work (Looking for Work/FT Work)	1.64***	0.75*
	PT Work/FT Work (Other/FT Work)	1.51***	0.31
	Looking for Work/FT Work (FT Study/FT Work)	0.65	2.18***
	Looking for Work/FT Work (PT Work/FT Work)	-0.57	0.65*
	Looking for Work/FT Work (Looking for Work/FT Work)	1.55***	1.57***
	Looking for Work/FT Work (Other/FT Work)	1.71***	2.91***
	Other/FT Work (FT Study/FT Work)	-1.11***	-1.16***
	Other/FT Work (PT Work/FT Work)	-1.23***	-2.09***
Other/FT Work (Looking for Work/FT Work)	-0.56*	-1.56***	
Other/FT Work (Other/FT Work)	-1.04**	-1.78***	
Post- secondary education and training	Apprenticeship (FT Study/FT Work)	-2.16***	-0.34
	Apprenticeship (PT Work/FT Work)	-1.73***	-0.08
	Apprenticeship (Looking for Work/FT Work)	-1.11***	0.77
	Apprenticeship (Other/FT Work)	-0.16	0.11
	Traineeship (FT Study/FT Work)	-0.15	0.01
	Traineeship (PT Work/FT Work)	-0.80*	0.57**
	Traineeship (Looking for Work/FT Work)	-0.28	0.62*
Traineeship (Other/FT Work)	-0.49	-0.12	

Note: Coefficient is the logit of ratio of odds. *** P<0.001, ** 0.001<P<0.01, * 0.01<P<0.05. 'X' indicates that the coefficient is not able to be estimated (zero cell).

Table A 14 Effects of base model and activities in second year (contrast with unemployment) on activity in fourth year

Variable		Male	Female
Intercept	FT Study/FT work	-1.65***	-1.87***
	PT Work/FT work	-1.33***	-1.25***
	Looking for Work/FT work	-1.03***	-1.63***
	Other/FT work	-2.27***	-0.84***
Achievement In Year 9	Achievement (FT Study/FT Work)	-0.01	-0.06
	Achievement (PT Work/FT Work)	0.03	0.03
	Achievement (Looking for Work/FT Work)	-0.37***	-0.33***
	Achievement (Other/FT Work)	-0.22	-0.13
Part-time work	PT Work in School/None (FT Study/FT Work)	0.06	0.26
	PT Work in School/None (PT Work/FT Work)	0.07	-0.34
	PT Work in School/None (Looking for Work/FT Work)	-1.44***	-0.48
	PT Work in School/None (Other/FT Work)	0.21	-0.59***
Activity in first year after leaving school	FT Study/FT Work (FT Study/FT Work)	0.14	0.06
	FT Study/FT Work (PT Work/FT Work)	0.32	0.56*
	FT Study/FT Work (Looking for Work/FT Work)	0.42	-0.45
	FT Study/FT Work (Other/FT Work)	0.15	-0.50
	PT Work/FT Work (FT Study/FT Work)	-0.16	-0.62
	PT Work/FT Work (PT Work/FT Work)	0.24	1.25***
	PT Work/FT Work (Looking for Work/FT Work)	0.33	0.32
	PT Work/FT Work (Other/FT Work)	1.16***	0.78*
	Looking for Work/FT Work (FT Study/FT Work)	-0.51	0.61
	Looking for Work/FT Work (PT Work/FT Work)	0.70*	1.38***
	Looking for Work/FT Work (Looking for Work/FT Work)	0.87**	0.85
	Looking for Work/FT Work (Other/FT Work)	1.01*	1.19
	Other/FT Work (FT Study/FT Work)	0.60	-0.14
	Other/FT Work (PT Work/FT Work)	-8.46	1.48**
Other/FT Work (Looking for Work/FT Work)	0.81	0.45	
Other/FT Work (Other/FT Work)	0.77	1.83***	
Activity in second year after leaving school	FT Work/Unemployed (FT Work/FT Work)	-1.50***	-1.25**
	FT Work/Unemployed (PT Work/FT Work)	-1.24***	-1.54***
	FT Work/Unemployed (Looking for Work/FT Work)	-1.43***	-1.69***
	FT Work/Unemployed (Other/FT Work)	-1.90***	-1.53***
	FT Study/Unemployed (FT Study/FT Work)	0.52	0.26
	FT Study/Unemployed (PT Work/FT Work)	-0.24	-0.47
	FT Study/Unemployed (Looking for Work/FT Work)	-0.73***	-0.36
	FT Study/Unemployed (Other/FT Work)	-0.14	-1.42***
	PT Work/Unemployed (FT Study/FT Work)	-1.15*	-0.25
	PT Work/Unemployed (PT Work/FT Work)	-0.23	-0.23
	PT Work/Unemployed (Looking for Work/FT Work)	-0.60	-0.99*
	PT Work/Unemployed (Other/FT Work)	-1.17***	-1.08***
	Other/Unemployed (FT Study/FT Work)	-0.30	1.00
	Other/Unemployed (PT Work/FT Work)	-0.80	0.06
Other/Unemployed (Looking for Work/FT Work)	0.55	0.83	
Other/Unemployed (Other/Looking for Work)	0.73	1.56***	
Post- secondary education and training	Apprenticeship (FT Study/FT Work)	-2.27***	-0.30
	Apprenticeship (PT Work/FT Work)	-1.73***	-0.23
	Apprenticeship (Looking for Work/FT Work)	-1.10***	0.77
	Apprenticeship (Other/FT Work)	-0.28	-0.26
	Traineeship (FT Study/FT Work)	-0.30	-0.13
	Traineeship (PT Work/FT Work)	-0.93*	0.44*
	Traineeship (Looking for Work/FT Work)	-0.34	0.46
Traineeship (Other/FT Work)	-0.72	-0.62*	

Note: Coefficient is the logit of the ratio of odds. *** P<0.001, ** 0.001<P<0.01, * 0.01<P<0.05. X coefficient not able to be estimated (zero cell).

Table A 15 Effects of base model and activities in third year (contrast with unemployment) on activity in fourth year

Variable		Male	Female
Intercept	FT Study/FT work	-1.64***	-1.64***
	PT Work/FT work	-1.66***	-1.81***
	Looking for Work/FT work	-0.40	-1.78***
	Other/FT work	-2.04***	-1.36***
Achievement in Year 9	Achievement (FT Study/FT Work)	0.06	-0.04
	Achievement (PT Work/FT Work)	0.04	0.04
	Achievement (Looking for Work/FT Work)	-0.29**	-0.36**
	Achievement (Other/FT Work)	-0.11	-0.07
Part-time work	PT Work in School/None (FT Study/FT Work)	0.07	0.20
	PT Work in School/None (PT Work/FT Work)	0.09	-0.28
	PT Work in School/None (Looking for Work/FT Work)	-1.31***	-0.74**
	PT Work in School/None (Other/FT Work)	0.33	-0.53*
Activity in first year after leaving school	FT Study/FT Work (FT Study/FT Work)	0.71***	0.46
	FT Study/FT Work (PT Work/FT Work)	0.30	0.67**
	FT Study/FT Work (Looking for Work/FT Work)	0.43	0.14
	FT Study/FT Work (Other/FT Work)	0.46	-0.20
	PT Work/FT Work (FT Study/FT Work)	-0.14	-0.90*
	PT Work/FT Work (PT Work/FT Work)	0.17	0.91***
	PT Work/FT Work (Looking for Work/FT Work)	0.49	0.15
	PT Work/FT Work (Other/FT Work)	1.30***	0.43
	Looking for Work/FT Work (FT Study/FT Work)	-0.37	0.65
	Looking for Work/FT Work (PT Work/FT Work)	0.72*	1.47***
	Looking for Work/FT Work (Looking for Work/FT Work)	0.90**	1.01*
	Looking for Work/FT Work (Other/FT Work)	0.91*	1.73***
	Other/FT Work (FT Study/FT Work)	0.62	-0.44
	Other/FT Work (PT Work/FT Work)	-8.28X	1.23**
Other/FT Work (Looking for Work/FT Work)	0.59	0.48	
Other/FT Work (Other/FT Work)	0.77	1.65***	
Activity in third year after leaving school	FT Work/Unemployed (FT Work/FT Work)	-1.67***	-1.85***
	FT Work/Unemployed (PT Work/FT Work)	-1.11**	-1.29***
	FT Work/Unemployed (Looking for Work/FT Work)	-2.22***	-1.69***
	FT Work/Unemployed (Other/FT Work)	-2.35***	-1.85***
	FT Study/Unemployed (FT Study/FT Work)	0.72	0.92*
	FT Study/Unemployed (PT Work/FT Work)	0.91*	0.93*
	FT Study/Unemployed (Looking for Work/FT Work)	-0.64	0.53
	FT Study/Unemployed (Other/FT Work)	0.04	-0.47
	PT Work/Unemployed (FT Study/FT Work)	-0.09	0.17
	PT Work/Unemployed (PT Work/FT Work)	0.92*	1.26***
	PT Work/Unemployed (Looking for Work/FT Work)	-1.85***	-0.11
	PT Work/Unemployed (Other/FT Work)	-1.21***	-0.15
	Other/Unemployed (FT Study/FT Work)	0.25	1.39**
	Other/Unemployed (PT Work/FT Work)	-0.97	1.14*
Other/Unemployed (Looking for Work/FT Work)	0.03	0.81	
Other/Unemployed (Other/Looking for Work)	0.63	2.68***	

Variable		Male	Female
Post-secondary education and training	Apprenticeship (FT Study/FT Work)	-2.97***	-0.59
	Apprenticeship (PT Work/FT Work)	-1.72***	-0.32
	Apprenticeship (Looking for Work/FT Work)	-1.19***	0.72
	Apprenticeship (Other/FT Work)	-0.32	0.20
	Traineeship (FT Study/FT Work)	-0.44	0.05
	Traineeship (PT Work/FT Work)	-0.80*	0.56*
	Traineeship (Looking for Work/FT Work)	-0.22	0.43
	Traineeship (Other/FT Work)	-0.46	-0.18

Note: Coefficient is the logit of the ratio of odds. *** $P < 0.001$, ** $0.001 < P < 0.01$, * $0.01 < P < 0.05$. X coefficient not able to be estimated (zero cell).

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NOTES

- 1 In his review of the school-to-work transition Ryan (2001) notes that in the United Kingdom and France participation in vocational education at school was associated with a 10 per cent reduction in earning power.
- 2 Although this procedure is appropriate, it is not without costs. A large number of coefficients are generated which can only be accurately interpreted as odds ratios. Furthermore, the multinomial logit does not provide a readily interpretable measure of goodness of fit so it is not possible to compare the explanatory power of models. However, statistical significance and the size of the effects do indicate the importance of different factors.
- 3 Hillman (2005) uses LSAY data to provide a detailed analysis of the activities and profiles of young people outside the labour force and full-time education.
- 4 These percentages in the boxes differ slightly from those presented in Table A 2 since they only include respondents interviewed in the adjoining years.
- 5 Note that these figures do not take into account part-time study. The role of post-school education and training are examined in later chapters.
- 6 A more detailed analysis of the education and labour market outcomes for Indigenous young people in the LSAY samples are provided by Rothman, Frigo & Ainley (2005).