

Bearing the Burden of Unemployment - Unequally. A Study of Australian Households in 1981

Author:

Bradbury, Bruce; Garde, Pauline; Vipond, Joan

Publication details:

Working Paper No. 53

Reports and Proceedings

0858233878 (ISBN)

Publication Date:

1985

DOI:

<https://doi.org/10.26190/unsworks/988>

License:

<https://creativecommons.org/licenses/by-nc-nd/3.0/au/>

Link to license to see what you are allowed to do with this resource.

Downloaded from <http://hdl.handle.net/1959.4/45303> in <https://unsworks.unsw.edu.au> on 2024-04-20

SWRC Reports and Proceedings

No 53

August 1985

BEARING THE BURDEN OF UNEMPLOYMENT - UNEQUALLY

A Study of Australian Households in 1981

by

Bruce Bradbury , Pauline Garde and Joan Vipond



Social Welfare Research Centre

THE UNIVERSITY OF NEW SOUTH WALES

P.O. Box 1, Kensington, New South Wales, Australia 2033

SWRC REPORTS AND PROCEEDINGS

No.53

August 1985

Reprinted February 1988

BEARING THE BURDEN OF UNEMPLOYMENT - UNEQUALLY

A Study of Australian Households in 1981

by

Bruce Bradbury

Pauline Garde

Joan Vipond

ISSN 0159 9607

ISBN 0 85823 387 8

**Social Welfare Research Centre
The University of New South Wales
PO Box 1, Kensington, NSW 2033, Australia**

Printed on the inside and outside back cover is a complete list of the Reports and Proceedings series of the Social Welfare Research Centre.

For further enquiries about the work of the Centre, or about purchasing our publications, please contact the Publications Officer, Jenepher Burton at the SWRC, University of New South Wales, PO Box 1, Kensington, NSW, 2033. Phone: (02) 697 5150.

As with all issues in the Reports and Proceedings series, the views expressed in this number do not necessarily represent any official position on the part of the Centre. The Reports and Proceedings are produced to make available the research findings of the individual authors, and to promote the development of ideas and discussion about major areas of concern in the field of Social Welfare.

CONTENTS

ACKNOWLEDGEMENTS

ABSTRACT

1 INTRODUCTION

The objectives of the report	1
The social and economic implications of the incidence of unemployment	2
The study in context	4

2 THE CONCENTRATION OF UNEMPLOYMENT AMONG HOUSEHOLDS

Introduction	9
The sample	13
The distribution of unemployment among households	14
Unemployed individuals within households	16
The family status of unemployed individuals	20
Summary	27

3 UNEMPLOYMENT AND INCOMES

Introduction	29
The data on incomes	30
The association between unemployment and low income levels	31
Summary	42

4 THE FAMILY BACKGROUNDS OF YOUNG UNEMPLOYED PEOPLE

Introduction	45
Family structure and youth unemployment	46
Personal and family characteristics and youth unemployment	51
Summary	64

5 SUMMARY AND CONCLUSIONS

Summary	75
Policy implications	77

NOTES	75
-------	----

BIBLIOGRAPHY	77
--------------	----

APPENDIX 1 : HOUSEHOLD AND FAMILY CLASSIFICATION IN THE CENSUS	81
---	----

APPENDIX 2 : EQUIVALENCE SCALE	82
--------------------------------	----

APPENDIX 3 : THE FAMILY BACKGROUNDS OF YOUNG UNEMPLOYED PEOPLE - DATA AND METHODS	83
--	----

Acknowledgements

Many people helped to develop the analysis contained in this report in seminars and informal discussions. Early drafts of parts of the report were read by Diana Encel, Chris Rossiter and Trevor Stegman. Later Bettina Cass, Adam Jamrozik, Russell Ross and David Tait commented on a complete draft. We are grateful to all of them for the comments they gave us and the suggestions they made. For the final report, however, we accept complete responsibility.

We should also like to thank Jenny Young who patiently typed so many tables and so many drafts, including this final one.

ABSTRACT

In 1983 for the first time, the Australian Bureau of Statistics released a sample of selected information from individual records from the 1981 census. This report analyses these data. It is based upon the Household Sample File of the 1981 Census. By linking information on individuals within households, it was possible to analyse the incidence and impact of unemployment within households and to show how concentrated they were.

The report has five chapters. The first introduces the topic of the concentration of unemployment in households and outlines why it is important. It also discusses the relevance to today of data based upon the situation in 1981. Chapter 2 presents the main statistics on the level of unemployment, on how many households were affected and on the types of families who lived in them. It shows how many unemployed people were in households with a multiple incidence of unemployment. In a more detailed analysis of the last topic, the relationships of unemployed people to each other within households are examined. Chapter 3 explores incomes and unemployment. It compares average income levels within the households of employed and unemployed people. Chapter 4 links data about young people who lived at home with information about their parents. It uses the logit regression technique to analyse first, the high youth unemployment rates among sole-parent families and second, the association of parents' and children's characteristics and unemployment probabilities of young people who lived with both parents.

Chapters 2 to 4 contain the main results of the report. Inevitably, because of the nature of the data source, they contain many tables and references to fairly complex statistical techniques. In general, the chapters contain tables of data and the results of statistical analysis. As far as possible, descriptions of the procedures used and discussions of the statistical significance of the results have been confined to footnotes and appendices. Chapters 2 to 4 end with summaries of the main results contained within them.

Chapter 5 summarises the whole report focussing on the most important results. It outlines the relevance of these results to current policy debates.

CHAPTER 1 : INTRODUCTION

THE OBJECTIVES OF THE REPORT

The narrower the incidence of unemployment the more likely it is that society will generate a wide range of myths and general intolerance towards the unemployed.
(Gregory, 1982, p.227)

Gregory further explains that there is a vast difference between the experience of unemployment among the mass of workers and the experience of the workers who bear the mass of unemployment. For the former, unemployment is either unlikely to occur or if it does it is short-lived. For those few who do not escape from the pool of unemployment quickly, unemployment is long-term because the probability of becoming employed declines as the duration of the unemployment spell increases.

Gregory measured the concentration of unemployment by the duration of the unemployment spells of individual workers. Other studies have focussed on the characteristics of unemployed people. For instance, Miller (1981) suggested that unemployment is associated with early school leaving, lack of qualifications, not being married and being born overseas. Brooks and Volker (1983) added that period of residence in Australia was another important determining factor. We know that unemployed people are likely to have had low incomes in their last jobs (Whiteford, 1982). We also know something of the locations within our largest cities where unemployment is most likely to occur (Vipond, 1985). The purpose of this report is to extend our understanding of the uneven incidence of unemployment by analysing the nature of the households in which unemployed people live and the degree to which multiple instances of unemployment occur within households. We are concerned not with the causes of unemployment but with its distribution, that is, with the question of whom it affects.

Our approach is not in itself new although as recently as 1982, Hakim commented that in the UK

Another approach which would be particularly appropriate for studies of the social consequences of unemployment but has so far never been used, is to measure the total unemployment experience within families or households (other than for individuals only).
(Hakim, 1982, p.440)

Some detailed surveys have been made in Australia of households containing unemployed workers (Cass and Garde, 1983; Brewer, 1984). We are innovative mainly in that we draw on data from a particularly large sample of private households and unemployed individuals.

THE SOCIAL AND ECONOMIC IMPLICATIONS OF THE INCIDENCE OF UNEMPLOYMENT

The incidence of unemployment has several important effects which justify its careful study. The quotation at the beginning of the introduction notes its relevance to the formation of social attitudes towards unemployed people. These attitudes, in turn, help determine the social and emotional stresses of unemployment. The quotation emphasises that the more unequal the impact of unemployment, the worse will be the burden it imposes on those bearing it.

In terms of concrete effects, the most obvious is the income loss experienced by unemployed workers. That unemployment is now an important and increasing source of poverty has been widely recognised (Smith, 1982; Cass and Garde, 1983; Gruen, 1984; Manning, 1985, Ch.9). The more uneven its incidence, the more concentrated is this source of poverty. These equity implications of unemployment are increasingly recognised as vital.

We must ensure that those at the face of change are not asked to bear its costs alone.

If change is to be justified in terms of the benefits to the community as a whole, then the community must shoulder the burden and mechanisms must be developed for distributing the costs and benefits equitably.

(Prime Minister Hawke, reported in the **Sydney Morning Herald**, February 4, 1984)

The economic impacts of the concentration of unemployment are not limited to the effects on income distribution. Gregory (1982) argued that they also weaken the unemployment/inflation trade-off. In other words, whatever the likely reduction in inflation that will occur at high unemployment rates, it will be less the more unevenly the risk of unemployment is spread throughout the community.

Mitchell suggested another economic implication. He argued that unemployment concentration may explain why pressures on real wages were high

in 1981 and 1982 despite the level of unemployment.

Unemployment tended to be concentrated among entry-level potential workers, that is, among non-members of the employed workforce and of unions. As a high union official put it, 'I don't want to sound cynical about this ... but while there are 10 per cent of workers unemployed, there are 90 per cent in employment'. As the US experience has indicated, wage concessions occur voluntarily when core members of the union workforce have been displaced. In Australia the core members did not really begin to feel threatened until the economic deterioration of 1982-83. It took several years under such a threat to produce a substantial volume of concessions in the United States. There may be similar lags in Australia.

(Mitchell, 1984, p.151)

The arguments of Gregory and Mitchell are similar but not identical. Gregory refers to the demands for money-wage increases, which he views as a major determinant of inflation, being unaffected by the level of unemployment. Mitchell refers to real-wage increases. The implication of Gregory's argument is that inflation may not easily be reduced when unemployment increases. Mitchell implies that though real wage increases may lead to higher unemployment, the majority of workers still want higher real wages. Because unemployment is concentrated among particular groups of workers, the higher wages of the majority are not generally put at risk by increasing demands for real wages.

Both arguments are very important. One implies that the main benefit that might be obtained from unemployment - a reduction in the rate of inflation - is not likely to be forthcoming. The other suggests that an adjustment mechanism that might cure unemployment - cuts in real wages - will not be forthcoming. In both arguments, the concentration of unemployment, especially among young workers, is a crucial factor. Our paper is concerned with the concentration of unemployment in households. It seeks to find the extent to which unemployed workers are integrated with those in paid employment, especially in highly paid employment, in their living environments. The more isolated we find unemployed individuals to be, the more support we provide for the arguments of Gregory and Mitchell.

From the perspective of social welfare policy the incidence of unemployment in households has obvious importance. The issue of intra-household transfers of resources is enormously complex and much beyond the scope of this report. Nevertheless we can state, without assuming that the

unemployed **do** get household support, that when there is a multiple occurrence of unemployment, the possibility of financial support from within the household must be weakened. 'In kind' forms of assistance, such as shared food, accommodation and cars, may also be limited by a lack of resources. Similar effects flow on if unemployment disproportionately burdens households in which employed members have very low incomes.

The effects which we have described are important enough to justify measurement and description of the incidence of unemployment within households. Most of our study attempts no more than this. In Chapters 2 and 3 we demonstrate the uneven incidence of unemployment among households and the association between unemployment and household income levels. Several forms of household income are disaggregated - per capita incomes, employment incomes, unemployment incomes and so on. In this part of the analysis no model of causation was employed because we wanted simply to find out what concentrations and associations existed. In Chapter 4 we do consider associations between household and family background and youth unemployment which may imply causal links. Nevertheless, the focus of the report is on the description and evaluation of the incidence of unemployment rather than upon the nature of causation.

THE STUDY IN CONTEXT

Unemployment may be studied in several ways. One may analyse the movement of people among the three labour market states, employment, unemployment and non-participation in the labour force. For obvious reasons, such an approach is called a flow analysis and it uses data on gross flows among labour market states. The flow approach is used to analyse labour market turnover, the duration of unemployment and the origins and destinations of the flows. For example, it can show how many people are unemployed because they left a job and how many are entering the labour market. It can show how often unemployment ends with a new job compared with exit from the labour force.

A second method is to analyse the stock of unemployed people. Our study falls into this category. We have analysed people who were counted as unemployed in the Census of June 1981. Since few of these people would have known when their unemployment spell would end, our data cannot answer

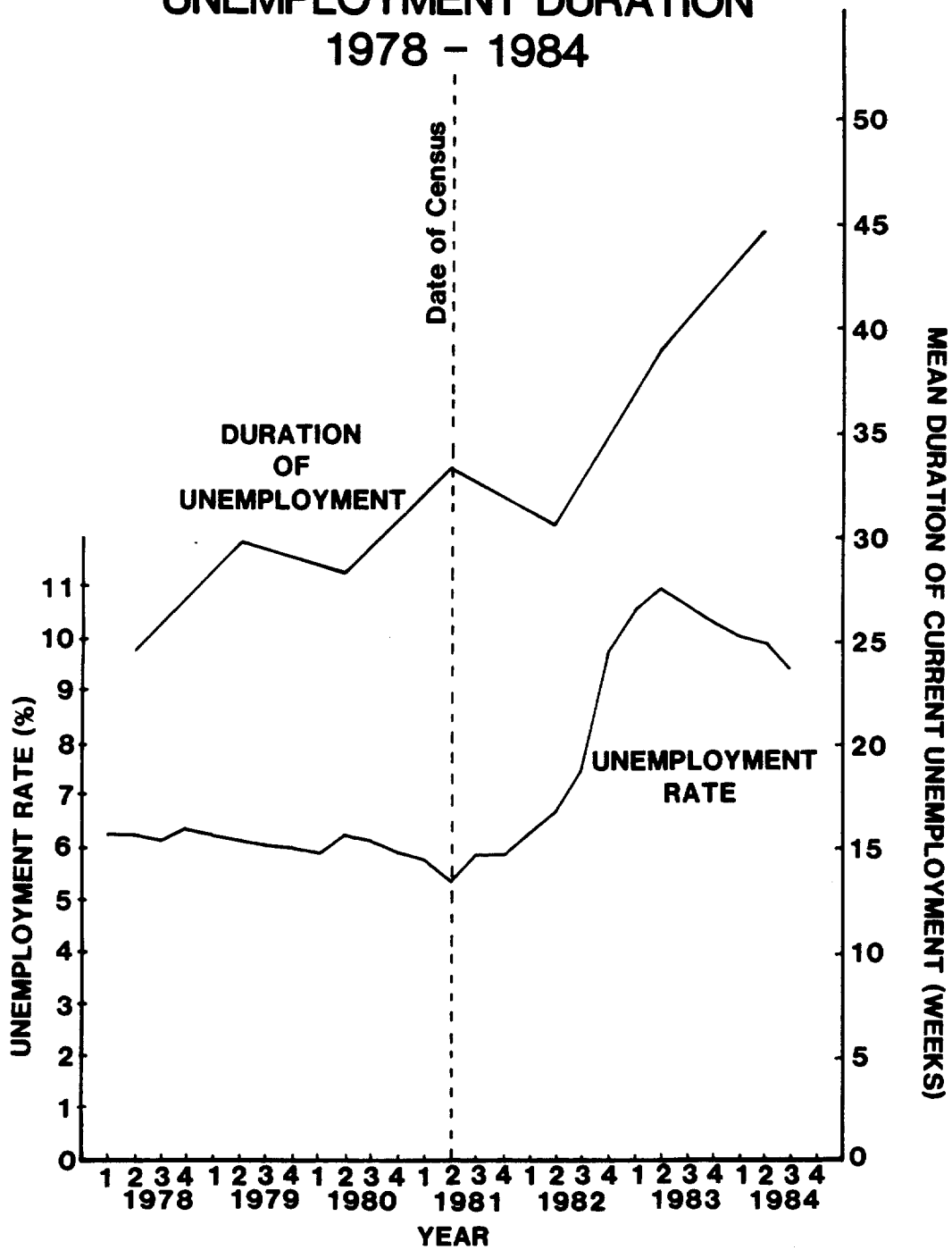
the same questions that flow analysis can. The advantage of our approach is that from the census we have a lot of information about not only the unemployed workers but also their families and households.

Obviously we should not view unemployment in 1981 in isolation. Rather it should be seen in the general context of unemployment rates over the preceding and subsequent years. The accompanying graph (Figure 1.1) illustrates that unemployment rates in the period 1978-1984 reached their lowest point in June 1981, the precise time the census was conducted. This was the case for both men and women, and for younger and older workers. Labour force statistics¹ for June 1981 showed an overall unemployment rate of 5.4 per cent while the most recent statistics for the September quarter 1984 show the rate at 9.0 per cent. It peaked at 11.0 per cent in the June quarter 1983.

At first sight, it may appear that analyses of unemployed workers when unemployment is at its lowest are of little value. At the census of 1981 unemployment was less than half the rate it subsequently reached. It might be argued that the seriousness of unemployment will be underestimated by our data. In terms of measuring the number of unemployed people this statement is undoubtedly true. In terms of the types of households experiencing unemployment it may be less true. The stock of unemployed people represents mainly the long-term unemployed workers. Using the flow analysis approach Gregory argued that in 1981 these were the people who experienced the mass of unemployment. They are therefore of central interest from both economic and social welfare perspectives. Their conditions are of interest independent of the overall state of the labour market.

Table 1.1 from Gregory (1982) illustrates the importance of his flow analysis results. It shows that one third of unemployment in terms of weeks was accounted for by only one twentieth of the spells of unemployment. These were spells that lasted more than one year. Of course, at the census count of the stock of unemployed people, all those unemployed for the whole of 1981 were included (Column 3, Table 1.1). One quarter of unemployment was accounted for by 11 per cent of spells, at least half of these unemployed people were in the census. The percentages listed in the third column of Table 1.1 make the unrealistic assumption that unemployment does not

Fig. 1.1
 UNEMPLOYMENT RATES
 AND
 UNEMPLOYMENT DURATION
 1978 - 1984



fluctuate seasonally. They are there to illustrate orders of magnitude not precise figures. Generally, they show that the census collected information on proportionately more people whose unemployment was a long-term experience than would have been produced from statistics on flows in the labour market. The sample of unemployed people that we analysed was representative according to the proportion of total unemployment experienced rather than according to the number of spells of unemployment. In terms of all households who experienced unemployment it represents proportionately more of the long-term unemployed than those whose unemployment experience was of short duration.

Figure 1.1 shows that the rapid rise in the unemployment rate during 1982 was associated with a fall in the **average** duration of unemployment. At that time many new people must have become unemployed. The findings of 1981 may, then, not have had so much relevance for 1982 and 1983. In 1984 and 1985, however, unemployment has fallen - as it did during 1980-81. Again today, as earlier, the average duration of unemployment is rising. Thus today we again have the problem of increasing long-term unemployment.

A reason for believing that the incidence of unemployment today is similar to that of 1981 is that cross-section studies of many countries and many years have all linked high unemployment probabilities with the same worker characteristics. These are predominantly lack of skills and work experience. These characteristics lead either to difficulty in finding jobs or to short-term job tenures and frequent re-entry into the state of unemployment.

FIGURE 1.1

- Notes:**
- (1) Unemployment Rates: Unemployment rates are the seasonally adjusted rates for persons looking for full-time work only.
 - (2) Duration of Unemployment: The measure of the duration of unemployment used is the average (mean) duration of current unemployment for total persons unemployed in June of each year.
 - (3) Date of Collection: Data relate to the period 1978-1984 and have been collected on a monthly basis in March, June, September and December.

Sources: 1978-1984: Australian Bureau of Statistics, *The Labour Force, Australia*, Cat.No.6203.0, various issues.
1984: Australian Bureau of Statistics, *The Labour Force, Australia, October 1984, Preliminary*, Cat.No.6202.0, November 1984, p.8.

TABLE 1.1 : ALL PERSONS : UNEMPLOYMENT EXPERIENCE DURING 1981

Completed spell length	Spells %	Weeks %	Proportion of spells in stock of unemployed in any week of 1981 %
< 4 weeks	28.5	3.3	< 8
4 to less than 13 weeks	35.1	16.9	8 - 25
13 to less than 26 weeks	20.4	23.0	25 - 50
26 to less than 52 weeks	11.4	25.2	50 -100
52 weeks and over	4.6	31.6	100

Notes: In the third column, the figures assume that the labour market flows are not subject to seasonal fluctuation.

Source: Gregory, R.G. (1982), 'Work and Welfare in the Years Ahead', **Australian Economic Papers**, Vol.21, No.39, pp.219-243.

Another reason for expecting similar characteristics among unemployed people is that the experience of long-term unemployment itself affects some of the variables that we are measuring. It affects income levels. As we shall argue in the next chapter, it may affect living arrangements. That is, the formation of households that include unemployed people. Thus to some extent, in this study, we are measuring the combined incidence and impact of unemployment in households. Because our data are new and refer to only one period we cannot prove that our findings are valid for other times. We expect, however, that there are many similarities and that the types of household affected by long-term unemployment today are not very different from those in 1981. The problems today are worse because many more people are unemployed, including long-term unemployed.

CHAPTER 2 : THE CONCENTRATION OF UNEMPLOYMENT AMONG HOUSEHOLDS

INTRODUCTION

Although we tend to know more about the individual characteristics of unemployed people than about how frequently unemployment is found in the same household, there is some information on unemployment and families. For example, 1981 Australian Bureau of Statistics' labour force data show that unemployment and reduced labour force participation were concentrated in particular families: the wives of unemployed men were six times more likely to be unemployed and less than half as likely to be employed compared with the wives of employed men. Continuing the comparison, their participation rates were 20 percentage points lower and their unemployment rates were ten times higher (Australian Bureau of Statistics, 1981, Cat.No.6224.0). Similarly, non-dependent children (i.e. sons and daughters 15 years and over who were not full-time students) living at home in families where either parent was unemployed were twice as likely to be themselves unemployed when compared with the children of employed parents (Australian Bureau of Statistics, 1980, unpublished data presented by Cass and Garde, 1983, pp. 93-4).

Brooks and Volker (1983) also examined family behaviour. They related decisions on the labour supply of various family members to the labour market status of other members. They found that for adults aged 25-64 years, ethnicity variables (birthplace and period of residence in Australia) were important, as were educational background and marital status. However family factors were particularly relevant for women (25-64 years) and for teenagers (15-19 years). For women, the presence of young children and the level of their partners' incomes were influential factors (in addition to those listed above), while for teenagers, family income and level of parents' education were important, as were age and location.

With so much emphasis on families, why should we analyse households? The distinction that we make follows that of the census. A family is defined on the basis of blood and marriage (including de facto) relationships while a household is defined as a group of people living together as a single domestic unit sharing common eating arrangements. Of course, in most cases

a household is a family but, as we shall show, unemployment is relatively concentrated in households that are not of the traditional family type or that do not live solely as single families. It is true that the majority of the unemployed live in households that contain one family unit. Relative to the employed workers, however, the unemployed people are much more likely to live in non-nuclear family households. It was for this reason that we wished to extend the coverage from unemployment concentration in families to that in households.

In non-nuclear family households, theoretical models of family behaviour in relation to the labour market are often irrelevant. The possible models of the incidence of unemployment among households are extremely diverse. They can perhaps be grouped into four categories.

One set of reasons for the concentration of unemployment among some types of household relates to the previous comments on the nature of household composition. It is possible that some households are formed as a result of unemployment. For instance, young workers may leave their homes in order to search for work. Being unemployed usually means having few resources and, therefore, having to share accommodation. If unemployed workers are attracted to the centres of job accessibility then several may share accommodation in the same area. It is possible that long-term unemployed people form households together because of the support they can give each other. For example, Clark and Clissold (1982) in their survey found that unemployed young men perceived that they had less support from their families than their employed contemporaries perceived they had from theirs. Both groups said they found the same level of support among their friends. Thus one impact of unemployment may be the creation of new households, particularly of the non-nuclear family type in which unemployed people are concentrated.

Economic analysis may provide a second set of reasons why the labour market status of one household member may depend on that of others. There are several theories that may be relevant. Although they predict different outcomes, they all begin with an assumption that the household can be treated as a single economic unit that somehow maximises its utility within the income and time constraints that face the whole household. These economic theories may, therefore, be more relevant to nuclear family households than to non-family households.

One economic theory predicts that unemployment will be more often found among those who are wealthy than those who are poor. Search-theory suggests that the duration of searching for jobs will 'increase with a worker's wealth ... i.e. a wealthier worker will hold out longer in hope of getting a more preferred job' (Reder, 1969, p.12). The theory may, however, have little relevance to 1981 since it presupposes a labour market in which all unemployment is voluntary, that is, of workers searching among job offers. Although the unemployment rate of 1981 was low by the records of the nineteen eighties it was still regarded as high in the whole post-war context and most economists would argue that there was substantial involuntary unemployment.

Another economic hypothesis with contradictory implications but perhaps more realistic assumptions is the additional worker hypothesis. It is argued that the 'unemployment of a family member or a temporary decline in his or her income will induce labour force participation of other family members' (Lloyd and Niemi, 1979, p.50). In a recession when new labour market entrants will find jobs hard to find, and in situations where unemployment benefits are paid, the additional worker may be the additional, unemployed worker. According to this hypothesis unemployment would generally be found in low income households and the unemployment of one family or household member could lead to that of another.

A third set of reasons for unemployment concentration is that some households' incentives and disincentives to work may be affected by social security benefits. The incentives vary according to **family** relationships. For instance, labour force participation of married women can be affected because entitlements to unemployment benefits are means tested on the joint incomes of couples. Boyd, Jordan and Porter (1984) have estimated high effective marginal rates of tax (including loss of benefits) over a considerable income range for married unemployed couples on 1984 entitlements. There would have been similar conditions in 1981 when our data were collected. Certainly, as Cass and Garde (1983) have pointed out, the workforce participation rates of women married to unemployed men were low. The impact of these incentives on unemployment rates may be ambiguous. On the one hand, if the response of the partner of the unemployed person is to drop out of the labour force as Cass and Garde suggest, this could reduce unemployment. On the other, the partner might reject part-time in favour of full-time work. By not being available for part-time work, the probability of unemployment, particularly

of women, may be increased.

Social security payments may have different implications for two worker families that are not married couples. For sole parents with working age children, social welfare payments may encourage labour-force entry and early school-leaving of the children (Chapter 4 has further details).

A fourth and very different reasons for the concentration of unemployment can be seen as flowing from the association of the characteristics of the household or household members with high unemployment rates. For instance, households in regions of high general unemployment would have a higher than expected chance of having multiple unemployment. That is, residents of the same household share the same local labour market, the same transport system and possibly the same education and training facilities. They usually have common cultural and class backgrounds. In other words, the shared environment of a household may mean that its individual members' probabilities of unemployment are not independent.

In addition, patterns of certain individual characteristics could produce this concentration. For instance, young workers have a generally higher chance of unemployment and households with one young worker are more likely to have other young workers. Thus varying demographic structure in households could produce concentration. Other personal variables such as sex, ethnicity and education could produce a similar effect.

In summary, unemployment concentration may be found in households because:

- (a) the household was formed as a result of unemployment.
- (b) economic relationships within the household mean that members' labour market statuses are not independent.
- (c) social security payments to some household members determine the labour market status of other members.
- (d) the household represents a set of worker characteristics that are similar for all members within households and different among households. Some sets lead to low probabilities of unemployment, some to high probabilities.

For policy purposes it would be extremely useful to separate these forms of association. Unfortunately, that is not possible with our data. A full analysis that would permit the isolation of case (a) requires longitudinal data that trace household status before, during and after unemployment. Although that is impossible with our data we can derive indirect evidence by considering the family status of unemployed individuals. If the incidence of unemployment is higher in non-nuclear family households that might be evidence that unemployment sometimes affects where and with whom unemployed people live. We must interpret our data with care, however, since young people tend to live in non-family households and young people have high unemployment rates.

This chapter will outline both the extent of the uneven incidence of unemployment and the family status of households in which unemployed people lived. Cases (b) and (c) above can only be separated from each other if we know the source of incomes of household members - our data indicate levels of income but not sources. We shall analyse unemployment and incomes in Chapter 3. Case (d) above requires more information on location than is provided by our data. Within that constraint we attempt in Chapter 4 to analyse the separate impact of personal characteristics and family background on the unemployment rates of young people who live with their parents.

THE SAMPLE

Because of our interest in the composition and income levels of households we do not wish to enter in detail the debate on whether families or individuals **should** be the focus of policies (Cass, 1982; Maas, 1984). Our aim instead was to discover the facts - whether unemployed people lived in families, whether they were often found in the same families or whether their living arrangements excluded family relationships. This involved seeking as wide a coverage as possible. Therefore, private households were our chosen unit of analysis as they are the largest groups in which people privately share their accommodation and meals. The sample we used excluded only those people who live in institutions such as hotels, gaols, boarding houses and caravan parks.

The main source of data was the one per cent sample of household records which had been randomly selected by the Australian Bureau of Statistics from

the 1981 Census of Population and Housing. Definitions are those of the 1981 Census.² The statistics on incomes refer to gross annual incomes from all sources.³ People were classified as unemployed if they had actively sought full-time or part-time work during the week before the census.

The Household Sample File comprises the individual answers to most of the census questions put to 46,688 private households. This is an unusually large sample. In 36,556 of these households there were 64,570 workers (employed and unemployed), an average of 1.7 per household. The remaining households contained no members of the labour force. In the sample, there were 3,748 unemployed persons making an unemployment rate of 5.8 per cent. The unemployed people were generally young: 30 per cent were aged between 15 and 19 years and a further 22 per cent were between 20 and 24 years. In the tables below and in the text all results from the sample file have been multiplied by 100 to show the imputed values for Australia as a whole.

THE DISTRIBUTION OF UNEMPLOYMENT AMONG HOUSEHOLDS

The distribution of unemployment among households in Australia was not random. If it were, the unemployment rate of 5.8 per cent would have meant that 9.9 per cent⁴ of households would have been affected. In fact unemployment was concentrated in 8.7 per cent of the private households that contained workforce members. As one might expect, these tended to be large. Only 13 per cent of households without unemployment had three or more resident workers compared to 33 per cent of households with some unemployment (Table 2.1). Of those 317,900 households where there was some unemployment, 271,400 or 85.4 per cent had only one member of the workforce unemployed, while 46,500 households or 14.6 per cent had two or more workforce members unemployed (Table 2.2). In other words, one in every seven of the households under discussion had multiple unemployment.

In households with only one person unemployed, the unemployed person was most frequently one of two workforce members (37%). However in one third of cases or 89,700 households, the unemployed person was the only workforce member of the household. In 19 per cent of households with only one person unemployed, there were a further two employed workers and the remaining 11 per cent of households had a further three or more employed workers (Table 2.2).

TABLE 2.1 : HOUSEHOLDS : NUMBER OF WORKFORCE MEMBERS BY INCIDENCE OF UNEMPLOYMENT

No. of workforce members in household	Households without unemployment		Households with unemployment		All households with workforce members	
	('000)	%	('000)	%	('000)	%
1	1,539.3	46	89.7	28	1,629.0	45
2	1,351.6	40	123.0	39	1,474.6	40
3	313.8	9	64.1	20	377.9	10
4	106.4	3	28.7	9	135.1	4
5 to 10	26.6	1	12.4	4	39.0	1
1 to 10	3,337.7	100	317.9	100	3,655.6	100
% of all households	91.3		8.7		100	

Note: Percentages may not add to 100 due to rounding.

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Household Sample File.

TABLE 2.2 : HOUSEHOLDS WHERE UNEMPLOYMENT IS PRESENT : NUMBER OF WORKFORCE MEMBERS IN HOUSEHOLD BY INCIDENCE OF SINGLE AND MULTIPLE UNEMPLOYMENT

No. of workforce members in household	Households with one unemployed		Households with more than one unemployed		Total households with unemployment	
	('000)	%	('000)	%	('000)	%
1	89.7	33	N/A		89.7	28
2	101.2	37	21.8	47	123.0	39
3	51.9	19	12.2	26	64.1	20
4	21.2	8	7.5	16	28.7	9
5 to 10	7.4	3	5.0	11	12.4	4
1 to 10	271.4	100	46.5	100	317.9	100
% of all households with unemployment	85.4		14.6		100	

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Household Sample File.

Table 2.2 shows the concentration of multiple incidence of unemployment in larger households. Almost half of households with multiple unemployment had two workers both of whom were unemployed. 27 per cent of households with multiple unemployment had four or more labour force participants compared with 11 per cent of households where there was one unemployed worker.

In summary, in June 1981 among all Australian households that contained workforce participants, 8.7 per cent experienced some unemployment and 1.2 per cent included more than one unemployed worker. At least 3 per cent had all of their workforce members unemployed, that is, had no employed breadwinner despite having workforce members.

UNEMPLOYED INDIVIDUALS WITHIN HOUSEHOLDS

Another way of approaching this analysis of the extent of unemployment in households is to look at the unemployed people rather than at households. The Household Sample File represents a total of 374,800 unemployed people living in 317,900 households (a mean of 1.2 unemployed people in these households). Whereas 85 per cent of households where unemployment was present had only one person unemployed, only 72 per cent of all unemployed people lived in such households (Table 2.3). A total of 103,400 unemployed people or 28 per cent lived where there was at least one other unemployed person. In other words, approximately one unemployed person in every four lived in a household which experienced multiple unemployment. This ratio is higher than was intuitively anticipated and it calls into question assumptions underlying the setting of unemployment benefit rates which imply that other household or family members can be called upon to assist people to weather periods of unemployment. Not only would many be called upon to support two or more unemployed householders, but also the probability that they would themselves have experienced (or in future will experience) one or more periods of unemployment should not be overlooked. Moreover, as a household may contain unrelated individuals, there is a question as to whether there is any basis for intra-household obligations.

A clear trend emerges on examination of unemployment rates in relation to number of workforce members in households (Table 2.4). In private households where there was only one person in the workforce (there could be any number of residents not in the workforce), the unemployment rate was 5.5 per

TABLE 2.3 : UNEMPLOYED PERSONS IN HOUSEHOLDS WHERE UNEMPLOYMENT IS PRESENT : NUMBER OF WORKFORCE MEMBERS IN HOUSEHOLD BY INCIDENCE OF SINGLE OR MULTIPLE UNEMPLOYMENT

No. of workforce members in household	Unemployed persons in households with only one unemployed		Unemployed persons in households with more than one unemployed		Total unemployed persons	
	('000)	%	('000)	%	('000)	%
1	89.7	33	N/A		89.7	24
2	101.2	37	43.6	42	144.8	39
3	51.9	19	28.1	27	80.0	21
4	21.2	8	18.4	18	39.6	11
5 to 10	7.4	3	13.3	13	20.7	6
1 to 10	271.4	100	103.4	100	374.8	100
% of all persons unemployed	72.4		27.6		100	

Note: Percentages may not add to 100 due to rounding.

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Household Sample File.

TABLE 2.4 : HOUSEHOLDS : NUMBER OF WORKFORCE MEMBERS BY UNEMPLOYMENT RATES

No. of workforce members in household	Unemployment rate
	%
1	5.5
2	4.9
3	7.1
4	7.3
5	9.2
6	13.3
7	10.4
8	22.5
1 to 10	5.8

Note: The unemployment rate was measured as the percentage of unemployed individuals who were in the workforce and who were members of households of the size indicated.

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Household Sample File.

cent. This dropped to 4.9 per cent in households with two residents in the workforce and then rose consistently as the number of household residents in the workforce rose. Although the numbers of larger households were small, the general trend of increasing unemployment rates with increasing workforce numbers in the household holds firm and is statistically significant at the 10 per cent level.

The concentration of unemployment in some households cannot, however, be entirely attributed to the number of workforce members. Among households of each size, there was a difference between the actual distribution of unemployment and that which could have been expected according to the unemployment rates listed in Table 2.4.

As the results in Table 2.5 show there were fewer households with only one person unemployed than would be expected if unemployment were random, regardless of the number of workforce members per household, and more households than expected with either no unemployment or multiple unemployment. For example, in households with two members in the workforce, it was expected that there would be 137,700 households with one unemployed worker; in fact, there were only 101,200 such households or 73 per cent of the expected number. Conversely, the number of two worker households free of unemployment was 18,300 higher than expected, as was the number of households with both workers unemployed. For the latter type, the ratio indicates a result over six times the expected level. In general, the pattern holds throughout the table, with the level of concentration increasingly accentuated the larger the number of workers in the household.

These findings strongly support arguments that unemployment was not distributed evenly across the community. More households than expected were untouched by unemployment, while other households, particularly the larger ones, experienced far higher shares of unemployment than anticipated.

TABLE 2.5 : HOUSEHOLDS WITH TWO TO FIVE WORKFORCE MEMBERS : ACTUAL AND EXPECTED UNEMPLOYMENT CONCENTRATION

No. of workforce members in household	No. of unemployed workforce members in household	Actual No. of house-holds ('000)	Expected No. of house-holds(1) ('000)	Difference (Actual - Expected) ('000)	Ratio (Actual ÷ Expected)
2	0	1351.6	1333.3	18.3	1.01
2	1	101.2	137.7	-36.5	.73
2	2	21.8	3.55	18.3	6.14
3	0	313.8	303.4	10.4	1.03
3	1	51.9	69.1	-17.2	.75
3	2	8.5	5.25	3.25	1.62
3	3	3.7	.133	3.57	27.82
4	0	106.4	99.6	6.8	1.07
4	1	21.2	31.5	-10.3	.67
4	2	4.7	3.74	.96	1.26
4	3	2.2	.197	2.00	11.2
4	4	0.6	.004	.6	150.0
5	0	22.0	19.6	2.4	1.12
5	1	6.5	9.93	-3.43	.65
5	2	2.1	2.01	.09	1.05
5	3	0.9	.203	.697	4.43
5	4	0.3	.0103	.290	29.1
5	5	0.0	.00021	-.00021	0.0

Note: (1) Expected distribution of household unemployment calculated on the assumption of independent unemployment probabilities of household workforce members. Calculated from binomial distributions with $p \equiv$ probability of unemployment = 4.9%, 7.1%, 7.3% and 9.2% for households with 2, 3, 4 and 5 workforce members respectively.

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Household Sample File.

THE FAMILY STATUS OF UNEMPLOYED INDIVIDUALS

Because our interest here is in households as a whole, rather than just families, we have used the Household Sample File information on the structure of each family together with information on the presence of non-family individuals to look at the whole composition of households. (It should be remembered that this is largely determined by the people present on census night. Refer to Appendix 1 for definitions of population groups and the classifications in Table 2.6.) Except for the two categories, 'single person households' and 'all persons unrelated households', all households contained a head of household and all might have contained children (not dependent), ancestors or siblings, in addition to the patterns of spouse and dependants elaborated in the tables.

Most commonly, unemployed people lived in households with only one family, including both a spouse and dependant(s). The 32 per cent in this group together with the 20.0 per cent in households with single families including spouse and no dependants comprised over half the unemployed population (see Figure 2.1). However, if we compare the distribution of unemployed to that of the employed persons, we find the unemployed were relatively concentrated in households with no families i.e. all persons unrelated (these comprised 11.0% of the unemployed and only 6.4% of the employed) and the larger households with one family plus non-family members (11.3% compared to 5%) or two or more families (8.3% compared to 4.3%). These groups combined contained 30.5 per cent of unemployed persons and only 15.7 per cent of employed workers. In other words, unemployed people were relatively less concentrated in the 'traditional' or 'nuclear' family households of one family with head and spouse and possibly other adults or dependants. Disaggregation of the data on one-family households showed that there was a smaller concentration of unemployment when only a head and/or spouse and/or dependent children were present than when there were other adults such as grown-up children or siblings of the head. These figures have not been listed.

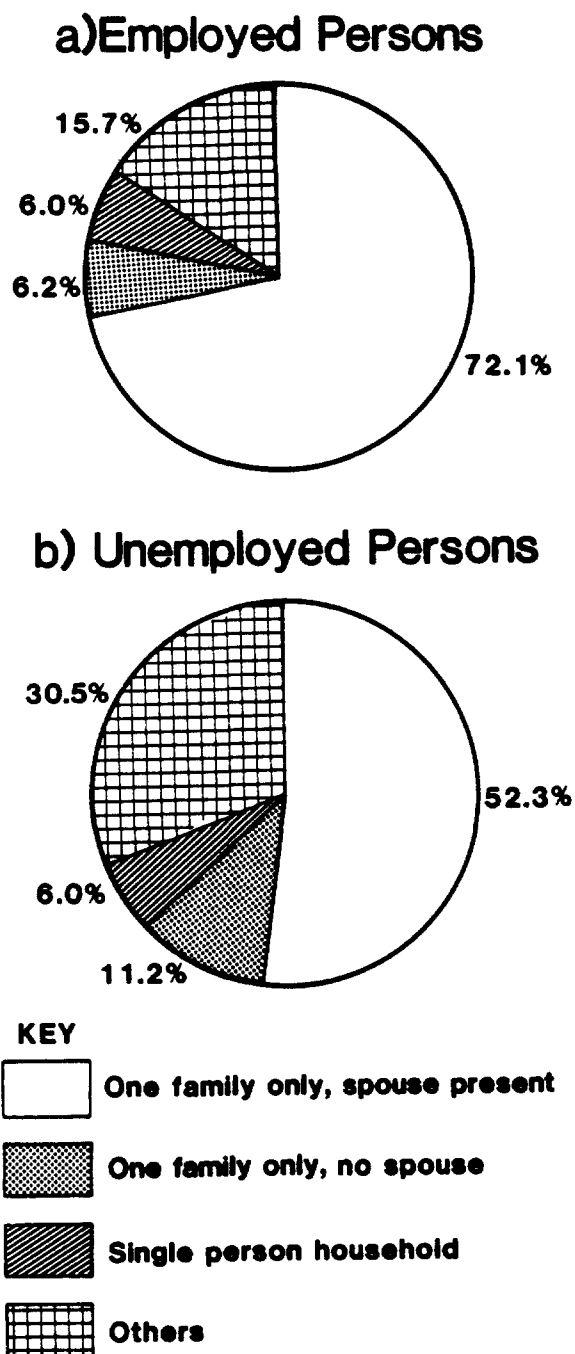
Further information on inter-relationships within households where there was multiple unemployment was obtained by a method of creating pairs of unemployed individuals within the same household. Only the first five work-force members in each household (randomly ordered) were included. Table 2.7

TABLE 2.6 : THE HOUSEHOLD COMPOSITION OF EMPLOYED AND
UNEMPLOYED PERSONS

Household Composition	Employed Persons	Unemployed Persons
	%	%
<u>One family only</u>		
With spouse, some dependants	43.5	32.3
With spouse, no dependants	28.6	20.0
With no spouse, some dependants	2.6	5.3
With no spouse, no dependants	3.6	5.9
<u>One family + non-family member</u>		
With some dependants	2.6	6.7
With no dependants	2.4	4.6
<u>Two families only</u>	3.7	6.6
<u>Two families and non-family members or 3 or more families</u>	0.6	1.7
<u>All persons unrelated</u>	6.4	11.0
<u>Single person household</u>	6.0	6.0
<u>All above</u>	100.0	100.0
No. of persons	6,082,200	374,800

Source: Australian Bureau of Statistics, 1981 Census of
Population and Housing, 1% Household Sample File.

Fig. 2.1
HOUSEHOLD COMPOSITION OF
EMPLOYED AND UNEMPLOYED
PERSONS



Source: See Table 2.6

refers to the age of pairs of unemployed people. It shows that the most frequent age-pairing was that of 15-19 year olds with 20-24 year olds, followed by 15-19 with 15-19 year olds and 20-24 with 20-24 year olds. This means that 28.4 thousand pairs or 42.8 per cent of the total of 66.4 thousand pairs consisted of people under the age of 25 years. People under 25 years paired with people of any age from 15 to 65 years and over constituted 73.9 per cent of all pairs. There was another cluster of similar aged pairs (20-24 years with 25-34 years and 25-34 with 25-34 years) and a group of younger-older pairs, i.e. 15-19 with 35-49 years.

The second table (Table 2.8) helps clarify the relationship of the two unemployed people to each other. This table has been split into two sections; the first part includes 40.9 thousand pairs of unemployed people in the same family and living in the same household while the second part refers to unemployed people who were not in the same family but who lived in the same household (25.5 thousand pairs). When both persons were in the same family, the largest group was that of siblings (14.8 thousand pairs) which in part probably corresponds with the young group pairing in the previous table. The second most numerous group was that of heads of households and their spouses which probably constituted a good part of the similar age pairs in the 20-34 years groups, while the third most numerous group is a combined one of 9.8 thousand parent-child pairs.

Some 38.4 per cent of all pairs were not related. These would most probably have been 'share' households or 'mingles' identified in Table 2.6 on the structure of households as 'persons unrelated' and 'non-family members'. This very large incidence of multiple unemployment among non-related individuals who lived together suggests that we should not consider the household background of unemployed individuals as being always determined independently of their labour market status. In some cases being unemployed may lead individuals to form households which contain other people in the same situation. Of course, this does not mean that all non-family households with unemployment were formed in this way. Many young people live in non-family households and young people have a high probability of being unemployed.

When the unemployment rates of individuals in each age group are disaggregated according to the family composition of the households in which

TABLE 2.7 : AGE OF PAIRS OF UNEMPLOYED INDIVIDUALS WITHIN HOUSEHOLDS
(thousands of pairs)

AGE OF PERSON ONE	AGE OF PERSON TWO					
	15-19	20-24	25-34	35-49	50-64	65+
15-19	10.7	11.9	3.3	5.2	2.6	0.3
20-24	-	5.8	5.5	1.6	2.0	0.2
25-34	-	-	4.6	2.3	1.1	0.1
35-49	-	-	-	2.2	1.4	0.2
50-64	-	-	-	-	3.1	1.2
65+	-	-	-	-	-	1.1
Total number of pairs = 66.4 (thousand)						

- Notes:
- (1) These are the numbers of all possible pairs.
A household with two unemployed would contribute one pair, a household with 3 unemployed 3 pairs, with 5 unemployed 10 pairs etc.
 - (2) Only the first 5 workforce members in each household (randomly ordered) are considered for inclusion in this table.

Source: Australian Bureau of Statistics, **1981 Census of Population and Housing**, 1% Household Sample File.

TABLE 2.8 : FAMILY RELATIONSHIPS OF PAIRS
OF UNEMPLOYED INDIVIDUALS
WITHIN HOUSEHOLDS
(thousanads of pairs)

<u>Pairs with both persons in the same family</u>				
	Spouse	Child	Ancestor	Other Family Member
Head	12.8	7.5	.2	2.4
Spouse	-	2.3	.0	.7
Child	-	14.8	.2	.0
Ancestor	-	-	.0	.0
Other family member	-	-	-	.0
Sub total				40.9
<u>Pairs with persons not in the same family</u>				25.5
Total				66.4

- Notes:
- (1) These are the numbers of all possible pairs.
A household with two unemployed would contribute one pair, a household with 3 unemployed 3 pairs, with 5 unemployed 10 pairs etc.
 - (2) Only the first 5 workforce members in each household (randomly ordered) are considered for inclusion in this table.

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Household Sample File.

TABLE 2.9 : PERSONS AGED 15 YEARS AND OVER IN PRIVATE DWELLINGS:
UNEMPLOYMENT RATES BY AGE AND FAMILY
COMPOSITION OF HOUSEHOLD

Family composition of household in which individual lives	Unemployment rate of individuals in age groups:							All ages
	15-19	20-24	25-34	35-44	45-54	55-64	65+	
	%	%	%	%	%	%	%	%
One family (only) with spouse	12.6	7.1	3.5	2.5	2.0	2.9	4.6	4.3
One family (only) with no spouse	19.1	10.8	8.9	5.9	4.3	6.5	8.8	10.0
One family plus non family members or 2 or more families	25.7	14.4	9.5	4.7	4.5	7.1	13.0	11.5
All persons unrelated	18.8	9.3	6.8	6.7	9.4	9.8	2.9	9.6
Single person household	17.4	6.8	4.1	4.0	6.5	4.8	14.1	5.7
All above	15.9	8.7	4.6	3.0	2.8	3.8	7.1	5.8

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing,
1% Household Sample File.

the individuals lived, the same association of low unemployment rates in one-family households is found (Table 2.9). Among all teenage workers, unemployment rates were 12.6 per cent in one family households, 19.1 per cent in single-parent families and 25.7 per cent in households where there was either more than one family or a family and a non-family member. In group households where all persons were unrelated, unemployment rates were 18.8 per cent. In single person households, they were 17.4 per cent. As the age of individuals increased, unemployment generally declined. However, the same pattern of lower unemployment rates among one-family households remained with the exception that unemployment was lowest in single person households for the age group 20 to 24 years.

SUMMARY

Even in the relative 'good' year of 1981, there were 317,900 households with one or more unemployed residents. One in every seven of those households had more than one person out of work on census night; one in every four unemployed people shared their homes with at least one other unemployed person.

Over a third of households with unemployment did not have anyone in a paying job and almost three quarters had at least half their workforce members unemployed. The probability of being unemployed was very much higher in some households than in others. More households than expected were untouched by unemployment, while other households, particularly the larger ones, experienced far higher shares than anticipated. In the main, unemployed people lived in households with only one family consisting of head, spouse and possibly dependants. However they were relatively less concentrated in traditional families than were employed people and more spread in households of unrelated persons or larger mixed households.

The extent of multiple unemployment extracted from the data on one per cent of Australian households was greater than intuitively anticipated and it certainly is of an order to cast doubt on assumptions that those 'nearest' to unemployed people, i.e. other members of their families and/or their households, would assist them through periods of unemployment. Not only was multiple unemployment in households greater than anticipated, it also involved individuals who might not have been able and/or willing to assist

each other. The most common pairing of unemployed people was among unrelated household members and the second ranking pairing was of siblings. Unrelated individuals often do not have obligations to assist each other. Sibling unemployment imposes double burdens on the families. Whatever the nature of intra-household relationships, whether the unemployed people could gain assistance would partly depend on the financial situations of employed and unemployed people. These are examined in the following chapter.

CHAPTER 3 : UNEMPLOYMENT AND INCOMES

INTRODUCTION

In the association between unemployment and individual and household income both the impact of unemployment and its incidence are involved. Unemployment usually implies a loss of income to the individual. To appreciate the full extent of this requires studies of completed spells of unemployment and of the incomes of the unemployed before their job loss. In the UK, the incomes of unemployed people were measured by Davies, Hamill, Moylan and Smee (1982) and by Smith (1980). They showed that income losses occurred despite the fact that unemployment was concentrated among those who had low earnings when in work (Moylan and Davies, 1980). Whiteford (1982) has shown that in Australia too, unemployed workers in the survey year of 1978-79 earned less per week when they had work than the average for full-year, full-time workers. However Australian data were not sufficiently detailed to measure the impact of unemployment on incomes or the levels of unemployment benefits on incentives to work as in the UK studies.

Though no precise estimates are available, unemployment is recognised as a major and increasing source of poverty.

The chief factor making for a worsening of poverty in Australia in the decade since the Poverty Inquiry income survey of 1973 has been the rise in unemployment.
(Manning, 1985, p.132)

Gruen (1984) has suggested

If unemployment could be wound back, a good deal - though by no means all - the poverty existing in Australia would be eliminated.
(Gruen, 1984, p.45)

In this chapter, we will show the associations between unemployment and levels of household incomes and between unemployment and household incomes relative to needs. It has been noted that studies of unemployment suggest that its incidence is greatest among workers who are marginal to the work-force, especially the lowest paid. Our data permit us to examine whether the household incidence of unemployment is such that households where earned incomes are low are most affected. Although a simple analysis shows this to be the case, we have also noted that the reason may be that workers who are

marginal live together - for instance, young workers. Yet, even if we control for demographic influences, a negative association emerges between the incomes of employed members of each household (averaged over all employed workers) and the amount of unemployment in the household. The uneven incidence of unemployment falls most heavily where working members of households have low pay.

THE DATA ON INCOMES

A question on individual income was asked of all persons aged 15 years and over in the 1981 Census. The question was

What is the gross income (including pensions and/or allowances) that each person usually received each week from all sources?

The accompanying instructions were to count all income, wages, salary, overtime, family allowances, pensions, superannuation, tips and gratuities, business or farm income, and unemployment benefits without deducting tax, health insurance or other payments. Thus, the data that we have on incomes refer to gross incomes.⁵

The wording of the income question, particularly in relation to unemployed people, is problematic in that it asks for the gross income each person 'usually receives' each week. Presumably this means the gross income that they received at the time of the census. However in the case of recently unemployed people, it is possible that they may have responded with a figure that they usually received when in work. Were this to have occurred, the income figures would be inflated to some degree. As our analysis will show, the reported data on the income of unemployed workers indicate that such incomes were, on average, low and not widely dispersed. A possible reason, as we have argued in Chapter 1, is that unemployed workers at the census were predominantly those whose unemployment was long-term. Nevertheless, it is important to the argument presented here that the census question on incomes was not likely to provide data with a downward bias on the incomes of unemployed people.

Some benchmark incomes for mid-1981 may be useful before the statistics on census incomes are considered. Gross national product per capita in 1981-82 was about \$10,000. Average earnings for males were approximately \$14,000 per annum; for females, full-time earnings were about \$2,000 per

TABLE 3.1 : ANNUAL INCOMES AT PENSION AND BENEFIT RATES
APPLYING IN JUNE 1981

	Annual Income \$
<u>Pensions:</u>	
Age, Invalid, Widow Class B or C	
- Standard rate for one person	3466
- Married rate	5777
<u>Benefits:</u>	
Supporting Parent with one child	4298
Unemployed - One person aged 16 or 17 years	1872
- One person aged 18 years or more	2779
- Married rate	5777
- Married rate with one child	6297
- Married rate with two children	6817

Notes: Supplementary assistance of \$260 per annum not included.
Family allowances not included. They were in the range \$182-364 per annum per child depending upon the number of children in the family.

Source: Department of Social Security (1981), **Annual Report 1980-81**, pp.127-131.

annum less. Pension rates, which are listed in detail in Table 3.1, provided almost \$3,000 per annum per adult. This was less than the poverty line for people in the workforce and for single persons who did not work (Burbidge, 1984, p.3). For single persons, Burbidge sets the poverty line for 1981-82 at a gross income of \$5,220 per annum for those in the labour force and at \$3,967 per annum for those at home. For couples, the figures were respectively, \$6,545 and \$5,620 per annum.

THE ASSOCIATION BETWEEN UNEMPLOYMENT AND LOW INCOME LEVELS

That unemployed workers have low incomes is evident from the data on incomes and employment status (Table 3.2). It is quite clear that the unemployed are comparable with those who do not work. At least eight in ten of those unemployed or not in the labour force had incomes not exceeding

TABLE 3.2 : INDIVIDUALS 15 YEARS AND OVER IN PRIVATE HOUSEHOLDS :
INDIVIDUAL INCOME BY LABOUR FORCE STATUS

Individual Income per annum	Labour Force		Not in Labour Force
	Employed ⁽¹⁾	Unemployed	
	%	%	%
\$ 0 - 6,000	17.9	80.1	83.4
\$ 6,001 - 12,000	39.9	11.5	6.7
\$12,001 - 18,000	25.8	1.6	1.5
\$18,001 - 22,000	6.3	.2	.3
\$22,001 - 26,000	2.9	.1	.1
\$26,001 and over	3.7	.3	.2
Not stated	3.6	6.3	7.7
All income levels	100.0	100.0	100.0
Total no. of individuals ('000)	6,082.2	374.8	3,891.0

Note: (1) Includes unpaid helpers.

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Household Sample File.

\$6,000 per annum while less than one in five employed workers were in this category. The second largest groups for both unemployed and not in the labour force were in the \$6,001 to \$12,000 per annum range. The proportions of unemployed and not in the labour force with incomes in excess of \$18,000 per annum were negligible while 13 per cent of employed individuals in private households had incomes in excess of \$18,000 per annum.

Households that contained unemployed workers generally could be expected to have low total household incomes and this is confirmed in Table 3.3. Approximately one in five individuals who were either unemployed or not in the labour force lived in households with incomes of less than \$6,000 per annum. Another one in four were in households with incomes that ranged from \$6,001 to \$12,000 per annum. Only one in eight employed workers were in households in those income ranges. Some of these employed workers may, of course, have lived in households that included unemployed people.

TABLE 3.3 : INDIVIDUALS 15 YEARS AND OVER IN PRIVATE HOUSEHOLDS :
HOUSEHOLD INCOME BY LABOUR FORCE STATUS

Household income per annum	Labour Force		Not in Labour Force
	Employed ⁽¹⁾	Unemployed	
	%	%	%
\$ 0 - 6,000	1.9	16.6	20.8
\$ 6,001 - 12,000	10.8	25.3	24.0
\$12,001 - 18,000	18.1	19.0	18.3
\$18,001 - 22,000	13.4	8.5	8.1
\$22,001 - 26,000	12.7	6.0	5.8
\$26,001 and over	33.7	12.7	12.9
Not stated	9.4	11.9	10.0
Total no. of individuals ('000)	6,082.2	374.8	3,891.0

Note: (1) Includes unpaid helpers.

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Household Sample File.

Although the household incomes of unemployed workers were much lower than those of employed workers, not all unemployed workers lived in low income households. Similar data led Stromback to conclude

... while there is a very strong association between unemployment and low income it is by no means universal if we take family income into account. The unemployment of one family member may be compensated for by the employment of other family members.
(Stromback, 1983, p.2)

Whilst the figures in Table 3.3 do indicate the possibility of some compensation within households for the personal poverty associated with unemployment, the tables in the previous chapter provided the warning that not all relationships within households were as strong as family ties and that the households of unemployed people tended to be large. Even if unemployed workers could obtain household support the amount available would depend on other claims on household income from other household members.

Table 3.4 presents a range of data on per capita incomes within households according to the number of unemployed persons in the household. These

TABLE 3.4 : HOUSEHOLDS : UNEMPLOYMENT BY PER CAPITA INCOMES

No. of unemployed workers in household	Mean values of			
	per capita income of unemployed members	per capita income of employed members	per capita income of households	Equivalent per capita income of households
	\$ p.a.	\$ p.a.	\$ p.a.	\$ p.a.
0	-	12,322	6,841	5,881
1	3,003	10,785	4,506	4,170
2	2,843	9,429	3,175	3,049
3	2,647	8,653	3,084	3,094
4	2,563	7,250	1,942	2,233
All households with 0 to 4 unemployed workers	2,975	12,207	6,675	5,758

Notes: Per capita income of households = $\sum_{i=1}^p I_i / p$

Equivalent per capita income of household = $\sum_{i=1}^p I_i / p \sum_{i=1}^p \alpha_i$

Per capita income of unemployed members = $\sum_{i=1}^p \beta_i I_i / p \sum_{i=1}^p \beta_i$

Per capita income of employed workers = $\sum_{i=1}^p \gamma_i I_i / p \sum_{i=1}^p \gamma_i$

Where

I_i is income of individual i

p is the no. of persons in household

α_i is equivalent person weight of individual i

$\beta_i = \begin{cases} 1 & \text{if unemployed} \\ 0 & \text{otherwise} \end{cases}$

$\gamma_i = \begin{cases} 1 & \text{if employed} \\ 0 & \text{otherwise} \end{cases}$

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Household Sample File.

data show an equality of poverty among the unemployed as individuals. Incomes were in the range \$2,500 to \$3,000 per annum per unemployed worker and there was only a small decrease in the average incomes of unemployed workers as the number of persons who were unemployed in the household increased. Possibly, this decline occurred because there were more unemployed juveniles in households with multiple unemployment.

Because of the low incomes of unemployed workers, households with unemployment tended to have low per capita incomes. On average, the per capita incomes of households with unemployment was about \$6,800 per annum. For households, with one unemployed person, it was \$4,500 per annum. Households with multiple unemployment generally averaged lower per capita incomes though the differences in the incomes of households with two, three or more unemployed members were not statistically significant. Per capita incomes were generally in the range \$2,000 to \$3,000 per annum.

Measurements of per capita income provide comparability between households by making a very crude adjustment for household size. Each person is treated as an equal. More sophisticated adjustments can be made using equivalence scales (Kakwani, 1983; Manning, 1984; Social Welfare Policy Secretariat, 1981). These have been devised to take into account economies of scale in living - 'the fact that two can live more cheaply than twice one' (Commission of Inquiry into Poverty, 1975, Vol.1, pp.41-43). In addition they may adjust the weighting to be given to individual household members to allow for the fact that the cost of living of children is less than that of adults while that of workers is greater than that of people who are at home. Appendix 2 provides details of the equivalence scale used in this analysis which adjusts only for economies of scale and the different living costs of adults and children.

Per capita incomes and equivalent per capita incomes were almost the same at just over \$3,000 per annum in households with three unemployed workers (Table 3.4). In households with fewer unemployed workers, equivalent per capita incomes were lower than per capita incomes. The converse was true of households with four unemployed workers. Thus the impact of low household income among unemployed workers was to some extent mitigated by the fact that they lived in relatively large households and therefore enjoyed

economies of scale. The extent of this offsetting factor was, however, small. The mean value of equivalent per capita incomes was clearly lowest in households with multiple unemployment and highest in households without unemployment. Households with one person unemployed fell between those two groups in terms of income.

The average association of unemployment and low incomes both at an individual and household level is shown in Table 3.4. There remains a question, however, not of average association, but of how many unemployed workers could rely on family support particularly from the incomes of the family head and spouse, if there were one. Our data permitted us to measure the combined incomes of head and spouse (if present) of 273,000 unemployed workers including those who were themselves family heads. Of these 273,000 people, that is 73 per cent of all unemployed workers, 83,300 lived in families where the incomes of head and spouse exceeded \$12,000 per annum. They were 22 per cent of the total (374,800) persons unemployed at the time, compared with the 46 per cent who lived in households with a household income exceeding \$12,000 per annum (Table 3.3). Only 13,200 unemployed persons lived in families where the income of head and spouse exceeded \$26,000 per annum. They were 4 per cent of unemployed workers compared with approximately 13 per cent who lived in households with household incomes of that level (Table 3.3). From these figures we concluded that potential family support for unemployed workers was likely to be much less than indicated by household income figures.

Our measurements of the incomes of all household and family members were partial indicators of the impact of unemployment. We were also interested in its incidence among households that contained employed workers. Could it be shown that households with the lowest earned incomes suffered the most unemployment? Or was unemployment more widely dispersed? Ideally, we should have liked to analyse this issue by measuring the labour-market incomes of employed household members. Our data were not, however, sufficiently detailed. All incomes data refer only to gross incomes from all sources.

There was a strong negative association between the mean values of the per capita income of employed workers in each household and the number of unemployed persons in each household (Table 3.4 and Figure 3.1). On average, workers in households without unemployment had incomes per worker of over

\$12,000 per annum. Employed workers in households with four unemployed members averaged incomes of about \$7,000 per annum. The number of households with multiple unemployment was so small that the difference in mean incomes of employed workers among these households was not statistically significant. Clearly, however, employed workers in households with one unemployed person earned less than those who lived in households without unemployment. The lowest incomes of all were found among employed workers who lived with more than one unemployed person.

This relationship between incomes of employed workers and the amount of unemployment in households could have a demographic explanation. Possibly incomes were lower because households with unemployment contained more women and young workers than did households without unemployment. This possibility is not unlikely since these workers have high unemployment rates and because workers of the same age group are often found together in households. We attempted to isolate the impact of demographic factors on the incomes of employed workers in two ways. We compared incomes only of employed household heads and we used regression analysis to control for the age of workers, their household size and for the number that were female.

Employed heads of households aged over 25 years are a reasonably homogeneous group of workers. In Table 3.5, their incomes are cross-tabulated according to the amount of unemployment and the number of workforce members in their households. We have already shown that unemployment rates increased as the workforce membership of households increased (Table 2.4). According to the data in Table 3.5, the heads' incomes also declined as workforce membership increased. Thus larger households tended to be poorer. Yet, even when we considered households of each workforce size, we found that unemployment was concentrated among households where the employed heads had low incomes. In households with each number of workforce members, the average income of the heads declined as the number of unemployed workers increased. For example, in households with three workforce members when two members were unemployed the heads' incomes averaged 17% less than when no member was unemployed. In a four workforce household the percentage reduction was 21.

Regression analysis was also used to separate the demographic from the labour-market influences on income levels. In the analysis, the dependent variable was the per capita income of employed workers in a household.

TABLE 3.5 : EMPLOYED HEADS OF HOUSEHOLDS, AGED OVER 25 : MEAN INCOME
BY NUMBER OF WORKFORCE MEMBERS AND NUMBER OF
UNEMPLOYED PERSONS IN HOUSEHOLD

No. of work- force members in household	Number of Unemployed Persons in Household				
	0	1	2	3	4+
1	14,475	-	-	-	-
2	14,318	13,527	-	-	-
3	14,047	12,818	11,713	-	-
4	14,037	12,400	11,086	7,917	-
5	13,288	12,952	12,263	11,167	7,167

Notes: Total cases = 2,935.8 thousands
Missing cases = 83.5 thousands or 2.8%

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Household Sample File.

In addition to the number of unemployed members, independent variables were 1) the number of employed females, 2) the mean age of employed workers and 3) the number of workforce participants in the household. By controlling for these three variables it was possible to show the underlying association between the amount of unemployment in a household and the incomes of its employed members.

Before describing the results, we must outline the model's specification. On **a priori** grounds we did not expect a linear relationship with some of these independent variables. For instance, in many jobs, life-cycle profiles of earnings indicate that a peak is reached in middle age and incomes later stabilise or decline as age increases. (The pattern varies among occupations.) As the number of females per household increases, employment tends to shift from part-time to full-time, e.g. from married women to teenage girls, so the impact of 'femaleness' on earnings become less severe. The variable measuring household size (number of workforce members) is a proxy for the remaining effects - other than age and sex - of household composition and may have non-linear effects. Thus these three variables were entered into the

regression analysis in quadratic form. Unemployment was, however, entered into the equation as a linear variable and the inclusion of a quadratic term did not improve the statistical significance of its relationship with the dependent variable, the per capita incomes of employed household members.

The equation is presented in Table 3.6. Despite the low adjusted R^2 statistic all the independent variables had statistically significant relationships with the dependent variable. All coefficients had signs which confirmed our *a priori* expectations. All were highly significant. Sex and age appear to have been the most important determinants of the incomes of employed people. Other factors being held constant, if there were an employed female in the household the average per capita incomes of employed workers in the household was lower. The turning point in the relationship occurred at 2.42 employed females.⁶

The data suggest that, as the average age of employed workers increased up to 42 years, the average of incomes per employed worker increased, though at a declining rate. After a mean age of 42, incomes fell and at an increasing rate as age rose.

As the workforce membership of a household increased, average income per employed worker initially decreased although it did so at a declining rate. That is, the decline in average income that occurred between there being one and two workers (say, one adult male and an adult couple) was greater than the decline between four and five workers (say, a family of two adults and two young workers compared with a family with three young workers). The apparently positive relationship between average income per employed worker and workforce memberships greater than five is doubtful because it was based on very few observations. Workforce membership as a control variable probably picked up the fact that low income workers have a greater need than those on high incomes to share household expenses.

The association between unemployment and incomes per employed worker was negative and statistically significant. Other things being the same, the per capita incomes of employed workers in households with one unemployed worker were approximately \$730 per annum less than in households with no unemployment. In households with two unemployed members such incomes were about \$1,460 per annum lower and so on. The regression line is shown in Figure 3.1. It is

TABLE 3.6 : MULTIPLE REGRESSION ANALYSIS OF PER CAPITA INCOMES
OF EMPLOYED PERSONS IN HOUSEHOLDS

Dependent Variable : per capita incomes of employed
workers in household

Independent Variable	Coefficient	t value	Min. or Max.
1. No. of employed females	-2732.22	26.571)	Min. 2.42
(No. of employed females) ²	562.40	12.780)	
2. Mean age of employed workers	510.38	36.687)	Max. 42.70
(Mean age of employed workers) ²	-5.98	35.991)	
3. No. of workforce members	-1291.78	9.689)	Min. 6.46
(No. of workforce members) ²	99.98	3.926)	
4. No. of unemployed	-730.76	6.544	
CONSTANT	5573.46	18.931	

Notes: 1. $\bar{R}^2 = 0.13109$ D.F. = 33798

2. Mean values of variables

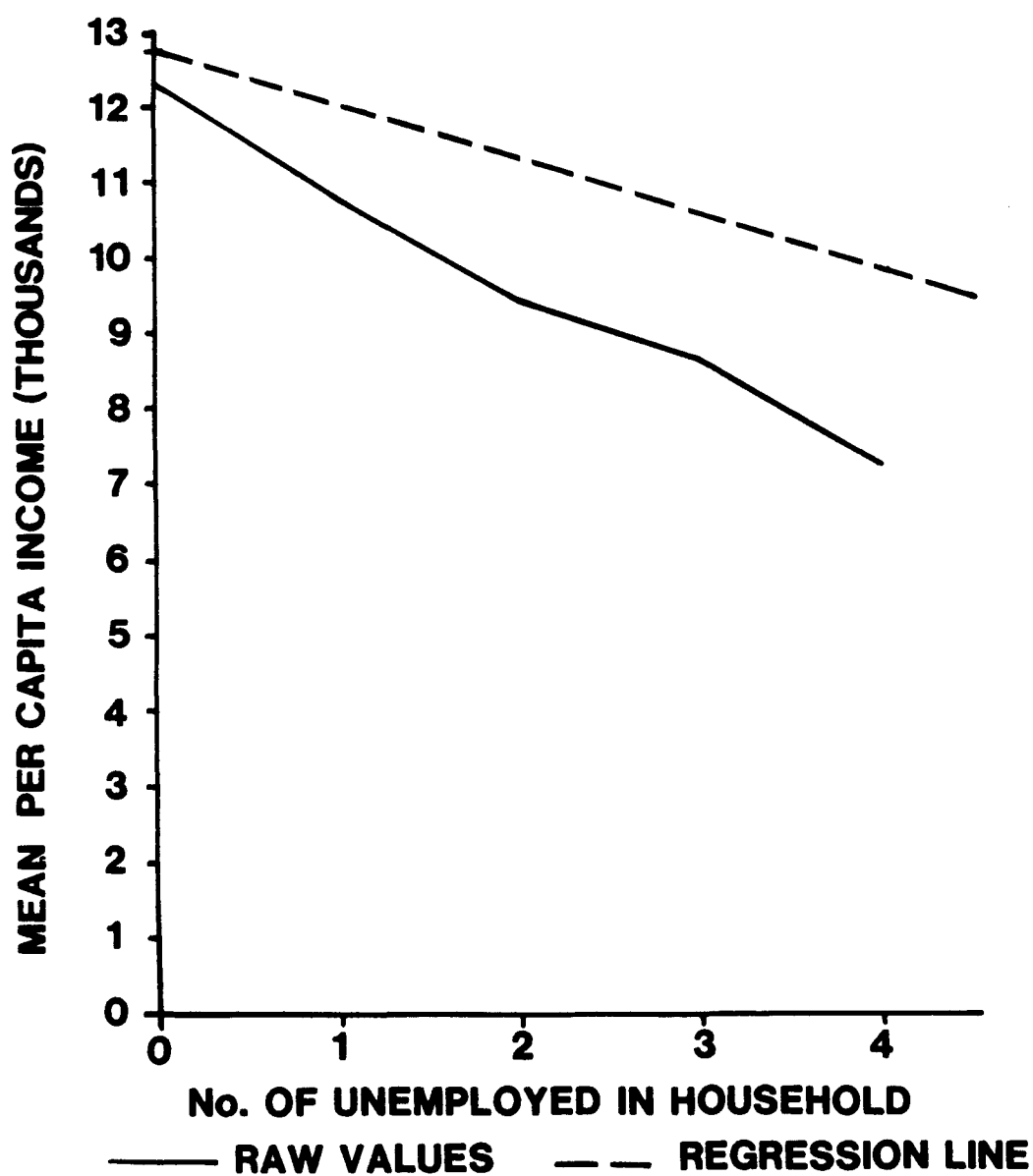
Dependent = \$12226 per annum, per employed person in household.

Independent 1. 0.6438 female workers
2. 36.76 years
3. 1.77 workforce members
4. 0.0637 unemployed members

3. The minimum and maximum values indicate respectively the lower and upper turning points in the quadratic relationships between independent and dependent variables.

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Household Sample File

Fig. 3 .1
EMPLOYED INCOMES
AND UNEMPLOYED
RAW VALUES AND REGRESSION LINE



Source: Tables 3.4 and 3.6

less steep than the first order relationship between employment incomes and unemployment, which is also shown in Figure 3.1, because households with multiple unemployment are large. Nevertheless, as the regression line shows, after controlling for demographic factors and household size, unemployment was negatively associated with the levels of incomes of employed members of households.

Measurements of unemployment among households of different income levels display both the effects of unemployment - it reduces income - and the incidence of unemployment - it falls disproportionately on households where incomes of employed members are already low. Thus as well as being a direct source of inequality in individual income distribution, unemployment indirectly heightens inequality between households.

SUMMARY

The one per cent sample of private households from the 1981 Census provide a mass of evidence which has implications for the level of social welfare support required by unemployed workers. All of it points towards the need for social welfare assistance and to the weakness of possible family support.

Chapter 2 described the first, and perhaps most important, statistic which showed that the extent of multiple instances of unemployment within households was far from negligible. In 1981, 28 per cent of unemployed individuals lived in households that contained at least one other unemployed person.

Second, unemployment was disproportionately concentrated in large households and even within households of a given size, was not distributed randomly.

Third, unemployed individuals were more likely than employed individuals to live in family structures that were not of the traditional or nuclear types. Among all unemployed workers, 31 per cent lived neither as one family nor as a single individual but in some composite type of arrangement as families with non-family members or in unrelated groups.

This chapter has outlined the fourth statistic; unemployment was on average associated with low per capita incomes in households. This was true whether the incomes were measured in dollars or in terms that allowed for economies of scale in living costs and for children having cheaper needs than adults.

Fifth, the incidence of unemployment was higher among households where employed members had low incomes. This was shown to have been the case even after standardising for demographic factors and household size: because for example, young workers and females tend to have lower wages than prime age males.

Of course, some of the associations between unemployment and household type and incomes can be explained by the young age of more than half of unemployed people. Yet the separation of unemployed people from high income, employed workers could not be totally explained in that way.

Our understanding of the complex relationships between labour status, incomes and family relationships is incomplete in many ways. Data from the one per cent sample of households in 1981 show that slightly more than one quarter of young people who were aged 15 to 20 years and were not in full-time education lived apart from their parents. Unemployment rates among the age group varied markedly according to how they lived. In the next chapter we shall explore the relationships between family background and unemployment rates among youth who lived with their families. We shall show that unemployment and low parental income were positively correlated. We have no evidence, however, as to how labour market status and parental income affect young people's decisions on whether to live at home or not. We can point to psychological studies that show that young unemployed men perceived that they had less psychological support from their families than their contemporaries perceived that had from theirs (Clark and Clissold, 1982). Until longitudinal surveys such as those of the Bureau of Labour Market Research (McRae, 1984) produce results, however, we cannot know whether unemployment is a factor in the way that new households are formed and old ones change.

Because of our lack of information on why unemployment is concentrated in some households, we must use care in drawing the social welfare implications of our findings. Nevertheless our conclusion must be that the

data we have presented point to a lack of financial resources for families to support unemployed people. Many do not live in families. Many live with other unemployed people. Many live in households where the incomes of employed members are low relative to those in households without unemployment. These findings therefore emphasise the importance of unemployment benefits to the living standards of unemployed people.

The implications of the evidence presented in Chapters 2 and 3 are not restricted to social welfare policy. It has been noted that both Gregory (1982) and Mitchell (1984) argued that in 1981, the uneven incidence of unemployment meant that most workers were unaffected. As a result, the impact of unemployment on the moderation of real and money wage demands was weak. Our analyses support their views by adding a further dimension. Employed workers may have had little to fear from unemployment not only because unemployment was accounted for by a small number of long spells of unemployment and by high incidence in marginal groups of workers, but also because they did not have to live with it.

CHAPTER 4 : THE FAMILY BACKGROUNDS OF YOUNG UNEMPLOYED PEOPLE

INTRODUCTION

In the report so far, there has been an emphasis on the differences between employed and unemployed people, particularly with regard to their family situations and their income levels. Yet, although we have shown that unemployment tends to be concentrated disproportionately among people who live in non-family situations, we have also shown that the majority of unemployed people live in one family households. In addition, we have noted that a large proportion of unemployed people are young: in 1981, people aged 19 years and under accounted for 30 per cent of total unemployment and those aged 20 to 24 years accounted for a further 22 per cent. In this chapter, we focus upon the group amongst whom an unemployed person was most likely to be found, i.e. among young people aged 15 to 19 years who lived with one or both parents. We shall analyse the association between their unemployment experience and their family background.

Our analysis treats an aspect of the larger topic of intergenerational mobility. Rather than attempting to measure the association between the occupational status of parents and children (Broom *et al*, 1980; Richardson, 1985), we shall measure relationships between family background and labour market status. Nevertheless, we are concerned with some of the same social processes by which labour market advantages or disadvantages are concentrated within families.

We consider the state of being unemployed while young as a current, labour market disadvantage. Whether that disadvantage implies a lifetime of lower earnings or lower occupational status is not known. Broom *et al*, comparing different age cohorts found that

Men who started work in the depression entered lower-status jobs and were still in lower-status jobs at JOBN (current job) than men who started work before the depression.
(Broom *et al*, 1980, p.168)

Travers (1983), however, found little support for the view that, **within** the depression age-cohort, the experience of unemployment harmed career prospects.

In their analysis of the Class of '71, a group of young people who experienced the 1970s depression, Blandy and Richardson (1982) concluded that:

Unemployment experience has no significant effect on the occupations followed by these young people but does lower their subsequent earnings compared with those of them who have not been unemployed.

(Blandy and Richardson, 1982, p.S45)

This chapter reports on two models of the association of family background and unemployment among young people. In the first, the unemployment rates of youth who lived with both parents are compared with those of young people who lived with only one parent. We shall show that the difference between the two was mainly associated with differences in family incomes. Since membership of a sole-parent family *per se* did not seem to make much difference to unemployment probabilities, our second analysis was of the association of detailed family characteristics and unemployment rates among youth who lived with both parents.

The statistical technique used - logit analysis - and the complete results are reported in Appendix 3. This chapter describes only the main results.

FAMILY STRUCTURE AND YOUTH UNEMPLOYMENT

According to our sample data, in 1981 the unemployment rate of young people aged 15 to 19 who lived with both parents was 13 per cent. Higher rates were found among those living in sole-parent families. Among people of that age group who lived with their mother only, the rate was 23.6 per cent. Among those who lived with their father only, it was 28.2 per cent (Table 4.1). A corresponding pattern appeared in employment rates, while participation rates were similar among family types.⁷

The Australian Families Survey of 1982 (Australian Bureau of Statistics, Cat.No.4408.0), which reported on the unemployment rates of young people aged 15 to 24 years, also suggested that higher unemployment rates were found among those who lived in 'mother only' families but that youth unemployment rates were the same in families with two parents and when the sole parent was the father (see Appendix 3). The different unemployment rates found among young people in 'father only' families in the census and the survey may

TABLE 4.1 : YOUTH AGED 15-19 YEARS, NOT IN FULL-TIME EDUCATION AND LIVING WITH AT LEAST ONE PARENT ON CENSUS NIGHT : EMPLOYMENT STATUS BY FAMILY TYPE

Employment Status	Family Type			Total
	Mother only	Father only	Both	
	<u>Numbers ('000)</u>			
Employed	42.1	10.7	343.6	396.4
Unemployed	13.0	4.2	51.4	68.6
Not in workforce	8.1	2.4	44.4	54.9
	<u>Rates (%)</u>			
Employment	66.6	61.8	78.2	76.2
Unemployment	23.6	28.2	13.0	14.8
Participation	87.2	86.1	89.9	89.4
% of total youth	12.2	3.3	84.5	100%

Note: Youth in families with only one parent present who was **now married** are excluded from this table (see Appendix 3). Youth employed as 'unpaid helpers' have been included with 'not in workforce' in this chapter because their workforce status is ambiguous.

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Household Sample File.

reflect the different classification ages of youth but may simply be due to random fluctuations since there were very few young people in such families.

What might be the reasons for the variations in unemployment rates for youth in different family types? Why should unemployment rates be influenced by the presence of only one rather than two parents? There are several possibilities.

First, there is the hypothesis that some factors peculiar to single-parent families detrimentally affect their children's employment prospects. These are thought to stem from the trauma of family breakup through separation or death, the often welfare-dependent nature of the household or the effects of living in a family with only one parent.

Another possibility is that the children may actually be 'carers' of their parents (who have no spouse to care for them) registering as unemployed to increase their income. If this is a major cause of the higher unemployment rate of children of single parents we should expect there to be some difference in this pattern between male and female youth. As other studies have shown (e.g. Rossiter *et al*, 1984) women take up the burden of caring for the parents much more often than do men. Thus, we should expect to find the unemployment rate difference for male children to be less than that for females. However, although the level of unemployment rates of females was higher than that of males, living in a sole-parent family had no greater impact on the rates of females than on those of males.

The two reasons suggested above are direct mechanisms that translate membership of a sole-parent family into a labour market disadvantage for the youth. It is possible, however, that the differences in unemployment rates do not depend upon family type but that they reflect an association between family type and other social and economic variables which are more important in determining access to jobs. The most obvious economic difference among families was in incomes. The mean family income (income of head and spouse, if present) was approximately \$7,000 per annum for mother-headed families, \$11,000 per annum for father-headed families and \$17,8000 per annum for dual-parent families. These figures reflect both the lower number of income earners in single-parent families but also, particularly for mother-headed families, the lower income of the parent.

The lower workforce participation rates of parents with childcare responsibilities (at the time of the census and before it), and the associated lower incomes may be of major importance. They could negatively influence youth's employment prospects in several ways, via

- (i) a lower level of educational attainment for the youth;
- (ii) the family living in a low rent, low employment suburb, remote from job opportunities;
- (iii) lack of workforce 'contact' via workplace experience of parents and reduced access to informal job-seeking networks;
- (iv) lack of other resources helpful in finding jobs (good clothes or cars, for example).

Essen and Wedge (1982) cite several studies which suggest that the lower **educational** attainment of youth of single-parent families in Britain is due more to the handicaps which accompany single-parent families, such as their material conditions, than to their parental position *per se*. In their own study they illustrate that when controlling for income and housing quality, reading attainment levels at age 16 were identical for children of one-parent and small two-parent families (Essen and Wedge, 1982, p.111). Given that youth with lower education levels are more likely to be unemployed (see next section), this provides support for the above hypothesis that unemployment flows from the economic disadvantages of single-parent families.

Current income differences among parents are a very narrow measure of their economic situations and their abilities to transfer labour market advantage to the next generation. For instance, the children of parents with low current incomes but high educational qualifications may be very successful themselves in educational attainment because of family encouragement and example. Their parents may have influential contacts in job-information networks despite their low incomes. In other studies of intergenerational mobility, indicators of parental class position have included occupational status and parental education. Ethnic origin has also been included as a possible determinant of children's labour market outcomes.

In this study we compared the differences in the education levels and birthplaces of the parents of young workers in different family circumstances.

Occupation was not included in the analysis because of the marginal, or at least intermittent, attachment to the workforce of many single parents.

The analysis showed that single-parent mothers were slightly more likely to be Australian born but had the same level of education as mothers in dual-parent families. Single-parent fathers on the other hand were less likely to be Australian born (60% of single-parent fathers compared with 70% of fathers in dual-parent families). They were more likely to have been born in 'English Speaking' countries other than Australia. The educational qualifications of fathers were also different. Although about the same proportion in both groups had tertiary qualifications, single-parent fathers were more likely to be unskilled and less likely to have acquired trade skills than other fathers. Models were fitted including these variables, but they had virtually no effect on the relationship between family type and youth unemployment. Consequently, we have not reported on the models, though in Appendix 3 we have listed the differences between parents in sole-parent and dual-parent families.

Since the education and birthplace of parents did not significantly affect associations with unemployment rates, the model that was selected sought to measure the association between a young person being unemployed or employed and their family type while controlling for family income. Family type was classified as dual-parent, mother only and father only. The results (Appendix 3) showed that family income was a very significant variable. Moreover, when income was held constant there was no statistically significant difference between the unemployment probabilities for youth living with their mother only and for youth living with both their mother and father.

Youth in father-headed single-parent families were significantly more likely to be unemployed (at a given level of income) than youth in the other two types of family. Why this should be so remains something of an enigma. No particular explanation seems to be obvious though we can never entirely discount the possibility of the result being due to random fluctuations. It does seem, however, to be an issue calling for further analysis.

With respect to mother-headed single-parent families, however, the pattern of concentration of disadvantage seems to be clear. The poverty of many women single parents continues its impact into the next generation

with higher unemployment levels for their children. That family income plays such a large part in explaining the high unemployment rates of the children of single parents signifies the general importance of such economic, and other 'background' factors in households and families that contribute to the uneven incidence of unemployment in households. In the next section, this is examined in more detail for the youth in dual-parent families.

PERSONAL AND FAMILY CHARACTERISTICS AND YOUTH UNEMPLOYMENT

Our results, reported in the previous section, that family income was significantly and negatively associated with the unemployment rates of teenagers who lived with one or both parents is in contrast with much Australian work on intergenerational mobility.

As Richardson (1985) has noted - her results, which suggest Australia is an open society -

... support the conclusions of Broom and Jones (1976) and several American studies: there is extensive intergenerational mobility in socio-economic status, in the main facilitated by formal education. These are important conclusions. Most people would judge a society which provides considerable openness of access to desirable job opportunities to be superior to one in which outcomes are inherited - on ethical as well as efficiency grounds. The charge that formal education is an instrument for perpetuating inequalities across generations receives little support from our results. The grain of truth which it does contain is that education is very important for success, and families influence education not so much directly but indirectly through children's aspirations and determination to do well. (Richardson, 1985, pp.33-34).

The most important reason for the difference in results may be that in the previous section we employed a very simple model that did not analyse differences in the characteristics, such as education, of the youth in the different family situations. In this section, we report on a much more complex analysis of youth unemployment rates which does include both personal and family characteristics. The objective is to test whether associations between family characteristics and youth unemployment remain significant when personal characteristics are controlled. Unfortunately we did not have the detail of information on IQs and attitudes which Richardson acquired in her survey. Nevertheless the census did provide a large amount of personal detail; on the sex, age, education, race, English ability and period of

residence in Australia of each young person. Family information included parental occupations, education, housing and birthplaces. In addition there was very limited information on location. In order to make full use of this information we reduced the sample to youth who lived with both parents. The reduction in the sample size was small.

Because our analysis centres on workers, it is not intended as a review of the eventual labour market outcomes of all young people including those in full-time education. It focuses on the inequalities experienced by those who are least advantaged and on a currently very important form of inequality - whether one has a job or not.

We measured the association between a variable and youth unemployment rates in two ways. First we measured the unemployment rates of all people aged 15 to 19 years who were classified in the different categories. For instance the unemployment rate among young women was 16.4 per cent; among young men it was 10.5 per cent. The unemployment rate of young people who had fathers who were professional or managerial employees was 7.7 per cent while that of young people with unemployed fathers was 41.6 per cent. These rates are listed in Column 2 of Table 4.2. The number of unemployed young people in each category is listed in Column 1 in order to indicate categories which, because of their small sample size, could be subject to a high sampling error. For example, we cannot be confident about analyses of the unemployment rates of Aborigines.

The second measure of association between unemployment rates and family, personal and locational characteristics is listed in Column 3. It was derived from the logit analysis described in Appendix 3. This measure calculates for each category the fitted probability of unemployment **all other variables being held constant**. The fitted probability of unemployment of a young person with a professional father was 7.2 per cent compared with a probability of 11.1 per cent for a youth with a father employed in manual or trades work.

To obtain these probabilities it was necessary to specify at exactly what constant value the other significant variables were held. The approach used here was to set the continuous variables (family income and rooms per person) to their mean values and hold the categorical variables at their modal

values. Thus the fitted probabilities just quoted refer to the situation where family income equalled \$17,800, the mother was not in the workforce, it was an owner/purchaser household, there were 1.34 rooms per person, the youth had lived in Australia for 5 or more years, English ability was 'well' or better, the youth was male, and left school at age 16, the household was in a major urban area and had not moved in the last five years. Modal categories are indicated in Table 4.2 by an asterisk. In analysing the association between the probability of unemployment and mother's occupation, the father's occupation was set to manual employee and all other variables except mother's occupation took the values listed above. Similar procedures were followed for each other variable.

It is worth noting that the **size** of the difference or ratio between these fitted probabilities will vary depending on the values at which the variables are held constant though the **ordering** will always remain the same. Thus if the fitted probabilities had been calculated holding sex constant at 'female' for example, the fitted probabilities noted above would have been 11.7 per cent for youth with professional fathers and 17.5 per cent for those with trades or manual fathers. Note that $17.5 - 11.7 \neq 11.1 - 7.2$ and $17.5/11.7 = 1.50 \neq 1.54 = 11.1/7.2$, though the ratios will be approximately equal as long as we do not choose extreme categories.

In some cases, the logit analysis suggested that there was no significant association between unemployment rates and a variable when all other variables were included in the equations. Such cases are listed in Column 3 as 'n.s.s.' - not statistically significant. The significance level used for inclusion was a 5 per cent level. Thus, all variables with unemployment rates listed in Column 3 were significantly associated with the unemployment rates of young people **at least** at the 5 per cent level. Within variables, some categories were significantly different from the modal category. These cases are marked with two asterisks. Again the benchmark level of significance was 5 per cent. Some categories were the same as each other - their rates are bracketted together.

Our information on personal characteristics was limited to the sex, education level, age, race, period of residence in Australia and English ability of young people. Unemployment rates varied markedly according to these characteristics.

TABLE 4.2 : YOUTH AGED 15-19 LIVING WITH BOTH PARENTS AND NOT IN
FULL-TIME EDUCATION : COMPARATIVE UNEMPLOYMENT RATES

Variables/categories	Number of unemployed youth in category ('000) 1	Unemployment rate in category % 2	Unemployment rates, all other variables constant at mean or modal values % 3
<u>PERSONAL CHARACTERISTICS</u>			
<u>SEX</u>			
Male*	23.6	10.5	11.1
Female	27.8	16.4	17.5**
<u>EDUCATIONAL LEVEL</u>			
Post school qualifications	1.2	4.4	4.4**
Left school age 17+	10.4	11.5	12.0
Left school age 16*	17.9	12.1	11.1
< 16 or no school	10.1	17.1	13.8**
Not stated or still at school part-time	1.8	15.7	14.3**
<u>AGE</u>			
15	3.4	20.7	
16	8.6	14.0	
17	14.8	15.1	n.s.s.
18*	15.4	13.0	
19	9.2	9.2	
<u>RACE</u>			
Aboriginal or T.S.I.	.6	20.7	
Other (including not stated)*	50.8	13.0	n.s.s.
<u>PERIOD OF RESIDENCE IN AUSTRALIA</u>			
5 or more years (including not stated)*	50.5	12.9	11.1
1-4 years	0.5	13.9	4.0
< 1 year	0.4	80.0	66.3**
<u>ENGLISH ABILITY</u>			
'Well' or better (including not stated)*	50.7	12.9	11.1
'Not well' or not at all	.7	70.0	52.4**
<u>FAMILY CHARACTERISTICS</u>			
<u>FATHER'S OCCUPATION</u>			
Employee - Professional	1.5	7.7	7.2**
" - Managerial	1.7	6.4	
" - Clerical	3.1	9.4	7.2**
" - Sales	1.1	7.1	
" - Trades	9.0	14.2	11.1
" - Manual*	17.2	16.2	
Independent - Professional & Managerial	1.3	5.7	5.8
" - Trades	1.1	6.8	5.1**
" - Other	3.9	9.0	7.2**
Unemployed	3.7	41.6	17.0
Not in workforce	6.6	21.6	9.7
Employed but occupation not stated	1.2	13.2	7.5
<u>MOTHER'S OCCUPATION</u>			
Employee - Professional & Managerial	2.1	10.2	15.1
" - Clerical	3.5	8.0	9.2
" - Sales	1.0	5.9	
" - Trades & Manual	10.1	14.3	13.6
Independent	2.4	6.0	7.4**
Unemployed	1.2	46.2	23.8
Not in workforce*	29.0	15.3	11.1
Employed but occupation not stated	2.1	19.1	16.1
<u>NATURE OF OCCUPANCY</u>			
Owner-Purchaser*	35.1	11.1	11.1
Housing Authority	6.4	25.3	16.9**
Other rental	7.5	21.7	13.4
Other (including not stated)	2.4	13.0	8.4
<u>FATHER'S EDUCATION LEVEL</u>			
Post school qualifications	13.0	9.7	
Left school age 17+	2.2	11.2	
Left school age 16	4.4	12.7	n.s.s.
Left school age < 16 or no school*	19.5	15.2	
Not stated or still at school	2.3	18.3	

Variables/categories	Number of unemployed youth in category ('000) 1	Unemployment rate in category % 2	Unemployment rates, all other variables constant at mean or modal values % 3
FAMILY CHARACTERISTICS continued ...			
MOTHER'S EDUCATION LEVEL			
Post school qualifications	3.6	9.1	n.s.s.
Left school age 17+	1.3	7.6	
Left school age 16	6.9	12.8	
Left school age < 16 or no school*	37.7	13.9	
Not stated or still at school	1.9	15.4	
BIRTHPLACE OF FATHER			
Australia*	33.2	11.9	n.s.s.
Other English Speaking	8.6	17.1	
Northern Europe	2.8	17.0	
Southern Europe	4.6	12.1	
Asia	1.7	22.4	
Other (including not stated)	0.5	10.4	
SIBLINGS ⁽⁴⁾ UNEMPLOYED			
No siblings in workforce*	25.4	13.5	(12.3)
Some in workforce, none unemployed	16.5	9.3	(8.8)**
Some in workforce, some unemployed	2.2	23.7	(17.1)
Some in workforce, all unemployed	7.3	36.7	(26.8)**
LOCATION CHARACTERISTICS			
TYPE OF REGION			
Major urban or migratory*	28.5	11.5	11.1
Other urban	13.9	15.3	12.6
Rural	9.0	16.1	15.5**
RESIDENTIAL MOBILITY ⁽⁵⁾			
Moved in last year	8.5	24.6	23.9**
Didn't move in last year, but has moved in last 5 yrs.	11.2	15.6	14.8
Hasn't moved in last 5 years*	31.7	11.0	11.1
TOTAL	51.4	13.0	11.1

- Notes: 1. * Modal categories are those categories containing the largest number of youth. They are marked with an asterisk
2. ** Unemployment rates significantly different from the rate for the modal category, all other things held constant, are marked with two asterisks.
3. n.s.s. = not statistically significant (given the other variables) at the 5% level.
4. For definition see Appendix 3. For reasons explained in that appendix, this variable was not included in the logistic regression model when determining the other fitted probabilities. The figures in brackets in column 3 represent the fitted probabilities that are obtained when this variable is included in the model.
5. If 1981 or 1980 address not stated, cases are coded as having moved in the last year. If 1976 address (only) not stated, and haven't moved in last year, cases are coded as having moved in the last 5 years.

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Sample File.

As has often been noted, female youth have a substantially higher unemployment rate than males. Their higher unemployment rates have existed for the last two decades (Bureau of Labour Market Research, 1983, p.13). As Windschuttle (1979) points out, the primary cause of this is the segregated labour market, which severely limits the job choices for young women. Not only is direct discrimination involved, but also the processes which determine the narrow range of job choices which are socially appropriate for young women to consider (see Koller *et al*, 1980). When all other variables were held constant the difference between male and female unemployment rates was very similar.

The impact of education upon labour market success has been stressed by many writers (e.g. Miller, 1981). Our data show that among young workers, those with lower education had higher unemployment. This pattern may be explained in terms of human capital theory - as the youth having fewer educational resources to offer employers. Alternatively, employers may have been using education level as a screening device in selecting employees.

Our results suggest different forms of education and training have different benefits among the teenage workforce. Vocational training may be more helpful in the avoidance of unemployment than is extra schooling. Post-school qualifications, for this age group, are mainly trade qualifications and technical diplomas. Among teenage workers with these qualifications the actual unemployment rate was very low, 4.4 per cent. When all other variables are held constant, unemployment is reduced by about one percentage point for each extra year of school, from 14 per cent to 12 per cent but the unemployment of youth with post-school qualifications remains at 4.4 per cent. This low rate may reflect the effect that the 'resources boom' had upon the market for tradesmen at the time of the census.

The 'resources boom' affected males more than females which raises the issue of whether education has a differential impact on males and females. Miller (1981, p.10) in his study of 1976 Census data found an interaction effect between education and sex. That is, among those who left school at 16 years, males had lower unemployment probabilities than females, but among those who had left school at 18 years there was little difference between the sexes. This result is not contradicted by our model. Fitting an interaction term shows females to be less disadvantaged (compared to males) if they left

school at age 17 or more than if they left at age 16. However, the difference in this sample is not statistically significant.

The reverse phenomena seems to occur when post-school qualifications are obtained (mainly trade and secretarial qualifications for this age group). In the Household Sample File sample none of the 121 males with post-school qualifications were unemployed, whilst 12 or 8 per cent of the females were. Thus males benefitted much more than females from holding post-school qualifications. This interaction between post schooling qualifications and sex was most unlikely to have been due to chance fluctuations ($p < .01$) and probably flowed from the different types of qualifications held by males and females. This relationship may not hold any longer with the collapse of trade employment for youth after 1981 and the ending of the 'resources boom'.

Unemployment rates fell as the age of youth increased yet age was not significantly associated with unemployment when holding the other variables constant. This was due to the strong association between age and education level; by definition, 15 year old workers, employed or unemployed, must have a low education level. Thus knowing the youth's age contributes little extra information if we already know their education level. Education level, rather than age has been included in the model here because it was better able to explain unemployment rate variations.

The data suggest that with their 21 per cent unemployment rate youth of Aboriginal or Torres Strait Islander descent were much more likely to be unemployed than other young people. When other variables were held constant however, race was not significantly associated with unemployment. It is difficult to interpret this result as it is based on a small sample. Possibly, the size was limited because Aborigines were under-enumerated in the census (see Australian Bureau of Statistics, 1985, p.15).

Recent migrants to Australia can generally be expected to suffer from numerous disadvantages in the labour market such as unfamiliarity, language problems, unrecognised qualifications and direct discrimination. Among the few youth who had arrived in the last year, four out of the five in the sample were unemployed (Table 4.2, columns 1 and 2). Miller using the 1976 Census and Brooks and Volker (1983) using the Household Sample File found

similar tendencies. Even after standardising for the other variables, period of residence in Australia continued to be a significant predictor of unemployment rates: those who had arrived in the previous year had an unemployment probability of 66 per cent. The 4 per cent unemployment probability for the 1 to 4 year residents was not, however, significantly different from the rate for the long term residents.

English ability was associated with unemployment rates in the expected manner, with those speaking English 'not well' or 'not at all' having 7 out of 10 unemployed. English ability remained a significant predictor of unemployment probability when all other variables were held constant. Those speaking 'not well' or 'not at all' had an unemployment probability of 43 per cent. This reduction from the 70 per cent in the raw data was probably due to the association of English ability with period of residence in Australia, income levels of newly arrived migrants and other factors.

In view of Richardson's quotation at the beginning of this section, the association of some personal characteristics and high unemployment rates is not surprising. While it confirms her conclusions, other parts of our analysis contradicted her comfortable picture of Australia as an equal society. As we shall show, our results suggest that even when personal characteristics are taken into account there remains a fairly strong association between family background and unemployment rates. We must qualify our results, however, in that they could not take into account the personal qualities of IQ and attitudes of young people.

We measured family characteristics by income and eight other variables, five of which were statistically associated with unemployment probabilities.

Both father's and mother's incomes were higher among employed than unemployed youth. On average, fathers of employed youth earned \$13,500 per annum and mothers' earnings were \$4,700. Unemployed youth had fathers who earned, on average, \$10,700 and mothers who earned \$3,600. The effect of father's income and mother's income on the probability of unemployment were found to be very similar, so in the model reported here (Appendix 3) they were summed together as 'family income'.

When controlling for the other variables the probability of unemployment was found to drop, at a decreasing rate, as the level of family income rose up to \$38,000 per annum.⁸ The relationship is illustrated in Figure 4.1 which shows the fitted probability of unemployment ranging from 23 per cent at \$5,000 per annum to 7 per cent at \$30,000 per annum.

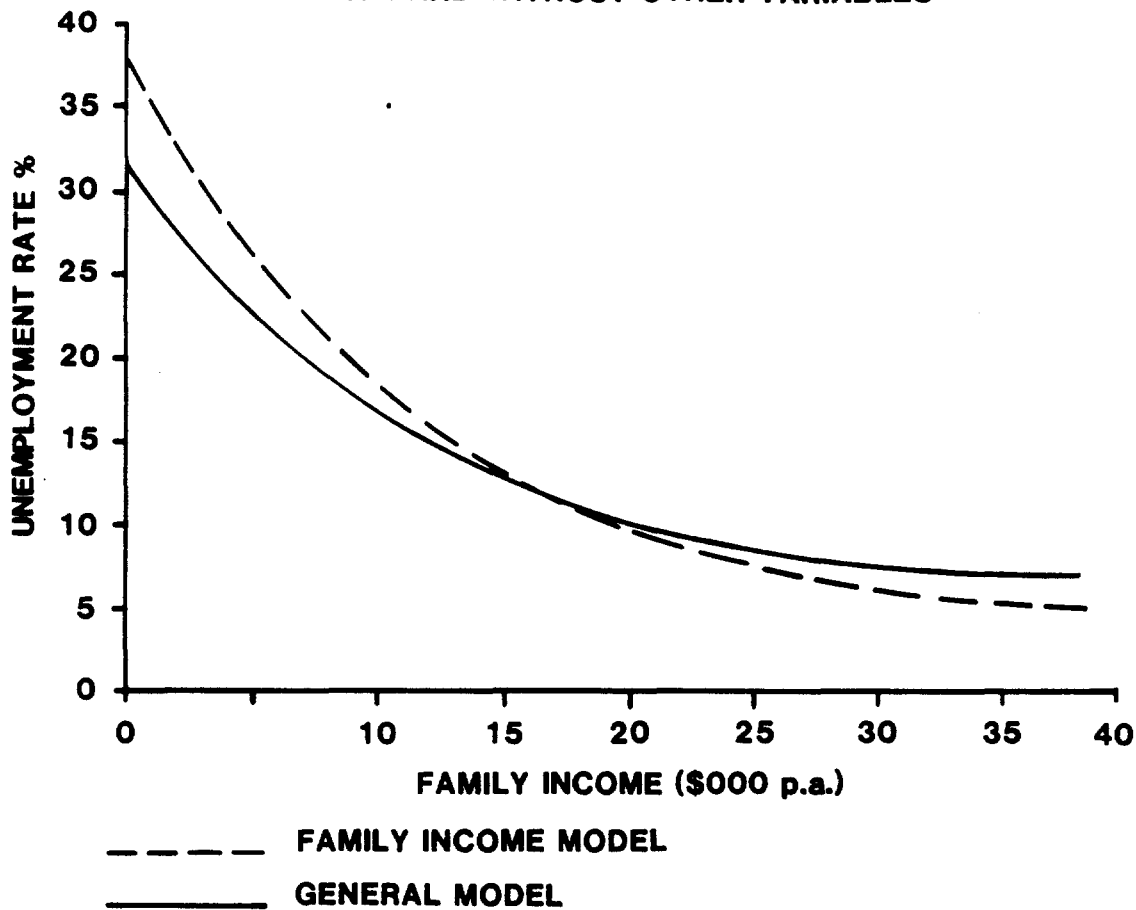
Figure 4.1 also contains the curve derived from fitting unemployment probability as a function of family income (and family income squared) only. As one would expect, this curve shows an even stronger relationship between the two variables - as we are now not holding other variables such as father's occupation constant. The difference between the two curves however, is not all that great, suggesting that there was a fair degree of independence between the effect of the income measure and parental occupation (as coded here) on youth unemployment. That is, there were aspects of parental occupation other than simply income that affected youth's employment prospects. The most notable of these seems to be the increased ability of self-employed or employer parents to help their offspring find work - an association shown in unemployment rates according to parental occupations.

Parental occupation, which has figured most prominently in discussions of intergenerational consistencies in class advantage and disadvantage, was categorised into employees and employers/self-employed, and within these two categories into various occupational groups. This has been done in order to capture some of the diversity of positions in the power structures of production in Australian society (see Appendix 3). Our measure is, of course, much less detailed than the ANU2 status scale (Broom *et al*, 1977) used in intergenerational mobility studies. One advantage of our approach was that we could include in our scale parents who were unemployed or not in the workforce.

A notable result was that almost half of the youth with a mother or father unemployed were themselves unemployed. In establishing the magnitude of this effect, however, it should be borne in mind that relatively few of the fathers and mothers of youth in this age group were unemployed, with unemployment rates of 2.4 per cent and 1.3 per cent respectively. When all other variables were held constant the unemployment rates of children with unemployed parents were not significantly different from those of the children of manual workers. No doubt, this was due to the association between parents'

Fig. 4.1

**FITTED YOUTH UNEMPLOYMENT RATES
WITH AND WITHOUT OTHER VARIABLES**



Notes: The 'family income model' curve models youth unemployment as a function of family income (and family income squared) only.

The 'general model' curve models youth unemployment as a function of family income together with the other variables listed in Table A3.7.

Source: The 'general model' curve is derived from the parameters in Table A3.7. The 'family income model' curve is derived from a similar model including only the family income variables.

unemployment and low family income.

Generally the pattern of unemployment rates according to mother's and father's occupation was as predicted on the basis of sociological theory. That is, parents in those occupations which enabled them to directly place their children in work or which allowed them to transfer social resources such as education and self esteem to their children, were least likely to have unemployed children. Thus, fathers in professional, managerial or clerical occupations had children with significantly lower unemployment than manual workers' children. Fathers and mothers who were independent (i.e. employers or self-employed) also had children with lower unemployment rates, though in general they had rates the same as those with fathers who were employees in the same occupations. The exception was that of youth with fathers employed in trades, where youth with employee fathers had much higher unemployment rates than those with independent fathers.

The level of parental education was also associated with youth unemployment rates, youth with more highly educated parents having a lower probability of unemployment. Parental education was associated with occupational status of parents and their income levels. As a result it did not appear as a statistically significant variable in the logit analysis. In other words the effect of parental education on youth employment seems to be mediated by the other variables in the model, most notably parental occupation and income and youth's education level.

Although the children of migrants had higher unemployment rates than those of the Australian born, the birthplace of the father was not significant when all other variables were held constant. This result is consistent with that of Inglis and Stromback (1984) that migrants are less likely to be unemployed the longer they have been in Australia. The important controlling variable was length of residence in Australia. There was, of course, a positive correlation between being born outside Australia and being a resident here for less than a year. For the small number of youth born outside Australia, it was found that their unemployment was not significantly different to Australian youth both when controlling and not controlling for other variables.

The class position of youth, as determined by their access to social resources of various kinds, may be indicated by family wealth as well as by parental occupations and education. Broom *et al* (1980) for instance, found their indicators of (parental) family wealth to be strong predictors of later occupational status and incomes - better than any of the other family background variables.

Housing situations have been used here as an indicator of family wealth because no direct information was available and because the assets of most families are concentrated in housing. The 'nature of occupancy' variable distinguishes home owners and purchasers, private renters and public renters as major tenancy groups. Household density, defined as rooms per person was also included in our data. Both these variables indicated associations with youth unemployment (see Table 4.2, column 2 and Appendix 3, Table A3.7). Youth in renting households, particularly public renters, had over twice the unemployment rate of youth in owner-purchaser households and employed youth lived in less cramped accommodation than unemployed.

When all other variables were held constant these indicators of wealth were significantly associated with unemployment. Youth in private rental accommodation had unemployment rates similar to those in owner-occupied dwellings but youth who were housing authority tenants had significantly higher unemployment (17% compared with 11% among families that were owners and purchasers). Teenage unemployment among all families increased as rooms per person in the dwelling decreased.

The final variable measuring family background referred to the unemployment experience of siblings. As outlined in Appendix 3, although this was a significant variable it was not easy to interpret. It can have two meanings. It may imply that the employment status of one youth directly affects that of another. For example an elder, employed sibling may be able to help a younger sibling to find a job in ways that he or she could not do if unemployed.

On the other hand, it may measure the impact of variables that are missing from our equations and that affect all the family. Locational variables are particularly important since all family members are part of the same local labour market. For instance, a family in the outer suburbs may have several

members unemployed. We know from other studies that living in the outer suburbs of large cities may lead to higher unemployment than being in the middle or inner areas (Vipond, 1985). In the absence of precise measures of locations, the impact of place could appear as being an impact of family background in our analysis. Though we believe these latter factors to be more important, we cannot draw firm conclusions on the impact of sibling unemployment upon youth unemployment rates. Our approach to modelling this relationship is discussed further in Appendix 3.

The limited information available on the geographic location of the youth pointed to the relative disadvantage of those youth not living in the major urban centres. When controlling for the other variables in the model, rural youth had significantly higher unemployment rates than urban youth.

The effect of geographic mobility on unemployment is at first glance perhaps more surprising than that of location as it illustrates a very strong association between residential mobility and youth unemployment. It is important to note, however, that we have no information on the **type** of mobility from the census. That is, residential movement could mean an inter-state, intercity, intersuburb or simply 'up the street' movement. This makes the interpretation of the relationship difficult. The observed result, however, of higher unemployment rates amongst 'movers' tallies with results from other Australian Bureau of Statistics surveys which show a consistently higher unemployment rate across sex and age groups amongst those who have moved in the last year (ABS 1982, Cat.No.3408, p.10).

The fact that unemployment rates are higher amongst movers suggests either that:

- (a) people (and families) that are more prone to unemployment are also more likely to move (e.g. renting families)
- or
- (b) moving has a causal influence upon the likelihood of a person being unemployed (e.g. through loss of contacts, unfamiliarity with the local labour market etc.)
- or
- (c) unemployment causes movement in search of work. This however is not a likely relationship for our sample of youth as they

would have to get their parents to move with them as they looked for work (otherwise they would be excluded from the sample).

Whilst the issue is obviously complicated, we can make some headway by looking at the relationship between the unemployment rates of these youth and their geographical mobility whilst controlling for the other variables. If the association still exists this weakens the argument that it is people of a 'similar type' who both move and become unemployed, and correspondingly strengthens the alternative - that there is a causal link between moving and being unemployed.

The results suggested that residential mobility continued to be a strong associate of youth unemployment, particularly for those who had moved in the last year who had an unemployment rate of 24 per cent. This, it should be emphasised, is despite controlling for measures of wealth, income and other indicators of social class.

As 97 per cent of the youth moved with their families, the figures seem to imply that family relocation was a major disruption to youth's employment search. To the extent that relocation was due to parental (most likely father's) labour mobility it allows us to suggest the mixed blessing that such labour mobility holds for the moving families. Whilst the father may move to find or improve his job, the disruption to youth's life, particularly to the informal contacts so necessary to finding work, may be severe. This effect continued beyond the youths who had moved in the last 12 months to also include those who had moved in the last 5 years. The fitted probability of unemployment dropped from 24 per cent for the first group to 15 per cent to 11.1 per cent for those who had not moved.⁹

SUMMARY

The main finding of this chapter is that family background as well as personal characteristics appear to be associated with the unemployment levels of 15 to 19 year old workers. For this sub-sample, we have shown in some detail the association of low incomes, low occupational status and high risks of unemployment within families. The main results may be summarised as follows.

Youth in single-parent families had almost twice the unemployment rate of youth living with both parents. Youth with the same level of family income, however, had similar unemployment rates whether they lived with single mothers or both parents. This implies that it is the associated economic disadvantages of single parenthood which disadvantaged the youth in the labour market rather than the qualities of single parenthood *per se*.

This explanation, however, does not hold for the youth of single-fathered families who had both a higher unemployment rate and higher family income than those of single-mothered families. Why this is so remains something of a mystery, though it should be noted that it is not confirmed by the Australian Families survey of 1982 (for a different age range).

For youth with both parents in the household a much more detailed analysis of the effect of family and household characteristics was possible. The results indicated that the personal characteristics of teenagers were associated with unemployment risks in predictable ways. Young women had higher unemployment rates than young men; more education was associated with less unemployment as was the ability to speak English well and unemployment was high among recent arrivals to Australia. Yet, even when these characteristics were held constant, there remained a significant association between family characteristics and unemployment rates.

Social class was found to be strongly associated with unemployment probabilities, with those youth coming from disadvantaged families (low family incomes, parents in working class occupations or unemployed, parents with lower education levels, and families living in poorer quality or rental accommodation) being more likely to be unemployed. The effect of parental education, however, was largely an indirect one, acting via its effects on the other variables mentioned rather than directly. Similarly, living in private rental accommodation did not disadvantage the youth when the other class variables were held constant, though living in housing authority accommodation did. This was probably because the latter better reflected long-term family wealth.

Rural youth had substantially higher unemployment rates irrespective of whether one controlled for the other variables in the model. The process of family movement seemed significantly disadvantageous for the younger

members of the family. As other studies have shown, informal job seeking networks are very important in finding work, particularly for youth. These are likely to become substantially disrupted when families move. A case could thus be made to include those mobile youth with other disadvantaged groups when allocating places in temporary employment programmes, such as The Community Employment Program.

All these relationships, however, were not sufficient to describe entirely why youth unemployment was concentrated in particular households, for even when taking all the relationships above into account, youth were still more likely to be unemployed if they had siblings unemployed. We believe that this residual association was most likely to be due to regional variations in unemployment rates which we have been unable to model from the Household Sample File together with other family factors which we have been unable to measure, or able to measure only imprecisely.

The significant association we have found between high unemployment rates and disadvantages in family background is in contrast with studies of the occupational status of employed parents and their employed children which have tended to stress the openness of Australian society. We have shown that both parental occupations and parental incomes were strongly associated with the unemployment rates of young workers. That is, that there was consistency in the labour market disadvantages of parents and higher probabilities of unemployment in their children.

As we have noted our analysis was hampered by a lack of data on subjective measures such as attitudes to work and success and on personal qualities such as 'intelligence'. Nevertheless our statistics were not without important details on the individual characteristics of employed and unemployed young people. Moreover, they were drawn from a very large, random sample of the entire Australian population. The results of this section therefore present a particularly disquietening picture of inequity in Australian society.

CHAPTER 5 : SUMMARY AND CONCLUSIONS

SUMMARY

This report has analysed the incidence of unemployment in households in Australia in 1981. In this chapter we summarise the main results and discuss their implications for developments in 1981 and their relevance for the policy debates of today.

Chapter 1 noted the effects of the uneven incidence of unemployment. These are both social and economic and are of importance to policy development. The social impact of unemployment concentration is that it separates a minority in society from the rest who, because of their isolation from the problem, have little understanding or sympathy with its effects. The main economic impact is the poverty associated with unemployment. The rise in the numbers of unemployed people, combined with the concentration of unemployment among those households that experience either long spells of unemployment or multiple incidences of unemployment or both, is a source of increasing inequality in society.

Policy responses to the unemployment problem take two forms, macro-economic attempts to cure the problem and social welfare programs to alleviate its impacts. Macroeconomic policies are constrained by the unemployment-inflation trade-off and by the levels of real wages. Much dispute occurs over the extent to which these constraints are real or binding. Nevertheless, many economists would agree that the more concentrated is unemployment within a minority of society the greater will be the difficulties in achieving reduced unemployment by macroeconomic policies. Social welfare programs are also impeded by the uneven impact of unemployment. The more that a given amount of unemployment is concentrated among a few families and households, the more difficult it is to alleviate the economic and psychological hardship it imposes.

Chapter 2 speculated on the social and economic reasons why unemployment is not randomly spread among all households. It noted that the experience of unemployment may itself affect the formation of households. This may happen when workforce entry or job termination leads one household member to

move. The individual may want to look for work and/or reduce living costs. In either case, there may be a movement to situations where job access is high and/or housing costs are low. We might find unemployed people living together to share expenses. A similar result could follow if the tensions caused by long-term unemployment led to family breakdown, though we have no documented evidence for this.

Another cause of unemployment concentration may be the nature of family links within a household. Where the household acts as a single economic unit, low incomes may cause early school-leaving and unemployment among younger members.

Social security arrangements may influence labour-force participation decisions and hence unemployment probabilities. Since social security payments are made to married couples as a unit rather than as two individuals, this impact may mainly affect married people rather than youth and single adults.

Finally, unemployment may occur in some households rather than others because the people who live in such households are in the 'at risk' categories of workers. They may be young, unskilled, female; they may not speak English well, they may have moved recently or have just arrived in Australia. They may live in isolated rural areas or the distant outer suburbs of large cities. They may share common class or cultural backgrounds.

These disparate causes of unemployment concentration within households imply that the statistical data must be interpreted with care. Our measurement of the incidence of unemployment is really a mixture of an identification of household types that are affected by unemployment plus an indication of some of the social impacts of unemployment. Among the latter are its effects on the incomes, mobility and housing conditions of those who become unemployed.

Chapter 2 presented the main data on incidence and impact. The unemployment rate was 5.8 per cent. The average of 1.7 workforce members per household (among households with labour-force participants) implied that a random distribution of unemployment would have meant that unemployment should have affected 9.9 per cent of households. In fact unemployment was found in

only 8.7 per cent of households with workforce members. Because so few households were affected, there was a high incidence of multiple unemployment. One in every four unemployed persons shared their homes with at least one other unemployed person.

Unemployment rates were higher among people who lived in large households. The majority of unemployed people lived in households which contained only one family that included both a head and spouse as well as other members. Unemployed people were, however, relatively less concentrated in traditional or nuclear families than were employed people.

As one might expect, Chapter 3 showed that individually, unemployed people were poor. Eighty per cent had incomes of less than \$6,000 per annum in 1981. Household incomes were higher, but, as shown in Chapter 2, the households that contained unemployed workers tended to be large. Per capita mean incomes were calculated for each household. On average, these were lower the more unemployed workers the households contained. The fall in incomes was slightly less when account was taken of economies of scale in living costs (via measuring equivalent per capita incomes for each household). Nevertheless, the mean values of these equivalent per capita incomes were lower for households with unemployment than for those without.

The incidence of unemployment was concentrated in households where the incomes of employed members were low. This association between unemployment and low incomes of employed household members was found to hold even after taking into account the effects of the differing impacts of age and sex on earning capacities.

The picture painted by the data of Chapters 2 and 3 is one that shows the impact and incidence of unemployment. Unemployment creates poverty. It also falls disproportionately on the poorer households - those least able to bear the impact. Unemployment is also found to be relatively concentrated among people who do not live in traditional or nuclear family situations but rather in households composed of non-related members or more than one family. The picture is thus one of a concentration of labour market disadvantages, not only in terms of unemployment but also of low earnings.

In 1981, 30 per cent of unemployed persons were in the age group 15-19

years. Chapter 4 analysed unemployment rates and family backgrounds of the 75 per cent of this age group who lived with one or both parents. It showed that unemployment rates were much higher among those in single-parent families as compared with those living with both parents. We already know, however, that unemployment rates were also highest among households with the lowest incomes. When the unemployment rates were standardised for the effects of income differences among parents, it was found that the unemployment rates of young workers were the same in complete families and in single-parent families headed by the mother. In single-parent families headed by the father, however, unemployment rates were significantly higher. We had no explanation for this, though we noted that the finding was based on very few cases. In general, we concluded that the income of the family was more important to the employment prospects of the children than was the number of parents present.

A detailed analysis of the unemployed young people who lived with both parents showed some predictable and some unanticipated results. The relationship between parents' income and children's employment prospects was confirmed. Holding other factors constant, the probability of unemployment among the children ranged from 23 per cent, when the family income was approximately \$5,000 per annum to 7 per cent when income was \$30,000 per annum.

Other factors that helped determine unemployment probabilities, in addition to income, were the parents' occupations and employment status. Unemployment probabilities among young persons were very high whenever a parent or sibling was unemployed. Housing tenure of the family had some influence and so did family mobility. The unemployment probabilities of young people who had recently moved were relatively high.

POLICY IMPLICATIONS

These results have implications for our understanding of the past and relevance to today's policy debates. They are additional statistical support for those who have argued that unemployment has been a major source of poverty since the mid 1970s. They also provide new evidence of how, in 1981, unemployed people were marginal to the core of the workforce. As compared with employed workers, their lives involved association with lower

income workers and non-family household arrangements.

Economists have argued that a separation between the majority of the workforce and unemployed workers contributed to the breakdown of wage indexation and the wage-push in 1981 and 1982 despite the fact that by the standards of earlier years unemployment was at a high level. Our data provide new evidence on the type of separation that has occurred between employed and unemployed workers in this country. That separation is not just in working life but also in domestic living arrangements.

Our findings have relevance today despite changes between 1981 and 1985. After 1981 unemployment rose rapidly to a peak of 11 per cent in June 1983. Undoubtedly, in this period new people entered the pool of unemployment because the average duration of unemployment fell. In 1985, however, unemployment is below the previous peak, as it was in 1981. The average duration of unemployment has risen continuously since 1982. We can expect that the pool of unemployed people contains more and more people who are experiencing long-term unemployment. As there may be similarities in the characteristics of unemployment in 1981 and 1985, we can use the new data presented here in current policy debates. We emphasise that in doing so we are not attempting to evaluate all of the issues: merely we wish to contribute some relevant statistical evidence.

Most directly, the data are support for those who argue that unemployment is a cause of poverty and that unemployment benefits are inadequate. The main point in this debate is that unemployment beneficiaries should be treated more equally with other recipients of social welfare payments. For example, they should receive supplementary assistance if they are renters. The arguments against equalisation have been partly cost, partly a view that unemployment is a temporary problem (as compared with say, invalidity or old age) and partly that unemployed persons can rely on family or household support. Our data are relevant to the weakness of the final argument. In many cases households contain more than one unemployed person. In families and households that contain unemployed people average incomes are relatively low.

We must emphasise, however, that while our data are relevant, we are not trying to settle issues. A key problem in raising unemployment benefits

is the possibility of further distorting the incentives facing young people who have to choose between leaving school or continuing their education and training. In 1981, 52 per cent of unemployed workers were aged less than 25. Recently, both the Committee of Inquiry into Labour Market Programs (1985) and the OECD's Manpower and Social Affairs Committee (1984) have raised the question of how to rationalise schemes that affect youth.

We cannot trace the complex issues of these debates here. Two quotations from recent surveys may, however, indicate the main themes.

... despite the uncertainty in the literature about the relative importance of the various financial and non-financial factors affecting education participation, the direction of incentive provided by government financial assistance is easy to identify.

... The most important disincentives arise from the difference between the rate of education allowances and unemployment benefit. Students from low income backgrounds are likely to be more sensitive to this and the net effect of youth income support may be to discourage lower income students from education participation. (Edwards, 1985, pp.45-46)

... the goal of increasing participation rates (in education) ... has tended to overshadow pressing problems in the income support structure, such as the low level of UB for 16 and 17 year olds and the question of additional assistance to those without parental support or the older unemployed who live in private rented accommodation. (Bowers and Dunlop, 1984, p.40).

Our results have relevance to these issues.

First, and most important, we have shown the link between low parental income and high unemployment among young people. We have shown that this link is more important than is the structure of the families of young unemployed people. The issue of youth unemployment is therefore critical to the whole issue of income equality in our society. Our data on the low parental incomes of young unemployed people emphasise the comments by Bowers and Dunlop above, about the needs of young people who rely on unemployment benefits.

The OECD Committee (1984, Ch.4) has provided evidence on how young people in low income families are encouraged to leave school. The lower the parental income, the greater the need that children should contribute to the household finances. For a 17 year old person deciding to stay at school for

year 12, the incentive is that the parents will receive \$20.12 per week. Leaving school, however, offers that young person an income of \$45 as unemployment benefit or \$51 per week for attendance at a Technical or Further Education course. It is therefore worrying that our data indicate an association between early school leaving and high unemployment probabilities as well as an association between the latter and low parental incomes. For the children of low income parents, the means test is not a disincentive to any decision. It does not exclude them from the Tertiary Education Assistance Scheme if they can afford to complete their school education. It would not exclude them from unemployment benefits if these were means tested on parental income.

Our evidence on how unemployed people live is support for the OECD's Committee's recommendation that 'In testing income and setting benefit levels, authorities should take into account whether a young person is living at home or is "independent"' (OECD Manpower and Social Affairs Committee, 1984, p.71). Particularly important is the evidence that independent youth have higher unemployment rates than dependent youth. This evidence is thus also relevant to the arguments of Bowers and Dunlop on needs.

Our findings on life-styles are also indicative of the difficulties that rationalising youth policies must encounter. Wilenski (1984) has costed a youth allowance scheme - covering all youth aged 15-19 - at \$2.8 billion per annum, assuming that the scheme was means tested on young people's incomes. The cost falls to \$1.3 billion per annum if parental incomes were tested. Obviously a parental means test enables expenditures to be directed towards those in need. Our evidence that many young people, especially those who are unemployed, do not live in families with both parents, is relevant. It is not impossible to devise schemes to test the incomes of absent parents. It might be difficult, however, to administer the tests. Even more difficult, in some cases, would be ensuring parental support where state aid was denied by the tests.

Rationalising the support schemes for young people is complex and will not be achieved quickly. The evidence presented in this report that many young people cannot rely on financial support from their families means that the current needs of unemployed youth must not be discounted when policies

are being created to alter education participation. Furthermore, the evidence that unemployed people - both young and old - are subject to poverty and isolation from the mainstream of economic life suggests that direct intervention via job creation schemes for those who have been unemployed for a long time is the only direct solution.

Finally, we have argued that the isolation of the unemployed people was relevant to the wage-push pressures of 1981. We should expect that similar effects would be present today. The Accord, however, is different to the Wage-Indexation policies of 1981 so we can draw no conclusions as to its strength or likely development.

NOTES

1. There are small differences in the measurements of unemployment in the Labour Force Surveys and in the census.
2. Detailed definitions can be found in the following publications related to the Census of Population and Housing, 30 June 1981, by the Australian Bureau of Statistics:
 - a) Cat.No.2167.0 : **Household Sample File; Technical Details**
 - b) Cat.No.2150.0 : **Information Paper; Dwelling, Household, Family**
 - c) Cat.No.2443.0 : **Summary Characteristics of Persons and Dwellings, Australia**
3. On the magnetic tape of the 1 per cent Household Sample File of the 1981 Census of Population and Housing, the highest range for income was \$26,000 or more per annum. For individual incomes of this level we assumed an actual value of \$30,000 per annum. For family and household income, we calculated our own data by summing the relevant individual incomes in each household. For incomes in ranges below \$26,000 per annum we assumed an actual income in the mid point of the range.
4. The figure of 9.9 per cent is calculated from the following formula:

$$\sum_{i=1}^{10} N_i(1-(1-p)^i)/N = .099$$

where, N equals the number of households with one or more workforce members, N_i equals the number of households with i workforce members and p equals the unemployment probability for individuals ($p = .058$).

The formula is derived as follows. $(1-p)^i$ equals the probability that a household of workforce size i will have all workforce members employed (assuming independent and equal unemployment probabilities). Hence $1-(1-p)^i$ equals the probability that the household will have one or more workforce members unemployed, and so $N_i(1-(1-p)^i)$ equals the expected number of such households. This must then be summed over all household sizes and divided by the total number of households to obtain the required percentage. (No household had more than ten workforce members.)

5. See Note 3 above.
6. The positive relationship between per capita incomes of employed workers and number of employed females for households with more than two females is not relevant. On average, there were 0.6438 females employed in the households; the standard deviation was 0.6478.
7. The unemployment rates for youth given in Table 4.1 do not correspond exactly with those in Table 2.9 because of different population bases. In the tables in Chapter 4, youth employed as unpaid helpers are excluded from the workforce, while in Chapter 2 they are not. Further, in Chapter 4 youth in single-parent families, for example, must be children of the parent. In Table 2.9, the unemployment figures for youths in single-parent families include those who are parents themselves.

8. Family income was fitted as a quadratic relationship. That is, both family income and family income squared were included as variables. Their parameter estimates are given in Table A3.7. The minimum point of the quadratic relationship occurred at approximately \$38,000 per annum. Few families had incomes above this figure.
9. Despite the fact that the second term is not statistically different from the last, this is a valid statement as a 'trend line' would be significant.

BIBLIOGRAPHY

- AMEMIYA, T. (1981), 'Qualitative Response Models : A Survey', *Journal of Economic Literature*, Vol.XIX, December, pp.1483-1536.
- AUSTRALIAN BUREAU OF STATISTICS, *Australian Families 1982*, Cat.No.4408.0.
- AUSTRALIAN BUREAU OF STATISTICS, *Census of Population and Housing, 30 June 1981, Information Paper; Dwelling, Household, Family*, Cat.No.2150.0.
- AUSTRALIAN BUREAU OF STATISTICS, *Census of Population and Housing, 30 June 1981, Household Sample File; Technical Details*, Cat.No.2167.0.
- AUSTRALIAN BUREAU OF STATISTICS, *Census of Population and Housing, 30 June 1981, Summary Characteristics of Persons and Dwellings; Australia*, Cat.No.2443.0.
- AUSTRALIAN BUREAU OF STATISTICS (1985), *An Evaluation of Census Counts of the Aboriginal Population, 1971, 1976, 1981 Censuses*, Occasional Paper, No.1985/2.
- AUSTRALIAN BUREAU OF STATISTICS, *Internal Migration, Australia; Twelve Months Ended 30 June 1982*, Cat.No.3408.0.
- AUSTRALIAN BUREAU OF STATISTICS, *The Labour Force, Australia*, Cat.No.6203.0.
- AUSTRALIAN BUREAU OF STATISTICS, *The Labour Force, Australia, October 1984, Preliminary*, Cat.No.6202.
- AUSTRALIAN BUREAU OF STATISTICS, *Labour Force Status and Other Characteristics of Families, Australia*, Cat.No.6224.0.
- BAKER, R.J. & NELDER, J.A. (1978), *The GLIM System Manual, Release 3*, Numerical Algorithms Group, Oxford.
- BLANDY, R. & RICHARDSON, S. (1982), 'The Fate of the Class of '71', *Australian Bulletin of Labour*, September, Supplement No.4.
- BOWERS, J. & DUNLOP, M. (1984), 'Education and Welfare Concerns in Income Support for Young People', *Social Security Journal*, December, pp.20-41.
- BOYD, C., JORDAN, J. & PORTER, M. (1984), *The 1984 Budget : A Comment on Tax, Social Security and Incentive Issues*, The Parliament of the Commonwealth of Australia, Legislative Research Service, Discussion Papers, No.3, Canberra.
- BREWER, G. (1984), *The Experience of Unemployment in Three Victorian Regions*, Social Welfare Research Centre, Reports and Proceedings No.48, University of New South Wales, Kensington.
- BROOKS, C. & VOLKER, P. (1983), *Labour Market Success and Failure : An Analysis of the Factors Leading to the Workforce Destinations of the Australian Population*, Bureau of Labour Market Research, Conference Paper No.38, Canberra.

- BROOM, L. & LANCASTER JONES, F. (1976), **Opportunity and Attainment in Australia**, ANU Press, Canberra.
- BROOM, L., DUNCAN-JONES, P., LANCASTER JONES, F. & McDONNELL, P. (1977), **Investigating Social Mobility**, Australian National University, Canberra.
- BROOM, L., LANCASTER JONES, F., McDONNELL, P. & WILLIAMS, T. (1980), **The Inheritance of Inequality**, Routledge & Kegan Paul, London.
- BURBIDGE, A. (1984), **Poverty in Australia**, Institute of Family Studies, Melbourne.
- BUREAU OF LABOUR MARKET RESEARCH (1983), **Youth Wages, Employment and the Labour Force**, Research Report No.3, AGPS, Canberra.
- CASS, B. (1982), **Family Policies in Australia : Contest Over the Social Wage**, Social Welfare Research Centre, Reports and Proceedings No.21, University of New South Wales, Kensington.
- CASS, B. & GARDE, P. (1983), 'Unemployment and Family Support', in A. Graycar (ed.) **Retreat from the Welfare State**, Allen & Unwin, Sydney.
- CASS, B. & GARDE, P. (1984), 'Unemployment in the Western Region of Sydney : Job Seeking in a Local Labour Market' in R. Hooke (ed.) **54th ANZAAS Congress : SWRC Papers**, Social Welfare Research Centre, Reports and Proceedings No.47, University of New South Wales, Kensington.
- CLARK, A.W. & CLISSOLD, M.P. (1982), 'Correlates of Adaptation Among Unemployed and Employed Young Men', **Psychological Reports**, Vol.50, pp.887-893.
- COMMISSION OF INQUIRY INTO POVERTY (1975), **Poverty in Australia**, AGPS, Canberra.
- COMMITTEE OF INQUIRY INTO LABOUR MARKET PROGRAMS (1985), **Report of the Committee of Inquiry into Labour Market Programs**, AGPS, Canberra.
- DAVIES, R., HAMILL, L., MOYLAN, S. & SMEE, C.H. (1982), 'Incomes in and out of Work', **Employment Gazette**, July, pp.237-243.
- DEPARTMENT OF SOCIAL SECURITY (1981), **Annual Report 1980-81**, AGPS, Canberra.
- EDWARDS, M. (1985), 'Youth Allowances : Incentive and Reform', **Australian Journal of Social Issues**, Vol.20, No.1, pp.35-55.
- ESSEN, J. & WEDGE, P. (1982), **Continuities in Childhood Disadvantage**, Heinemann, London.
- GREGORY, R.G. (1982), 'Work and Welfare in the Years Ahead', **Australian Economic Papers**, Vol.21, No.39, pp.219-243.
- GRUEN, F.H. (1984), 'Australia's Long-term Economic Strategy', **Economic Papers**, Vol.3, No.2, June, pp.40-50.

- INGLIS, P. & STROMBACK, T. (1984), 'Migrants' Unemployment : The Determinants of Employment Success', **Bureau of Labour Market Research, Working Paper, No.49**, November, Canberra.
- HAKIM, C. (1982), 'The Social Consequences of High Unemployment', **Journal of Social Policy**, Vol.11, No.4, pp.433-67.
- KAKWANI, N. (1983), 'The impact of personal income taxation and government transfers on income distribution and poverty in Australia' in J.G. Head (ed.) **Taxation Issues in the 1980s**, Australian Tax Research Foundation, Sydney.
- KOLLER, K., WADE, R. & GOSDEN, S. (1980), 'Youth unemployment, the special case of young women', **Australian Journal of Social Issues**, Vol.15, No.1, February, pp.43-48.
- LLOYD, C.B. & NIEMI, B.T. (1979), **The Economics of Sex Differentials**, Columbia University Press, New York.
- MAAS, F. (1984), **Should Families be a Focus for Policies?**, Institute of Family Studies, Policy Background Paper No.5, Melbourne.
- McRAE, I. (1984), 'The Australian National Longitudinal Survey', **Bureau of Labour Market Research, Conference Paper No.44**, Canberra.
- MANNING, I. (1984), **Measuring the Costs of Living of Australian Families**, Social Welfare Research Centre, Reports and Proceedings No.43, University of New South Wales, Kensington.
- MANNING, I. (1985), **Incomes and Policy**, Allen and Unwin, Sydney.
- MILLER, P.W. (1981), 'How Unemployment Rates Differ : The Influence of Education and Migration', **Centre for Economic Policy Research, Discussion Paper No.19**, Australian National University, Canberra.
- MITCHELL, D.J.B. (1984), 'The Australian Labour Market' in R.E. Caves and L.B. Krause (eds) **The Australian Economy**, Allen and Unwin, Sydney.
- MOYLAN, S. & DAVIES, B. (1980), 'The Disadvantage of the Unemployed', **Employment Gazette**, August, pp.830-832.
- ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, Manpower and Social Affairs Committee (1984), **Review of Youth Policies in Australia**, Canberra.
- REDER, M.W. (1969), 'The Theory of Frictional Unemployment', **Economica**, February, Vol.36, No.141, pp.1-28.
- RICHARDSON, S. (1985), 'Intergenerational Mobility in Labour Force Attainment', Paper presented to the 14th Conference of Economists, May, University of New South Wales, Kensington.
- ROSSITER, C., KINNEAR, D. & GRAYCAR, A. (1984), **Family Care of Elderly People : 1983 Survey Results**, Social Welfare Research Centre, Reports and Proceedings No.38, University of New South Wales, Kensington.

- SOCIAL WELFARE POLICY SECRETARIAT (1981), **Report on Poverty Measurement**, AGPS, Canberra.
- SMITH, D.J. (1980), 'How Unemployment Makes the Poor Poorer', **Policy Studies**, Vol.1, July, pp.20-27.
- SMITH, P. (1982), 'U is for Unemployment', **Australian Social Welfare - Impact**, Vol.12, No.4, September, pp.5-8.
- STROMBACK, T. (1983), 'The Social Consequences of Unemployment, A Review', **Bureau of Labour Market Research Working Paper**, No.33, Canberra.
- Sydney Morning Herald**, 4 February, 1984.
- TRAVERS, P. (1983), **Unemployment and Life History : A Pilot Study**, Social Welfare Research Centre, Reports and Proceedings No.30, University of New South Wales, Kensington.
- VIPOND, J. (1985, forthcoming), 'Unemployment - A Current Issue in Intra-Urban Inequalities' in I. Burnley and J. Forrest (eds) **Social Change in Metropolitan Australia**, Allen and Unwin, Sydney.
- WHITEFORD, P. (1982), 'The Earned Incomes of the Unemployed', **Social Security Journal**, December, pp.34-42.
- WILENSKI, P. (1983), 'Youth Policy and Youth Allowances', **Australian Quarterly**, Vol.55, No.3, pp.252-262.
- WINDSCHUTTLE, K. (1979), **Unemployment**, Penguin, Harmondsworth.
- WRIGHT, E.O. (1978), **Class, Crisis and the State**, Verso, London.

APPENDIX 1 : HOUSEHOLD AND FAMILY CLASSIFICATION IN THE CENSUS

The categories of family composition of households described in Chapter 2 were derived from the census family classification variables which describe the family composition of the first (or primary) second and third families in each household. Individuals may also be classified as belonging to no family.

All families except the primary family must contain at least two people, a head plus one or more others. Households where the head is the only person in the primary family, and all other persons are non-family members, have been classified as 'All persons unrelated'.

For the purposes of the classification, families are defined as containing a 'head' together with possibly spouse, dependants and/or other adults. Dependants include: all children in the family aged 0-15 and all issue children in the family aged 16-20 who are full-time students. Children who are not issue children (e.g. visitors aged 0-15) are included with the children of the primary family. 'Other adults' comprise: children not covered above, ancestors and other family members (e.g. siblings of the head).

Whether the family contains other adults has not been indicated in the tables. Thus in the category 'One family only - with spouse, some dependants', some households may have other adults also present in the single family.

It is important to note that all these structures are based upon the household composition **on census night** and so may reflect purely temporary absences.

APPENDIX 2 : EQUIVALENCE SCALE

The equivalence scale used is based upon the Social Welfare Policy Secretariat's basic equivalence scale and is derived by 'smoothing' the scale shown in their Table 4.5 (SWPS 1981, p.110). The scale used is

First Adult in Household	=	1.66	equivalent	persons
Subsequent Adults	=	.98	"	"
Dependants	=	.29	"	"

For simplicity no account has been taken of different labour force situations. The table in this Appendix compares this equivalence scale with the SWPS original from which it was derived. Our equivalence scale was weighted to give the same number of equivalent persons in the sample as 'real' persons whilst the SWPS scale was weighted to give a two adult household a value of one. The second column of the table thus reweights our scale to the SWPS standard for comparison (by dividing by 2.64).

TABLE A2.1: COMPARISON OF SWPS EQUIVALENCE SCALE WITH SMOOTHED SCALE

Household		Scales		
Adults	Children	Smoothed	Smoothed Reweighted	SWPS
1	0	1.66	.63	.67
1	1	1.95	.74	.92
1	2	2.24	.85	1.07
1	3	2.53	.96	1.05
2	0	2.64	1.00	1.00
2	1	2.93	1.11	1.11
2	2	3.22	1.22	1.20
2	3	3.51	1.33	1.31
2	4	3.80	1.44	1.33
2	5	4.09	1.55	1.48
3	0	3.62	1.37	1.39
3	1	3.91	1.48	1.63
3	2	4.20	1.59	1.67
4	0	4.60	1.74	1.77
4	1	4.89	1.85	1.71
4	2	5.18	1.96	1.93

Source: SWPS scale from Social Welfare Policy Secretariat, (1981), **Report on Poverty Measurement**, Table 4.5, p.110.
Other scales - see text.

APPENDIX 3 : THE FAMILY BACKGROUNDS OF YOUNG UNEMPLOYED PEOPLE - DATA AND METHODS

Data

The population included in the tables of Chapter 4 comprises youth aged 15 to 19 years who were not in full-time education, and were living with at least one parent on census night. Apart from Table 4.1, the analysis is further restricted by looking only at those youth in the labour force. Because of the ambiguity of their status, youth employed as 'unpaid helpers' have been defined as not in the labour force, and hence excluded from most of the tables.

We excluded those youth not living with their parents, even though they suffered a particularly high unemployment rate, as our data lacked detailed information about their family backgrounds.

The variables reflecting parental and sibling characteristics were not available directly from the census data. Rather, the information was obtained by first identifying individual youth and then by searching the household record for persons identifiable as their parents or siblings. This necessitated some further minor exclusions.

Firstly, the analysis was restricted by the fact that the census provided information only for those persons who were in the dwelling on census night. Thus if one or both of the youth's parents were in a different location for that night, the youth was classified as either being in a single parent family or not living with their parents respectively. To make the category of 'single parent family' more meaningful, all cases with only one parent in the dwelling on census night, but with that parent describing themselves as 'now married' were excluded.

The census coding of family relationships meant that some youths were excluded from the families described here even though their parents were in the same household. This occurred because they were classified into different families as, for example, when the youth was married or had a *de facto* or child(ren) present on census night. Additionally, if the youth had been nominated as household head their parents (if present) may have been coded as either ancestors or as a separate family (if both parents or other children

were present). In all these cases (which we would expect to be small in number) the parents could not be identified and the youth was classed as living without their parents on census night, and so excluded. We believe that these exclusions have only a minor effect upon the results obtained.

One independent source that largely confirms the results of Table 4.1 is the Australian Families Survey of 1982 (Table A3.1). In this survey, non-dependent youth aged under 25 and not in full-time education had a substantially higher unemployment rate if they were in a mother-headed single-parent family than if they were in a dual-parent family or living with their father only. As noted in Chapter 4, the different pattern for the father-headed single-parent families may perhaps have been due to random fluctuations in the small numbers of youth in those families in both the data sources. In fact, the unemployment rate of youth of single-father families was not published by the Australian Bureau of Statistics because of high sampling error. The figure in Table A3.1 had to be derived by subtraction.

TABLE A3.1 : YOUTH AGED 15-24 YEARS, NOT IN FULL-TIME EDUCATION AND LIVING WITH AT LEAST ONE PARENT : EMPLOYMENT STATUS BY FAMILY TYPE (FAMILIES SURVEY)

Employment Status	Family Type		
	Mother only (1)	Father only (1)	Both
		Rates %	
Employment	73.9	87.3	85.1
Participation	97.1	100.0	97.6
Unemployment	23.9	12.7	12.8
Number ('000)	120.0	31.5	795.5

Notes: All estimates are subject to sampling variability.

(1) includes cases where parent married but spouse not present in the household.

Source: Australian Bureau of Statistics, **Australian Families 1982**, Cat.No.4408.0, p.27.

The Families Survey did not suffer from the census limitation of family structure being defined by those present on the night, as repeated call-backs were made to obtain the **usual** family structure.

Definitions of Variables

Most variables used in the analysis of Chapter 4 were defined following the Australian Bureau of Statistics definition (see ABS, **Census of Population and Housing, 30 June 1981, Household Sample File, Technical Details**, Cat.No. 2167.0 for further details). Some variables however have been newly created, modified, or formed into new categories. These variables were:

Family type, discussed above.

Family income. The Household Sample File supplies data on individual incomes grouped into 14 categories with an upper range of \$26,000 or more per annum. For incomes in this last category we assumed an income of \$30,000 per annum, whilst the other categories were recoded to their midpoint. Family income was calculated by summing the individual incomes of the family head and spouse (where present).

Father's and mother's occupation. An attempt was made to follow the class-based categories of occupations developed by E.O. Wright (1978). Data limitations meant that a full elaboration of his categories was not possible. Rather, we used the census variable of occupational status to divide the workforce into employees and employers/self-employed, and then used the census variable of occupation to subdivide these two categories into various occupational groups (see Table A3.2). These subgroups have been chosen in order to create groups which are relatively homogeneous with respect to their members' positions in the power structures of production in Australian society. Using only this information we are unable to do full justice to Wright's theoretical categorisation, and are unable to fully identify the various contradictory class locations he describes.

However, even our crude introduction of the dichotomy of employee versus employer/self employed does provide us with some information that a categorisation based on a concept of 'occupational status' (as described in the sociological literature - not ABS terminology) glosses over. For example,

TABLE A3.2 : CORRESPONDENCE BETWEEN FATHERS⁽¹⁾ OCCUPATION CATEGORIES
AND AUSTRALIAN BUREAU OF STATISTICS CODES

Category if employee	Category if employer/self employed	ABS three digit codes
Professional	Professional and Managerial	1-78, 80-85, 87-91, 500, 501, 503, 504, 524, 525
Managerial	Professional and Managerial	79, 86, 100-119, 203, 204, 208, 209, 210, 824, 826, 828, 830
Managerial	Other ⁽²⁾	300-316
Clerical etc.	Other	150-155, 515, 516, 521, 522, 523, 526, 648, 657, 664, 683, 746
Sales	Other	200, 201, 202, 205, 206, 207, 211
Trades	Trades	400-406, 409, 411-414, 602, 603, 607-610, 612, 616, 621, 622, 624, 625-638, 640-647, 650-656, 665, 666, 669, 670, 676-682, 687-691, 693, 700, 702, 703, 716, 800, 801.
Manual	Other	317-337, 407, 408, 410, 502, 505-514, 517-520, 527-531, 600, 601, 604-606, 611, 613-615, 617-620, 623, 639, 649, 658-663, 667, 668, 671-675, 684-686, 692, 694-699, 701, 704, 705-715, 717-745, 747, 802-823, 825, 827, 829, 831.

Notes: (1) Mothers occupational categories are formed from aggregations of these.

(2) This categorisation is based on a finer categorisation which included rural self employed or employer as an additional category. In removing this category (to simplify the scale) these occupations were included with the 'other' category, though some occupations (farm managers etc) would have been placed in the managerial group if they were employees.

in Chapter 4 we show how youth of self employed or employer trades fathers have a lower chance of unemployment than those with employee trades fathers. This is probably due not to any difference in 'status' but rather to the concrete fact that the former fathers have a greater degree of power in the production process which improves their child's employment prospects.

Additionally the use of discrete categories rather than a single continuous occupational status measure allows us to avoid the thorny issue of where to place those who are unemployed or not in the workforce.

Rooms per person in household. This variable was defined as the total number of rooms in the household (excluding toilets, pantries, laundries, storerooms, halls and corridors) divided by the number of people in the household.

Birthplace. Countries other than Australia were grouped as: 'English speaking': United Kingdom, Ireland, Canada, United States of America, South Africa, Zimbabwe and New Zealand.

'Northern European': Austria, Belgium, Czechoslovakia, Denmark, Estonia, Finland, France, Germany, Hungary, Latvia, Lithuania, Netherlands, Norway, Poland, Sweden, Switzerland and the USSR.

'Southern European': Albania, Greece, Italy, Malta, Portugal, Spain and Yugoslavia.

'Asia': following ABS categorisation.

Siblings Unemployed. For computational simplicity, 'siblings' here includes all 'child family members' of the household, some of whom may have belonged to different families from those of the youth (because there could be more than one family per household). In almost all cases however, we expect them to be brothers or sisters of the youth. The categories used here are a simple way of describing the many possible combinations of sibling workforce status that youth may have. The variable should be interpreted cautiously as it is not independent of family size. For example, a youth must first have at least two siblings before he or she could be placed in the category of 'some (siblings) in workforce, some employed'.

Treatment of Missing Values

Where the value of variable is not known (the census questionnaire was not filled in fully etc.), two procedures have been adopted. For continuous variables, missing variables have been set to equal the overall mean of that variable. For categorical variables, either categories for 'not stated' have been included, or those cases have been included with another category. This is indicated in the tables in Chapter 4. Table A3.3 lists the percentages of cases that were not stated for most variables. The details of treatment of the variable 'family type' have been given above.

Statistical Methods

In the multivariate analysis of Chapter 4, the aim was to measure the effect of the individual independent variables on youth unemployment probabilities, whilst controlling for the effects of the remaining independent variables. Because the dependent variable for the analyses was binary (youth are defined as being either employed or unemployed) the method of logistic regression, or more precisely, binomial regression with logit link, was used.

Logistic regression is conceptually very similar to ordinary regression. The dependent variable, probability of unemployment, is modelled as a function of the independent variables and associated parameters. Because of the limited range of the dependent variable (the probability of unemployment must lie between 0 and 1) a logit transformation is used to make the linear function of independent variables lie within this range. Formally, the procedure models the fitted probability of unemployment, p_i as equal to

$$p_i = \frac{1}{1 + \exp(-\underline{X}_i' \underline{\beta})} \quad (1)$$

where $\underline{X}_i' \underline{\beta}$ represents a linear function of variables \underline{X} and parameters $\underline{\beta}$ as in ordinary regression. We can rearrange this equation to note that

$$\underline{X}_i' \underline{\beta} = \log \left(\frac{p_i}{1-p_i} \right) = \log \left(\begin{array}{c} \text{odds of unemployment} \\ \text{for person } i \end{array} \right)$$

TABLE A3.3 : PERCENTAGE OF YOUTH FOR WHOM DATA ON PARTICULAR
VARIABLES WERE NOT AVAILABLE

(For youth in dual-parent families, N = 3950)

Variable	Percent missing
Sex	0.0% ⁽¹⁾
Age	0.0% ⁽¹⁾
Education level	1.9% ⁽²⁾
Race	3.4%
English ability	2.0%
Period of residence in Australia	0.2%
Father's occupation	2.3%
Mother's occupation	2.8%
Father's education level	3.6% ⁽²⁾
Mother's education level	3.2% ⁽²⁾
Father's birthplace	0.6%
Nature of occupancy	1.4%
Type of region	0.0% ⁽¹⁾
Residential mobility	NA ⁽³⁾
Siblings unemployed	0.0% ⁽¹⁾
Father's income	3.4%
Mother's income	8.2%
Rooms per person	1.0%

Notes: (1) Missing cases were imputed to likely values by the ABS.

(2) Percentage for whom age left school was not known.

(3) Not known. See Note 5, Table 4.2.

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Household Sample File.

'Odds of unemployment' are defined as the probability of unemployment divided by the probability of not being unemployed, for a given set of characteristics X_i . The linear predictor $X_i\beta$ was expressed in the same way as in conventional regression models with the vector of parameters, β , being estimated by maximum likelihood methods. For categorical independent variables, dummy variables were generated.

In determining whether the parameter values obtained were likely to be due simply to chance fluctuations in the sampling process asymptotic 't' statistics (parameter estimates divided by their standard error) were used. 't' statistics with an absolute value greater than 1.96 are significant at approximately the 5% level (two tailed).

Further, it is possible to test whether groups of terms (e.g. the set of dummy variables for a particular variable) are statistically significant. In this way a statistically parsimonious model can be arrived at by excluding variables which do not improve the fit of the model significantly given the presence of the other variables. The test used to do this is referred to as the likelihood ratio test and is defined as the difference between the likelihood ratio statistic of the model including these terms minus the likelihood ratio statistic of the model excluding these terms. The test statistic is asymptotically distributed as χ^2_t where t is the number of parameters under test (Baker and Nelder 1978).

As with most statistical tests the significance levels thus obtained assume a random sample of independent observations. However for the models used here the observations are not independent. This is because the Household Sample File contains an independent random sample of **households**, but we are analysing a sample of **youth**. That is, in some cases we will have more than one youth from a particular household in our sample and those youths will have identical values for their household level variables and, more than likely, identical values for their family level variables.

Thus any test statistics would show an inflated level of descriptive significance. For example a variable which was shown to contribute significantly to the fit of the model at the 5 per cent level might really be only significant at the 10 per cent level, though in practice the effect was not so great. Direct modelling of this sample structure is too difficult for

us to attempt here, but there are ways of getting approximate estimates.

One way would be to select only one person from each household and build the models on this sub-sample. This, however, would have the effect of under-representing the conditions of youth in large households.

The compromise approach used here has been to explore the fit of the model (checking significance of terms and looking for interactions) with a sub-sample consisting of only one youth from each household. For the model for youth with both parents present, this meant dropping 15 per cent of the 3,950 cases. The 't' statistics presented with the results of this model are from the sub-sample (see Table A3.7). Parameter estimates for this model, however, were derived from the model fitted to the full sample. For the simpler model for youth of single parent families, estimates and 't' statistics from both samples are presented in Table A3.6.

Also presented with the tables are two measures of goodness of fit, the Cragg-Baxter statistic, and McFadden's R^2 .

The Cragg-Baxter statistic is defined as

$$(1 - \exp 2 (L_C - L_B) / n) / (1 - \exp 2L_C / n)$$

(Brooks and Volker, 1983, p.31)

and McFadden's R^2 is defined as

$$1 - \frac{L_B}{L_C} \text{ (Ameniya, 1981, p.1505)}$$

with n = number of observations, L_C = the maximum of the log likelihood when only a constant is used and L_B = the maximum when all coefficients are included in the model. These attempt to provide some analogy to the R^2 statistic of standard regression. In all the models presented these statistics are quite low, which is not uncommon when constructing models based upon observations of individual persons.

These low values for these goodness of fit statistics indicate that the models described can explain only a small proportion of the pattern of youth unemployment. However we have been able to identify a range of significant associations between youth unemployment and personal, family and household variables.

Presentation and Interpretation of Parameters

The parameters β are in themselves not easily interpretable. For continuous variables they measure the increase in log odds of unemployment for an increase of one unit of the independent variable (given the other terms in the model), whilst for categorical variables they measure the increase in the log odds of unemployment relative to the reference category (for which β_i is defined to be zero) of the variable.

In the tables here we have always defined the reference category to be the largest or modal category for that variable. The exponent of the parameter β gives us the relative risk or odds ratio of unemployment relative to the reference category. That is

$$\text{Odds ratio} = \frac{p_i}{1-p_i} / \frac{p_j}{1-p_j} = \exp(\beta_i)$$

where p_i = probability of unemployment in category i , and j indexes the reference category. These odds ratios can thus be easily derived by taking the exponent of the parameter values presented in Tables A3.6 and A3.7.

Whilst odds ratios may be the 'natural' measure to use in these models, they are not as easily interpreted as the more familiar probability differences or ratios. For this reason fitted probabilities at the modal categories and means of continuous variables, were presented in Table 4.2. They were derived from the following formula:

$$\text{fitted probability} = 1 / (1 + \exp - (C + \beta_i))$$

where

C = constant term + effect of incomes
rooms per person at mean

β_i = parameter of interest.

For the model in this table,

mean family income = \$17,800 per annum

mean rooms per person = 1.34

and so

$C = -2.081$

The non-linear nature of the logistic regression model means that the differences or ratios of these fitted probabilities will vary depending upon which categories are chosen as reference categories. This problem of non-linearity does not occur with odds ratios.

Results of the Statistical Analysis of Youth Unemployment and Family Structure

The object of this analysis was to try to explain the variations in youth unemployment rates among different family types.

As explained in Chapter 4, previous work suggested that youth unemployment would be likely to be associated with family income, parental education level and ethnic background (among other things). If these family background variables were in turn associated with the different family types, then the association between family type and unemployment may have simply reflected these associations and may not have reflected problems of single-parent families *per se*. For example, if single parents tended to be born in England and youth of English parents also tended to have higher unemployment rates, then we would expect youth in single-parent families to have higher unemployment rates simply on the basis of these associations. To test for these sorts of possibilities, a number of logistic regression models were fitted with employment status as the dependent variable and family type (single-parent/mother headed, single-parent/father headed, dual parent), family income and parental education and birthplace as independent variables.

Ethnicity and education variables for family types are presented in Tables A3.4 and A3.5. These indicate slight, though significant, differences in birthplaces of both fathers and mothers, and the education levels of the fathers in the different family types. These variables also showed some association with youth unemployment probabilities. However, the association was not strong enough to have any noticeable impact on the relationship between family type and youth unemployment when controlling for the effect of parental birthplace and education. For simplicity of presentation, the results from those models are not presented here.

The variable which was strongly associated with both unemployment and family type was family income. The parameters of the logistic regression model including this variable together with family type as predictors of youth unemployment are shown in Table A3.6.

As explained above, because of the sample structure it was necessary to fit the model to both the full sample and a sub-sample consisting of only one

youth per household. It was found that the same conclusions flow from either model.

Table A3.6 indicates that whilst dual-parent families were not significantly different from mother-headed single-parent families, youth in father-headed single-parent families were significantly more likely to be unemployed (at a given level of income) than youth in the other two types of family. This is thus consistent with the hypothesis that the high unemployment rate of youth in single mothered families at least is due to the lower incomes of those families. No particular reason seems to be apparent for the high unemployment rate of youth of single fathers, though the conflicting result from families survey data (see Table A3.1) should lead us to be cautious about this result.

It is interesting to note that when one **did not** control for income there was no significant difference between the unemployment rates for youth in the two single-parent family types. However the higher income of the single fathers, together with the general tendency for unemployment probability to fall as family income rises meant that at a constant level of income youth in single-father families had a higher unemployment probability. This relationship was explored further with interaction effects between family type and income but no explanation for this result was forthcoming. We cannot discount the possibility that this result for the youth in the father-headed families was due to random fluctuations.

RESULTS OF THE STATISTICAL ANALYSIS OF YOUTH UNEMPLOYMENT AND FAMILY BACKGROUND

The object of this model was to describe the relationships between a range of personal, family and locational variables and the probability of youth being unemployed. By using logistic regression we were able to separate out the effects of each individual variable from others with which they might be associated.

Table A3.7 presents the parameter estimates and 't' values for two models (which differ by the inclusion or exclusion of the variables for sibling employment status). As noted above, the parameter estimates have been derived from the model fitted to the whole sample, and the 't' statistics from

TABLE A3.4 : EDUCATION LEVELS OF PARENTS OF YOUTH AGED
15-19 YEARS (AND NOT IN FULL TIME
EDUCATION) BY FAMILY TYPE

Education Level ⁽¹⁾	('000s)			
	Mothers of		Fathers of	
	Single parent families	Dual parent families	Single parent families	Dual parent families
Diploma, Bach.degree & higher degree	1.2 2.3%	10.5 3.0%	.7 4.9%	19.0 5.4%
Other post-school qualification	4.1 8.0%	23.0 6.5%	2.5 17.4%	108.1 30.1%
Left school 17+ years	3.2 6.2%	16.4 4.6%	1.1 7.6%	18.1 5.1%
Left school at 16 years	5.8 11.3%	50.6 14.3%	1.6 11.1%	32.1 9.1%
Left school at < 16 years	37.1 72.2%	248.1 70.2%	8.5 59.0%	176.5 50.0%
Total	51.4 100%	353.5 100%	14.4 100%	353.8 100%

$$\chi^2_4 = 6.2 \quad (p > .10) \quad \chi^2_4 = 12.7 \quad (p < .02)$$

Notes: (1) Highest level reached. If post-school qualifications not stated age left school used. If age left school also not stated (or still at school) case excluded from table.

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Household Sample File.

TABLE A3.5 : BIRTHPLACE OF PARENTS OF YOUTH AGED 15-19 YEARS
(AND NOT IN FULL TIME EDUCATION)
BY FAMILY TYPE

Birthplace ⁽¹⁾	('000s)			
	Mothers of		Fathers of	
	Single parent families	Dual parent families	Single parent families	Dual parent families
Australia	42.5 79.3%	263.9 73.2%	8.7 59.2%	254.4 70.5%
'English Speaking'	5.5 10.3%	44.6 12.4%	3.1 21.1%	47.9 13.3%
Northern Europe	1.4 2.6%	11.6 3.2%	.9 6.1%	15.3 4.2%
Southern Europe	2.6 4.9%	31.5 8.7%	1.4 9.5%	34.1 9.5%
Other	1.6 3.0%	8.9 2.5%	.6 4.1%	9.1 2.5%
Total	53.6 100%	360.5 100%	14.7 100%	360.8 100%

$$\chi^2_4 = 13.6 \quad (p < .01) \quad \chi^2_4 = 11.4 \quad (p < .05)$$

Notes: (1) 'Not Stated' excluded from table.

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Household Sample File.

TABLE A3.6 : YOUTH UNEMPLOYMENT MODELLED AS AN EFFECT OF
FAMILY TYPE AND FAMILY INCOME, USING
LOGISTIC REGRESSION

Variable	Full Sample(N=4294) Parameter 't' value		Sub-Sample(N=3649) Parameter 't' value	
Mother headed single parent family	0.0	NA	0.0	NA
Father headed single parent family	0.55	2.6	.57	2.5
Dual parent family	-0.048	0.4	0.039	0.3
Family Income (\$000 p.a.)	-0.068	10.1	-0.069	9.5
CONSTANT	-0.78	6.7	-0.84	6.9
Difference between Father headed S.P.F. and Dual parent families	0.60	3.1	0.54	2.6
L.R. Statistic	3384 @ 4290d.f.		2869 @ 3645d.f.	
L.R. Statistic difference for model with Family Type excluded	9 @ 2d.f. (p<2%)		7 @ 2d.f. (p<5%)	
McFadden's R ² = .048 Cragg Baxter statistic = .069 (full sample)				

Note: Dependent variable is youth unemployment — equal to 1 if unemployed, 0 if employed. Population the same as in Table 4.1, but youth with 'not stated' for family income are excluded as are those youth not in the workforce.

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Household Sample file.

TABLE A3.7 : LOGISTIC REGRESSION MODELS OF YOUTH
UNEMPLOYMENT AND FAMILY BACKGROUND

Variables	With sibling terms included		With sibling terms excluded	
	Logistic regression parameters (1)	t _i (2)	Logistic regression parameters (1)	t _i (2)
<u>Constant</u>	-.670	-1.6	-.723	-1.8
<u>Sex</u>				
Male	0.0	-	0.0	-
Female	.544	5.3	.532	5.2
<u>Educational level</u>				
Post-school qualifications	-.965	-2.7	-.997	-2.8
Left school at 17+ years of age	.0935	1.3	.0874	1.3
Left school at 16	0.0	-	0.0	-
Left school <16 or no school	.214	2.0	.250	2.2
N.S. or still at school (p.t.)	.319	2.0	.287	2.0
<u>Period of Residence in Australia</u>				
5 or more years (incl. N.S.)	0.0	-	0.0	-
1-4 years	-1.10	-1.2	-1.09	-1.2
<1 year	2.38	2.0	2.76	2.2
<u>English Ability</u>				
'Well' or better (incl. N.S.)	0.0	-	0.0	-
'Not well' or not at all	2.04	2.9	2.18	3.1
<u>Family income (\$000 p.a.)</u>	-.0903	-4.4	-.0958	4.6
Family income squared (3)	.00115	2.8	.00126	3.0
<u>Father's occupation</u>				
Employee - Prof. & Managerial	-.452	-2.1	-.468	-2.2
- Clerical & Sales	-.435	-1.7	-.478	-2.0
- Trades & Manual	0.0	-	0.0	-
Independent				
- Prof. & Managerial	-.660	-1.3	-.702	-1.4
- Trades	-.866	-2.7	-.833	-2.6
- Other	-.459	-2.3	-.472	-2.4
Unemployed	.326	.8	.498	1.3
Not in Workforce	-.175	-1.5	-.155	-1.5
Occupation not stated	-.480	-1.3	-.434	-1.3
<u>Mother's occupation</u>				
Employee - Prof. & Managerial	.338	1.2	.351	1.2
- Clerical & Sales	-.197	-1.1	-.217	-1.2
- Trades & Manual	.239	1.4	.232	1.4
Independent	-.415	-2.1	-.450	-2.2
Unemployed	.841	1.6	.917	1.8
Not in Workforce	0.0	-	0.0	-
Occupation not stated	.379	.8	.430	.8
<u>Nature of Occupancy</u>				
Owner/purchaser	0.0	-	0.0	-
Housing Authority tenant	.455	2.7	.492	3.0
Other rental	.137	.9	.214	1.3
Other (inc. N.S.)	-.313	-1.4	-.312	-1.5
<u>Rooms per person in household</u>	-.396	2.7	-.382	-2.8
<u>Type of Region</u>				
Major urban or migratory	0.0	-	0.0	-
Other urban	.126	1.2	.147	1.3
Rural	.393	2.8	.382	2.8
<u>Residential Mobility</u>				
Moved in last year	.893	5.1	.926	5.3
Didn't move last year but have moved in last 5 years	.301	1.8	.333	1.9
Have not moved in last 5 years	0.0	-	0.0	-

Variables	With sibling terms included		With sibling terms excluded	
	Logistic regression parameters (1)	t , (2)	Logistic regression parameters (1)	t , (2)
<u>Siblings in Workforce</u>				
None in workforce	0.0	-	-	-
Some in workforce, none unemployed	-.369	-2.3	-	-
Some in workforce, some unemployed	-.387	1.0	-	-
Some in workforce, all unemployed	.960	4.0	-	-
McFadden's R^2	.13		.11	
Cragg-Baxter statistic	.18		.15	
N	3950 (for full sample)			

- Notes: (1) For youth aged 15-19, not in full-time education, in the workforce and living with both parents on census night 1981. Dependent variable is youth unemployment status - equal to 1 if unemployed, 0 if employed. The parameter estimates are obtained from the full sample. Zero parameter values represent reference categories of variables. These are also the modal categories.
- (2) Parameter estimate divided by its standard error. Absolute 't' values in excess of 1.96 indicate parameters are significantly different from zero at the approximate 5 per cent level. Note these 't' values are obtained from the model fitted to the sub-sample of one youth per household.
- (3) Turning point of quadratic relationship occurs at \$39,300 per annum and \$38,000 per annum for models with sibling terms included and excluded respectively.

Source: Australian Bureau of Statistics, 1981 Census of Population and Housing, 1% Household Sample File.

the model fitted to a subsample of one youth per household.

The models presented exclude those variables listed in Table 4.2 which did not significantly improve the goodness of fit of the model given the presence of the other variables (at the 5% level of significance). See above for the statistical procedure used. Further, some of the occupational categories were grouped together (indicated by brackets on Table 4.2) where preliminary analysis showed little difference of effect between the categories, and where they represented similar positions in the power structures of production. Parental incomes were also collapsed into one family income variable as this provided a simpler model without any significant loss of goodness of fit.

Additionally, we explored the interactions between some of the independent variables. The only interaction which was found to be statistically significant was that between sex and the impact of holding post-school qualifications. The interpretation of this result is outlined in Chapter 4.

The 't' statistics shown in Table A3.7 measure the significance of individual categories with variables. More precisely, for the categorical variables they measure the likelihood of the effect of the category being the same as the effect of the reference or modal category. A high value indicates that they are unlikely to be the same. These values should be viewed as only approximate given the model simplification that has been carried out, and as in all research, the parameters and significance tests obtained should always be viewed in conjunction with our theoretical understanding of the causes of youth unemployment.

As noted in the table, two models for youth unemployment are presented, one containing all the variables, which were found to be statistically significant, and the other identical except for the exclusion of the variable of sibling unemployment. It is this latter model which we feel is the more appropriate here, for sibling unemployment is more usefully considered as an associated rather than a causal variable of youth unemployment.

There was, certainly, a strong relationship remaining between the workforce status of the youth and their siblings even when controlling for the

other variables in the model (L.R. statistic = 27 at 3 d.f. : $p < .001$). As one would expect, however, the strength of this relationship is somewhat attenuated from that obtained without controlling for the other variables. Those youth with all their siblings unemployed had a 37 per cent unemployment rate in the raw data as opposed to a 27 per cent rate when controlling for other variables (Table 4.2). This attenuation indicates that the other variables in the model have captured some of the communalities of youth in the same family and household which cause them to have similar unemployment probabilities.

The association between sibling and youth unemployment measured in the logistic regression model in Table A3.7 can be described as comprising two types of factors

- (1) direct influences between siblings e.g., elder siblings setting examples or helping younger siblings to find work;
 - (2) communalities between siblings not measured by the model.
- The most obvious example of this is the varying unemployment rates in different regions of Australia due to widely different patterns of labour market supply and demand. Other communalities would include the effects of variables such as family wealth which we have been able to measure only indirectly, errors of measurement of the family and household variables in the model, and other family factors (such as attitudes towards education) which could not be measured.

Whether the first or the second of these types of factors is considered to be more significant will determine which of the two models in Table A3.7 is appropriate. If the first is considered the major mechanism, then it makes sense to add the sibling effect into the model like any other causal variable and discuss the effects of the other variables whilst holding it constant.

Whilst not entirely discounting the possibility of this direct inter-sibling employment effect we consider the latter set of factors to be the more likely explanation for the observed association between sibling unemployment. There is then no reason to control for sibling unemployment when looking at the effects of other variables, as there is no direct causal

link between sibling employment and youth employment. In this case the statistical significance of the variable sibling employment does not describe inter-sibling relationships, but instead indicates that there is a sizeable 'household component' of the variation in youth unemployment rates which our model has failed to capture. That failure arose through the exclusion of some variables which could not be measured, e.g. region, cultural attitudes etc. and the crudeness of measurement of others, e.g. income, wealth, class position, education etc.

The discussion in Chapter 4 concentrates on the variation in youth employment that we can explain by way of our measured variables and makes the assumption outlined above of excluding the sibling unemployment variable from the model. If, in fact, there is a direct causal link between sibling unemployment then our model will be mis-specified. The effects of the independent variables on youth unemployment should then be considered as the effect **including** that part of the effect that may have flowed via its effect on sibling employment. As can be seen from a comparison of columns 1 and 3 of Table A3.7, the effect of such a possible mis-specification is not large. The parameters of the two models display the same patterns and lead to similar conclusions. The effect of including the sibling variable in the model is to generally attenuate the parameters for the other variables, which is as we would expect if unemployment of the youth's siblings is determined by the same background factors as youth unemployment.

The fitted probabilities of Table 4.2 are derived from the model excluding sibling unemployment. However some fitted probabilities for sibling unemployment itself were included (in brackets) in order to describe the relationship of this variable to youth unemployment when controlling for the other variables.

SWRC Reports and Proceedings

- No. 1 J. Moller (ed), **Data for Welfare Decision Making**, September 1980, 51 pp. \$4
- No. 2 Peter Saunders (ed), **The Poverty Line: Methodology and Measurement**, October 1980, 54 pp. \$4
- No. 3 Michael Morrissey and Andrew Jakubowicz, **Migrants and Occupational Health: A Report**, November 1980, 92 pp. \$3
- No. 4 Jan Carter, **States of Confusion: Australian Policies and the Elderly Confused**, January 1981, 50 pp. \$3
- No. 5 Adam Graycar and David Kinnear, **The Aged and the State: A Working Paper**, Revised edition, September 1982, 119 pp. \$4
- No. 6 Michael Liffman, **Immigrant Welfare: A Research Perspective**, April 1981, 40 pp. \$3
- No. 7 Bettina Cass, **Unemployment and the Family: The Social Impact of the Restructuring of the Australian Labour Market**, April 1981, 55 pp. \$3
- No. 8 Adam Jamrozik and Marilyn Hoey, **Workforce in Transition: Implications for Welfare**, May 1981, 74 pp. \$4
- No. 9 Robert V. Horn, **Fiscal Welfare Effects of Changes in Australian Income Tax, 1972-73 to 1980-81**, May 1981, 59 pp. \$3
- No.10 Concetta Benn, **The Developmental Approach: Demonstration Programs in the Brotherhood of St. Laurence**, May 1981, 20 pp. \$3
- No.11 Bettina Cass (ed), **Unemployment: Causes, Consequences and Policy Implications**, August 1981, 72 pp. \$3
- No.12 Adam Jamrozik and Robin Beck, **Worker Co-operatives: An Evaluative Study of the New South Wales Worker Co-operative Programme**, August 1981, 178 pp. \$5
- No.13 Robert V. Horn, **Extra Costs of Disablement: Background for an Australian Study**, September 1981, 25 pp. \$3
- No.14 P.R. Kaim-Caudle, **Cross National Comparisons of Social Services Pensions for the Elderly**, September 1981, 47 pp. \$3
- No.15 Adam Jamrozik, Marilyn Hoey, Marilyn Leeds, **Employment Benefits: Private or Public Welfare?**, November 1981, 138 pp. \$3
- No.16 Linda Rosenman, **Widowhood and Social Welfare Policy in Australia**, January 1982, 75 pp. \$3
- No.17 Adam Graycar and Wendy Silver, **Funding of Non-Government Welfare: Agencies Serving Disabled People in Western Australia**, January 1982, 89 pp. \$3

- No.18 Vivienne Milligan and Margaret McAllister, **Housing and Local Government: An Evaluation of the Waverley Community Housing Officer Project**, February 1982, 109 pp. \$3
- No.19 Tania Sweeney and Adam Jamrozik, **Services for Young Children: Welfare Service or Social Parenthood?**, March 1982, 144 pp. \$4
- No.20 Adam Graycar (ed), **Aged Care - Whose Responsibility?**, March 1982, 49 pp. \$3
- No.21 Bettina Cass, **Family Policies in Australia: Contest over the Social Wage**, May 1982, 41 pp. \$3
- No.22 Tania Sweeney, **An Analysis of Federal Funding of Children's Services - A Sourcebook**, May 1982, 62 pp. \$3
- No.23 David Kinnear and Adam Graycar, **Family Care of Elderly People: Australian Perspectives**, May 1982, 63 pp. \$3
- No.24 Carol Keens and Bettina Cass, **Fiscal Welfare: Some Aspects of Australian Tax Policy. Class and Gender Considerations**, September 1982, 55 pp. \$3
- No.25 Jill Hardwick and Adam Graycar, **Volunteers in Non-Government Welfare Organisations in Australia: A Working Paper**, September 1982, 41 pp. \$3
- No.26 Robert Pinker, **Theory, Ideology and Social Policy**, October 1982, 23 pp. \$2
- No.27 Adam Jamrozik and Marilyn Hoey, **Dynamic Labour Market or Work on the Wane? Trends in the Australian Labour Force 1966-1981**, December 1982, 100 pp. \$4
- No.28 Adam Graycar, **Government Officers' Expectations of Non-Government Welfare Organisations: A Discussion Paper**, December 1982, 93 pp. \$3
- No.29 Jan Carter, **Protection to Prevention: Child Welfare Policies**, January 1983, 76 pp. \$3
- No.30 Peter Travers, **Unemployment and Life-History: A Pilot Study**, June 1983, 75 pp. \$4
- No.31 Jo Jarrah (ed), **53rd ANZAAS Congress: SWRC Papers**, June 1983, 118 pp. \$4
- No.32 Andrew Jones, **Selectivity in Children's Services Policy**, June 1983, 68 pp. \$4
- No.33 Ian Scott and Adam Graycar, **Aspects of Fiscal Federalism and Social Welfare**, July 1983, 80 pp. \$4
- No.34 Jo Jarrah (ed), **Child Welfare: Current Issues and Future Directions**, July 1983, 89 pp. \$4
- No.35 Carol Keens, Frances Staden and Adam Graycar, **Options for Independence: Australian Home Help Policies for Elderly People**, December 1983, 119 pp. \$5

- No.36 Diana Encel and Pauline Garde, **Unemployment in Australia: An Annotated Bibliography, 1978-83**, January 1984, 152 pp. \$5
- No.37 Stuart Rees and Anneke Emerson, **Disabled Children, Disabling Practices**, January 1984, 129 pp. \$5
- No.38 Chris Rossiter, David Kinnear and Adam Graycar, **Family Care of Elderly People: 1983 Survey Results**, January 1984, 100 pp. \$5
- No.39 Randall Smith, **Meals on Wheels in New South Wales: A Discussion Paper**, March 1984, 48 pp. \$4
- No.40 Bettina Cass and Mary Ann O'Loughlin, **Social Policies for Single Parent Families in Australia: An Analysis and a Comparison with Sweden**, March 1984, 86 pp. \$4
- No.41 Adam Graycar (ed.), **Accommodation After Retirement**, April 1984, 51 pp. \$4
- No.42 Linda Rosenman and Marilyn Leeds, **Women and the Australian Retirement Age Income System**, April 1984, 102 pp. \$5
- No.43 Ian Manning, **Measuring the Costs of Living of Australian Families**, April 1984, 70 pp. \$4
- No.44 Tania Sweeney and Adam Jamrozik, **Perspectives in Child Care: Experiences of Parents and Service Providers**, April 1984, 201 pp. \$5
- No.45 Ann Harding, **Who Benefits?: The Australian Welfare State and Redistribution**, April 1984, 147 pp. \$5
- No.46 Andrew Jakubowicz, Michael Morrissey and Joanne Palser, **Ethnicity, Class and Social Policy in Australia**, May 1984, 125 pp. \$5
- No.47 Rosemary Hooke (ed.), **54th ANZAAS Congress: SWRC Papers**, June 1984, 231 pp. \$5
- No.48 Graeme Brewer, **The Experience of Unemployment in Three Victorian Regions**, August 1984, 103 pp. \$5
- No.49 Ugo Ascoli, **Analysis of the Italian Welfare State: Some Implications for Current Australian Issues**, August 1984, 58 pp. \$5
- No.50 Chris Rossiter, **Family Care of Elderly People: Policy Issues**, December 1984. \$4
- No.51 Vivienne Milligan, Jill Hardwick and Adam Graycar, **Non-Government Welfare Organisations in Australia: A National Classification**, December 1984. \$5
- No.52 Richard Chisholm, **Black Children, White Welfare? Aboriginal Child Welfare Law and Policy in New South Wales**, April 1985, 150 pp. \$5
- No.53 Bruce Bradbury, Pauline Garde and Joan Vipond, **Bearing the Burden of Unemployment - Unequally. A Study of Australian Households in 1981**, August 1985, 102 pp. \$5

- No.54 Adam Jamrozik (ed.), **Issues in Social Welfare Policy 1985: Perceptions, Concepts and Practice** (SWRC Papers at ASPAA and ANZAAS), September 1985, 149 pp. \$5
- No.55 Adam Jamrozik (ed.), **Income Distribution, Taxation and Social Security: Issues of Current Concern**, January 1986, 150 pp. \$5
- No.56 Bruce Bradbury, Chris Rossiter and Joan Vipond, **Poverty, Before and After Paying for Housing**, February 1986, 101 pp. \$5
- No.57 Adam Jamrozik, Sarah Drury and Tania Sweeney, **Innovation and Change in the Child and Family Welfare System**, February 1986, 139 pp. \$5
- No.58 Diana Encel, **Unemployment in Australia: An Annotated Bibliography, 1980-85**, March 1986, 225 pp. \$5
- No.59 Ruth Errey, Carole Baker and Sarah Fox, **Community Care of the Aged: A Working Model of a Needs-Based Assessment Unit**, May 1986, 139 pp. \$5
- No.60 Adam Jamrozik (ed.), **Provision of Welfare Services to Immigrants** (Proceedings of SWRC Seminar, 26 May 1986), July 1986, 80 pp. \$4
- No.61 Adam Jamrozik (ed.), **Social Security and Family Welfare: Directions and Options Ahead** (Proceedings of SWRC Seminar, held in Adelaide, 4 July 1986), July 1986, 140 pp. \$5
- No.62 Jan Carter, **In Debt and Out of Work**, August 1986, 39 pp. \$3
- No.63 Don Stewart, **Workers' Compensation and Social Security : An Overview**, November 1986, 179 pp. \$5
- No.64 David Wiles, **Living on the Age Pension: A Survey Report**, June 1987, 108 pp. \$5
- No.65 Peter Saunders and Adam Jamrozik (eds), **Social Welfare in the Late 1980s: Reform, Progress, or Retreat?** (Proceedings of a conference held in Perth, Western Australia, on 27-28 March), June 1987, 180 pp. \$5
- No.66 Jill Hardwick, Jenny James and Fiona Brown, **Accommodation, Employment Policies and Services for People with Disabilities**, August 1987. 130 pp. \$5
- No.67 Peter Saunders (ed.), **Redistribution and the Welfare State: Estimating the Effects of Government Benefits and Taxes on Household Income.** (Proceedings of a Workshop held at the University of New South Wales on 13 May 1987. August 1987), 77pp. \$5.
- No.68 Sara Graham, **The Extra Costs Borne by Families Who Have a Child with a Disability**, September 1987, 146 pp. \$5
- No.69 Peter Saunders and Peter Whiteford, **Ending Child Poverty: An Assessment of the Government's Family Package**, December 1987. 86 pp. \$5
- No.70 Peter Saunders and Adam Jamrozik (eds), **Community Services in a Changing Economic and Social Environment**, December 1987. 165 pp. \$5