

# CENTRE FOR ECONOMIC POLICY RESEARCH

Australian National University

## DISCUSSION PAPERS

### Youth Unemployment: Aggregate Incidence and Consequences for Individuals\*

Bruce Chapman<sup>1</sup> and Matthew Gray<sup>2</sup>

DISCUSSION PAPER NO. 459

December 2002

ISSN: 1442-8636

ISBN: 0 7315 3529 4

---

\*Also published as Chapter 5, in P. Saunders and R. Taylor (eds), *The Price of Prosperity: The Economic and Social Costs of Unemployment*, UNSW Press, Sydney, NSW 2002

The view expressed in this paper do not necessarily reflect those of the Australian Institute of Family Studies or of the Economics Program, RISS, ANU.

1 Bruce Chapman, Professor of Economics, Economics Program, Australian National University, Canberra, ACT, 0200, email: [Bruce.Chapman@anu.edu.au](mailto:Bruce.Chapman@anu.edu.au)

2. Matthew Gray, Principal Research Fellow, Australian Institute of Family Studies, 300 Queen Street, Melbourne, VIC, 3000, email: [matthewg@aifs.gov.au](mailto:matthewg@aifs.gov.au)

## CONTENTS

	<b>Page</b>
<b>Abstract</b>	<b>iii</b>
<b>Introduction</b>	<b>1</b>
<b>Understanding Contemporary Youth Unemployment</b>	<b>1</b>
<b>Measuring Unemployment</b>	<b>2</b>
<b>Describing Youth Labour Market Experience</b>	<b>4</b>
<b>Summarising the Youth Labour Market Experience</b>	<b>7</b>
<b>Groups at Risk of Youth Unemployment</b>	<b>9</b>
<b>The Dynamics of Labour Market Experience and Educational Participation</b>	<b>10</b>
<b>Transitions between Labour Force States and Education Participation</b>	<b>10</b>
<b>Young People Not in Education and Not in Work</b>	<b>13</b>
<b>Unemployment and Future Labour Market Outcomes</b>	<b>14</b>
<b>The Impact of Unemployment on Future Labour Market Outcomes</b>	<b>15</b>
<b>Probability of Being Under –Employed</b>	<b>17</b>
<b>Impact on the Chances of Repeat Unemployment</b>	<b>18</b>
<b>Duartion Dependence</b>	<b>19</b>
<b>Policy Responses</b>	<b>19</b>
<b>Concluding Comments</b>	<b>20</b>
<b>References</b>	<b>21</b>

## **ABSTRACT**

This paper analyses the incidence and impact of unemployment among young Australians. It is argued that the scale and seriousness of the current youth problem are often overstated. There is no evidence that the aggregate unemployment experience of young Australians has changed over the last two decades.

The groups of young people most at risk of unemployment are identified. While the overall scale of the problem is not worsening, some of the young unemployed face adverse future labour market outcomes. It is argued that while there is a role for specific policies targeted on young people, these need to be accompanied by policies that involve managing aggregate demand.

## **INTRODUCTION**

High rates of youth unemployment have been a prominent economic and social issue in Australia for a long time. There are two main reasons. The first is the commonly held view that high rates of youth unemployment mean that there are large numbers of young people experiencing financial and social hardship. Second, it seems reasonable to presume that young unemployed people will be disadvantaged for a long time, with lower future earnings or an increased probability of being unemployed again.

This paper analyses the incidence and impact of unemployment among young Australians (those aged 15-24). While the focus here is on economic issues, it is important to recognise the important non-labour market consequences of youth unemployment, with respect to for instance health and criminal behaviour, which are considered in other papers. In what follows, the patterns and trends in unemployment among young Australians are described and explained. An analysis of the transitions between statuses within the labour force and educational participation is presented, which allows an understanding of the effect of unemployment on young people's future labour market outcomes. Recent policies aimed at reducing the rate of youth joblessness are considered briefly.

The paper makes several important points. The first is that the scale and seriousness of the current youth unemployment problem are often overstated. There is no evidence that the aggregate unemployment experience of young Australians has changed over the last two decades. Second, the nature of teenage employment, in terms of the full/part-time dimension, has changed significantly since 1980, and understanding this is critical to an assessment of how problematic youth unemployment is for policy. Third, we show that young Australians experiencing either very long or frequent spells of unemployment have poor future labour market outcomes. That is, unemployment can be a scarring process for some young Australians. Finally, it seems that those most at risk of scarring include those with low levels of educational attainment, indigenous Australians and those living in low socio-economic status areas. The long-term costs of youth unemployment are inequitable, being concentrated on the socially and economically vulnerable. A priori, the findings highlight the possible need for targeted policy responses.

## **UNDERSTANDING CONTEMPORARY YOUTH UNEMPLOYMENT**

In October 1995, Rupert Murdoch said about the Australian economy, 'I think it's a disgrace. There's 8.2 per cent unemployment and in this city [Adelaide] 34 per cent of youth are unemployed.' Kerry Packer agreed, saying 'Youth unemployment is extraordinary. The idea that the economy is going ahead well with that level of unemployment is ridiculous' (Australian, 27 October 1995, p 1). These are familiar claims based on the reported very high unemployment rates for Australian youth. The problem has continued: in August 2000 the teenage (15-19 years) unemployment rate was 16.2 per cent and the young adult unemployment rate (20-24 years) was 9.6 per cent.

Clearly, youth unemployment is topical and important. However, the major point of what follows is that there has been a tendency to exaggerate the extent of the current problem. In this section we address three inter-related issues. The first relates to measurement, and promotes the view that the way data are recorded is critical. Second, the extent of youth

unemployment is documented in a contemporary historical context. Third, data and explanations are offered which suggest that current levels of youth joblessness are not high relative to the experience of the preceding two decades. This becomes clear through reference to the interaction of educational participation and full- and part-time youth employment experience. None of this implies that youth unemployment is unimportant. Indeed, unemployment generally remains the most significant labour market challenge for the Australian Government, and a proportion of young people are adversely affected by the experience, but this issue is addressed in later sections of this paper.

## MEASURING UNEMPLOYMENT

What measures of youth unemployment mean is critical. When the Australian Bureau of Statistics (ABS) surveys the labour market, their representatives ask several questions. One is, roughly: Have you worked for pay for one hour or more in the last week? If the answer is 'No', a next question is: Have you taken active steps to, look for, a job in the last week, and would you be prepared to start work if a job was offered? if a respondent says 'No' to the first question but 'Yes' to the second, they are then recorded as being in the labour force and without a job. That is, they are measured as unemployed. This raises several issues, now explained more formally.

The unemployment rate (UR) is given by:

$$U = \frac{UE}{(EMP + UE)} \quad (1)$$

where UE is the number of jobless people actively searching for a job; and EMP is the number of people with a job. This equation can be broken down into several components. The first is the participation rate (PR), which is given by:

$$UR = \frac{L}{P} \quad (2)$$

where L is the number of people in the labour force; and P is the size of the population. L in turn is given by:

$$L = UE + EMP \quad (3)$$

A further measurement issue relates to the distinction between the unemployed searching for full-time and part-time employment. That is:

$$UE = FUE + PUE \quad (4)$$

where FUE and PUE are the number of people searching for full-time and part-time jobs respectively. Substituting (4) into (1) gives:

$$UR = \frac{FUE + PUE}{UE + EMP}$$

$$= \frac{FUE}{UE + EMP} + \frac{PUE}{UE + EMP} \quad (5)$$

Equation 5 is particularly relevant to an understanding of the Australian youth labour market because a large number of people - teenagers in particular - will be measured as 'unemployed' even though they are enrolled full-time in education and would remain in education, even with a part-time job.

There is a critical dynamic dimension related to these definitions: if both educational enrolments and the likelihood of students being interested in part-time work increase over time, the unemployment rate of teenagers will increasingly represent educationally committed young people searching for part-time jobs.

An illustrative example is useful. Imagine that there are 100 young people, and of these 70 are employed (with 60 in full-time and 10 in part-time work). The other 30 are jobless and searching for full-time employment. The youth unemployment rate (UR) is thus:

$$\begin{aligned} UR &= \frac{(FUE + PUE)}{(FUE + PUE) + EMP} & (6) \\ &= \frac{(30 + 0)}{(30 + 0) + 70} \\ &= 30 \text{ per cent} \end{aligned}$$

Now imagine that in a later year, an increasingly large number of young people choose education instead of full-time employment. This might mean that a survey conducted in the later year of 100 young people would reveal that 50 are employed (with 10 in full-time and 40 in part-time work). If the other 50 are jobless, but in full-time education and wanting part-time work the unemployment rate is given by:

$$\begin{aligned} UR &= \frac{(0 + 50)}{(0 + 50) + 50} \\ &= 50 \text{ per cent} \end{aligned}$$

Superficially, the unemployment rate of 50 per cent in the later year seems to be a much more serious outcome than the earlier unemployment rate of 30 per cent, but this is not an accurate picture of the situation. The reason is that in the first period 30 per cent of the group want a full-time job, but in the second period the unemployed want a part-time job because education is their main concern.

In this illustration the switch in preferences from full - to part-time employment - related strongly to changes in education participation impacts fundamentally on an assessment of the welfare implications of measured unemployment. Being in full-time education and wanting a

part-time job is very different in a welfare context to wanting a fulltime job after leaving school. These illustrations characterise recent trends in the Australian teenage labour market.

### DESCRIBING YOUTH LABOUR MARKET EXPERIENCE

What now follows documents various dimensions of the recent Australian youth labour market experience. The data are not disaggregated by sex, because in general the male and female experiences have been similar. However, the experiences of those aged 15-19 and those aged 20-24 are shown separately, since they seem to be distinct'. The data are taken from the ABS publication, *The Labour Force* (catalogue no 6203.0).

We start in Figure 5.1 with the most commonly used statistic, the unemployment rate. Several important features of Figure 5.1 should be noted. The first is that current youth unemployment rates are similar to those experienced in 1980, a year which is not (now) considered to have been characterised by high unemployment. Second, since the mid-1990s these rates have not been particularly high relative to the experience of the preceding two decades. Both points imply that contemporary experience with respect to youth unemployment rates is not unusual.

**Figure 5.1 Youth unemployment rates: 1980-2000 (%)**

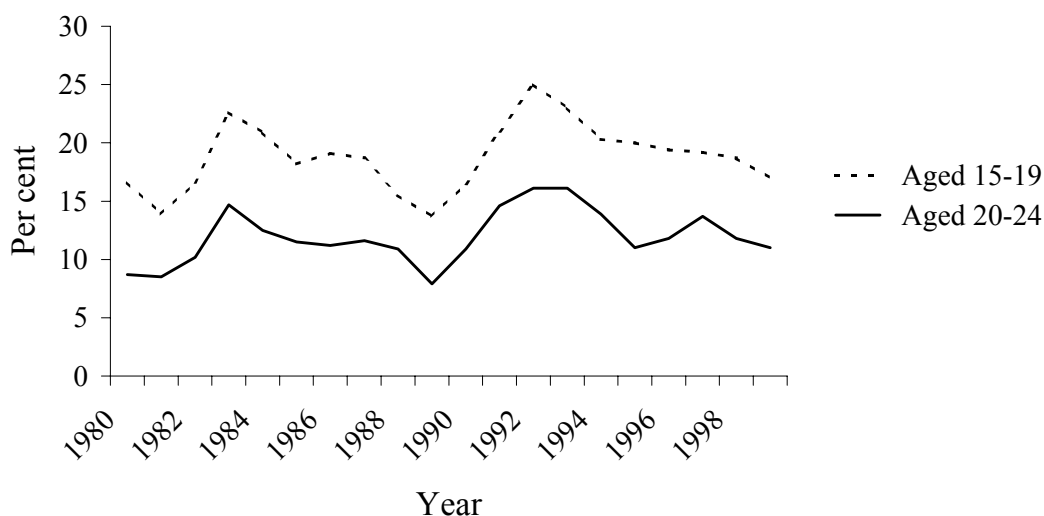
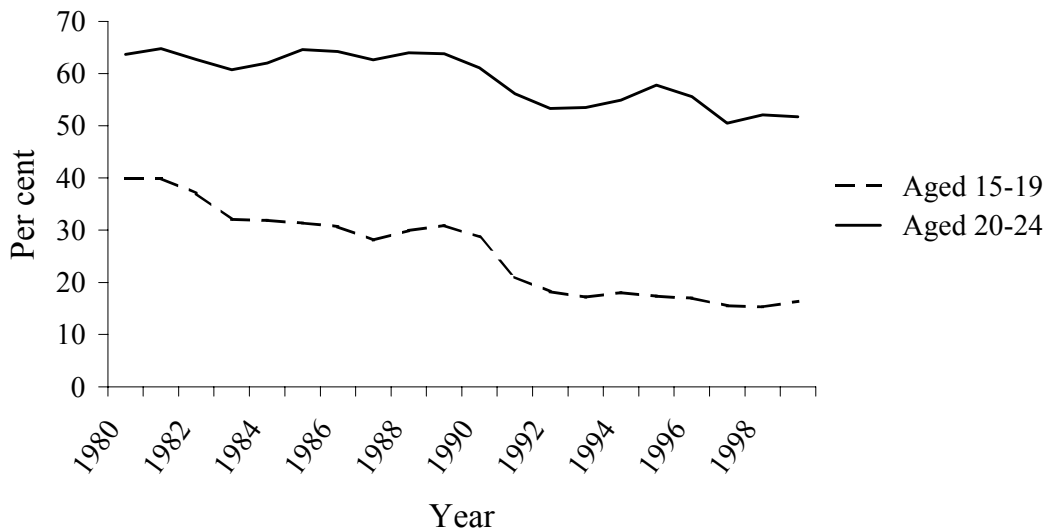


Figure 5.2 shows the proportion of the population employed. The most interesting feature of this is that there has been a very marked decrease in the employment/population ratio for teenagers aged 15-19 over the last 20 years: a reduction of around 50 per cent (from about 40 per cent to about 20 per cent). For those aged 20-24 there has been little change in the ratio.

**Figure 5.2 Youth employment/population ratio: 1980-2000**



In terms of understanding the seriousness of youth unemployment it is of interest to explore what type of employment young unemployed people are interested in. In a policy context, an unemployed person in search of a full-time job is different to a person in search of a part-time job, as discussed above. The data from Figure 5.3, of full-time labour force participation rates, show that there has been only a slight fall in the proportion of those aged 20-24 involved in the full-time labour market, but there has been a very considerable and consistent change for teenagers. In 1980 around 50 per cent of teenagers participated full-time in the labour market, but by 2000 this figure was only around 20 per cent.

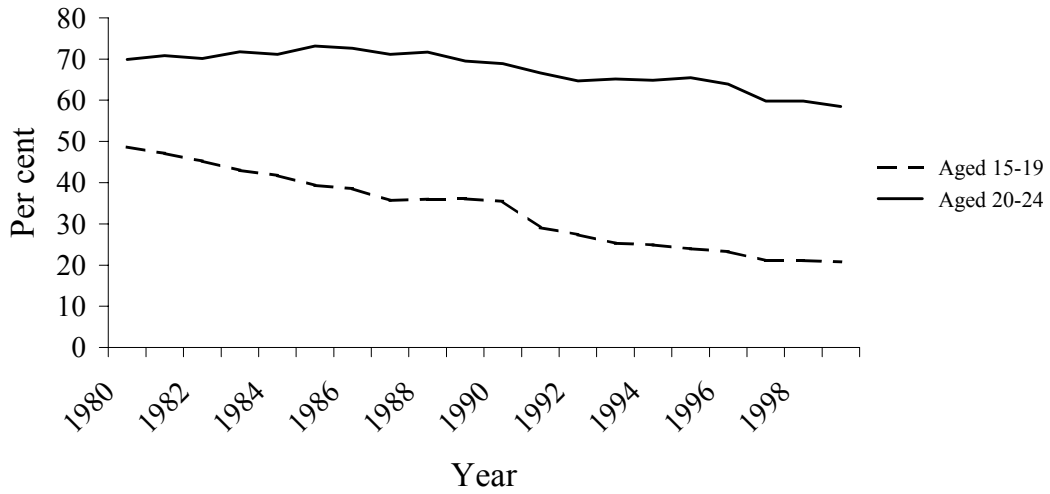
These first three figures suggest strongly that in aggregate terms there has been little change in the labour market experiences of those aged 20-24. For teenagers, however, quite a lot has been going on, and it is here that the real story lies. Consequently the focus in what follows is on teenagers only.

It seems that the full-time / part-time dichotomy is critical to our understanding of changes and this is now explored more fully. Figure 5.4 shows the trend in teenage part-time labour force participation rates since 1980.

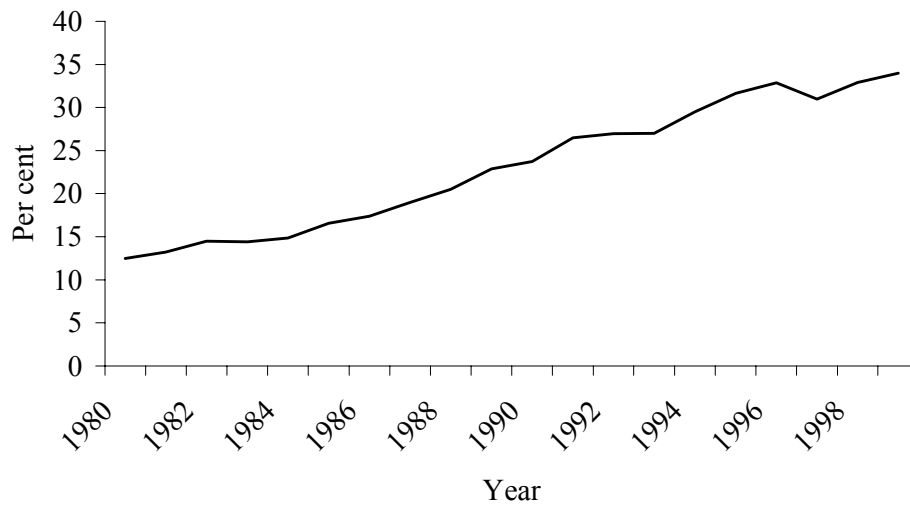
These data illustrate that in the 1980 to 2000 period there has been a very large increase in the part-time participation rate for those aged 15-19, from about 12 to about 34 per cent. It seems that this participation rate increase has been associated with improved teenage part-time employment prospects, as illustrated in Figure 5.5.



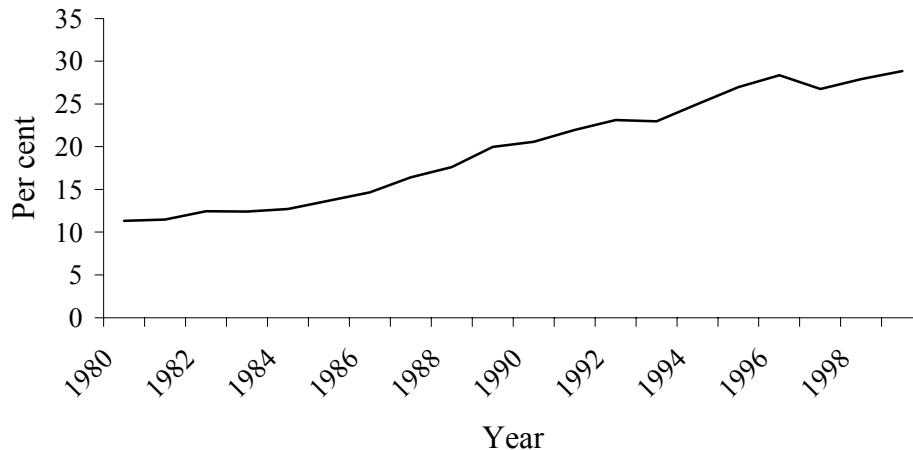
**Figure 5.3 Youth full-time labour force participation rates:  
1980-2000**



**Figure 5.4 Teenage part-time labour force participation  
rates: 1980-2000**



**Figure 5.5 Teenage part-time employment/population ratio:  
1980-99**



### **SUMMARISING THE YOUTH LABOUR MARKET EXPERIENCE**

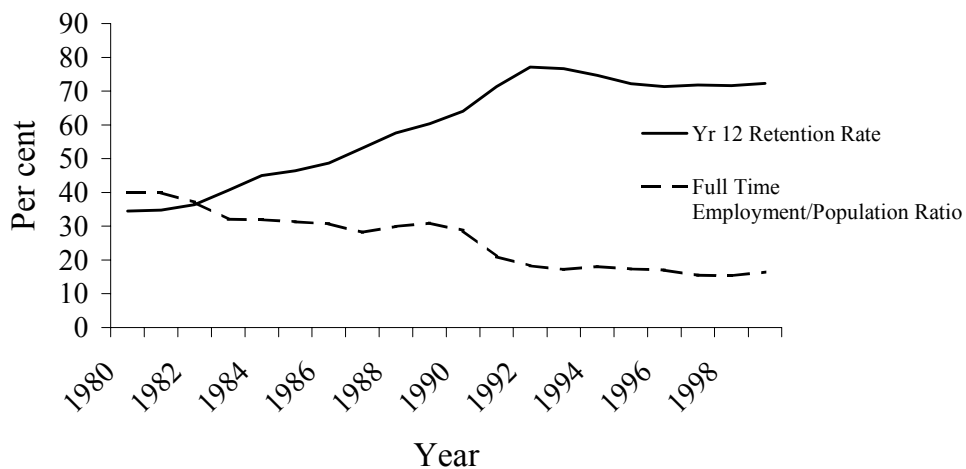
The foregoing analysis of changes in the youth labour market over the period 1980 to 2000 indicates that Australia has experienced:

- little change in the labour market status of those aged 20-24
  - no major changes for teenagers in unemployment rates
  - a considerable fall in the teenage employment/population ratio
  - a large fall in the teenage full-time labour force participation rate
  - a large decrease in teenage full-time employment
  - a large increase in teenage involvement in the part-time market.
- These conclusions lead to the following simple summary story of changes in the youth labour market over the last 20 years: Australian teenagers have become increasingly less interested in full-time employment, and those offering full-time jobs have become increasingly less interested in offering them to teenagers. But while teenagers are less likely to be in the labour market generally, the major change has been the very significant shift towards part-time employment.

The essence of the story relates to participation in education, which is shown in Figure 5.6.

Figure 5.6 provides an excellent summary of the teenage labour market experience. It shows that from 1980, Year 12 retention rates increased by nearly 40 percentage points, at the same time that the proportion of teenagers with a full-time job fell by about half. That is, as teenage full-time job opportunities fell, and as teenagers increasingly remained in education, both employment and full-time employment in particular decreased. Parttime employment for teenagers increased as preferences for lower working hours, to suit educational commitments were manifested.

Figure 5.6 Year 12 retention rates and the teenage full-time employment/population ratio



Thus it seems that relative to the past, there is no crisis in the current youth labour market. The situation for those aged 20-24 is generally the same as it has been since 1980. The unemployment experience of teenagers is also similar to the past, with the exception that this part of the labour market is now very much a part-time phenomenon, accompanied by very marked changes in educational participation.

To some extent these changes can be seen to be desirable. However, this does not mean that all is well in the teenage labour market. Some of those experiencing unemployment are very disadvantaged, and could experience long-term adverse consequences as a result. The first of these issues is now explored.

## GROUPS AT RISK OF YOUTH UNEMPLOYMENT

There are a several groups of young Australians who experience very high levels of unemployment. Two important dimensions of this are shown for 1999 in Table 5. 1.

**Table 5.1 Unemployment rates for selected groups aged 15 to 24 (%)**

	Unemployment rate	Unemployment to population ratio
	%	%
<b>Educational attainment</b>		
Higher degree, postgraduate diploma or bachelor degree	5.8	5.1
Undergraduate diploma or associate diploma	8.4	7.4
Skilled vocational	6.0	5.6
Basic vocational	14.0	12.4
Completed secondary school	12.7	8.2
Did not complete secondary school	22.1	17.4
<b>Indigenous origin</b>		
Indigenous	31.4	16.0
Non-Indigenous	15.4	10.1

Source: ABS, Transition from Education to Work, May 1999, cat no 6203.0 (education); unpublished cross-tabulations from 1996 census (indigeneity).

The data reveal that. young people with the lowest levels of educational attainment have much higher rates of unemployment than those with a higher level of educational attainment. For example, those who have not completed secondary school have an unemployment rate of 22.1 per cent and an unemployment to population ratio of 17.4 per cent. This compares to an unemployment rate of 12.7 per cent for those who have completed secondary school but have no post-secondary qualification, and just 5.8 per cent for those with a higher degree, postgraduate diploma or bachelor degree.

Perhaps the group that experiences the highest rates of unemployment is indigenous Australians. The 1996 Census reveals an unemployment rate of 31.4 per cent for indigenous Australians as compared to a rate of 15.4 per cent among the non-indigenous population. Although indigenous Australians make up only 1.8 per cent of the total Australian population, Hunter and Taylor in Chapter 6 argue that the costs of the high rates of unemployment amongst the group in terms of lost output are at least \$3 billion dollars per year.

The unemployed are disproportionately concentrated in low socioeconomic geographic regions (see Hunter, 1998). The unemployed are also concentrated in families with more than one person being unemployed (see Bradbury, Garde and Vipond, 1986; Miller, 1998), and this in turn creates longer-term effects wherein the behaviour patterns of individuals are adversely affected by the reinforcing effects of living in a household or region characterised by unemployment.

There are a number of mechanisms through which living in high unemployment areas or households can have negative flow-on or feedback effects. For example, it can have an adverse effect on the job search process, where informal contacts are important (see McGregor, 1983; Holzer, 1988; Jones, 1989; Heath, 1999). There is also substantial empirical evidence that there is a negative impact upon educational attainment (see Miller, 1982; Bureau of Labour Market Research, 1983; Edwards, 1985). Given the importance of education in determining labour market outcomes this must be counted as a dynamic cost of unemployment (see Harris, 1996; Miller, 1998; Knights, Harris and Loundes, 2000). These feedback effects of being in a high unemployment environment can also lead to the inter-generational transmission of unemployment.

### **THE DYNAMICS OF LABOUR MARKET EXPERIENCE AND EDUCATIONAL PARTICIPATION**

We now present an analysis of the dynamics of the youth labour market by describing the transitions between various labour force states over a two-year period. Three issues are addressed. First, we describe the transitions between unemployment and the other labour force states and educational participation. This provides an overview of the dynamics of labour force status and educational participation. Second, we explore the relationship between being unemployed while in education and the ease with which the transition from education to the labour market is made. Third we examine the extent to which those young people who are not actively engaged in education or the labour market remain inactive.

The transition analysis presented in this section is based upon data from the Australian Youth Survey (AYS), a longitudinal survey of young Australians. The AYS began in 1989 with a sample of 5350 individuals drawn from the Australian population aged 16-19. Since 1989 these individuals have been interviewed annually, with the obvious exception of those not able to be contacted. In addition, in each year from 1990 a new sample of 16-year-olds was interviewed, with the total number in 1994 being 11 767.

### **TRANSITIONS BETWEEN LABOUR FORCE STATES AND EDUCATION PARTICIPATION**

Transition analyses are often used to describe labour market dynamics by presenting the extent to which the reported labour force status and educational participation of individuals changes over time. Table 5.2, using data from the 1993 and 1994 waves of the AYS, presents the short-run (one-year) transitions for young Australians. These are the probability of being in a particular labour force/educational participation category in a subsequent wave given earlier labour force status/educational participation category.

Thus, the first row indicates that 31.8 per cent of those unemployed and not participating in education in 1993 remained unemployed and not in education in 1994. An additional 5.6 per cent remained unemployed but had returned to education. Only a small proportion of the sample moved out of the labour force, with 6.0 per cent leaving the labour force and not returning to education and 5.4 per cent leaving the labour force but returning to education. The single biggest flow was into employment, with 42.8 per cent in employment and not participating in education and an additional 8.4 per cent both finding employment and returning to education.

The unemployed who were in education also had high rates of unemployment one year later, with 28.3 per cent being unemployed, of whom 13.3 per cent were not in education and 15.0 per cent in education. In addition, 32.0 per cent had left education and found employment and 25.9 per cent were employed but still in education - meaning that in total 57.9 per cent were employed. This is a slightly higher employment rate than for\* those unemployed and not in education.

Table 5.2 also contains information about the return to education. The unemployed not in education were more likely to have returned to education than the employed who were not in education, with 19.4 per cent as opposed to 12.1 per cent returning to education. This was comprised of 5.6 per cent who remained unemployed, 5.4 per cent who were no longer in the workforce and 8.4 per cent who were employed.

**Table 5.2. Transition between labour force states and educational participation: 1993-94 (%)**

Labour force status 1993	Labour force status 1994						Total	Number
	Unemployed and not-in education	Unemployed and in education	Not in the labour force (NILF) and not in education	NILF and in education	Employed and not in education	Employed and in education		
			Per cent					
Unemployed and not in education	31.8	5.6	6.0	5.4	42.8	8.4	100	500
Unemployed and in education	13.3	15	5.4	8.5	32	25.9	100	294
NILF and not in education	13.1	1.7	51.5	3.1	26.6	3.9	100	229
NILF and in education	11.9	6.3	13.1	27.8	21.6	19.1	100	528
Employed and not in education	5.2	0.7	3.3	1.5	79.3	9.9	100	2,033
Employed and in education	2.5	2.7	1.8	2.5	46.3	44.1	100	1,455
Total	8.6	3.3	6.5	5.4	55	21.3	100	5,039

Notes: Sample respondents were aged 16 to 23 years in 1993 and 17 to 24 years in 1994 and present in both 1993 and 1994 waves of the data; excludes respondents in secondary school in 1993. There were only three respondents who were not in secondary education in 1993 and had moved into secondary education by the interview in 1994.

Source: AYS, 1993-1994.

As noted earlier, a striking change in the youth labour market since the 1980s has been the increase in the rate of educational participation and the growth in the number of unemployed who are in education. This raises the question of the extent to which policy makers need to be concerned about unemployment among those in education. There are a number of reasons for thinking that the impact of unemployment differs according to whether or not a person is in education. The unemployed who are participating in education are likely to be increasing their skills and employability, whereas the unemployed who are not participating in education are typically not improving their skills and what skills they have may be depreciating through lack of use. It is also possible of course that lack of employment whilst in education may make the transition from education to the labour force more difficult.

With some basic manipulations, Table 5.2 sheds light on the relationship between being unemployed while in education and the ease with which people make the transition out of education and into employment. Of those in post-secondary education and employed in 1993 who had left education by 1994, 5.2 per cent were unemployed in 1994. This is far lower than the unemployment rate of 28.3 per cent amongst those who were in education and unemployed in 1993 and the unemployment rate of 18.3 per cent amongst those who were not in the labour force during their final year in education.

This suggests that those who were unemployed during their final year in post-secondary education were much more likely to be unemployed in the following year than those who were employed during their final year in post-secondary education. However those not in the labour force while in education had a very similar chance of being unemployed one year after leaving education. For students, it does not so much appear to be unemployment as non-employment that is associated with a higher probability of unemployment. This analysis does not take into account differences in characteristics between the employed and unemployed, and therefore cannot be interpreted as indicating the impact of unemployment whilst in education on the ease with which post-secondary students find employment after leaving education. However, the size of the difference does suggest that governments should be concerned about the effect that lack of employment experience amongst post-secondary students has on the ability of young people to make the transition from post-secondary education to the full-time labour market. These findings are consistent with those found in the United States (Rhum, 1997).

## **YOUNG PEOPLE NOT IN EDUCATION AND NOT IN WORK**

Concerns have been raised about the welfare of young people who are not in the labour market or undertaking education or skills training (see McClelland, MacDonald and MacDonald, 1998). It is argued that young people in this situation are becoming economically and socially marginalised, and that this will affect their future prospects. The extent to which this is a problem depends upon several factors. First, what such individuals are doing is critical. For example, if they are involved with child rearing, other caring roles or voluntary work then they cannot be considered inactive. Second, the length of time spent not in the labour market or education is important. If the typical



pattern is that most of the young people not in the labour market or education in one year are in employment or education the following year, then this can be viewed as a temporary phenomenon and therefore of less concern than if they are inactive for long periods of time.

Table 5.2 shows that 51.5 per cent of those not in the labour force and not in education in 1993 remained not in the labour force and not in education in 1994. However, there were substantial flows to employment, with 26.6 per cent finding employment and an additional 3.9 per cent finding employment and returning to education. There were smaller but still substantial flows to unemployment, with 13.1 per cent moving to unemployment and 1.7 per cent returning to education and unemployment. Overall, 45.4 per cent of those not in the labour force and not in education in 1993 had moved into the labour market by 1994.

This analysis thus shows that a substantial number of those not in the labour force and not in education in 1993 were still not in the labour force and not in education in 1994. However an exploration of what these young people were actually doing reveals that 82.2 per cent had children and could not therefore be properly described as inactive. To further put the problem in perspective, the AYS estimates show that the proportion of young Australians not in the labour force and not participating in education or training in consecutive years is only 3.7 per cent of the population.

The overall pattern is thus of large flows between post-secondary education, employment, unemployment and out of the labour force. This reflects the fact that for many young people the transition out of education into the labour market is a prolonged one with frequent flows into and out of education and between labour market states. Many young people enter the labour market via a succession of casual jobs, very often on a part-time basis interspersed with time spent unemployed and out of the labour force.

The transition from education to the labour market is becoming longer and more varied in most developed economies. While this change is common to most developed economies there are important national differences, particularly among those who do not go onto tertiary education. Young Australians are much more likely to experience more time out of work, particularly in the initial transition years, than young Germans and to a lesser extent young people in France and Ireland. The rates of joblessness experienced by young Australians are similar to those experienced by young Americans (OECD, 1998).

## **UNEMPLOYMENT AND FUTURE LABOUR MARKET OUTCOMES**

While there are clearly costs of unemployment which are incurred while a young person is unemployed, there may well be costs of unemployment which continue into later adult life which are just as bad, and more permanent. The experience of unemployment may have a negative impact upon future labour market outcomes in a number of ways, including by:

- reducing the hourly wage rate in future jobs

- increasing the probability of under-employment
- increasing the probability of experiencing unemployment again in the future ('repeat unemployment')
- decreasing the probability of exiting from a spell of unemployment into employment ('duration dependence').

While it is often presumed that the experience of unemployment while young will have a negative impact upon future labour market outcomes, it is possible that in some cases it is a part of a productive Job-search process. In such search models, time spent unemployed is used by jobseekers to search for the optimal job. However, the empirical evidence for Australia suggests that the experience of unemployment has either no impact or a negative impact upon future labour market outcomes. This section explores whether there are significant ongoing costs from the experience of unemployment in terms of each of the factors identified above. This is done using a combination of new empirical estimates and a review of the existing empirical literature.

## **THE IMPACT OF UNEMPLOYMENT ON FUTURE LABOUR MARKET OUTCOMES**

There are a number of reasons for unemployment while young leading to scarring effects. The experience of unemployment may reduce the hourly wage rate received in subsequent jobs by decreasing productivity. This can occur through the depreciation of general skills, the loss of firm-specific skills or through forgone skill development, which would have occurred had the person remained employed. Of these mechanisms, forgone skill development may be particularly significant for younger workers, given the human capital argument that the majority of investment in skills development occurs early in a person's working life.

Past unemployment may also reduce hourly wages, by leading individuals to lower the minimum hourly wage rate at which they will accept a job (the reservation wage) as is predicted by many search models.

A final mechanism is the 'screening hypothesis, which suggests that employers use unemployment history as a way of screening out 'poor workers' in their selection process. In this hypothesis, the experience of unemployment sends a negative signal to employers about characteristics of the potential employee that the employer can not readily, if at all, observe. Thus, having a history of unemployment results in employment at a lower hourly wage rate.

The experience of unemployment may also reduce earnings in subsequent jobs if it leads to an involuntary reduction in the number of hours worked per week compared with what the individual would have worked had he/she never been unemployed - in other words, an increased probability of being under-employed and the probability of being under-employed if employers are prepared to offer only part-time jobs to individuals who have a history of unemployment. This may occur for several reasons. First, if having a history of unemployment makes employers uncertain about the productivity of a potential

employee, and hiring and firing costs are lower for part-time than fulltime workers, then employers may be willing to employ people with a history of unemployment only in jobs with lower hours. Second, if unemployment history reduces productivity (through forgone skills or depreciation of skills), then the range of job offers the jobseeker has to choose from may be reduced. Given that an increasing proportion of new jobs being generated are part-time (Campbell and Burgess, 1993; Dawkins and Norris, 1995; Wooden, 1996b), this means that individuals with a history of unemployment are more likely to be employed part-time .

Experiencing unemployment may also increase the probability of being unemployed again. This could occur if unemployment leads to a fall in productivity or if employers use unemployment as an indicator of a worker's productivity.

Finally, some economists see the labour market as divided into two, non-competing sectors: a primary and a secondary sector. jobs in the primary sector offer relatively high wages, stable employment, good working conditions and opportunities for advancement. Secondary-sector jobs, however, tend to be low-wage, unstable, dead-end jobs with poor working conditions. Of key importance is the belief that mobility between sectors is close to zero. If the experience of unemployment whilst young increases the probability of being employed in the secondary labour market, then this could result in a pattern of repeated periods of unemployment from which the person cannot escape.

Estimating the impact of unemployment upon future labour market outcomes is complex. A negative association between unemployment experience and the hourly wage rate received in subsequent jobs could arise because the experience of unemployment causes lower hourly wages. In this case, there is a causal relationship and the lower hourly wage rate is an ongoing cost of unemployment. However, it is also possible that the experience of unemployment is correlated with pre-existing characteristics that are related to the probability of experiencing unemployment and subsequent hourly earnings. In this case, no causal relationship exists and any association between unemployment and subsequent labour market outcomes cannot be interpreted as an ongoing cost of unemployment.

The causal effect of unemployment and the effect of pre-existing characteristics can be disentangled by statistically controlling for the impact of relevant, observable pre-existing characteristics (such as education and age). This can be done using fairly simple standard statistical techniques. However, there is likely to be some unobserved heterogeneity that is related both to the probability of experiencing unemployment and subsequent labour market outcomes. Such factors include motivation and ability. The issue of distinguishing between the causal effects of unemployment and the effects of pre-existing characteristics is equally important when estimating the impact of unemployment upon other labour market outcomes.

The impact of unobserved heterogeneity can, in general, only be controlled for using longitudinal data. The discussion of the empirical literature below therefore focuses on

studies that use longitudinal data to control for unobserved heterogeneity. Only limited reference is made to studies that do not control for unobserved heterogeneity.

Several papers address the impact of unemployment upon future hourly earnings. Garcia and Stern (1989) and Gregory and Jukes (1997) using data on British men found that unemployment had a negative impact upon subsequent individual hourly earnings, but that the effects were smallest for young men. In contrast, Ackum (1991) in a study of Swedish youth found that after taking into account the effects of unobserved heterogeneity there was no impact upon subsequent hourly wages. For Australia, Gray (2000a) found that, when unobserved heterogeneity was taken into account, it was only the experience of multiple long-lasting spells of unemployment that had a negative effect on the hourly wages of young Australians. For example, having multiple spells of unemployment which totalled two years or more, was estimated to decrease the hourly wages of males by 14.8 and females by 20.2 per cent. Shorter experiences of unemployment had little, if any, impact upon subsequent hourly wages.

The finding that only extensive unemployment had an -adverse impact upon hourly wages should not be surprising given the presence of minimum wages for young Australians which limits the extent to which hourly wages can fall. It is likely that young Australians with substantial histories of unemployment are receiving the minimum wage.

### **PROBABILITY OF BEING UNDER-EMPLOYED**

There is strong evidence that having experienced unemployment increases the chances of later being under-employed. Table 5.3 demonstrates the relationship between unemployment experience and underemployment. Consider males employed part-time who have never been unemployed. Of this group, 45.1 per cent said they would prefer to be working full-time rather than part-time, whereas nearly 73 per cent of males currently employed part-time but who had been unemployed for between 51 per cent and 75 per cent of their time in the labour force, expressed a preference for full-time employment - more than 30 percentage points higher than for males with no history of unemployment.

**Table 5.3 Preference for full-time work of the part-time employed by unemployment experience**

<b>Unemployment History</b>	<b>Males</b>		<b>Females</b>	
	<b>%</b>	<b>Number of observations</b>	<b>%</b>	<b>Number of observations</b>
No unemployment	45.1	286	43.7	455
0.01% to 25%	46.5	310	43.9	510
26% to 50%	56.9	167	54.9	299
51% to 75%	72.5	69	57.9	140
76% to 99%	74.7	75	57.7	111

Note: The question “Would you rather be working full time - that is, 30 hours a week or more - or part-time?” was asked of individual males and females aged 15-24 years, who were employed for less than 30 hours a week and not in education at the time of the interview.

Source. Gray (2000a. Derived from AYS, 1989-94.

For males and females employed part-time, the proportion underemployed increases as the percentage of time they have spent unemployed increases. That is, individuals who have a history of unemployment are more likely to be under-employed than are individuals with no history of unemployment. The high proportion of the part-time employed who are under-employed is consistent with ABS estimates (cat no 6203.0).

Analysis of the impact of unemployment on the probability of being employed part-time confirms the results of the above cross-tabulations. Gray (2000a) found that even relatively small amounts of unemployment experience can result in a substantially lower number of hours worked per week. The decrease in working hours increases as the length of time unemployed in the past increases and is very substantial for individuals who have experienced long periods of unemployment.

Also, multiple spells of unemployment experience seem to be particularly damaging in terms of weekly earnings. There did appear to be some recovery in weekly earnings with continuing re-employment, although there was no evidence of recovery in hourly wages. This means that the recovery in weekly earnings is due to an increase in the number of hours worked. This finding is consistent with the work of Gaston and Timcke (1999) which found that part-time casual employment is a stepping stone to full-time permanent employment for a large number of young Australians.

### **IMPACT ON THE CHANCES OF REPEAT UNEMPLOYMENT**

There is some evidence that having been unemployed in the past increases the chances that young Australians will be unemployed again in the future (Dunsmuir, Tweedie, Flack and Mengersen, 1989; Junankar and Wood, 1992; Gray, 2000b; Knights, Harris and Loundes, 2000). The study by Knights, Harris and Loundes (2000) found that, after controlling for unobserved heterogeneity, experiencing unemployment did increase the chances of being unemployed one year later, but that the increase was very small - in the order of only 1 percentage point. Further, the impact is estimated to have disappeared entirely after three to four years of continuing re-employment.

Gray (2000b) extended this study by analysing the impact of differences in the proportion of time in the labour force spent unemployed. Using data from the AYS for the period 1989 to 1994, the impact of unemployment was estimated separately for males and females, and high and low education groups. The estimates control for the impacts of unobserved heterogeneity. For all groups, there was very little effect from increases in the percentage of time spent unemployed until it reached approximately 25 per cent of time in the labour force and the increase in the probability of being unemployed was very substantial for those with extended unemployment histories. For males and females with a cumulated duration of unemployment of 52 weeks - and with low education, the increases in the probability of being unemployed were 11.6 per cent and 7.6 per cent respectively. For those with high education, these probabilities were 17.7 per cent for males and 6.0 per cent for females.

Studies by Dunsmuir (1989) and Junankar and Wood (1992) report estimations of the impact of the number of previous spells of unemployment on future employment. These studies conclude that multiple spells of unemployment are associated with an increased probability of experiencing unemployment. The evidence thus supports the conclusion that the experience of unemployment in itself does not increase the chances of experiencing unemployment in the future, but that having a large cumulative amount of unemployment increases the chance of experiencing further unemployment. There is also some evidence that experiencing multiple spells of unemployment in a short period of time is associated with an increased probability of unemployment, although it is not clear that the effects of unobserved heterogeneity have been adequately controlled for in these studies (Dunsmuir, 1989; Junankar and Wood, 1992).

### **DURATION DEPENDENCE**

Having been unemployed may also decrease the chances of an unemployed person finding a job. Several papers report the impact of the duration of previous unemployment spells upon the probability of reemployment (Dunsmuir, Tweedie, Flack and Mengersen, 1989; Trivedi and Alexander, 1989; Marks and Fleming, 1998).

The majority of these studies reports that previous unemployment duration lowers the probability of re-employment and hence increases the risk of becoming long-term unemployed. In other words, the usual sequence of multiple spells of unemployment is one where a series of short spells is followed by increasingly longer spells of unemployment. There is one study which found the opposite result - that is the larger the number of spells of unemployment a person has experienced the shorter will be the expected duration of the current spell of unemployment (Hui, 1986) - but unfortunately, the way in which the sample for this study was selected is likely to have biased the results towards this finding. Indeed all of these studies are based on highly selective samples drawn from the Australian Longitudinal Survey (ALS). Given the associated econometric problems, the results need to be treated with caution.

Hardin and Kapuscinski (1997), using the AM and the AYS, found that unemployment in the previous 12 months decreases the probability of exiting unemployment to employment. Further, the chances of finding employment decrease as the duration and number of spells of previous unemployment increase. This study, however, did not control for unobserved heterogeneity, which means that there is not necessarily a causal relationship between the measured variables. Econometric problems and the failure of research to control for the effects of unobserved heterogeneity make it difficult to draw conclusions about the extent to which past unemployment increases the probability of becoming long-term unemployed.. While it seems probable that the relationship exists, its extent is not yet resolved.

### **POLICY RESPONSES**

There have been a number of policy initiatives focused at assisting unemployed young Australians to find employment. In the last decade, the emphasis of government policy has been on improving the productivity of young people in order to increase their

competitiveness in the labour market. Policies have been directed to targeted labour market programs and increased participation in vocational education and training. The expansion of employment-based structured training through apprenticeships and traineeships, rather than full-time institution-based vocational education has been a key policy objective since the mid-1980s.

There has also been substantial effort and expenditure on successive initiatives such as the Australian Traineeship System, Career Start Traineeships, the Australian Vocational (Certificate) Training System, the Modern Australian Apprenticeship and Traineeship System, and New Apprenticeships, in addition to ongoing tinkering with Commonwealth financial support for traditional apprenticeships. Successive governments have seen increasing access to such employment-based structured training opportunities as a key strategy in increasing young people's access to vocational education and training.

Recently, the Work for the Dole scheme has been introduced. This scheme is based on the principle of mutual obligation, which requires that in return for welfare payments, young unemployed people must actively seek work and strive to improve their competitiveness in the labour market. Under Work for the Dole, young people who have been unemployed for longer than six months are automatically placed on the scheme and they are required to supplement their job searching with training, education, community work or subsidised employment.

The research suggests that these policy responses are not likely to be a panacea for youth unemployment. While it is desirable that young people have both higher productivity and improved job-search skills, the evidence is strongly supportive of the proposition that youth unemployment, and unemployment generally, is essentially a demand issue. Managing the economy, and having good fortune with respect to international factors, are the key ingredients for success (Chapman, 1999).

## **CONCLUDING COMMENTS**

Youth unemployment matters, but the problem needs perspective. There has not been an increase in the proportion of young Australians unemployed over the last 20 years. Moreover, teenagers currently measured as unemployed are overwhelmingly full-time students looking for part-time work. Significant increases in educational participation rates are critical to our understanding of the policy relevance of current youth unemployment. While the overall scale of the problem is not worsening, some of the young unemployed face adverse future labour market outcomes. We have found that while few and short unemployment experiences do not affect future labour market outcomes, frequent and longer unemployment experiences increase significantly the chances of a young person being unemployed and under-employed in the future.

For those with the very worst histories of unemployment there appears also to be a negative impact upon the hourly wage received in subsequent jobs. Even so, the numbers involved are small. The incidence and consequences of an unemployment experience for young people are disparate and for some there are serious long-term adverse

consequences. For them there is a case for targeted assistance. Even so, it is likely that the state of the macroeconomy is the critical determinant of youth unemployment. The conclusion is that the policy priority should be the maintenance of high levels of economic growth. That is, youth unemployment is not a special subset of the aggregate unemployment issue: it is essentially a consequence of poor macroeconomic performance, and can only -be diminished with higher economic growth.

#### **NOTE**

The views expressed in this paper do not necessarily reflect those of the Australian Institute of Family Studies.

#### **REFERENCES**

Ackum, S (1991) 'Youth unemployment, labour market programs and subsequent earnings', *Scandinavian Journal of Economics*, 93(4): 531-543.

Australian Bureau of Statistics (ABS: 1999) *Transition from Education to Work*, Cat no 6203.0, May, ABS, Canberra.

Australian Bureau of Statistics (various years) *Labour Force, Australia*, Cat no 6203.0, ABS, Canberra.

Bradbury, B, Garde, P and Vipond, J (1986) 'Youth unemployment and intergenerational mobility', *Journal of Industrial Relations* 28(2): 191-210.

Bureau of Labour Market Research (1983) *Youth Wages, Employment and the Labour Force*. Research report no. 3. AGPS, Canberra.

Campbell, I and Burgess, J (1993) 'Unemployment and non-standard employment'. In A Hodgkinson, D Kelly and N Verrucci (eds) *Responding to Unemployment: Perspectives and Strategies*, LMAP, University of Wollongong, Wollongong.

Chapman, B (1999) "Could increasing the skills of the jobless be the solution to Australian Unemployment". In S. Richardson (ed) *Reshaping the Labour Market: Regulation Efficiency and Equality in Australia*. Cambridge University Press, Melbourne.

Dawkins, P and Norris, K (1995) 'Casual employment in Australia', *Australian Bulletin of Labour* 16(3): 156-73.

Dunsmuir, W, Tweedie, R, Flack, L and Mengersen, K (1989) 'Modelling of transitions between employment states for young Australians'. *Australian Journal of Statistics* 31A: 165-96.

Edwards, M (1985) 'Youth allowances: incentives and reform issues'. *Australian Journal of Social Issues* 20(1): 35-55.



Garcia, J and Stern, J (1989) 'Real earnings, gains, and losses from unemployment'. In S Nickell, W Narendranathan, J Stern and J Garcia (eds) *The Nature of Unemployment in Britain: Studies of the DHSS Cohort*. Oxford University Press, Oxford.

Gardecki, R and Neumark, D (1998) 'Order from chaos? The effects of early labor market experiences on adult labor market outcomes'. *Industrial and Labor Relations Review*, 51(2): 299-322.

Gaston, N and Timcke, D (1999) 'Do casual workers find permanent full-time employment?'. *Economic Record* 75(231): 333-347.

Gray, M (1999) The effects of Unemployment on the Earnings of Young Australians. PhD thesis, Australian National University.

Gray, M (2000a) *The effects of unemployment on the earnings of young Australians*. Centre for Economic Policy Research discussion paper no 419, Centre for Economic Policy Research, Australian National University, Canberra.

Gray, M (2000b) 'The impact of unemployment upon future unemployment'. Unpublished mimeo, Australian National University.

Gregory, M and Jukes, R (1997) 'The effects of unemployment on subsequent earnings: A study of British men'. *The Labour Market Consequences of Technical Change*. Discussion paper no 21, Centre for Economic Performance, London School of Economics, London.

Hancock, K (1999) 'Labour market deregulation in Australia'. In S Richardson (ed) *Reshaping the Labour Market, Regulation, Efficiency and Equality in Australia*. Cambridge University Press, Melbourne.

Hardin, A and Kapuscinski, C (1997) Young Australians in unemployment: Despair by any other name. Discussion Paper no 359, Centre for Economic Policy Research, The Australian National University, Canberra.

Harris, M (1996) 'Modeling the probability of youth unemployment in Australia'. *Economic Record* 72(217): 118-129.

Heath, A (1999) 'Job search methods, neighbourhood effects and the youth labour market'. Research Discussion Paper 99-07, Reserve Bank of Australia, Sydney.

Heckman, J and Singer, B (1984) 'Econometric duration analysis'. *Journal of Econometrics* 24(1-2): 63-132.

Holzer, HJ (1988) 'Search method use by unemployed youth'. *Journal of Labor Economics* 6(1): 1-20.

Hui, W (1986) 'Modelling multiple spells of unemployment'. Working paper in economics and econometrics no 135, Department of Economics, Australian National University, Canberra.

Hunter, BH (1998) 'Addressing youth unemployment: Examining social and locational disadvantage within Australian cities'. *Urban Policy and Research* 16(1): 47-58.

Jones, SRG (1989) 'Job search methods, intensity and effects'. *Oxford Bulletin of Economics and Statistics* 51(3): 277-296.

Junankar, P and Wood, M (1992) 'The dynamics of youth unemployment: an analysis of recurrent unemployment'. In R Gregory and T Karmel (eds) *Youth in the Eighties: Papers from the Australian Longitudinal Survey Research Project*. Centre for Economic Policy Research, Australian National University, Canberra.

Junankar, P and Kapuscinski, CA (1992) *The Costs of Unemployment in Australia*. Economic Planning Advisory Council background paper no 24, AGPS, Canberra.

Knights, S, Harris, M and Loundes, J (2000) 'Dynamic relationships in the Australian labour market: heterogeneity and state dependence'. Melbourne Institute working paper no 6/00, University of Melbourne, Melbourne.

Marks, G and Fleming, N (1998) 'Factors influencing youth unemployment in Australia: 1980-1994'. Research report number 7, Australian Council of Education Research, Melbourne.

McClelland, A, MacDonald, F and MacDonald, H (1998) 'Young people and labour market disadvantage: The situation of young people not in education or full-time work'. In J Dusseldorp (ed) *Australia's Youth: Reality and Risk*. Dusseldorp Skills Forum, Sydney.

McGregor, A (1983) 'Neighbourhood influence on job search and job finding methods'. *British Journal of Industrial Relations* 21: 91-99.

Miller, P (1982) 'The determinants of school participation rates: a cross-sectional analysis for New South Wales and Victoria'. Discussion paper 40, Centre for Economic Policy Research Discussion Paper, The Australian National University, Canberra.

Miller, P (1998) 'Youth unemployment: does the family matter?' *The Journal of Industrial Relations* 40(2): 247-276.

Miller, P and Chiswick, B (1996) *Literacy, Numeracy and the Labour Market, Aspects of Literacy: Assessed Skill Levels*. ABS, cat no 6203.0, ABS, Canberra.

OECD (1998) 'Getting started, settling in: The transition from education to the labour market'. *Employment Outlook*, June, OECD, Paris.

Rhum, C (1997) 'Is high school employment consumption or investment'. *Journal of Labor Economics* 15(4): 735-76.

Romeyn, J (1992) 'Flexible working time: Part-time and casual employment'. Industrial Relations research monograph 1, Department of Industrial Relations, Canberra.

Sweet, R (1998) 'Youth: the rhetoric and the reality of the 1990s'. In J Dusseldorp (ed) *Australia's Youth: Reality and Risk*. Dusseldorp Skills Forum, Sydney.

Trivedi, P and Alexander, J (1989) 'Reemployment probability and multiple unemployment spells: A partial-likelihood approach'. *Journal of Business and Economic Statistics* 7(3): 395-401.

Wooden, M (1996a) 'The training experience of part-time and casual youth workers: Evidence from the 1993 Survey of Training and Education'. National Institute of Labour Studies working paper no 138, National Institute of Labour Studies, Flinders University, Adelaide.

Wooden, M (1996b) 'The youth labour market: characteristics and trends'. *Australian Bulletin of Labour* 22(2): 136-60.

Wooden, M (1998) 'The labour market for young Australians'. In J. Dusseldorp (ed) *Australia's Youth: Reality and Risk*. Dusseldorp Skills Forum, Sydney.