

# Longitudinal Surveys of Australian Youth

## Research Report 34

### **Dynamics of the Australian Youth Labour Market: The 1975 Cohort, 1996-2000**

Gary N. Marks,  
Kylie Hillman,  
Adrian Beavis

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## EXECUTIVE SUMMARY

This report examines labour market dynamics between 1996 and 2000 of a cohort of young Australians born in 1975. During this time, most of the cohort were either in post-secondary education and training, or establishing themselves in the labour market. The first chapter reports on their major activity (full-time study, full-time work, part-time work, looking for work and 'other' activities) for each year between 1996 and 2000 (when they were 21 to 25 years of age). This chapter also presents the cohort's participation in education and training and their occupational profiles. The second chapter focuses on the year-to-year movement between activities and occupational group. The subsequent chapters focus on full-time work, unemployment and marginal activities (unemployment, part-time work and other activities excluding domestic responsibilities), respectively. These three chapters begin with a breakdown of the proportions of time the cohort spent in each activity. Subsequently, the relationship between time spent in the activity and a range of social background and educational labour market variables is examined. The third section examines the influences of qualifications and labour market experiences on the proportion spent in these activities.

The main findings from the analyses of the major activities, qualifications and occupations of the cohort between the ages of 21 and 25 are as follows:

- The proportion working full-time increases from 44 per cent at age 21 to 71 per cent at age 25. In each year approximately 10 per cent more young men than young women were working full-time.
- The proportion of the cohort in full-time study declined substantially from 28 per cent at age 21 to 5 per cent at age 25.
- The proportion of the cohort unemployed (that is, not working but looking for work) declined over the years, from 6 per cent at age 21 to 3 per cent at age 25. The proportion of young men looking for work was slightly higher than that for young women.
- The proportion of the sample engaged in part-time work also declined, from 14 per cent at age 21 to 11 per cent at age 25. Women engaged in part-time employment at a substantially higher rate than young men.
- The most common form of post-secondary study was a degree course. Over one third of the cohort held a degree qualification and 4 per cent a postgraduate qualification by age 25.
- By age 25, approximately 7 per cent of the cohort had completed an apprenticeship or traineeship and 13 per cent held a TAFE certificate.
- Less than 40 per cent of the cohort held no post-secondary school qualification by the time they were 25 years of age.
- Approximately 13 per cent of males and 11 per cent of females had not completed Year 12 or gained a post-secondary qualification by age 25.
- Of those in the work force, about 46 per cent held professional (including para-professional) or managerial jobs at age 25. Seventeen per cent were in clerical work and 16 per cent worked in sales and personal service work. A further 9 per cent were in trades (skilled manual) and 9 per cent worked in semi-skilled and unskilled occupations.
- The occupational profile of the cohort at age 21 was very different to that at age 25. There were much higher proportions in semi-skilled and unskilled work and sales and personal service work at age 21 than there were at the later time point—17 and 33 per cent as compared to 9 and 16 per cent, respectively.
- Gender differences in the distribution of occupations were similar to that for the entire adult workforce. Higher proportions of young men worked in managerial, trades, and other manual occupations. Higher proportions of young women worked in clerical, sales and personal service occupations.

- A high proportion of part-time work was in sales and personal service work, although this proportion declined substantially (from 52 to 32 per cent of part-time workers) between 21 and 25 years of age.

The main findings from the examination of year-to-year movement between activities between the 21 and 25 years of age are as follows:

- Focusing on adjacent years, the proportion of young people remaining in full-time work in two adjoining years was around 80 to 85 per cent. For part-time work, unemployment and ‘other’ activities, the comparable proportions were 30 to 40 per cent, 10 to 20 per cent, and 30 to 50 per cent, respectively.
- Much of the movement from part-time work, unemployment and ‘other’ activities was into full-time work.
- There is little movement from part-time work to unemployment.

The main findings from the analyses of time spent in full-time employment, unemployment and participation in marginal activities (unemployment, part-time work and other activities excluding domestic responsibilities) from age 21 to age 25 are as follows:

- Prior experience of full-time work had a large positive impact on subsequent labour market outcomes, whereas the experience of unemployment decreased time spent in full-time work and increased time spent looking for work or in marginal activities in the subsequent five years.
- Labour market experience of full-time work or unemployment had a much greater impact than qualifications on subsequent labour market outcomes.
- Of the qualifications examined, a degree had the strongest effect on subsequent time spent in full-time work, but afforded little protection against unemployment or participation in marginal activities.
- An apprenticeship qualification increased subsequent time spent in full-time employment (as it provided experience in full-time work), but had little or no effect on time spent looking for work.
- When controlling for prior experience of full-time work, a TAFE certificate increased subsequent time spent in full-time employment but marginally increased time spent looking for work. A TAFE diploma had a slightly stronger positive influence than a TAFE certificate on time spent in full-time work.
- Completion of Year 12 increased time spent in full-time work after adjusting for prior experience of full-time work. It also reduced the time-spent looking for work, although this effect was small.

The report demonstrates the benefits of gaining full-time employment early in the school-to-work transition. Experience of working-full time has substantially stronger positive effects on the labour market outcomes of 21 to 25 year olds than completion of Year 12 or post-secondary qualifications and training. Unemployment has a scarring effect of the probability of subsequent unemployment. One policy implication of the analyses is that governments should emphasize securing full-time employment and the avoidance of unemployment for those young people who may be at risk of spending much of their time in marginal activities.

The report also shows that there is not a large homogenous group of young people excluded from full-time work. There is considerable movement across activity states although full-time is the most stable. Furthermore, the proportion of young adults who are engaged in marginal activities for long periods is relatively small, less than 10 per cent of the cohort.

## 1. INTRODUCTION

Over the last three decades, the transition from full-time education to full-time work has been characterised as problematic for a significant proportion of young adults. It is often argued that a high proportion of young people continually move between unemployment, part-time work, low-status full-time work and withdrawal from the labour force. Young people are viewed as ‘significant losers’ from changes in the labour force that have occurred over recent decades (Spierings, 1999:5).

This report focuses on labour market *dynamics* between the ages of 20 and 25 for a cohort of young people born in 1975. The early 20s is the age at which adults establish themselves in the labour force. By age 25 most young people who did not proceed with full-time post-secondary education have been in the labour market for at least five years, and should be well established in their careers. On the other hand, most young adults who pursued post-secondary education have entered the labour market but for a considerably shorter time. In contrast to most studies on the youth labour market, which use cross-sectional data, the data used in this report are longitudinal which allow examination of the year-to-year changes in the cohort’s activities. Focusing on the dynamics provides a better understanding of how young people are faring as it indicates whether unfavourable labour market situations are permanent or transitory.

### Background

This study is a companion piece to other reports in the LSAY series. One recent LSAY report focuses on the labour market outcomes of school leavers between the ages of 16 and 21 (McMillan & Marks, 2003). The analyses presented in that report are similar to those presented here. The current report also updates work on unemployment and earnings for the three older *Youth in Transition* cohorts born in 1961, 1965 and 1970, and the pathways reports, which used data from the Australian Youth Survey (Lamb, 2001; Lamb & McKenzie, 2001; Marks & Fleming, 1998a; Marks & Fleming, 1998b).

These reports provide valuable information on the labour market experiences of young people in Australia over the last two decades. Marks and Fleming’s (1998a) study on youth unemployment (for cohorts of young people born in 1961 and 1965) found that prior experience of full-time work had a strong (negative) relationship with the likelihood of a young person becoming unemployed. Completion of Year 12 and higher achievement in literacy and numeracy were also important in reducing the likelihood of entering unemployment, as was the state of the labour market indicated by declines in the national unemployment rate. Those who had completed an apprenticeship or held a degree tended to show substantially lower rates of unemployment. Those with TAFE certificates showed slightly lower unemployment rates. However, post-school qualifications did not appear to substantially affect chances of becoming unemployed, after taking into account completion of Year 12 and labour market experience. Similarly, family background factors such as parental occupation, location and ethnicity had little or no direct effects on unemployment (Marks & Fleming, 1998a). One little recognized influence on youth unemployment is related to the effect of age—as cohorts age, their labour market outcomes improve, and this improvement can only partially be attributed to greater labour market experience. There may, therefore, be some type of ‘maturity’ effect whereby young people either become ‘more serious’ about their involvement in the labour market or have attained ‘life skills’ which improve their employment prospects.

Lamb (2001) investigated the post-school pathways of TAFE diploma and university graduates and non-graduates. Graduates experienced smoother transitions to full-time work. Although by the seventh year out of school the proportion of males in full-time employment was higher for non-graduates (78 per cent) than for graduates (68 per cent), the proportion in marginal activities (looking for work, part-time work, and not in the labour force) was much higher among non-graduates (19 per cent compared to 10 per cent for non-graduates). For males, the major difference was in unemployment, with 9 per cent of non-graduates looking for work compared to only 3 per cent of graduates. Among young women, differences between graduates and non-graduates

presented a different picture to that for men—73 per cent of graduates were working full-time in the seventh post-school year compared to 68 per cent of non-graduates. In addition, a much higher proportion of non-graduates were in marginal activities (36 per cent compared to 13 per cent for graduates). Female non-graduates were much more likely not to be in the labour force (17 per cent) compared to graduates (4 per cent) (Lamb, 2001; Lamb & McKenzie, 2001).

Part of the reason why unemployment is higher among non-graduates from these cohorts (who left school between 1986 and 1991) is that they tended to enter the labour market earlier when the unemployment rate was higher. Unemployment peaked at over 11 per cent in 1993 and has declined since then. A more recent examination of a cohort of students who were in Year 9 in 1995 shows weaker differences in labour market outcomes between early school leavers and school completers (for the years 1996-2000). On some indicators, early school leavers show superior labour market outcomes. For example, 71 per cent of early leavers, 65 per cent of later school leavers, and 61 per cent of completers (who had not entered higher education), were employed full-time in 2000. Early school leavers also showed slightly higher incomes. However, unemployment was higher among later (but not earlier) school leavers (McMillan & Marks, 2003). The positive outcomes for the group of early school leavers is likely to be due to their greater experience in the labour market.

Each report shows improvements in labour market outcomes or as the cohort ages. All reports show that achievement in literacy and numeracy tends to be associated with superior labour market outcomes. Young people who pursue university education tend to show better labour market outcomes, because their qualifications enable them to enter particular labour markets characterized by less unemployment, more full-time work and higher incomes. One common finding from these reports is the benefit of an apprenticeship. Young people with apprenticeships quickly enter the labour market and accumulate labour-market skills; however, the benefits of other qualifications are not so clear. Completion of Year 12 does appear to confer some advantage to cohorts who left school during the 1980s and early 1990s, but as discussed above in the context of the school leavers report, may not be as beneficial for cohorts who left school in the late 1990s. There is no clear evidence that a TAFE certificate is highly beneficial in terms of labour market outcomes among youth cohorts.

### **The Current Report**

This report examines the labour market outcomes between the ages of 21 and 25 of a youth cohort born in 1975. Therefore for the analyses the focus is on their labour market activities between 1996 and 2000. During this period, Australia experienced lower unemployment and high growth in both jobs and the economy in general. Examining this cohort informs on questions about the youth labour market in Australia, specifically, the extent to which young people are engaged in marginal activities; the benefits of school completion, apprenticeships and qualifications; the extent to which part-time work leads to full-time work; whether young people are ‘scarred’<sup>1</sup> by unemployment, and the relative benefits of experience in full-time work *vis-à-vis* post-secondary qualifications.

The report employs the concept marginal *activities*, defined as looking for work but not working, working part-time but not in full-time study, and not in the labour force. This is the definition used by Dusseldorp Skills Forum (Spierings, 1999:6) and the recent LSAY report on school leavers (McMillan & Marks, 2003). It differs from the ABS definition of marginal *attachment* to the labour force which applies only to those not in the labour force. Part-time workers and the unemployed are part of the labour force so are not considered as having a marginal attachment to the labour force.<sup>2</sup> The concept of marginal activities (as distinct from marginal attachments) is employed for this report in order to address the view often expressed in the research and policy communities that a large proportion of young people who are excluded from full-time work continually move between unemployment, part-time work and not-in-the-labour force (for example, Sweet, 1995, and Dusseldorp, 1999). This view contends that those engaged in marginal

activities are unlikely to gain full-time work and implies that these three activities are more or less equally deleterious. The analyses presented here do not support this view.<sup>3</sup>

This report is limited to the cohort's labour market experiences between 21 and 25 years of age. There are several reasons for not analysing their labour market outcomes at an earlier age. First, this cohort was 18 and 19 years of age in 1993 and 1994, at which time the economic environment was very different to their more recent experiences during their early to mid 20s. Second, analyses of the initial labour market experiences of a similarly aged cohort were the subject of previous LSAY research reports (Lamb, 1997; Lamb & McKenzie, 2001). Finally, a research report on the initial labour market outcomes and pathways from school-to-work of a much younger cohort, the Year 9 class of 1995, has recently been published (McMillan & Marks, 2003).

These analyses are based on data collected as part of the *Youth in Transition* project conducted by the Australian Council for Educational Research (ACER).<sup>4</sup> The data used in this report are from the youngest *Youth in Transition* cohort born in 1975. The cohort was initially contacted at school in 1989. At this time, cohort members completed a small questionnaire collecting demographic and social background data. They were also assessed in literacy and numeracy by ACER-designed tests. From 1990, cohort members were sent mail questionnaires, which collected information on their education, labour market, living arrangements and well-being. These questionnaires did not collect detailed data on other matters such as work satisfaction, preferences for full- or part-time work and occupational aspirations.

Details on the measurement of variables and the analytical procedures used are presented in appropriate sections of the text. 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; however, the very small group of young people who are truly desperate (for example, the homeless) are not represented in the sample. Appendix 1 provides more information on the weights and Table A presents the weighted sample distributions of categorical variables used in the analyses.

The first part of Chapter 2 is preliminary and 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 for each year between 1996 and 2000 when the cohort was between 20 and 24 years of age. It also presents these activity profiles by gender. This chapter also includes summaries of the cohort's educational participation, their qualifications to date, and the type of occupation (broken down by gender and whether employment was full- or part-time).

Chapter 3 focuses on the pathways young people took during their early 20s. Pathways show the degree to which activity changed from year-to-year, identifying the extent young people remained in or moved between full-time study, full-time work, part-time work, unemployment or engagement in other activities.

Chapters 4, 5 and 6 investigate the time spent in full-time work, unemployment and marginal activities. The first part of each of these chapters presents the time spent in these activities for all respondents and by gender. The second part shows the relationships between time spent and a range of demographic, social background, and school variables. The third section presents the bivariate relationships between these outcomes and Year 12 completion, qualifications and full-time work experience. The final sections of these chapters present the results of regression analyses of qualifications and labour market experiences on the proportion of time spent in each activity (full-time work, unemployment and marginal activities). A second group of regression analyses is also presented, focussing on those who did not obtain a degree qualification. For the chapters on full-time employment and unemployment, a variety of interaction effects were tested, with reports on additional analyses on these activities in the year 2000.

Chapter 7 discusses the findings and policy implications of this study.

## Context

A recent review of the labour market situation for 20 to 24 year olds concludes that, although this group has better labour market outcomes than teenagers, there remains some cause for concern. Unemployment rates for this group are almost twice that of other adults, the average duration of unemployment is around ten months, and part-time work is common. Furthermore, there is evidence of a change towards employment in small firms (which may not provide the training opportunities of larger organizations) and an overall decline in the skill levels of this group's occupations (Wooden & Vanderheval, 1999:35). The proportion of this age group in full-time work has declined from 66 per cent in 1987 to 55 per cent in 1992 and 52 per cent in 1997 (Wooden & Vanderheval, 1999:43). According to Wooden (1999:43), the proportion at risk, that is the proportion neither in full-time work or education, was around 28 per cent and this did not decline between 1987 and 1997.

In contrast, on other indicators, 20 to 24 year olds in 1990s are faring a little better than the same age group at earlier time points. Compared to 1987, 20 to 24 year olds in 1998 show a higher proportion engaged in full-time study (19 per cent compared to 9 per cent) and there is little change in the proportion unemployed (9 and 8 per cent) or not in the labour force (11 and 10 per cent) (Spierings, 1999:9). Other data presented by Wooden (1999:40) show a decline in unemployment among this age group: 16 per cent unemployed in 1993, 14 per cent in 1997 and 12 per cent in 1998.<sup>5</sup>

More recent data on the labour market for this group of young people are available from the Australian Bureau of Statistics (ABS, 2001b) for September 2001. These data show further improvements. The unemployment rate had declined to 10 per cent. This represents a substantial reduction from the 16 per cent in 1993. There is also a small decrease in the proportion not in the labour force (non-students only), at 9 per cent compared to 10 per cent in 1997 and 11 per cent in 1987. The proportion in full-time education has increased further to about 22 per cent of the cohort. The proportion in full-time work has remained steady at 55 per cent. However, these data show that the proportion of the cohort at risk, defined as persons not in full-time education or full-time work, remained steady at around 27.4 per cent, compared to 28.6 per cent estimated for 1997 (see Wooden & Vanderheval, 1999:35).

**Table 1 Labour force statistics for 20-24 year olds in September 2001**

	Employed		Unemployed			Labour force	Not in labour force	Civilian population	Unemployment rate	Participation rate
	Full-time workers	Total	Looking for full-time work	Looking for part-time work	Total					
<b>Not attending a tertiary institution full-time</b>										
Males	399.6	454.8	58.7	*4.2	62.8	517.7	32.4	550.1	12.1	94.1
Females	296.0	394.1	27.2	5.2	32.3	426.4	97.5	523.9	7.6	81.4
Persons	695.6	848.9	85.8	9.3	95.2	944.1	129.9	1,073.9	10.1	87.9
Age										
20	101.5	131.3	17.0	*2.0	19.0	150.3	25.3	175.6	12.7	85.6
21	125.6	156.5	15.2	*1.0	16.2	172.7	20.3	193.1	9.4	89.5
22	139.6	174.4	18.1	*1.9	20.0	194.5	26.8	221.3	10.3	87.9
23	161.8	189.2	20.1	*2.2	22.3	211.5	28.5	240.0	10.6	88.1
24	167.2	197.5	15.3	*2.2	17.5	215.0	29.0	244.0	8.2	88.1
<b>Attending a tertiary institution full-time</b>										
Males	4.9	75.3	*2.8	7.8	10.6	85.9	63.4	149.3	12.3	57.5
Females	5.5	87.8	*1.6	6.8	8.5	96.2	57.0	153.3	8.8	62.8
Persons	10.4	163.1	4.5	14.6	19.0	182.1	120.4	302.6	10.5	60.2
Age										
20	*2.0	54.6	*1.6	6.4	8.0	62.6	39.1	101.7	12.8	61.6
21	*2.7	46.0	*1.0	*2.7	*3.7	49.7	32.1	81.8	*7.5	60.8
22	*2.2	30.1	*0.7	*2.2	*2.9	33.0	20.3	53.2	*8.7	61.9
23	*2.2	17.1	*0.2	*2.0	*2.2	19.3	14.8	34.1	*11.6	56.6
24	*1.4	15.3	*1.0	*1.2	*2.2	17.5	14.2	31.7	*12.6	55.3
<b>All persons</b>										
Males	404.5	530.1	61.5	11.9	73.4	603.6	95.8	699.3	12.2	86.3
Females	301.5	481.8	28.8	12.0	40.8	522.6	154.5	677.1	7.8	77.2
Persons	706.0	1,012.0	90.3	23.9	114.2	1,126.2	250.3	1,376.5	10.1	81.8
Age										
20	103.4	185.9	18.6	8.4	27.0	212.9	64.4	277.3	12.7	76.8
21	128.3	202.5	16.3	*3.7	19.9	222.5	52.4	274.9	9.0	80.9
22	141.8	204.5	18.8	*4.1	22.9	227.4	47.1	274.5	10.1	82.9
23	163.9	206.2	20.3	*4.2	24.6	230.8	43.3	274.1	10.6	84.2
24	168.6	212.8	16.3	*3.4	19.7	232.6	43.1	275.7	8.5	84.4

Note: Figures (except for rates) in 1,000s.

\* too few for accurate estimates.

Source: ABS (2001b:23)

## 2. EDUCATION AND LABOUR MARKET ACTIVITIES

This chapter investigates the educational and labour market activities of the youth cohort born in 1975. It addresses the following research questions:

- What were the activities of young people aged 21-25 during the late 1990s?
- How did the profile of activities differ between young men and young women?
- What types of education did young people pursue?
- What educational qualifications did they obtain?
- What types of occupations did they enter?

The first part of this chapter shows in broad terms young people's activities during the period 1996 to 2000. Subsequent sections describe their participation in education and training, the distribution of educational qualifications, and the occupational profiles of those employed.

### Main Activity

Main activity was assessed by the respondent's major activity during October of the year surveyed. Main activity was categorised into five groups: full-time study, full-time work, part-time work, unemployed (looking for work but not working) and 'other'.<sup>6</sup> Full-time study includes both university and non-university study. The definition of unemployment is simply based on the respondent indicating they were looking for work. It does not take into account (as does the ABS definition) the hours of paid work in the previous week or availability to begin full-time work. Respondents were allocated to these categories according to this ordering of activities. For example, if they were studying full-time and working part-time they were classified as studying full-time. Similarly, if they were working part-time but looking for work they were classified as working part-time. 'Other' comprises young persons not in the labour force and not in full-time education. It is a residual group comprising respondents not allocated to any of the other four categories.

This hierarchy does not allow identification of those young people who are engaged in more than one activity. However, there was only a small proportion engaged in both full-time study and full-time work, and although part-time work in combination with full-time study was common, for the purposes of this analysis, it is assumed that full-time study is the major activity. Furthermore, creating additional categories for the small numbers of young people engaged in two or more activities would unnecessarily complicate these analyses.

Table 2 shows the proportion of young people in each category for the years 1996 to 2000.<sup>7</sup> The table is divided into three sections. The first shows the proportions of all persons in the sample, and the next two sections show the proportions of males and females, respectively.

The average proportion in full time study over the five-year period was 15 per cent, lower than the 20 per cent presented by Wooden and VanderHeuvel (1999:39) for a younger cohort. The proportion of young people studying full-time declined with age, as the proportion in full-time work increased. There was little difference between males and females in the proportions studying full-time. The category 'full-time study' conceals higher female participation in university and higher male participation in non-university study.

Over the five-year period, the average proportion in full-time employment was around 59 per cent. The proportion engaged in full-time work increased from 44 per cent at age 21 to 71 per cent at age 25. The proportion of females in full-time work was consistently lower (about 10 percentage points) than the proportion of males in full-time work. During the same time period, the younger cohort of 16–21 year olds also show higher levels of full-time work among males (McMillan & Marks, 2003).

**Table 2 Main activity by year, 1996-2000**

Year	1996	1997	1998	1999	2000	Average
Age	21	22	23	24	25	
<b>All</b>						
Studying full-time	28	20	13	8	5	15
Working full-time	44	52	62	67	71	59
Working part-time	14	14	15	11	11	13
Looking for work	6	6	3	4	3	4
Other	7	9	7	11	10	9
<b>Males</b>						
Studying full-time	27	19	14	8	6	15
Working full-time	51	54	67	74	78	65
Working part-time	10	11	11	6	7	9
Looking for work	7	7	4	3	4	5
Other	6	8	4	8	5	6
<b>Females</b>						
Studying full-time	29	20	11	7	4	14
Working full-time	40	50	59	62	67	56
Working part-time	17	15	17	14	13	15
Looking for work	6	5	3	4	3	4
Other	8	9	9	13	13	10

The proportion of young people engaged in part-time work declined from 14 per cent at age 21 to 11 per cent at age 25. The proportion of females working part-time was consistently higher than that for males: 17 per cent compared to 10 per cent at age 21, and 13 per cent compared to 7 per cent at age 25 (Table 2). Considering all work (part-time and full-time) together substantially decreases gender differences in work-force participation. On average over the five years, 74 per cent of males were employed, compared to 71 per cent of females. At age 25, the respective figures were 85 and 80 per cent.

The proportion of the sample looking for work (and not in full-time study, full-time work or part-time work) across the five years was small (around 4 per cent). This proportion declined from 6 per cent in 1996 to 3 per cent in 2000. These percentages are not equivalent to the unemployment rate since these are percentages of the entire cohort rather than the labour force. Excluding full-time students and those not in the labour market, the unemployment rate was around 11 per cent at age 21, but only 4 per cent at age 25. The decline in the proportions looking for work is consistent with the results presented by Wooden and VanderHeuval (1999:40), who show declines in the unemployment rate between the ages of 20 to 24. The proportion of males looking for work was slightly higher than that for females. The higher unemployment rate of males compared to females in this age group, was also noted by Wooden and VanderHeuval (1999:38-39).

The proportion of persons engaged in 'other' activities increased slightly over the five years from 7 to 10 per cent. While the proportion of males showed no clear trend, the proportion of females increased. This increase among young women may be due largely to child rearing responsibilities. Of the young women classified as involved in 'other activities', between 40 and 60 per cent indicated they were living with children of their own. This compares with much smaller proportions of men (Table 3).

**Table 3 Proportions of young men and women classified as involved in other activities who are living with children of their own**

Year	1996	1997	1998	1999	2000
Age	21	22	23	24	25
Men	7	8	<1	12	1
Women	42	41	50	43	57

### Participation in Education and Training

Participation in education and training was based on participation in each year of the survey. The categories used were Apprenticeship/Traineeship, TAFE certificates (not including apprenticeships), Diploma and Associate Diploma, Bachelor degree, Postgraduate degree and 'Other'. Each year's survey asked respondents if they were doing any study in the previous October. If they answered 'yes', they were asked what type of study.<sup>8</sup>

Table 4 shows the proportion of young people aged 21 to 25 who were participating in various types of post-school education, or not studying. This table comprises three panels, the first panel showing the proportions for the entire cohort and the second and third panels showing the proportions of males and females.

The majority of the cohort was not participating in education or training during these years. In 1996, this group comprised 55 per cent of the cohort rising to 79 per cent in 2000. There was little or no gender difference in these proportions after age 21.

Approximately 3 per cent of the cohort was participating in an apprenticeship or traineeship at age 21. This proportion declined to only 1 per cent by age 23. Apprenticeships show substantial gender differences—around 6 per cent of males were in an apprenticeship or traineeship at age 21, compared to only 1 per cent of females at the same age.

At age 21, only 4 per cent of the cohort was enrolled in a non-apprenticeship TAFE course. This proportion remained constant over the five-year period. A similar proportion of the cohort was enrolled in Diploma and Associate Diploma courses, usually at a TAFE institution. Slightly higher proportions of females were participating in these courses. Overall, 11 per cent of the cohort participated in some form of TAFE-related education and training at age 21. This proportion declined to 7 per cent by age 25. More males than females were engaged in the TAFE system at 21 and 22 years of age, due largely to the higher proportions of males in apprenticeships.

University was the most common site of educational participation. At age 21, 31 per cent were enrolled in a bachelor degree course. This proportion fell steadily over the five years, to 7 per cent by age 25. There were only very small differences in the proportion of males and females enrolled in degree courses during these years, although there are gender differences in the proportion with a degree qualification (see Table 5). Participation in post-graduate degrees increased from 2 per cent at age 21 to 5 per cent at age 25. The proportion engaged in other forms of study or training was small (around 2 per cent).

**Table 4 Participation in education and training**

Year	1996	1997	1998	1999	2000	Aver.
Age	21	22	23	24	25	
<b>All</b>						
Apprenticeship/Traineeship	3	2	1	1	1	2
TAFE Certificates	4	3	3	3	3	3
Diploma & Associate Diploma	4	3	3	3	3	3
University Degree	31	21	13	8	7	16
Post-Graduate Degree	2	3	4	5	5	4
Other	1	3	3	3	2	2
Not Studying	55	65	73	77	79	70
<b>Males</b>						
Apprenticeship/Traineeship	6	3	2	2	1	3
TAFE Certificates	4	2	3	2	3	3
Diploma & Associate Diploma	4	2	3	3	3	3
University Degree	30	22	14	8	5	16
Post-Graduate Degree	1	2	4	5	6	4
Other	1	3	2	3	3	2
Not Studying	53	65	72	77	79	69
<b>Females</b>						
Apprenticeship/Traineeship	1	1	0	0	0	0
TAFE Certificates	4	4	4	4	4	4
Diploma & Associate Diploma	4	4	4	3	3	4
University Degree	31	20	12	8	8	16
Post-Graduate Degree	2	4	4	5	5	4
Other	1	3	3	2	2	2
Not Studying	57	65	74	77	79	70

### Educational Qualifications

Table 5 Qualifications shows the percentages of the cohort with educational qualifications. Educational qualifications are categorised into seven groups: Apprenticeship or Traineeship, non-apprenticeship TAFE certificate, Diploma and Associate diploma, degree, post-graduate qualification, other qualification (awarded by a private provider) and no post-school qualification. The qualification categories are not mutually exclusive, since it is possible to have more than one educational qualification.

Approximately 7 per cent of the cohort had completed an apprenticeship and traineeship. This proportion did not increase over the time period investigated, as most young people obtain these qualifications before the age of 21. Males were more likely than females to have completed an apprenticeship or traineeship (12 per cent compared to 4 per cent, respectively).

The proportion of the sample that had obtained a non-apprenticeship TAFE certificate was around 13 per cent. As was the case for apprenticeships and traineeships, this proportion did not increase over the time period investigated. Higher proportions of young women (14 per cent) than young men (11 per cent) had achieved this qualification by age 25.

Around 10 per cent of the cohort had completed a TAFE diploma or associate diploma by age 25. A higher proportion of young women than young men had obtained these qualifications (12 and 8 per cent, respectively)

**Table 5 Qualifications**

Year	1996	1997	1998	1999	2000
Age	21	22	23	24	25
<b>All</b>					
Apprenticeship/Traineeship	7	6	7	6	7
TAFE Certificate	13	12	12	13	13
Diploma & Associate Diploma	9	9	9	10	10
Degree	22	27	31	34	36
Post-graduate Degree	2	3	4	4	4
Other Qualification	2	2	2	3	3
No Post-secondary Qualification	51	49	44	41	38
No Year 12 or Post-secondary Qualification	12	14	13	12	11
<b>Males</b>					
Apprenticeship/Traineeship	12	10	11	11	12
TAFE Certificate	11	9	10	10	11
Diploma & Associate Diploma	6	6	6	6	8
Degree	16	23	28	32	34
Post-graduate Degree	2	2	2	2	3
Other Qualification	1	2	2	2	2
No Post-secondary Qualification	55	54	48	44	40
No Year 12 or Post-secondary Qualification	14	16	14	13	13
<b>Females</b>					
Apprenticeship/Traineeship	4	4	4	4	4
TAFE Certificate	15	13	14	14	14
Diploma & Associate Diploma	11	11	12	12	12
Degree	26	29	33	36	38
Post-graduate Degree	2	3	4	5	5
Other Qualification	2	2	3	3	3
No Post-secondary Qualification	48	46	41	39	37
No Year 12 or Post-secondary Qualification	10	13	12	11	11

Note: Qualifications are not mutually exclusive and the categories 'no post-secondary qualification' and 'no Year 12 or post-secondary qualification' overlap.

The most common type of educational qualification obtained was a bachelor degree. Almost all bachelor degrees were obtained at a university. By age 25, 36 per cent of the cohort had completed a bachelor degree. The completion levels increased between ages 21 and 25, from 22 per cent to 36 per cent. There are some gender differences in completion of a bachelor degree. By age 25, 34 per cent of males and 38 per cent of females had completed a bachelor degree.

By age 25, only 4 per cent had completed a post-graduate qualification, and 3 per cent an 'other' qualification. A slightly higher proportion of females than males had obtained a post-graduate qualification. Similar proportions of females and males had completed an 'other' type of qualification.

Less than half of the cohort (38 per cent) had not obtained a post-secondary school qualification by age 25. This proportion was marginally higher for males than for females (40 and 37 per cent, respectively). Approximately 11 per cent of the cohort had not completed Year 12 and had not obtained any other post-secondary qualification; this proportion was higher for males (13 per cent) than females (11 per cent).

**Table 6 Major occupational groups - percentages 1996 to 2000**

Year	1996	1997	1998	1999	2000
Age	21	22	23	24	25
<b>All</b>					
Managers/Administrators	3	5	5	6	7
Professionals	9	16	23	26	30
Para-professionals	5	9	10	10	9
Trades/Skilled Manual	13	11	12	10	9
Clerical	19	17	16	16	17
Sales/Personal Service	33	29	23	19	16
Semi-Skilled Manual	2	3	3	3	3
Unskilled Manual	15	9	7	7	6
<b>Males</b>					
Managers/Administrators	4	8	8	9	9
Professionals	7	16	21	24	28
Para-professionals	6	8	9	10	8
Trades/Skilled Manual	27	21	23	20	19
Clerical	7	5	6	7	7
Sales/Personal Service	20	19	15	11	12
Semi-Skilled Manual	4	7	5	6	7
Unskilled Manual	24	17	13	11	10
<b>Females</b>					
Managers/Administrators	2	4	4	5	5
Professionals	10	17	25	27	31
Para-professionals	5	10	10	11	9
Trades/Skilled Manual	4	5	4	4	3
Clerical	26	24	23	21	24
Sales/Personal Service	42	35	29	23	19
Semi-Skilled Manual	1	1	1	1	1
Unskilled Manual	9	4	4	4	4

### Occupational Groups

Table 6 shows proportions of those employed by major occupational group between 1996 and 2000. The proportions are first shown for all those employed, and then separately for males and females. In 2000, when the cohort was aged 25, approximately 46 per cent of the sample worked as managers and administrators (7 per cent), professionals (30 per cent) or para-professionals (9 per cent). Approximately 17 per cent worked in clerical and 16 per cent in sales and personal service occupations. Only 18 per cent of those employed were in manual work—9 per cent in trades, 3 per cent in semi-skilled manual work, and 6 per cent in unskilled manual work. The proportions in managerial, professional, and para-professional occupations increased over time, from 17 per cent at age 21 to 46 per cent by age 25. In contrast, the proportion in unskilled manual jobs declined substantially from 15 per cent at 21 years of age to 6 per cent at age 25.

There are considerable gender differences in the distributions across the occupational groups. Young men tend to be concentrated in the trades (by age 25, 19 per cent of males were in this type of work compared to 3 per cent of females) and other manual work (17 per cent compared to 5 per cent, respectively). At age 25, 43 per cent of young women worked in clerical, sales and personal service occupations, compared to 19 per cent of young men. Similar proportions of males and

females worked in professional (28 and 31 per cent) and paraprofessional (8 and 9 per cent) occupations. At age 25, a higher proportion of males (9 per cent) than females (5 per cent) were engaged in managerial and administrative work.

Table 7 shows the occupational distributions for full- and part-time workers separately. At age 21, over 80 per cent of part-time workers were in clerical, sales, personal service or unskilled manual occupations. At age 25, the occupations of part-time workers became more evenly distributed, although nearly half of them worked in clerical, sales or personal service occupations.

**Table 7 Major occupational groups by employment status - percentages 1996-2000**

Year	1996	1997	1998	1999	2000
Age	21	22	23	24	25
<b>Full-time Work</b>					
Managers/Administrators	4	7	6	8	4
Professionals	10	18	26	29	43
Para-professionals	7	11	10	9	11
Trades/Skilled Manual	20	15	14	12	3
Clerical	24	20	18	17	14
Sales/Personal Service	21	21	18	16	13
Semi-Skilled Manual	3	3	2	3	3
Unskilled Manual	11	5	7	6	5
<b>Part-time Work</b>					
Managers/Administrators	1	2	3	2	2
Professionals	9	10	17	11	19
Para-professionals	3	8	10	14	11
Trades/Skilled Manual	3	4	6	6	4
Clerical	11	11	11	18	17
Sales/Personal Service	52	42	37	37	32
Semi-Skilled Manual	1	5	6	2	4
Unskilled Manual	19	18	10	9	11

## Summary

Between 1996 and 2000, the majority of members of this cohort of young people were engaged in full-time education and full-time work. Over the five-year period, 74 per cent (on average) were participating in these two activities. Smaller proportions were working part-time (on average, 13 per cent), looking for work (4 per cent) and in other activities (9 per cent). Between the ages of 21 and 25, the proportion studying full-time decreased from 28 per cent to 5 per cent, and the proportion in full-time work increased from 44 to 71 per cent.

Less than 10 per cent of the cohort was engaged in full-time study by the age of 24.

The major difference in the activity profiles between young men and women was the proportion in full-time work, with males showing participation rates about 10 percentage points higher than their female counterparts. Slightly higher proportions of males were looking for work and higher proportions of women were engaged in other activities.

The most common type of education pursued was a degree; at age 21, 29 per cent of the cohort was enrolled in a degree course. Much smaller proportions were in apprenticeships, traineeships,

and TAFE certificates and diplomas. The majority of the cohort, however, was not engaged in education and training; 54 per cent at age 21 rising to nearly 80 per cent by age 25.

Over half the cohort (52 per cent) had gained a post-school qualification by age 25. Only 11 per cent had not completed Year 12 or a post-school qualification.

As the cohort aged, higher proportions of the cohort held managerial, professional and paraprofessional occupations. At age 25, 46 per cent worked in these occupations. There was a substantial decline in the proportion in sales and personal service occupations, from 33 per cent at age 21 to 16 per cent at age 25. The decline in the proportion in clerical and service occupations was larger for part-time rather than full-time work. The proportion in unskilled manual occupations declined substantially from 15 per cent at age 21 to 6 per cent at age 25. A smaller decline was also found for the trades (from 13 to 9 per cent) with a more substantial decline among males (from 27 to 19 per cent). The proportion in clerical work remained steady at around 17 per cent.

Overall, these data paint a fairly positive picture of young people's activities during this time. The greater majority were in full-time work or full-time study, with a declining proportion looking for work or working part-time. More than 60 per cent of cohort members held post-secondary qualifications by age 25. Decreasing proportions were working in semi-skilled and unskilled manual jobs, and the proportion in managerial or professional jobs was over 40 per cent.

### 3. PATHWAYS

The previous chapter provided year-to-year profiles of the activity, educational and occupational profiles of the cohort between 21 and 25 years of age. It did not, however, show the dynamics of the cohort, that is, the extent to which there is movement into and out of these states. These dynamics are the subject of this chapter.

This chapter builds on the analyses presented in the previous chapter. The first section focuses on the pathways to and from the activities presented in the previous chapter. The second section presents occupational pathways. Activities and occupations are defined as the activities or occupations during the month of October.

The analyses presented in this chapter are designed to inform on the following research questions:

- 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, move to other marginal activities (such as unemployment), or subsequently gain full-time work?
- To what extent do those looking for work continue to do so, move to other marginal activities or obtain full-time employment?
- How much stability is there in the ‘other’ group of young people not studying full-time and not in the labour force? Do they remain in this situation or do they obtain full-time work?
- Generally, what is the extent of movement out of the marginal activities (part-time work, unemployment, and ‘other’ activities) into full-time employment?

#### Major Activity

For this examination of pathways to and from major activities, activities are defined in the same manner as in the previous chapter. The five activities are: full-time study, full-time work, part-time work (not including part-time work in combination with full-time education), unemployment, and ‘other’. The last three activities are understood here as marginal activities. Movement into and out of these states is of particular interest in this chapter.

Figure 1 presents the activity pathways between 1996 and 2000 for this cohort born in 1975. The percentages presented within boxes are the proportion of the cohort engaged in the particular activity.<sup>9</sup> Arrows and the associated outflow percentages indicate year-to-year movement between activities.

#### *Full-time study*

Between 40 and 50 per cent of those in full-time study were in full-time study the following year. The next most common pathway was to full-time work. Of those in full-time study in 1996, 31 per cent were in full-time work in 1997. These proportions were higher for later years. Between 1997 and 1998, 39 per cent moved to full-time work; from 1998 to 1999, 37 per cent moved to full-time work; and from 1999 to 2000, 38 per cent moved to full-time work.

There was some movement to part-time work from full-time education. In 1996, 12 per cent of those engaged in full-time education were in part-time work in 1997. Between 1997 and 1998, the proportion was of this order (14 per cent), but lower for 1998 to 1999 (9 per cent), and higher again for 1999 to 2000 (16 per cent).

A much smaller proportion of those in full-time education were looking for work the following year. Of those in full-time education in 1996, 6 per cent were looking for work in 1997. For subsequent years, the proportion looking for work in the following year was smaller: 3 per cent for 1997 to 1998, 4 per cent for 1998 to 1999, and less than 1 per cent for 1999 to 2000.

For each pair of years, approximately 5 per cent moved from full-time education to being engaged in 'other' activities. For the years 1996 to 1997 and 1997 to 1998, this figure was 4 per cent, for 1998 to 1999 6 per cent and from 1999 to 2000, 3 per cent.

#### *Full-time work*

Full-time work showed a high degree of stability. Approximately 80 to 85 per cent remained in full-time work in adjacent years. Of those in full-time work in 1996, 79 per cent were in full time work in 1997. For subsequent years this proportion increased 83 per cent from 1997 to 1998, 85 per cent from 1998 to 1999, and 86 per cent from 1999 to 2000.

There was some movement from full-time work to part-time work, but as the cohort aged, this pathway became less common. Of those in full-time work in 1996, 7 per cent were in part-time work in 1997. For 1997 to 1998 the figure was 8 per cent; for 1998 to 1999, 5 per cent; and for 1999 to 2000, 4 per cent.

Very few full-time workers were looking for work in the following year. Only 3 per cent of full-time workers in 1996 were looking for work in 1997. For 1997 to 1998, 1 per cent moved from full-time work to unemployment, and for 1998 to 1999 and 1999 to 2000, 2 per cent did so.

Higher proportions moved from full-time work to 'other' activities. Of full-time workers in 1996, 7 per cent were in 'other' activities in 1997. The comparable figures for subsequent years were 4 per cent for 1997 to 1998, 8 per cent for 1998 to 1999, and 7 per cent for 1999 to 2000.

There was little movement from full-time work to full-time study. Of those in full-time work in 1996, 4 per cent were in full-time study in 1997. This pathway became less common in later years: 3 per cent for 1997 to 1998, 1 per cent for 1998 to 1999, and 2 per cent for 1999 to 2000.

#### *Part-time work*

There was much less year-to-year stability in part-time work than for full-time work. Up to 40 per cent remained in part-time work in adjacent years compared to between 80 and 85 per cent for full-time work. Of those working part-time in 1996, 34 per cent were in part-time work in the following year. This proportion was 41 per cent for 1997 to 1998, 35 per cent for 1998 to 1999, and 51 per cent for 1999 to 2000.

Similar proportions of part-time workers were in full-time work the following year. Of part-time workers in 1996, 30 per cent were in full-time work in 1997, 36 for 1997 to 1998, 44 per cent for 1998 to 1999, and 34 per cent for 1999 to 2000.

In 1996 there was substantial movement from part-time work to full-time study: 19 per cent of those working part-time were in full-time study in 1997. In subsequent years decreasing proportions of part-time workers moved to full-time study in the following year: 11 per cent for 1997 to 1998, 6 per cent for 1998 to 1999, and 4 per cent for 1999 to 2000.

Only a small proportion of part-time workers reported looking for work in the following year. For 1996 to 1997 this figure was 5 per cent; for 1997 to 1998, 3 per cent; for 1998 to 1999, 5 per cent; and for 1999 to 2000, 3 per cent.

There was greater movement from part-time work to 'other' activities. Of part-time workers in 1996, 12 per cent were classified as 'not in the labour force' in 1997. The comparable figures for later years were 10 per cent (1997 to 1998), 11 per cent (1998 to 1999) and 8 per cent (1999 to 2000).

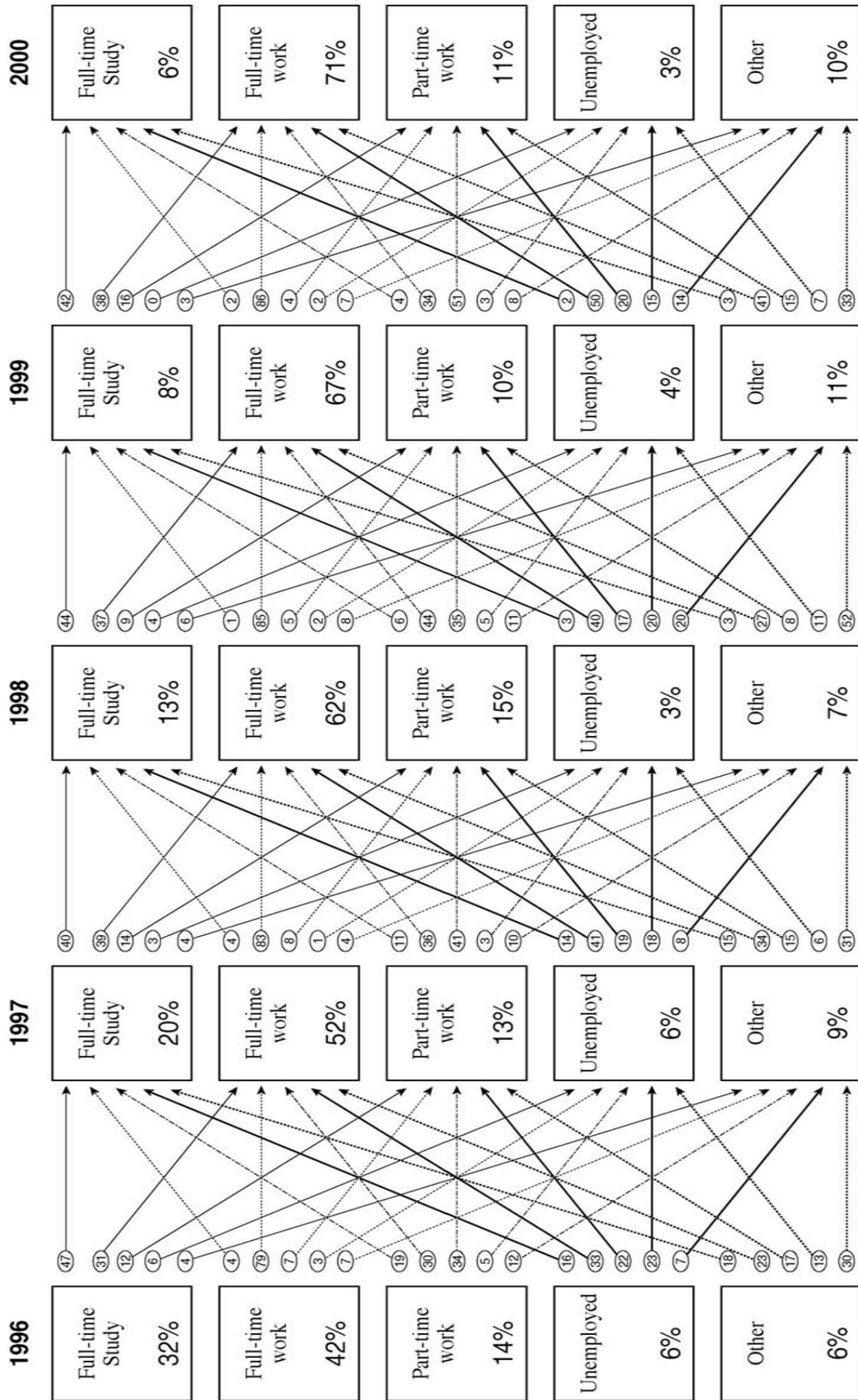


Figure 1 Main activity pathways, 1996-2000

### *Unemployment*

Approximately 20 per cent of the sample reported looking for work (but not working) in two consecutive years. Of those looking for work in 1996, 23 per cent were looking for work in 1997. For 1997 to 1998 this figure was 18 per cent; for 1998 to 1999, 20 per cent; and for 1999 to 2000, 15 per cent.

Decreasing proportions of the group looking for work moved into full-time study in the following year. Of those unemployed in 1996, 16 per cent were in full-time study in 1997. This figure was 14 per cent for 1997 to 1998, and substantially less for 1998 to 1999 (3 per cent) and 1999 to 2000 (2 per cent).

The largest movement from unemployment was into full-time work. Of those looking for work in 1996, 33 per cent were in full-time work in 1997. Movement from unemployment to full-time work increased in later years: 41 per cent for 1997 to 1998, 40 per cent for 1998 to 1999, and 50 per cent for 1999 to 2000.

Of those looking for work in 1996, 22 per cent were in part-time work in 1997. This pathway became less common in later years: 19 per cent for 1997 to 1998, 17 per cent for 1998 to 1999 and 20 per cent for 1999 to 2000.

There was increasing movement from unemployment to engagement in 'other' activities. Of those looking for work in 1996, 7 per cent were in 'other' activities in 1997. The comparable figures for later years were 8 per cent for 1997 to 1998, 20 per cent for 1998 to 1999, and 14 per cent for 1999 to 2000.

Assuming that full-time study and full-time work are satisfactory outcomes (compared to marginal activities), then approximately half the group looking for work were in these mainstream activities the following year. Of those looking for work in October 1996, 60 per cent were in full-time study (10 per cent) or full-time work (50 per cent) in October 1997.

### *Other activities*

Of those engaged in 'other' activities in 1996, 30 per cent were also engaged in 'other' activities in 1997. The comparable figure for 1997 to 1998 was 31 per cent; for 1998 to 1999, 52 per cent; and for 1999 to 2000, 33 per cent.

Of those in 'other' activities, decreasing proportions were in full-time study in the following year. Of those in 'other' activities in 1996, 18 per cent were in full-time study in 1997. The comparable figures for later years were 15 per cent for 1997 to 1998, and 3 per cent for 1998 to 1999 and 1999 to 2000.

Increasing proportions of this group were in full-time work in the following year. For 1996 to 1997, 23 per cent of those in 'other' activities moved into full-time work. This pathway was more common in later years: 34 per cent for 1997 to 1998, 27 per cent for 1998 to 1999, and 41 per cent for 1999 to 2000.

Smaller proportions of the group engaged in 'other' activities moved into part-time work. Of those engaged in 'other' activities in 1996, 17 per cent were in part-time work in 1997. The comparable figure for 1997 to 1998 was 15 per cent; for 1998 to 1999, 8 per cent; and for 1999 to 2000, 15 per cent.

There was little movement from 'other' activities to unemployment. Of those classified as 'other' in 1996, 13 per cent were looking for work in 1997. For 1997 to 1998 this figure was 6 per cent; for 1998 to 1999, 11 per cent; and for 1999 to 2000, 7 per cent.

## Occupational Pathways

For the analysis of occupational pathways, occupations were allocated to five groups: managerial and professional (including paraprofessional), trades (and skilled manual occupations), clerical, sales and personal service, and manual (both semi-skilled and unskilled). The analyses are restricted to respondents working full-time in adjacent years.

Figure 2 presents the occupational pathways for this cohort of young people. The percentages presented within boxes are the proportion of full-time workers in each occupational group for each year.<sup>10</sup> Arrows and the associated outflow percentages indicate year-to-year movement between occupational groups.

The managerial/professional group shows a high degree of stability. Between 80 and 90 per cent of those in a managerial or professional occupation in one year were in the same occupational group the next year. There was little movement to the trades and almost no movement to manual work. Of the movement out of professional and managerial occupations, most of the movement was to clerical, sales and personal service work. Of those in professional work in 1996, 17 per cent were in clerical, sales, or personal service work in 1997. In the later years, this movement became less common: for 1997 to 1998 the comparable figure was 9 per cent, for 1998 to 1999 it was 7 per cent, and for 1999 to 2000 it was 10 per cent.

The trades group also shows a high degree of stability. Of those in trade occupations in 1996, 87 per cent were working in the trades in the following year. In later years there was less stability with 79 per cent remaining in trades between 1998 and 1999, and 76 per cent between 1999 and 2000. Movement out of the group was largely and increasingly into managerial and professional work. For the years 1998 to 1999 and 1999 to 2000, about 13 to 14 per cent of those in trades were in managerial and professional work the next year. There was little movement to manual work (5 per cent or less) and almost no movement from trades to clerical work.

Clerical work shows a slightly lower level of stability. Of those in clerical work in 1996, 65 per cent were also in clerical work in 1997. In the later years, there was higher stability—around 75 per cent. Movement out of clerical work was often into professional and managerial occupations, approximately 15 per cent for each pair of years. For 1996 to 1997, 19 per cent of clerical workers were in sales or personal service work the following year, but less than 10 per cent in subsequent years. There was little or no movement to trades or manual occupations from clerical work.

Of those in sales and personal service work in 1996, 74 per cent were in the same type of job the following year. The comparable figures for the following pairs of years were: 70 per cent for 1997 to 1998, 75 per cent for 1998 to 1999, and 56 per cent for 1999 to 2000. There was increasing movement out of sales and personal service work to managerial and professional work: 13 per cent for 1996 to 1997, 17 per cent for 1997 to 1998, 15 per cent for 1998 to 1999, and 25 per cent for 1999 to 2000. There was also movement from sales and personal service work to clerical work: 12 per cent for 1996 to 1997, 9 per cent for 1997 to 1998, 9 per cent for 1998 to 1999, and 17 per cent for 1999 to 2000.

Manual work showed decreasing stability. Of those working full-time in manual work in 1996, 79 per cent were in the same or similar occupations the following year. This proportion was 81 per cent for 1997 to 1998, 77 per cent for 1998 to 1999, and 67 per cent for 1999 to 2000. In most years, much of the movement out of manual work was into professional and managerial occupations.

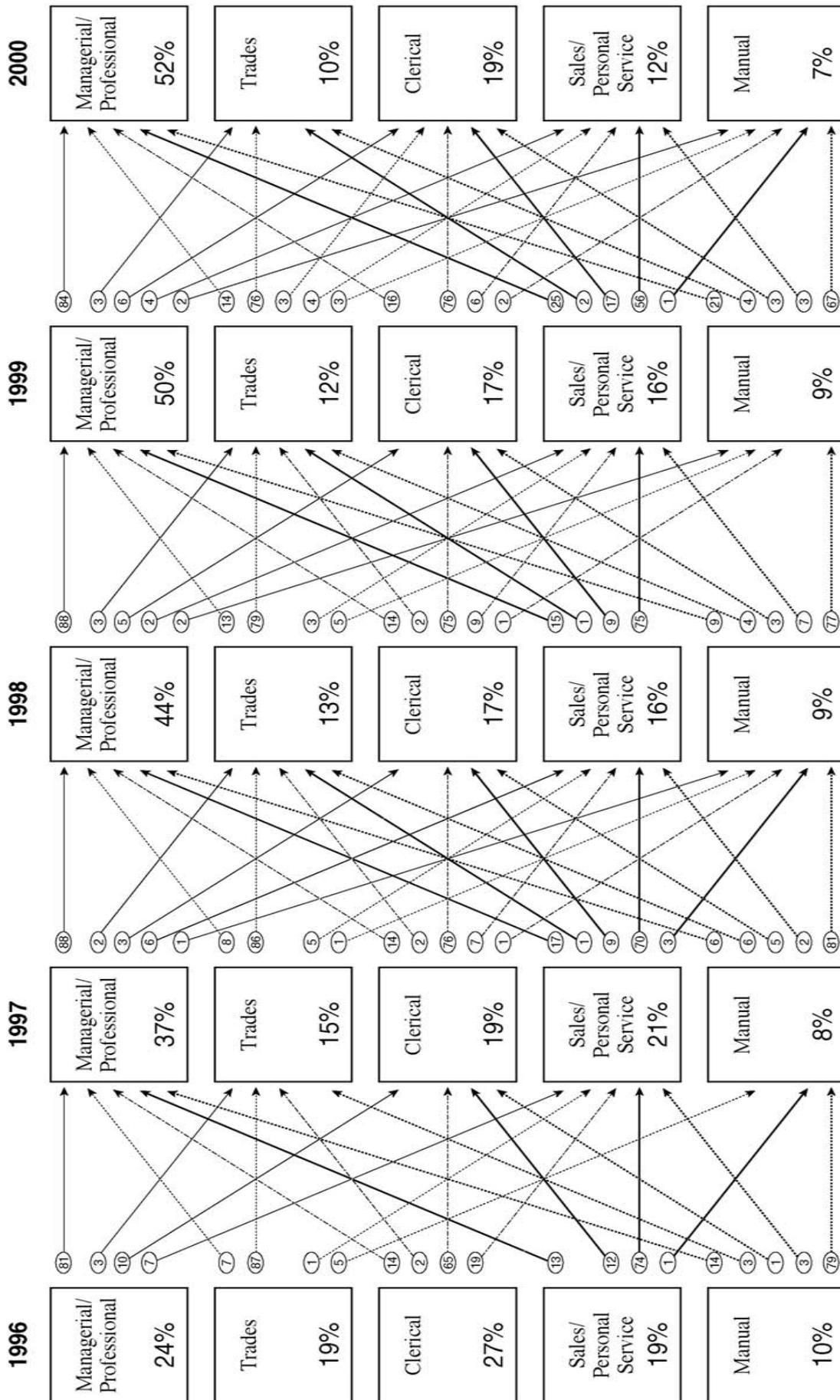


Figure 2 Pathways between occupational groups 1996-2000

## Summary

Once full-time employment was secured, around 80 per cent remained in full-time employment the following year. This proportion increased over time, from 79 per cent for 1996-1997 to 86 per cent for 1999-2000. Few full-time workers were in part-time work the following year and even fewer were looking for work. Between 5 and 10 per cent of full-time workers were engaged in 'other' activities in the following year.

Between one-third and one-half of part-time workers were also in part-time work the following year. A similar proportion of part-time workers moved into full-time work. Few part-time workers (around 5 per cent) were looking for work the following year. A larger proportion of part-time workers (around 10 per cent) were in 'other' activities the following year.

Between 15 and 20 per cent of the cohort were looking for work in successive years. A substantial proportion were in full-time employment the following year. This proportion increased from one-third for 1996 to 1997 to one-half for 1999 to 2000. About 20 per cent of those looking for work were in part-time work the following year. An increasing proportion of the group looking for work moved to other activities in the following year (7 per cent for 1996 to 1997 and 20 per cent for 1998 to 1999).

Between one-third and one-half of those classified in 'other' activities were also in 'other' activities the following year. Between 20 and 40 per cent moved into full-time work, 10 to 20 per cent moved to part-time work and around 10 per cent were unemployed the following year.

Approximately one-half of those in marginal activities remained in marginal activities the following year. When considering a two-year time frame, the proportion was still around 50 per cent; however, only 5 per cent of cohort members were in marginal activities for each of the five years investigated.

Like the previous chapter, this chapter also suggests that for the great majority of cohort members, their labour market outcomes were positive. Once full-time employment was obtained, over 80 per cent were in full-time employment the following year. There was much less stability within part-time work or unemployment. Movement out of part-time work and unemployment was largely towards full-time employment.

#### 4. FULL-TIME EMPLOYMENT

The focus of this chapter is on full-time work, as the transition between full-time study and full-time employment is often seen, by both policy makers and young people themselves, as a desirable outcome. The first section of this chapter presents the distribution of time spent in full-time work for each year investigated. The next section presents cross-tabulations of time in full-time work by a range of demographic, social background, educational and work-related variables. The third section of the chapter examines the influences of a number of these variables on full-time work, both for the entire cohort and for a sub-sample that excludes degree holders.

The analyses presented in the previous chapter used data on the activities of respondents in October of the year in question. In this and subsequent chapters, the more detailed calendar data are utilized. The first question of each survey asked respondents to record their activities: full- and part-time study, full- and part-time work (including paid leave), looking for work, not working and 'other'. For 'other', respondents were asked to explain what their 'other' activities entailed.<sup>11</sup> Respondents were informed that the activities on the calendar were not mutually exclusive. The proportion of time in full-time work was calculated by dividing the number of months in full-time employment (but not in full-time study) by 12.

##### Proportion of Time in Full-time Work

Table 8 presents the distribution of the sample by various proportions of full-time work for the years 1996 to 2000. About 40 per cent of the cohort had no full-time work in 1996, when they were 21 years of age. This proportion declined to 18 per cent by age 25. Similarly, the proportion in full-time work for 1 to 70 per cent of the year decreased from 20 per cent at age 21 to 14 per cent at age 25. In contrast, the proportion that spent 100 per cent of the year in full-time work increased from 34 per cent at 21 years of age to 56 per cent at age 25. The proportion that spent 71-99 per cent of the year in full-time work also increased, from 8 per cent at age 21 to 11 per cent at age 25.

**Table 8 Profile of young people in full-time work**

Year	1996	1997	1998	1999	2000
Age	21	22	23	24	25
<b>All</b>					
No full-time work	39	31	24	21	18
1-30% of time in full-time work	10	9	6	5	5
31-70% of time in full-time work	10	11	11	8	9
71-99% of time in full-time work	8	10	10	11	11
100% of time in full-time work	34	40	48	55	56
<b>Males</b>					
No full-time work	33	27	20	17	12
1-30% of time in full-time work	9	10	7	5	5
31-70% of time in full-time work	10	10	10	7	8
71-99% of time in full-time work	8	9	10	8	9
100% of time in full-time work	40	44	54	63	66
<b>Females</b>					
No full-time work	42	34	28	23	22
1-30% of time in full-time work	11	9	6	5	6
31-70% of time in full-time work	10	11	11	9	9
71-99% of time in full-time work	8	10	10	13	13
100% of time in full-time work	29	37	45	50	50

A higher proportion of young men than young women spent all or most of the year in full-time work. By age 25, 75 per cent of young men were in full-time work more than 70 per cent of the year compared to 63 per cent of young women. Similarly, a higher proportion of young women spent less than 31 per cent of the year in full time work: 28 per cent compared to 17 per cent of young men.

### **Relationship of Time Spent in Full-Time work with Demographic, Social Background and School Factors**

Table 9 presents the breakdown of the group in full-time work all year by demographic, social background and schooling variables. These relationships change over time, as those attending university leave full-time education and enter the labour market.

Generally, the relationship with occupational background is not the familiar hierarchy found for many educational outcomes, in which those with professional backgrounds show the most desirable outcomes followed (in order) by those from managerial, clerical, sales and manual backgrounds.<sup>12</sup> In the early years, those with trades and semi-skilled manual backgrounds showed the highest incidence of full-time work. By age 25, those whose parents had managerial occupations showed the highest incidence of full-time work. Respondents with professional (and paraprofessional) backgrounds do not show a particularly high incidence of full-time work for 100 per cent of the year. By age 24 and 25, those with unskilled manual backgrounds show the lowest incidence of full-time work.

Similarly, parental education showed a changing relationship with full-time work.<sup>13</sup> In the early years, respondents whose parents had not had a university education showed a higher incidence of full-time work than those whose parents had had a university education. By age 25, this situation had reversed.

Ethnicity made little difference to the incidence of full-time work. At age 21, those whose fathers were born in Australia showed the highest incidence of full-time work.<sup>14</sup> By age 25, the group whose fathers were born in another English-speaking country showed the lowest levels of full-time work. The group with fathers born in a non-English-speaking country showed comparable or higher levels of full-time work than the other two groups.

Only at age 21 were there substantial differences in the incidence of full-time work among respondents from metropolitan and non-metropolitan regions, with respondents who attended school in a non-metropolitan area showing higher levels of full-time work.<sup>15</sup>

Many respondents who had attended independent schools went on to full-time study, which led this group to show a lower incidence of full-time work in the earlier years: only 14 per cent at age 21. The gap decreased over time, and by age 25 this group showed a higher proportion in full-time work. From age 23 onwards, there was little difference in the incidence of full-time work between respondents who had attended Catholic and respondents who had attended government schools.<sup>16</sup>

The relationship with achievement is counter-intuitive in the early years, with the top quartile of achievers showing the lowest incidence of full-time work since most were in full-time education.<sup>17</sup> By 24 and 25 years of age, the top quartile showed comparable levels of full-time work with those who were in the other achievement quartiles.

**Table 9 Percentage in full-time work (100 per cent of year) by social background and school variables, 1996 to 2000**

Year	1996	1997	1998	1999	2000
Age	21	22	23	24	25
All	34	40	48	55	56
<b>Gender</b>					
Male	40	44	54	63	66
Female	29	37	45	50	50
<b>Parent's Occupation</b>					
Professional	20	31	39	48	57
Managerial	35	42	48	60	61
Clerical/Personal Service	36	43	53	59	58
Trades/Skilled Manual	42	45	50	57	51
Semi-skilled Manual	47	43	53	59	59
Unskilled Manual	33	41	53	48	48
<b>Parent's Education</b>					
Not University	37	42	50	55	55
University	19	29	42	53	62
<b>Father's Country of Birth</b>					
Australia	36	41	49	54	57
Other English-Speaking Country	28	36	46	49	51
Non-English Speaking Country	28	38	48	60	57
<b>Region</b>					
Non-Metropolitan	39	42	50	54	54
Metropolitan	30	38	47	56	58
<b>School Type</b>					
Government	38	43	51	56	56
Catholic	30	37	47	56	55
Independent	14	26	36	48	60
<b>Achievement Quartile</b>					
Bottom Quartile	38	42	45	47	54
Second Quartile	41	43	57	58	53
Third Quartile	38	46	52	57	60
Top Quartile	23	32	42	54	55

### Relationship of Time in Full-time Work with Qualifications and Full-time Work Experience

Table 10 presents the breakdown of the group in full-time work for the entire year by qualifications in education and training, and work experience. Year 12 completion status was assessed by age 19 (in 1994). Qualifications were assessed by the respondent's completion status in the previous year.

At ages 21 and 22, substantially higher proportions of non-completers than Year 12 completers were in full-time work. In later years, there was little difference between these groups, although at age 24 school completers showed a higher incidence of full-time work. This change is due to about half the group of Year 12 completers graduating from tertiary education between 1996 and 2000.

**Table 10 Percentage in full-time work (100 per cent of year) and qualifications and work history, 1996 to 2000**

Year	1996	1997	1998	1999	2000
Age	21	22	23	24	25
All	34	40	48	55	56
<b>Year 12 Completion</b>					
No Year 12	50	51	51	52	57
Year 12	29	37	48	56	56
<b>Qualifications (by Previous Year)</b>					
Apprenticeship	59	64	59	68	69
TAFE Certificate	35	46	53	47	53
Diploma & Assoc. Dip (TAFE)	40	45	40	52	55
Degree	31	38	52	60	60
Other Qual	9	19	26	13	26
No Qual	32	36	45	52	52
No Year 12 & No Post-Sec. Qual	51	48	49	50	55
<b>Working Full Time</b>					
In Previous Year	71	70	73	75	71
In 1995	71	68	64	63	62

Those who had completed an apprenticeship (or a traineeship) showed consistently higher levels of full-time work. At age 21, their incidence of full-time work was 25 percentage points higher than that for the entire cohort (at 34 per cent). In later years, the difference narrowed but remained substantial; at age 25, 69 per cent of those with apprenticeships were in full-time work, compared to 56 per cent for the cohort.

In contrast, holders of TAFE certificates did not show consistently higher levels of full-time employment. Their incidence of full-time employment was generally similar to or lower than that for the full cohort. Similarly, those with diploma or association diploma qualifications did not show particularly high levels of full-time employment. From age 23 onwards, those with diplomas and associate diplomas showed lower levels of full-time employment than for the entire cohort.

At age 21, degree holders showed a slightly lower incidence of full-time work (31 per cent) than that for the cohort (34 per cent); however, from age 23 they showed slightly higher levels of full-time work, higher than that for any other qualification except an apprenticeship.

The group that obtained an 'other' qualification consistently showed much lower levels of full-time work. In most years the proportion working full-time for 100 per cent of the year was between 20 and 35 percentage points lower than that for the cohort as a whole.

The group with no post-school qualifications consistently showed slightly lower levels of full-time work. The group of non-completers without post-secondary qualifications showed higher levels of full-time employment at age 21 and 22 than that for the entire cohort, and similar levels in the later years. By age 25, 55 per cent of this group worked full-time for 100 per cent of the year compared to 56 per cent for the entire cohort.

Experience of full-time work had a strong relationship with subsequent full-time work. At age 21, 71 per cent of those who worked full-time in the previous year worked full-time 100 per cent of time. This level was 37 percentage points higher than that for the cohort (34 per cent). In later years, full-time work in the previous year continued to have a strong relationship with full-time employment. It appears to have the strongest relationship with working full-time 100 per cent of the year than any of the other factors investigated here. Working full-time in 1995 at age 20 (but

not necessarily in later years) showed a stronger association with full-time work than any qualification in education or training (except an apprenticeship in 1999 and 2000).

### **Influences on Time in Full-Time Employment**

The next step was to investigate the influences on full-time time employment. The dependent variable was the percentage of time a respondent was in full-time employment for the years 1996 to 2000.<sup>18</sup> Months in which the respondent was also a full-time student were not counted. The predictor variables were gender (scored 1 for female, 0 for male), completion of Year 12 (scored 1 for completion and 0 for non-completion), qualifications in education and training (scored 1 for qualification and 0 otherwise) and three measures of labour market experience. Qualifications in education and training were gained by 1996. The exception was a degree qualification, as respondents who completed degree courses in the years up to and including 1999 were included in these analyses.<sup>19</sup> The timeframe for analysis of time in full-time work, however, was limited to only those years after they completed their degree. The three measures of labour market experience are the percentage of time between leaving school and 1995 in full-time work, in part-time work and in unemployment. Months in which respondents were studying full-time were not included in these calculations.

The analysis was performed in three stages: the first regression analysis included gender and qualifications, the second regression analysis added experience of full-time work, and the third added prior experience of both part-time work and unemployment. Since the proportion in full-time work increased each year, five control variables were included in the regression analyses denoting whether the respondent returned valid data for that year.<sup>20</sup>

Preliminary analyses found no substantial direct effects of demographic (except gender), social background and schooling variables on the proportion of time spent in full-time employment. These variables were therefore not included in the following regression analyses.

As the dependent variable was not normally distributed, various alternative specifications were investigated. The conclusions generated from these additional analyses were very similar to those reported here. It was decided to employ linear regression, rather than more complex procedures, due to linear regression's obvious advantages in terms of interpretability and other procedures' requirement of threshold cut-off points that have little meaning in this context.

Table 11 presents the results of the regression analyses. This table presents the regression estimates, significance levels and corresponding standardised coefficients. As the dependent variable is the percentage of time in full-time work, the regression estimates can be easily interpreted as percentage of time. Standardised coefficients are an indication of the strength of an influence as all effects are in the same metric. The adjusted R-squared indicates what proportion of the variation in the dependent variable (in this case, per cent time in full-time employment) is accounted for by the independent variables.

In accordance with the bivariate analyses, being female is negatively associated with time in full-time work. In the first analysis, young women spent about 10 percentage points less time in full-time work than young men. This effect is net of gender differences in Year 12 completion, apprenticeships and other qualifications.

Having an apprenticeship increased the time in full-time employment by 12 percentage points. Completion of Year 12 had no effect. A TAFE certificate increased time in full-time work by 6 percentage points. A diploma or associate diploma had a stronger effect, increasing the time in full-time work by 8 percentage points. A stronger effect was found for a degree qualification, increasing the time spent in full-time employment, on average, by 13 percentage points. Of the qualifications examined, a degree has the strongest effect with a standardised effect of 0.15. Although significant effects were found for gender, apprenticeships, TAFE certificates diplomas and degrees, only 5 per cent of the variation in time spent in full-time work can be attributed to these factors.

**Table 11 Influences of time spent in full-time work, 1996-2000**

Variable	Model/Analysis 1		Model/Analysis 2		Model/Analysis 3	
	Estimate	Std.	Estimate	Std.	Estimate	Std.
Intercept	64.96***	0.00	97.35***	0.00	103.69***	0.00
Gender	-9.55***	-0.13	-6.24***	-0.08	-6.60***	-0.09
Year 12	-1.79	-0.02	6.92***	0.08	7.69***	0.09
Apprent/Traineeship	11.97***	0.07	-2.30	-0.01	-1.97	-0.01
TAFE Certificate	5.87*	0.04	7.18**	0.05	8.00**	0.05
Diploma (TAFE)	7.68*	0.05	13.12***	0.08	13.54***	0.08
Degree	13.08***	0.15	27.19***	0.32	26.41***	0.31
% Time in FT work	.	.	8.46***	0.48	8.82***	0.50
% Time in PT work	.	.	.	.	0.76	0.04
% Time Unemployed	.	.	.	.	-2.54**	-0.05
Adjusted R-squared	0.05	.	0.21	.	0.24	.

Note: \*\*\*  $P < 0.001$ , \*\*  $0.001 < P < 0.01$ , \*  $0.01 < P < 0.05$ .

Qualifications (except degree) by 1996.

% Time is percentage of time between leaving school and end of 1995 (in 10 per cent units). % Time in FT Work centred at two-thirds.

A higher proportion of variance is accounted for with the addition of prior experience in full-time work. The variance explained rises from 5 to 21 per cent. Prior experience in full-time work is by far the strongest predictor, with a standardised effect of 0.48. A 10 percentage point increase in the percentage of time in full-time work between leaving school and 1995 increased the proportion of time in full-time employment between 1996 and 2000 (ages 21 to 25) by 8 percentage points.

The addition to the analysis of experience of full-time work changed the effects of other variables. Completion of Year 12 became significant, indicating that for respondents with equal proportions of time in full-time work since leaving school, Year 12 completers spent on average 7 percentage points more time in full-time work than non-completers. The effect of TAFE certificates increased marginally to 7 percentage points, whereas the effect of diplomas increased more substantially to 13 percentage points. The effect of having a degree doubled. Controlling for prior time in full-time employment, a degree increased the time in full-time employment by a substantial 27 percentage points. In contrast, an apprenticeship (or traineeship) had no additional effect on percentage of time in full-time employment, once prior experience in full-time employment was taken into account. Its effect became not significantly different from zero. This is because apprenticeships and traineeships are almost invariably undertaken in combination with full-time work. The effect of gender declined by about one-third, presumably because males tended to have had more prior experience of full-time work.

The addition of percentage of time in part-time work and unemployment to the analysis further increased the explanatory power of the model (from 21 to 24 per cent). Prior experience in part-time work had no effect on time spent in full-time employment. In contrast, there is a negative effect of prior experience of unemployment as defined for this report. A 10 percentage point increase in time spent unemployed between leaving school and 1995 was associated with a 2 to 3 percentage point decrease in time spent in full-time employment. This result suggests that unemployment has a weak scarring effect on subsequent full-time employment.

A number of interactions were tested. A significant interaction was found between gender and Year 12 completion with girls showing higher returns for Year 12 completion than boys. The effect was significant: girls who completed Year 12 spent on average 8 percentage points more time in full-time work between 1996 and 2000 than male full-time completers. The returns to having a degree were greater for girls than boys. Female degree holders spent about 8 percentage

points more time in full-time work than male degree holders. There was also a significant interaction between prior experience of full-time work and Year 12 completion. For every 10 per cent increase in time spent in full-time employment, Year 12 completers spent about 3 per cent more time in full-time employment than non-completers.

Table 12 shows the results of similar analyses on the restricted sub-sample of respondents who did not gain a degree qualification. Being female was again negatively associated with time spent in full-time employment. On average young women without degrees spent about 13 percentage points less time in full-time employment than similarly qualified young men. This difference was reduced by about a third after controlling for differences between males and females in prior experience of full-time work. After controlling for all three labour experience measures, the gender difference remained highly significant, with females spending about 9 percentage points less time in full-time employment. These findings indicate that gender differences in time spent in full-time employment cannot be attributed to gender differences in education and training and earlier labour market experiences.

Prior experience of full-time work had the largest effect on percentage of time in full-time work for this sub-sample of non-degree holders. Its standardised effect was 0.51, dwarfing the effects of other variables, and its addition to the analysis increased the variance explained from 4 to 27 per cent. A 10 percentage point increase in time spent in full-time employment between leaving school and 1995 increased the time in full-time employment by 9 percentage points. The subsequent addition of prior experience of part-time work and unemployment did not substantially increase the explanatory power of the model. Prior experience in part-time work had no effect. Prior experience of unemployment had the same effect as on the larger sample, decreasing the time spent in full-time work, but this effect is comparatively weak.

As was the case for the full sample, having an apprenticeship or traineeship was associated with a significantly longer proportion of time in full-time employment. This effect disappeared after controlling for prior experience of full-time work. Completion of Year 12 had no effect in the initial analysis, but had a positive effect after controlling for prior experience in full-time work. These results indicate that completion of Year 12 is beneficial for those with little prior experience of full-time work. No significant effects were again found for a TAFE certificate. A diploma or associate diploma increased, on average, the time spent in full-time employment by 15 percentage points when controlling for prior labour market experiences.

**Table 12 Influences of time spent in full-time work, 1996-2000 (excluding degree holders)**

Variable	Model/Analysis 1		Model/Analysis 2		Model/Analysis 3	
	Estimate	Std.	Estimate	Std.	Estimate	Std.
Intercept	67.91 <sup>***</sup>	0.00	107.08 <sup>***</sup>	0.00	107.55 <sup>***</sup>	0.00
Gender	-12.52 <sup>***</sup>	-0.17	-8.79 <sup>***</sup>	-0.12	-8.95 <sup>***</sup>	-0.12
Year 12	-1.53	-0.02	8.99 <sup>***</sup>	0.11	8.05 <sup>**</sup>	0.10
Apprent/Traineeship	11.99 <sup>***</sup>	0.08	-2.13	-0.01	-2.12	-0.01
TAFE Certificate	5.74	0.04	8.24 <sup>**</sup>	0.06	8.71 <sup>***</sup>	0.06
Diploma	9.12 <sup>**</sup>	0.06	16.39 <sup>***</sup>	0.11	15.99 <sup>***</sup>	0.11
% Time in FT work	.	.	9.06 <sup>***</sup>	0.52	8.94 <sup>***</sup>	0.51
% Time in PT work	.	.	.	.	0.46	0.02
% Time Unemployed	.	.	.	.	-2.51 <sup>*</sup>	-0.05
Adjusted R Square	0.04	.	0.27	.	0.27	.

Note: <sup>\*\*\*</sup> P<0.001, <sup>\*\*</sup> 0.001<P<0.01, <sup>\*</sup> 0.01<P<0.05.

Degree holders are excluded from these analyses. Qualifications are by 1996.

% Time is percentage of time between leaving school and end of 1995 (in 10 per cent units). % Time in FT Work centred at two-thirds.

**Table 13 Influences of time spent in full-time work in 2000**

Variable	Model/Analysis 1		Model/Analysis 2		Model/Analysis 3	
	Estimate	Std.	Estimate	Std.	Estimate	Std.
Intercept	71.54 <sup>***</sup>	0.00	31.63 <sup>***</sup>	0.00	33.46 <sup>***</sup>	0.00
Gender	-9.03 <sup>***</sup>	-0.11	-5.54 <sup>**</sup>	-0.07	-5.61 <sup>**</sup>	-0.07
Year 12	0.04	0.00	0.49	0.00	0.07	0.00
Apprent/Traineeship	9.08 <sup>*</sup>	0.05	1.73	0.01	1.58	0.01
TAFE Certificate	-0.02	0.00	1.21	0.01	1.66	0.01
Diploma	6.84 <sup>*</sup>	0.05	6.48 <sup>*</sup>	0.05	6.55 <sup>*</sup>	0.05
Degree	12.72 <sup>***</sup>	0.15	18.87 <sup>***</sup>	0.22	18.64 <sup>***</sup>	0.22
% Time in FT work	.	.	5.98 <sup>***</sup>	0.51	5.84 <sup>***</sup>	0.49
% Time in PT work	.	.	.	.	-0.11	0.00
% Time Unemployed	.	.	.	.	-1.40	-0.03
Adjusted R-squared	0.03	.	0.28	.	0.28	.

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

Qualifications are by 1999.

% Time is percentage of time between leaving school and end of 1999 (in 10 per cent units). % Time in FT Work in 2000 is not centred.

Table 13 presents the results of analyses of percentage of time spent in full-time work during 2000. This table presents the regression estimates, their significance level and the corresponding standardised coefficients. The predictor variables are the same as in the previous analyses with the exception of prior time in full- and part-time work and prior time unemployed. These measures now include information up to the end of 1999.

There are some differences in the influences on full-time work in 2000 compared to full-time work for the longer period 1996-2000. The pattern of gender differences is much the same, with young women spending on average about 9 per cent less time in full-time work. Controlling for prior time spent in full-time work, the effect declines to less than 6 per cent. The effects of completing Year 12 on full-time employment in 2000 compared to full-time employment for the period 1996-2000, net of full-time work experience, were not statistically significant. Therefore, the beneficial effects of Year 12 completion on full-time employment decrease with time. The effects of having completed a TAFE certificate are also weaker, again probably due to the greater time elapsed between obtaining these qualifications and the time period examined. The effect of an apprenticeship on full-time work in 2000 is only slightly lower than its effects on full-time work between 1996 and 2000, but once controlling for prior full-time work experience, its effects are again not significant. The effects of having a degree are substantial, but its effects are weaker in the analysis of full-time employment during 2000 than its effects on full-time employment between 1996 and 2000. A similar pattern was found for a diploma, but the effects of a diploma on full-time work are again considerably weaker than that for a degree. The weaker effects for both a degree and a diploma in the analysis of full-time work in 2000 compared to full-time work between 1996 and 2000 is because many of these graduates have had substantial experience of full-time work between 1996 and 1999.

The effects of prior experience of full-time work on full-time work in 2000 are substantial with a standardised effect of 0.50, the same as its standardised effect on full-time work between 1996 and 2000. In contrast, the effect of prior experience of unemployment is weaker and no longer statistically significant. Therefore, as the cohort ages, unemployment experiences no longer have a scarring effect.

## 5. LOOKING FOR WORK

A strong indicator of an unsuccessful transition to the labour market is unemployment. Not only does unemployment mean a lower standard of living and lower self-esteem for the individual involved, it also has macroeconomic effects, such as increased government expenditure and reduced taxation revenue. From a policy perspective, it is important to know the extent young people experience unemployment and its relationship with other factors, especially schooling, qualifications and prior labour market experiences. The focus of this chapter is on unemployment, which is defined here as looking for work but not working or in full-time study.

This chapter is organised in a similar manner to the previous chapter. The first section presents the distribution of time spent unemployed for each year under investigation. The next section provides a breakdown of those who were unemployed for between 30 and 100 per cent of each year by a range of demographic, social background, educational and work-related variables. The third section of the chapter examines the influences of these various social background, educational and work-related variables on unemployment both for all respondents and for the sub-sample that excludes degree-holders. As in the previous chapter, analyses presented here used the more detailed calendar data. A respondent was considered unemployed for a particular month if they indicated they were looking for work and did not indicate they were in either full-time work or study. Time unemployed was calculated as the percentage of each year looking for work.

### Proportion of Time Looking For Work

Table 14 presents the prevalence of unemployment in this cohort when aged 21 to 25 years old (1996 to 2000). The proportion that experienced no unemployment was high, and increased from 86 per cent at age 21 to 94 per cent at age 25. Similarly, the proportion experiencing a limited time unemployed (between 1 and 30 per cent) decreased from 9 per cent at age 21 to 4 per cent at age 25. Less than 2 per cent of the sample spent an entire year unemployed. The proportion unemployed between 30 and 100 per cent of the year declined from 5 per cent at age 21 to 2 per cent at age 25.

**Table 14** Distribution of time spent unemployed (looking for work)

Year	1996	1997	1998	1999	2000
Age	21	22	23	24	25
<b>All</b>					
No unemployment	86	88	91	92	94
1-30 % of year unemployed	9	8	5	6	4
31-70 % of year unemployed	3	3	2	2	2
71-99 % of year unemployed	1	1	1	0	0
100 per cent of year unemployed	1	1	1	1	0
<b>Males</b>					
No unemployment	87	86	92	91	93
1-30 % of year unemployed	7	9	4	6	4
31-70 % of year unemployed	4	3	2	2	3
71-99 % of year unemployed	1	1	1	0	.
100 per cent of year unemployed	1	1	0	1	0
<b>Females</b>					
No unemployment	86	90	91	92	94
1-30 % of year unemployed	10	7	6	6	4
31-70 % of year unemployed	3	3	2	1	1
71-99 % of year unemployed	1	1	0	0	0
100 per cent of year unemployed	1	1	1	0	0

In contrast to full-time work, there were minimal gender differences in the amount of time unemployed, although a slightly higher proportion of males were unemployed between 30 and 100 per cent of year.

### Relationship of Time Spent Looking for Work with Demographic, Social Background and School Factors

Table 15 presents the breakdown of the group unemployed for between 30 and 100 per cent of the year by demographic, social background and schooling variables.

**Table 15 Looking for work (31-100% of time) and demographics, social background and school variables, 1996 - 2000**

Year	1996	1997	1998	1999	2000
Age	21	22	23	24	25
All	5	4	3	2	2
<b>Gender</b>					
Male	6	5	4	3	3
Female	4	4	3	2	1
<b>Parent's Occupation</b>					
Professional	4	4	1	2	1
Managerial	4	3	2	1	1
Clerical/Personal Service	5	3	5	1	2
Trades/Skilled Manual	5	4	3	3	3
Semi-skilled Manual	7	6	6	2	2
Unskilled Manual	6	7	7	6	5
<b>Parent's Education</b>					
Not University	5	4	3	2	2
University	3	6	2	2	1
<b>Father's Country of Birth</b>					
Australia	5	4	3	2	2
Other English-Speaking Country	6	4	5	5	2
Non-English Speaking Country	5	4	5	1	2
<b>Region</b>					
Non-Metropolitan	7	6	5	3	2
Metropolitan	4	3	2	2	2
<b>School Type</b>					
Government	6	5	4	3	2
Catholic	2	2	1	2	2
Independent	2	2	3	2	0
<b>Achievement Quartile</b>					
Bottom Quartile	8	7	7	8	5
Second Quartile	5	3	4	2	2
Third Quartile	5	4	2	1	2
Top Quartile	4	4	2	2	1

Note: Unemployed 30-100 per cent of year. Months in full-time study excluded from analysis.

In contrast to the case for full-time work, there is a relationship with occupational background.<sup>12</sup> Those with managerial or professional backgrounds showed lower levels of unemployment and those with semi-skilled or unskilled manual backgrounds showed higher levels of unemployment. The relationship between occupational background and unemployment strengthened over time, as more respondents from professional and managerial backgrounds graduated from university. By ages 24 and 25, unemployment was substantially higher among those with unskilled manual backgrounds than for the cohort as a whole. Very few respondents with managerial or professional parents reported being unemployed.

Parental education showed a similar relationship with unemployment.<sup>13</sup> Respondents whose parents had a university education tended to show lower levels of unemployment.

There were no consistent differences in unemployment incidence according to ethnic background.<sup>14</sup> The group with fathers born in other English-speaking countries tended to show higher levels of unemployment levels, but at age 25 there was no difference. There is no indication that respondents with non-English-speaking backgrounds had experienced more unemployment.

Respondents from non-metropolitan regions showed consistently higher levels of unemployment rates in the first three or four years, but again there was no difference by age 25.<sup>15</sup>

Respondents who had attended government schools experienced more unemployment than those who had attended Catholic or independent schools. Between ages 21 and 24, respondents who had attended Catholic schools showed lower unemployment levels than students who had attended other school types. By age 25, unemployment among those who had attended independent schools was close to zero.<sup>16</sup>

School achievement shows a fairly constant relationship with unemployment.<sup>17</sup> The bottom quartile had the highest levels unemployment at all time points. The top quartile had the lowest or second lowest levels of unemployment.

### **Relationship of Time Spent Looking for Work with Qualifications and Full-time Work Experience**

Table 16 presents the unemployment incidence (30-100 per cent of the year) by qualifications in education and training. In general, completion of Year 12 was associated with a substantially lower incidence of unemployment. This was especially the case at age 21, when the proportion of non-completers experiencing more than 30 per cent of the year unemployed was double that of Year 12 completers. In all subsequent years, unemployment among non-completers was higher than that among completers, although by age 25 the difference was small.

Those who had completed an apprenticeship (or traineeship) showed substantially lower levels of unemployment. At age 21, this group had an unemployment incidence on this measure of 4 per cent, compared to 5 per cent for the entire sample. From age 23 onwards, only 1 per cent of those who had completed an apprenticeship indicated they were unemployed between 30 and 100 per cent of the year.

In contrast, holders of TAFE certificates showed substantially higher levels of unemployment. At age 21, their unemployment incidence was 16 per cent. By age 25, the unemployment level for this group was much lower (5 per cent), but still higher than that for the entire cohort (2 per cent). Those with a diploma or associate diploma qualification showed unemployment levels close to that for the entire cohort. Similarly, degree holders showed similar levels of unemployment to that for the cohort, although by age 25 their unemployment incidence was markedly lower. Those holding an 'other' qualification showed high levels of unemployment. At age 21, the unemployment level for this group was 19 per cent, compared to 5 per cent for the cohort, and at 23 it was 6 per cent, compared to 3 per cent for the cohort.

**Table 16 Looking for work (31-100 % of time) and demographics, qualifications and work history, 1996-2000**

Year	1996	1997	1998	1999	2000
Age	21	22	23	24	25
All	5	4	3	2	2
Finished Year 12					
No Year 12	8	6	5	6	3
Year 12	4	4	3	2	2
Qualifications (by Previous Year)					
Apprenticeship	4	5	1	1	1
TAFE Certificate	16	6	4	7	5
Diploma & Associate Dip (TAFE)	4	5	3	2	3
Degree (University)	4	5	3	1	0
Other qualification	19	4	6	3	4
No qualification	4	4	3	3	3
No Year 12 & No Post-Sec. qual.	6	4	5	7	4
Working Full Time					
In Previous Year	3	1	0	1	1
In 1995	3	2	2	2	1

Note: Unemployed for 30-100 Per cent of year. Full-time students excluded from analysis.

The group with no post-school qualifications showed unemployment levels similar to that for the entire cohort. The group that had not completed Year 12 or any other post-secondary school qualifications experienced much the same level of unemployment as the cohort as a whole during the early years, but higher amounts from age 23 onwards.

Experience of full-time work reduced the likelihood of subsequent experience of unemployment. Respondents who worked full-time in the previous year showed very low levels of unemployment, between 0 and 1.4 per cent from age 22 onwards. Full-time work in 1995 (but not necessarily in subsequent years) was associated with lower levels of unemployment in later years.

### Influences on Time Unemployed

Table 17 presents the results of regression analyses on time spent unemployed. As was the case for the analysis of full-time work, the dependent variable was continuous: the percentage of time unemployed between the ages 21 to 25 (years 1996 to 2000).<sup>21</sup> The independent variables were the same as those used in the previous regression analyses of full-time work. The measurement of these variables and the analytical procedure used were detailed in the previous chapter.

In contrast to the analyses of full-time work, there was little effect or no effect for gender on time spent unemployed between the ages of 21 and 25. The coefficient for gender is not statistically significant in either the first or third regression analyses, and has only a weak negative effect in the second.

Completion of Year 12 had a weak negative effect on the amount of time spent unemployed. This effect was larger after controlling for prior experience of full-time work, indicating that Year 12 was beneficial (in the context of unemployment) for those with little experience in full-time work. Controlling for time spent in part-time work and unemployment reduced the size of the effect of Year 12 completion, although it remained statistically significant.

**Table 17 Influences of time spent looking for work, 1996-2000**

Variable	Model/Analysis 1		Model/Analysis 2		Model/Analysis 3	
	Estimate	Std.	Estimate	Std.	Estimate	Std.
Intercept	5.62 <sup>***</sup>	0.00	0.22	0.00	-0.66	0.00
Gender	-0.69	-0.03	-1.11 <sup>*</sup>	-0.05	-0.83 <sup>*</sup>	-0.04
Year 12	-2.30 <sup>***</sup>	-0.09	-3.83 <sup>***</sup>	-0.14	-2.26 <sup>***</sup>	-0.09
Apprent/Traineeship	-2.31 <sup>*</sup>	-0.04	-0.28	-0.01	-0.28	-0.01
TAFE Certificate	3.20 <sup>***</sup>	0.07	2.96 <sup>***</sup>	0.07	2.17 <sup>**</sup>	0.05
Diploma (TAFE)	0.32	0.01	-0.58	-0.01	-0.06	0.00
Degree	0.05	0.00	-2.04 <sup>***</sup>	-0.08	-0.45	-0.02
% Time in FT work	.	.	-1.28 <sup>***</sup>	-0.23	-1.08 <sup>***</sup>	-0.20
% Time in PT work	.	.	.	.	-0.65 <sup>***</sup>	-0.10
% Time Unemployed	.	.	.	.	4.11 <sup>***</sup>	0.27
Adjusted R-squared	0.02	.	0.05	.	0.13	.

Notes: <sup>\*\*\*</sup> P<0.001, <sup>\*\*</sup> 0.001<P<0.01, <sup>\*</sup> 0.01<P<0.05.

Qualifications except degree are by 1996.

% Time is percentage of time between leaving school and end of 1995 (in 10 per cent units).

% Time in FT work centred at two-thirds.

Having completed an apprenticeship decreased the time spent unemployed or looking for work by 2 percentage points on average. TAFE certificates had a slightly stronger effect, increasing the time unemployed by 3 percentage points. A diploma (or associate diploma) had no significant effect in either of the three analyses. A degree had a weak negative effect on proportion of time unemployed, but only in the second regression analysis. Altogether, these variables explained very little of the variation in time spent unemployment (about 2 per cent).

In the second model, prior experience of full-time work was added. The variance explained rose from 2 to 5 per cent. Although its effect is moderate (with a standardised effect of 0.23), prior experience of full-time work had a much stronger relationship with unemployment than Year 12 completion or other qualifications. A 10 per cent increase in the percentage of time in full-time employment between leaving school and 1995 decreased the proportion of time unemployed between the ages of 21 and 25 by a little more than 1 percentage point.

The addition of percentage of time in part-time work and unemployment more than doubled the explanatory power of the model, from 5 to 13 per cent. Prior experience of part-time work (from leaving school until 1995) also reduced the proportion of time unemployed. Although its effect is about half that of prior experience in full-time work, this result shows that part-time work was negatively associated with unemployment.

Prior experience of unemployment had a much stronger relationship with time spent unemployed in the period analysed. A 10 percentage point increase in time unemployed (until 1995) increased the proportion of time unemployed between ages 21 and 25 by 4 percentage points. This effect was moderate but had the strongest impact of all variables investigated here. Its standardised effect was 0.27 compared to 0.20 for prior experience of full-time employment. This is evidence of the scarring effect of unemployment.

The interaction effects tested in the analysis of full-time employment were also tested for time spent unemployed. There were no significant interactions between gender and Year 12 completion or degree qualification and between prior experience of full-time work and Year 12 completion.

**Table 18 Influences of percentage of time spent unemployed, 1996 to 2000 for non-degree holders**

Variable	Model/Analysis 1		Model/Analysis 2		Model/Analysis 3	
	Estimate	Std.	Estimate	Std.	Estimate	Std.
Intercept	8.56***	0.00	3.24*	0.00	1.12	0.00
Gender	-1.19*	-0.05	-1.73**	-0.07	-1.43**	-0.06
Year 12	-1.87**	-0.07	-3.44***	-0.13	-1.95**	-0.07
Achievement Test Scores	-0.05**	-0.08	-0.06***	-0.09	-0.03*	-0.05
Apprent/Traineeship	-2.46*	-0.05	-0.34	-0.01	-0.35	-0.01
TAFE Certificate	3.18**	0.07	2.73**	0.06	2.16*	0.05
Diploma (TAFE)	0.19	0.00	-0.92	-0.02	-0.18	0.00
% Time in FT work	.	.	-1.36***	-0.24	-1.05***	-0.18
% Time in PT work	.	.	.	.	-0.50*	-0.06
% Time Unemployed	.	.	.	.	4.33***	0.29
Adjusted R-squared	0.02	.	0.07	.	0.15	.

Note: \*\*\*  $P < 0.001$ , \*\*  $0.001 < P < 0.01$ , \*  $0.01 < P < 0.05$ .

Degree holders excluded from analysis. Qualifications are by 1995.

% Time is percentage of time between leaving school and end of 1995, excluding months as a full-time student. % Time in FT Work centred at two-thirds.

Table 18 shows the results of the three regression analyses on the sub-sample of respondents who did not gain a degree qualification. This analysis differs from previous analyses as it includes achievement in literacy and numeracy (combined), which in preliminary analyses was found to have a significant effect on unemployment. An increase of 10 score points in the achievement tests<sup>22</sup> decreased the time unemployed by about half a percentage point. The effect of achievement remained significant with the addition of the three labour market experience measures.

As was the case for the larger sample, apprenticeships, TAFE certificates and completion of Year 12 all decreased the time spent unemployed, although the effect of apprenticeships was significant only in the first model. Diplomas had no impact on time spent unemployed.

Prior experience in full-time work had a moderate (negative) effect on proportion of time unemployed. As was the case for the larger sample, this effect was much stronger than the effect of qualifications. A 10 per cent increase in the percentage of time in full-time employment between leaving school and 1995 decreased the proportion of time unemployed between ages 21 and 25 by about 1 percentage point. The addition of prior experience in full-time work increased the variance explained from 1 to 7 per cent.

The effects of prior experience of unemployment and part-time work in this sample of non-degree holders were similar to their effects in the larger sample. The addition of prior experience of part-time work and unemployment further increased the explanatory power of the model from 7 to 15 per cent. Prior experience of unemployment had a reasonably strong effect—an increase of 10 per cent in the proportion of time spent unemployed since leaving school increased the proportion of time spent unemployed by 4 percentage points. Again in standardised terms, its effect was larger (although in the opposite direction) than that of prior experience of full-time work. The effect of prior experience of part-time work was relatively weak, although increased time in part-time work did reduce the time spent unemployed between ages 21 and 25.

Table 19 presents the results of analyses of percentage of time spent unemployed during 2000. These results can be compared to the effects on time spent unemployed between 1996 and 2000 (Table 17). As in the case for the similar analysis of full-time unemployment in the previous chapter, the labour market experience variables include labour market experiences up to 1999.

**Table 19 Influences of time spent looking for work in 2000**

Variable	Model/Analysis 1		Model/Analysis 2		Model/Analysis 3	
	Estimate	Std.	Estimate	Std.	Estimate	Std.
Intercept	3.45 <sup>***</sup>	0.00	7.22 <sup>***</sup>	0.00	4.30 <sup>***</sup>	0.00
Gender	0.02	0.00	-0.31	-0.02	0.21	0.01
Year 12	-1.69 <sup>*</sup>	-0.07	-1.74 <sup>**</sup>	-0.07	-0.71	-0.03
Apprent/Traineeship	-1.74	-0.04	-1.05	-0.03	-0.58	-0.01
TAFE Certificate	2.25 <sup>**</sup>	0.08	2.14 <sup>**</sup>	0.07	0.87	0.03
Diploma	-0.24	-0.01	-0.21	-0.01	-0.38	-0.01
Degree	-1.13 <sup>*</sup>	-0.06	-1.71 <sup>**</sup>	-0.09	-1.36 <sup>**</sup>	-0.07
% Time in FT work	.	.	-0.57 <sup>***</sup>	-0.20	-0.39 <sup>***</sup>	-0.14
% Time in PT work	.	.	.	.	-0.45 <sup>**</sup>	-0.09
% Time Unemployed	.	.	.	.	3.88 <sup>***</sup>	0.35
Adjusted R Square	0.01	.	0.05	.	0.17	.

Notes: \*\*\*  $P < 0.001$ , \*\*  $0.001 < P < 0.01$ , \*  $0.01 < P < 0.05$ .

Qualifications are by 1999.

% Time is percentage of time between leaving school and end of 1999 (in 10 per cent units). % Time Unemployed is not centred.

The effects of non-labour market factors are generally weaker. Gender differences are no longer significant, and the small protective effects of Year 12 completion and an apprenticeship have become minimal or insignificant. The effects of prior labour market experiences are similar, with experience of both full- and part-time work negatively, but weakly, associated with time unemployed during 2000. The strongest influence is prior experience of unemployment in which the standardised effect rose from -0.27 to -0.35. Unemployment in 2000 was strongly associated with prior experiences of unemployment.

## 6. MARGINAL ACTIVITIES

Unemployment, it has been argued, is not the only unsuccessful outcome young people are faced with upon entering the labour market. The ‘milling and churning’ theory contends that the youth labour market is characterised by a significant proportion of young people who move between part-time work, unemployment and withdrawal from the labour market without establishing a stable, full-time occupation. These so-called ‘marginal activities’ are the focus of the current chapter.

The structure of this chapter is similar to the two preceding chapters. The first section presents the distribution of a time spent in marginal activities for each year examined. The second section shows the relationships between being in marginal activities (for between 30 and 100 per cent of the year) with a range of demographic, social background, educational and work-related variables. The third section of the chapter examines the influences of these variables on the proportion of time in a marginal activity for all respondents and for the sub-sample that excludes degree-holders.

As in the preceding chapters, the calendar data are used for these analyses. Respondents are defined as in marginal activities for a given month if they indicate they are working or studying part-time, looking for work, not working or pursuing ‘other’ activities (not including domestic duties). Respondents who indicated they were working or studying full-time in a given month were not considered as being engaged in marginal activities, even if they were looking for work or working part-time.

### Proportion of Time in Marginal Activities

Table 20 presents the time spent in marginal activities between the ages 21 and 25 (1996 to 2000). At age 21, about one-half of the sample had spent no time in marginal activities. This proportion increased progressively to 72 per cent by age 25. The proportion that spent all of the year in marginal activities was less than 10 per cent in each year: 8 per cent at age 21 and 6 per cent at 25.

**Table 20 Profile of young people in marginal activities (excluding full-time students)**

Year	1996	1997	1998	1999	2000
Age	21	22	23	24	25
<b>All</b>					
No marginal activities	51	60	67	70	72
1-30 % of time in marginal activities	26	18	13	13	11
31-70 % of time in marginal activities	11	10	9	7	8
71-99 % of time in marginal activities	4	3	3	2	4
100 % of time in marginal activities	8	8	8	7	6
<b>Males</b>					
No marginal activities	59	63	72	76	75
1-30 % of time in marginal activities	23	17	11	10	10
31-70 % of time in marginal activities	10	10	8	7	8
71-99 % of time in marginal activities	3	3	2	1	2
100 % of time in marginal activities	6	7	6	7	5
<b>Females</b>					
No marginal activities	46	58	63	66	70
1-30 % of time in marginal activities	28	19	14	15	11
31-70 % of time in marginal activities	12	10	10	8	8
71-99 % of time in marginal activities	5	4	4	3	5
100 % of time in marginal activities	9	9	9	7	7

**Table 21 Marginal activities (31-100% of time) and demographic, social background and school variables, 1996-2000**

Year		1996	1997	1998	1999	2000
Age		21	22	23	24	25
All		23	21	20	17	17
<b>Gender</b>						
	Male	18	19	17	14	14
	Female	26	23	22	18	19
<b>Parent's Occupation</b>						
	Professional	24	22	20	16	16
	Managerial	20	20	21	16	12
	Clerical/Personal Service	21	18	15	16	16
	Trades/Skilled Manual	21	21	23	17	24
	Semi-skilled Manual	24	24	20	13	14
	Unskilled Manual	29	27	21	24	24
<b>Parent's Education</b>						
	Not University	23	21	20	17	18
	University	21	23	19	15	13
<b>Father's Country of Birth</b>						
	Australia	22	21	19	17	17
	Other English-Speaking Country	28	23	22	20	22
	Non-English Speaking Country	22	22	24	13	14
<b>Region</b>						
	Non-Metropolitan	25	23	21	20	23
	Metropolitan	22	21	20	14	14
<b>School Type</b>						
	Government	23	22	21	17	18
	Catholic	22	21	16	16	17
	Independent	21	22	19	14	11
<b>Achievement Quartile</b>						
	Bottom Quartile	29	26	32	28	25
	Second Quartile	24	22	19	18	20
	Third Quartile	22	22	17	15	15
	Top Quartile	19	18	19	13	14

Note: Marginal Activities 31-100 per cent of time. Months in full-time study excluded.

The proportion that spent between 71 and 100 per cent of the year in marginal activities declined from 12 to 10 per cent, and between 30 and 100 per cent of the year from 23 to 18 per cent over the surveyed period.

In most years, a higher proportion of young men than young women had no engagement in marginal activities. At age 21, 59 per cent of males spent no time in marginal activities compared to 46 per cent of young women. By age 25, the comparable figures were 75 and 70 per cent.

### **Relationship of Time in Marginal Activities with Demographic, Social Background and School Factors**

Table 21 presents the relationships between being engaged in marginal activities (31 to 100 per cent of the year) by demographic, social background and schooling variables.

There is little relationship with occupational background.<sup>12</sup> At age 21, young people with professional family backgrounds showed similar proportions in marginal activities for between 30 and 100 per cent of the year to those with semi-skilled backgrounds, and higher levels than those with clerical and personal service, or trade family backgrounds. Respondents with unskilled manual backgrounds tended to show the highest incidence of marginal activities, as defined here. Over the five year period, those with professional family backgrounds showed similar proportions in marginal activities (30 to 100 per cent of the year) to those for the entire cohort.

Similarly, there was no consistent relationship with educational background.<sup>13</sup> In most years, both groups show similar levels in marginal activities, although at age 25 those with university-educated parents showed a lower incidence of marginal activities.

There was no consistent relationship between time spent in marginal activities and ethnic background.<sup>14</sup> Respondents who were educated in non-metropolitan regions tended to show a higher incidence of marginal activities. This difference was small during the early years, but increased by ages 24 and 25.<sup>15</sup>

Those who had attended independent schools showed a substantially lower proportion engaged in marginal activities at age 25 only.<sup>16</sup> In the earlier years, there was little difference according to type of school attended.

The relationship between achievement and being engaged in marginal activities for between 31 and 100 per cent of the year followed the expected ordinal pattern.<sup>17</sup> Those who were in the highest achievement quartile had consistently the lowest proportions engaged in marginal activities and those in the lowest achieving quartile, the highest.

### **Relationship of Time in Marginal Activities with Qualifications and Full-time Work Experience**

Table 22 presents relationships between being engaged in marginal activities (for between 31 and 100 per cent of the year) and qualifications in education and training, and experience of full-time work. As was the case for unemployment, completion of Year 12 appeared to confer some advantage. At age 21, the proportions of school completers and non-completers in marginal activities were 22 and 27 per cent, respectively. By age 25, the comparable figures were 16 and 22 per cent.

Those with an apprenticeship or traineeship qualification showed lower proportions engaged in marginal activities. In most years (except 1996), the proportion of this group engaged in marginal activities was substantially lower than that for the cohort.

In contrast, holders of TAFE certificates showed a higher incidence of marginal activities (as defined here). At age 21, 38 per cent of those with a TAFE certificate were in marginal activities for between 31 and 100 per cent of the year, compared to 23 per cent for the cohort. In subsequent years the difference was smaller. Generally, those with a diploma or association diploma showed a higher incidence of marginal activities than the entire cohort. Compared to the entire cohort, degree holders had a higher incidence of marginal activities for the first two years, but a lower incidence from age 23 onwards. As was the case with unemployment, those with an 'other' qualification showed a particularly high incidence of marginal activities, particularly during the earlier years.

The group with no post-school qualifications showed proportions in marginal activities similar to that for the entire cohort. The group of school leavers also without post-secondary qualifications showed proportions in marginal activities similar to or slightly higher than those for the entire cohort.

**Table 22 Marginal activities and qualifications and work history, 1996-2000**

Year	1996	1997	1998	1999	2000
Age	21	22	23	24	25
All	23	21	20	17	17
<b>Finished Year 12</b>					
No Year 12	27	23	21	24	22
Year 12	22	21	20	15	16
<b>Qualifications (by Previous Year)</b>					
Apprenticeship	22	16	13	9	13
TAFE Certificate	38	23	21	21	25
Diploma & Assoc. Dip (TAFE)	28	21	30	19	21
Degree (Uni)	28	25	16	14	14
Other Qual	43	32	29	23	23
No Qual	20	21	21	17	18
No Year 12 & No Post-Sec. Qual	23	23	20	23	22
<b>Working Full Time</b>					
In Previous Year	13	10	7	9	9
In 1995	13	12	14	12	14

Note: In Marginal activities for 31-100 Per cent of year. Months in Full-time study not included.

At age 21, only 13 per of those had worked full-time in the previous year were in marginal activities, compared to 23 per cent of the cohort. By age 25, the comparable figures were 9 per cent and 17 per cent. The effect of previous full-time work appeared to be stronger than that of holding a degree and comparable to that for an apprenticeship. Working full-time in 1995 (but not necessarily in subsequent years) was also associated with lower proportions engaged in marginal activities in later years (1997 through 2000), although its effect weakened over time.

### Influences on Time in Marginal Activities

Table 23 presents the results of three regression analyses of the influence of various variables on the amount of time spent in marginal activities. Being female is positively but weakly associated with time spent in marginal activities. With no controls for prior experiences in the labour market, young women spent on average about 4 percentage points more time in marginal activities than young men. This gender difference was net of gender differences in Year 12 completion, apprenticeships and other qualifications. The gender effect decreased with the addition of prior experience of full-time work, to between 2 and 3 percentage points.

Completion of Year 12 slightly decreased time spent in marginal activities. Year 12 completers spent on average 3 percentage points less time in marginal activities than did non-completers. Achievement in literacy and numeracy had a very weak association with spent in marginal activities after controlling for Year 12 completion and qualifications.

Having an apprenticeship increased the time spent in marginal activities by 5 percentage points. A TAFE certificate, an associate diploma or degree had no significant effects. Since the statistically significant factors had small effects, this model accounted for only 2 per cent of the variation in time spent in marginal activities.

The addition of prior full-time work experience in Model 2 resulted in an increase in the proportion of variance accounted for from 2 to 10 per cent. Prior experience in full-time work was the strongest predictor with a standardised effect of 0.33. A 10 per cent increase in the percentage of time spent in full-time work between leaving school and 1995 (age 20) decreased the proportion

of time in marginal activities between age 21 and 25 by 4 percentage points. The addition to the analysis of experience of full-time work changed the effects of other variables. The effect of Year 12 completion increased, indicating that, of youths with equal proportions of time in full-time work since leaving school, Year 12 completers spend on average 8 per cent less time in marginal activities than non-completers. The effect of a degree became significant and had a moderate negative impact on time spent in marginal activities after previous experience of full-time work was added to the model. Degree holders spent only slightly less time in marginal activities; however, comparisons among those with similar levels of full-time work experience show that degrees do substantially reduce the time spent in marginal activities. In contrast, apprenticeship qualifications were associated with less time in marginal activities in the initial model, but when comparisons are made between those with the same proportion of prior time spent in full-time work, an apprenticeship had no influence on time spent in marginal activities.

The addition of percentage of time in part-time work and unemployment increased the explanatory power of the model only slightly, from 10 to 11 per cent. Part-time work had no effect on subsequent time spent in marginal activities, which includes part-time work. Prior experience of unemployment was moderately associated with time spent in marginal activities. A ten percentage point increase in time spent unemployed between leaving school and 1995 was associated with a five percentage point increase in time spent in marginal activities between 1996 and 2000.

**Table 23 Influences of percentage of time spent in marginal activities, 1996-2000**

Variable	Model/Analysis 1		Model/Analysis 2		Model/Analysis 3	
	Estimate	Std.	Estimate	Std.	Estimate	Std.
Intercept	21.38 <sup>***</sup>	0.00	5.54 <sup>*</sup>	0.00	4.03	0.00
Gender	4.20 <sup>***</sup>	0.08	2.69 <sup>**</sup>	0.05	2.83 <sup>**</sup>	0.06
Year 12	-2.95 <sup>*</sup>	-0.05	-7.49 <sup>***</sup>	-0.13	-5.47 <sup>***</sup>	-0.09
Achievement	-0.06 <sup>*</sup>	-0.04	-0.08 <sup>**</sup>	-0.06	-0.06 <sup>*</sup>	-0.04
Apprent/Traineeship	-4.93 <sup>*</sup>	-0.04	1.39	0.01	1.57	0.01
TAFE Certificate	0.03	0.00	-0.85	-0.01	-1.52	-0.02
Diploma	-0.11	0.00	-2.98	-0.03	-2.36	-0.02
Degree	-2.03	-0.04	-8.31 <sup>***</sup>	-0.14	-6.84 <sup>***</sup>	-0.12
% Time in FT work	.	.	-3.98 <sup>***</sup>	-0.33	-3.42 <sup>***</sup>	-0.28
% Time in PT work	.	.	.	.	0.13	0.01
% Time Unemployed	.	.	.	.	5.00 <sup>***</sup>	0.15
Adjusted R-squared	0.02	.	0.10	.	0.11	.

Notes: \*\*\* P<0.001, \*\* 0.001<P<0.01, \* 0.01<P<0.05.

Qualifications except degree are by 1995. %

Time is percentage of time between leaving school and end of 1995. % time in FT work centred at two-thirds.

Table 24 shows the results of a similar analysis on the sub-sample of respondents who did not gain a degree. The results were similar to that for the whole sample, although the effect of prior time spent in part-time employment was significant for non-degree holders—a 10 percentage increase in prior experience of part-time work increased the time spent in marginal activities by about 1 percentage point. This effect was much weaker than that for prior experience of unemployment.

**Table 24 Influences of percentage of time spent in marginal activities, 1996-2000 for non-degree holders**

Variable	Model/Analysis 1		Model/Analysis 2		Model/Analysis 3	
	Estimate	Std.	Estimate	Std.	Estimate	Std.
Intercept	21.21 <sup>***</sup>	0.00	5.22	0.00	4.14	0.00
Gender	4.94 <sup>***</sup>	0.09	3.20 <sup>**</sup>	0.06	3.20 <sup>**</sup>	0.06
Year 12	-2.77 <sup>*</sup>	-0.05	-7.30 <sup>***</sup>	-0.13	-4.83 <sup>***</sup>	-0.09
Achievement	-0.07	-0.05	-0.09 <sup>**</sup>	-0.06	-0.07 <sup>*</sup>	-0.05
Apprent/Traineeship	-4.71	-0.04	1.58	0.01	1.96	0.02
TAFE Certificate	0.37	0.00	-0.92	-0.01	-1.54	-0.02
Diploma	-0.62	-0.01	-3.91	-0.04	-3.04	-0.03
% Time in FT work	.	.	-4.03 <sup>***</sup>	-0.34	-3.13 <sup>***</sup>	-0.26
% Time in PT work	.	.	.	.	0.96 <sup>*</sup>	0.06
% Time Unemployed	.	.	.	.	5.53 <sup>***</sup>	0.17
Adjusted R Square	0.01	.	0.11	.	0.13	.

Note: \*\*\*  $P < 0.001$ , \*\*  $0.001 < P < 0.01$ , \*  $0.01 < P < 0.05$ .

Qualifications except degree are by 1995.

% Time is percentage of time between leaving school and end of 1995. Time in FT Work centred at two-thirds.

## 7. DISCUSSION

This report indicates that, for the greater majority of the cohort born in 1975, the labour market situation between 1996 and 2000 was generally positive. In 1996, when these young people were aged 21, over 70 per cent were in either full-time work or full-time study and only 6 per cent were unemployed. The proportions in full-time work increased over time, reaching 71 per cent in 2000, at which time the proportion looking for work had also declined to 3 per cent. Furthermore, much of the movement from unemployment, part-time work and 'other' activities was toward full-time work. The proportion of full-time workers in managerial and professional occupations increased during the period investigated, and the proportion in sales, personal service and unskilled manual work declined. This is not to say that there are not young people who are trapped in undesirable labour market situations for longer periods of time, rather that the proportion is quite small—between 5 and 10 per cent of the cohort. These findings indicate that policies and interventions are best targeted at this group in particular, rather than broader segments of youth cohorts.

One finding that stands out from these analyses is the importance of gaining full-time work. Over 80 per cent of those in full-time work in one year are in full-time work the next year. Less than 4 per cent are unemployed in the subsequent year. The group who worked full-time in the previous year showed the highest incidence of full-time employment in the following year than any qualification group. Furthermore, the protective effect of full-time work was not limited solely to the following year. Of those working full-time in 1995 (but not necessarily in subsequent years), the proportion in full-time employment in 2000 was higher than that for any qualification group with the exception of the group who had obtained an apprenticeship. Similarly, levels of unemployment among those who had been working full-time at age 20 were particularly low in subsequent years.

In the multivariate analyses, experience of full-time work between leaving school and 1995 had a much stronger effect on time spent in full-time employment in the following five years than any level of qualification. Similar results were obtained in the analyses on unemployment and marginal activities. These findings suggest that policies that increase participation in full-time work may have more direct effects on increasing subsequent employment than policies that provide further qualifications or training.

Similarly, it is important that the experience of unemployment among young people is minimized. Although less than 30 per cent of the cohort were unemployed for two successive years, this experience of unemployment significantly decreased subsequent time in full-time work and significantly increased subsequent time spent unemployed or in marginal activities. Its effect on subsequent time unemployed was stronger (but in the opposite direction) than that for experience of full-time work. Therefore, unemployment did have a 'scarring' effect that flowed on to subsequent labour market activity; however, the scarring effect was minimal on unemployment during 2000. These findings further support the contention that youth policies should emphasise the attainment of full-time work.

Less than one-half of those in part-time work in a given year were also in part-time work the next year. There was little movement from part-time work to unemployment and much greater movement towards full-time work. Prior experience of part-time work reduced subsequent time spent unemployed and had no effect on full-time employment or engagement in marginal activities. This leads to some doubt as to whether part-time work and 'other' activities are truly marginal activities in the same sense as unemployment. Although these situations may not be as beneficial as full-time work, they were generally more transitional than unemployment and did not have the same negative influence on subsequent labour market experiences. Around one-half of young women engaged in 'other' activities were looking after children. A high proportion of both sexes indicated they were 'travelling'. Between 20 and 40 per cent of the group classified as engaged in 'other' activities were in full-time work the next year and only a small proportion moved into unemployment.

Participation in full-time work was higher among males, but this was largely due to higher proportion of young women not in the labour force and in part-time work. The higher level of part-time work was reflected in their higher levels of engagement in marginal activities. There were only small and inconsistent gender differences in unemployment. There were substantial gender differences in the distribution of occupations among full-time workers, but it is difficult to conclude that either young men or young women enjoy superior occupational outcomes. Similar proportions of males and females worked in professional occupations, higher proportions of young women worked in clerical, sales and personal service jobs, and higher proportions of males were in semi-skilled and unskilled manual work.

Occupational and education backgrounds did not have strong effects on labour market outcomes. A social gradient did exist, but it was neither consistent nor strong. In 2000, when only a small proportion of the cohort remained in full-time education, those with professional family backgrounds did not show particularly high levels of full-time employment or particularly low levels of unemployment or engagement in marginal activities. This group did, however, show the most favourable educational outcomes. The group with unskilled manual family backgrounds did show lower levels of full-time employment and higher levels of unemployment and marginal activities. Those with university educated parents showed superior labour market outcomes compared to those with non-university educated parents, although this difference was restricted to the later years. This relationship may be attributable to the tendency for those from families with university backgrounds to gain degrees themselves, which improves labour market outcomes.

Young people with non-English speaking backgrounds did not show inferior labour market outcomes. There were, however, differences between those who had attended secondary school in non-metropolitan and metropolitan areas. Those from non-metropolitan areas showed higher levels of unemployment during the first three years of the period investigated (ages 21 to 23, inclusive) and were more likely to be engaged in marginal activities in the later years.

There were differences according to the type of school attended during the secondary years. The group who had attended independent schools tended to show lower levels of unemployment and engagement in marginal activities. The group who had attended Catholic schools showed levels of full-time work and engagement in marginal activities similar to that of the group who had attended government schools and lower levels of unemployment in general. Achievement in literacy and numeracy at age 14 showed a moderate relationship with unemployment and engagement with marginal activities. Generally, relationships were found in which those who had scored in the top quartile showed more desirable outcomes than those who had lower scores.

It is important to note that the relationships between social background and schooling factors, and labour market outcomes tended to disappear when more proximal factors, such as qualifications and prior labour market experiences, are considered. The exceptions were gender and, to some extent, earlier achievement in literacy and numeracy. This finding is positive, as it is these more proximal factors that are the most sensitive to policy changes and interventions.

Of the qualifications examined, a degree had the strongest effect on subsequent time spent in full-time work. This effect was reasonably large, reflecting the situation in which a degree provides entry to certain types of jobs even though most degree holders have had little prior experience of full-time work. For non-vocational degrees, employers may view a degree as an indication of the value of the applicant to the organisation. These analyses, however, indicate a degree provides little protection against unemployment or participation in marginal activities. The returns to degrees in regard to full-time employment were greater for young women than for young men.

The results for non-degree vocational qualifications were disappointing. An apprenticeship had positive effects on full-time employment, but this was because apprentices almost invariably worked full-time while undertaking their qualification. This explanation of the relationship is supported by the finding that an apprenticeship had little or no effect after controlling for prior experience in full-time employment, nor did it or any other qualification substantially reduce time spent unemployed. A TAFE certificate had small positive effects on full-time employment but

actually (marginally) increased time-spent unemployed. A TAFE diploma had no effect on unemployment but did increase the time spent in full-time work. Its effect was stronger after controlling for prior experience of full-time work, suggesting that diplomas may be more useful to those already in full-time employment.

Completion of Year 12 did not have strong positive effects on the labour market outcomes of 21 to 25 year olds. It increased time spent in full-time work when controlling for prior experience of full-time work, although its effects were comparatively weak compared to holding a degree or diploma. Year 12 completion had stronger effects reducing time spent unemployed, especially when controlling for full-time work experience among non-degree holders. The effect of Year 12 completion are substantially weaker, however, than the effect of experience in full-time work or the scarring effect of unemployment. This result suggests that the type of occupations Year 12 completers enter provide greater protection from unemployment than do the occupations of non-completers. Increasing opportunities for full-time work and lowering unemployment would be especially beneficial to those who leave school before completing Year 12.

These results lead to the question of whether students who wish to leave school before completing Year 12 should be allowed to do so or be encouraged to finish school. Our response is that they need not complete school if they can secure full-time work that is satisfying to them and has a career pathway; however, if suitable full-time work is not available, then they should complete school.

## APPENDIX: DATA AND FREQUENCIES

These analyses are based on data collected as part of the *Youth in Transition* project conducted by the Australian Council for Education Research. (This project is now part of a larger series of longitudinal surveys).<sup>23</sup> The data used in this report is from the youngest *Youth in Transition* cohort born in 1975. The cohort was initially contacted at school in 1989 and were assessed in literacy and numeracy by ACER designed tests. The students also completed a questionnaire that gathered information on their gender, social backgrounds, ethnicity, indigenous status, attitudes and aspirations.<sup>24</sup>

Subsequently, members of the cohort were annually sent mail questionnaires, which collected information on their education, labour market, living arrangements and well-being.

The sample was derived from the population of 14 year olds attending school in 1989. These students were in Years 8, 9 or 10 with differing proportions across States. Year 9 students were the modal category in most states and samples. The 1975 cohort was not connected with a national assessment study as were the three older *Youth in Transition* cohorts, but was implemented in 1989 to complement the other *Youth in Transition* cohorts.

The sample was two-stage stratified random sample using proportional probability sampling. In the first stage schools were sampled with a probability proportional to the number of 14 year olds attending school from a complete list for each State and Territory, arranged in post code order. When a school declined to take part in the study, a replacement school of the same type (Government, Catholic or Independent) in a nearby locality (identified by postcode) was selected. Listing schools in postcode order implicitly stratifies by geographic location. In the second stage, 25 students were randomly selected from the list or one or two intact classes were randomly selected from a list of classes. In rare cases, a greater number of students were selected either at the request of the school principal or because classes were selected which included students younger or older than 14 years. If there were fewer than 25 within-scope students in a school all students were selected. When less than 25 students were selected that school was combined with another school in the same locality to form pseudo-schools.

The original sample comprised of 5,567 students. In order to correct for differences between the original sample and the population from which the sample was drawn (as described in the appropriate edition of *Schools Australia*), the initial sample was weighted on the basis of the state, sector and gender. In 1995 the number of respondents in the sample had declined to 2,625. A second set of weights was constructed to take into account sample attrition. These weights were based on Year 12 completion by state. Unlike the weights for the Y95 and Y98 samples, achievement in literacy and numeracy was not used in the calculation of the attrition weights.

**Table A 1 Summary of background measures (weighted frequencies and percentages)**

Variables	Value	1995		1996		1997		1998		1999		2000	
		n	%	n	%	n	%	n	%	n	%	n	%
Sample	.	2625	.	2250	.	2230	.	2049	.	1766	.	1572	.
Gender	Male	1240	47	886	39	860	39	804	39	677	38	592	38
	Female	1385	53	1364	61	1370	61	1245	61	1089	62	980	62
Parent's Occupation	Professional	552	22	511	24	523	25	476	24	415	25	371	25
	Managerial	615	25	536	25	523	25	470	24	421	25	366	24
	Clerical/Personal Service	251	10	222	10	217	10	204	10	164	10	134	9
	Trades/Skilled Manual	425	17	370	17	351	17	336	17	276	16	250	17
	Semi-skilled Manual	341	14	274	13	265	13	261	13	215	13	204	14
	Unskilled Manual	323	13	261	12	240	11	207	11	193	11	173	12
	Missing	118	.	74	.	111	.	96	.	80	.	74	.
	Parent's Education	Not University	2165	84	1836	83	1780	82	1657	83	1421	82	1271
	University	411	16	389	17	381	18	343	17	306	18	266	17
	Missing	49	.	24	.	69	.	48	.	40	.	35	.
Father's Country of Birth	Australia	1812	70	1571	71	1493	69	1384	69	1204	70	1066	70
	Other English-Speaking Country	310	12	275	12	295	14	267	13	219	13	193	13
	Non-English Speaking Country	459	18	382	17	379	17	353	18	302	18	272	18
	Missing	44	.	23	.	62	.	45	.	42	.	41	.
Region	Non-Metropolitan	1040	40	893	40	864	39	836	41	701	40	619	39
	Metropolitan	1585	60	1357	60	1366	61	1213	59	1065	60	953	61
State (1989)	ACT	52	2	44	2	44	2	40	2	35	2	31	2
	NSW	882	34	755	34	748	34	688	34	593	34	528	34
	Vic.	666	25	573	25	567	25	521	25	449	25	400	25
	Qld.	471	18	404	18	401	18	368	18	317	18	283	18
	SA	208	8	178	8	176	8	162	8	139	8	124	8
	WA	247	9	212	9	210	9	193	9	166	9	148	9
	Tas.	75	3	64	3	64	3	58	3	50	3	45	3
	NT	24	1	20	1	20	1	18	1	16	1	14	1
School Type	Government	1826	70	1560	69	1546	69	1420	69	1224	69	1090	69
	Catholic	514	20	449	20	445	20	409	20	352	20	313	20
	Independent	285	11	242	11	240	11	220	11	190	11	169	11
Achievement Quartile	Bottom Quartile	425	16	343	15	328	15	276	13	241	14	210	13
	Second Quartile	576	22	477	21	476	21	453	22	353	20	318	20
	Third Quartile	759	29	680	30	649	29	596	29	528	30	473	30
	Top Quartile	863	33	749	33	777	35	725	35	643	36	570	36
	Missing	2	.	1	.	1	.	.	.	1	.	1	.

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## NOTES

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- 1 'Scarring' is a term often used in youth labour market research to denote the idea that early experiences of unemployment, part-time and unskilled work will have long-term effects on future labour market outcomes.
- 2 The ABS definition of marginal attachment comprises of two groups who are neither employed or unemployed, the first group consists of those wanting to work, not actively looking for work, but available to start work within four weeks; and a smaller group comprising, those wanting to work, actively looking for work but not able to start work in the next four weeks (ABS, 2002).
- 3 The view that young people spend prolonged periods "milling and churning" is also common in the United States, where the term originated. However, research conducted during the early 1990s suggests that young people obtain stable employment more rapidly than generally believed (Klerman & Karoly, 1994; Klerman & Karoly, 1995).
- 4 More details on the Longitudinal Surveys of Australian Youth are available at the ACER web site (<http://www.acer.edu.au>). Technical paper 6 documents the questionnaires and variable numbers for the 1975 Youth in Transition cohort. This technical paper is available from the Social Science Data Archives (<http://www.ssda.anu.edu.au>) or ACER.
- 5 Unemployment among the larger youth cohort aged 15 to 24 has also declined substantially during the 1990s for from around 24 per cent in 1992 to around 15 per cent in 1999 (ABS, 2001a:99).
- 6 For example, the questions used for activity in 1996 were as follows:  
 Were you doing any study in October 1996?  
 Yes  No   
 Did you have a job in October 1996  
 Yes  No   
 Was the Job: full-time  part-time   
 How many hours a week did you work at this job?  
 Were you looking for a job in October 1996?  
 Yes  No
- 7 The 'Other' activity group comprises of young persons not in the work force and not in full-time education. It is defined as a residual group of those not in any of the other four categories (full-time study, full-time work, and part-time work).
- 8 For example, the questions for 1996 were as follows:  
 Were you doing any study in October 1996?  
 Yes  No   
 What type of course was it?  
     Year 11 or Year 12   
     Traineeship   
     Apprenticeship   
     Certificate   
     Associate Diploma   
     Diploma   
     Degree   
     Post-graduate   
     Other
- 9 These percentages in the boxes in Figure 1 differ slightly from those presented in Table 2 since they do not include respondents who did return the following year's survey.
- 10 These percentages in the boxes in Figure 2 differ slightly from those presented in Table 7 (top panel) since they do not include those who were not working full-time in October of the following year or did return the following year's survey.

- 11 The format of the calendar was as follows:  
For each month in 1998 please indicate your activities.

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Full-time Work	<input type="checkbox"/>											
Part-Time Work	<input type="checkbox"/>											
Full Time Study	<input type="checkbox"/>											
Part-time Study	<input type="checkbox"/>											
Full-time Work	<input type="checkbox"/>											
Looking for work	<input type="checkbox"/>											
Not-Working	<input type="checkbox"/>											
Other (Please Specify)	<input type="checkbox"/>											

- 12 Parental occupational is based on the sample's responses to the question on their parent's occupation. This was asked in the self-completion 1989 questionnaire (at initial contact) and the 1991 mail questionnaire. Parental occupation is based on father's occupation, and when father's occupation is missing, mother's occupation.
- 13 Parental education was based on mother's education, and when data on mother's education were missing, father's education.
- 14 Ethnicity is based on the country of birth of the respondent's father. Three groups were distinguished: born in Australia, born in other English-speaking countries and born in a non-English speaking country. These data were collected in the initial self-completion questionnaire.
- 15 The measure of location distinguishes respondents whose school (at age 14) was in a metropolitan or non-metropolitan location. Metropolitan areas are defined as cities with populations greater than 100,000 persons.
- 16 This measure refers to school system attended at age 14. Three categories are used -- government schools, Catholic non-government schools, and non-Catholic non-government schools -- identified respectively as government, Catholic and independent. This measure was obtained as part of the sampling design for the 1975 cohort.
- 17 School achievement is the sum of the student's scores on tests of literacy and numeracy conducted in schools at the time the sample was first contacted. For bivariate analyses, a quartile measure was constructed based on the summed scores.
- 18 Respondents who did not return a questionnaire for a particular year (between 1996 and 2000) were not excluded from these analyses. Percentages were calculated for the years respondents provided useable data.
- 19 For example if a respondent completed a degree in 1997, participation in full-time work was analysed only for the years 1998 to 2000.
- 20 Estimates of other variables in the analyses did not markedly change when these control variables were not included.
- 21 The percentage of time a respondent was unemployed for each year was calculated and the mean percentage taken for the years that the respondent participated in the survey.
- 22 Achievement scores ranged between 0 and 40.
- 23 More details on the *Longitudinal Surveys of Australian Youth* are available at the ACER web site (<http://www.acer.edu.au>). Technical paper 6 documents the questionnaires and variable numbers for the 1975 Youth in Transition Cohort. This technical paper is available from the Social Science Data Archives (<http://www.ssda.anu.edu.au>) or ACER.
- 24 The initial questionnaire also collected data on the students' attitudes to politicians and political knowledge.