

Parliament of Australia

*Parliamentary Research Service*

Background Paper

The Australian Longitudinal Survey:  
Measuring the Dynamics  
of the Youth Labour Market

Tony Kryger  
Statistics Research Group

21 August 1990

*This paper has been prepared for general distribution to Members of the Australian Parliament.  
The views expressed in the paper do not necessarily reflect those of the Research Service or of any  
part of the Parliament.*

*The content of the paper may be attributed to the author.*

ISSN 1034-8107

Copyright Commonwealth of Australia 1990

Except to the extent of the uses permitted under the *Copyright Act 1968*, no part of this publication may be reproduced or transmitted in any form or by any means including information storage and retrieval system, without the prior written consent of the Department of the Parliamentary Library, other than by Members of the Australian Parliament in the course of their official duties.

Published by the Department of the Parliamentary Library, 1990

## CONTENTS

	<i>Page</i>
Executive Summary .....	1
1. Introduction .....	2
2. What is a Longitudinal Survey? .....	3
3. Description of the ALS and its Origin .....	3
4. Objectives of the ALS .....	3
5. Structure of the ALS .....	4
6. Data Items Collected .....	4
7. Recent Developments .....	6
8. Selected Findings .....	7
9. Access to ALS Data .....	9
10. Research Based on the ALS .....	9

## EXECUTIVE SUMMARY

This paper provides an insight into the establishment, since 1984, by the Department of Employment Education and Training, of a continuing study of a group of young Australians. With the ageing of the original survey sample, DEET introduced a new sample, in the "Australian Youth Survey", interviewed for the first time in 1989.

This is the first large scale survey of this kind in Australia. By interviewing the established sample over a number of years, the Longitudinal Survey can explore matters which are not explicable by other survey approaches. The objective has been to answer questions about the operation of the labour market, with the focus in the area of high youth unemployment.

The author, now with the Statistics Research Group, was previously engaged on the project.

The paper provides access to what is expected to be a growing research resource, dealing with the transition from school to work and with labour force experience of young people. The information on individuals allows for comparison of experience with regard to family background, education, duration of employment and unemployment, job training, job satisfaction and income, and (reported) psychological well-being.

The findings of the survey between 1985 and 1988 are of importance not by being surprising; their significance would seem to be in the fact that the survey documents in a factual way some critical relationships between social circumstance, which are often assumed. Some are not as clearly expected. Even where not surprising, however, the representation of trends in such factual terms facilitates focus on problems of entrenched disadvantage. For example:

- the categories most prone to unemployment include those who at 14 are not living with both parents, those with father unemployed, those with health problems affecting ability to work
- the longer the experience of unemployment in the first 12 months of the survey, the greater the average duration of unemployment in the last 12 months
- those at school in 1985 who had the highest rates of achievement in 1988 tended to be female, had a parent with a degree, had a father in a white collar job, or had a private school education
- there is a direct link between state of employment and psychological well-being
- of those who had just left school in 1985, before Year 12, males were earning more than females in 1988; the earnings of males and females who completed Year 12 were about equal.

## 1. Introduction

The Australian Longitudinal Survey (ALS) is a continuing study of a group of young Australians, with particular emphasis on the youth labour market. It is a major survey, covering large numbers of both people and data items.

The ALS is managed centrally by the Economic and Policy Analysis Division of the Department of Employment, Education and Training (DEET). The survey is conducted in the field by market research companies (currently Reark Research) under contract to the Department.

Labour market research in Australia has largely been based on data from the monthly ABS Labour Force Survey and other cross-sectional (or point-in-time) sources of data. Australia is well served by these data sources, and the data they generate have been extensively exploited in the analysis of labour market problems and the development of policy. There are however, many issues which cannot be addressed using cross-sectional data, such as the job search process, the effect of unemployment on subsequent labour market experience, the role of training, and the school to labour market transition. These issues, and more, are covered by the ALS.

The dynamic nature of the ALS allows 3 kinds of analysis which are not possible using cross-sectional data. These are:

- **Gross Flow Analysis** – ALS data permit measurement of the flow of people in and out of different labour force states. (Limited flow analysis is possible using Labour Force Survey data with seven-eighths of the sample common between any two consecutive months – one-eighth of the sample being rotated out of the survey each month)
- **Causal Analysis** – ALS data are available in a time sequence that is important in clarifying the direction as well as the magnitude of relationships among variables.
- **Event History Analysis** – This focuses on the timing, frequency, concentration and duration of particular events as well as their causes.

The importance of the ALS as a tool for conducting research into labour market issues is therefore considerable. The purpose of this paper is to describe the ALS and to further emphasise its importance, both in terms of research undertaken and its potential for further research.

## 2. What is a Longitudinal Survey?

A longitudinal survey is one which is designed from the outset to measure change over time in the unit under investigation. The units are usually individuals but may also be households, firms or organisations. Data are collected through repeated survey, e.g. once a year, of the same unit. The composition of the sample in a longitudinal survey is therefore the same from one survey period to the next.

Longitudinal surveys differ significantly from the more traditional cross-sectional surveys in which a new sample is selected each time a survey is required. Hence, cross-sectional surveys permit analysis at an aggregate level (e.g. how much) but allow little analysis of the relationship between one event and another. Analysis of this nature requires the collection of data over a long period of time from the same unit (individual, household etc.) – that is, a longitudinal survey.

## 3. Description of the ALS and its Origin

The Australian Longitudinal Survey is a continuing study of a group of young Australians aged 15-24 in 1984. It was set up to explore the dynamics of the youth labour market, and thereby to help answer questions about how the labour market works.

The decision to conduct a longitudinal survey had its origin in the concern of the Australian Government for the problem area of the labour market for youth. Youth unemployment rates have been up to 2 to 3 times that of older participants and the development of programs and policies specific to the young has required data not available from traditional cross-sectional studies. In particular, cross-sectional studies cannot provide information on how unemployment affects people and their future employment prospects. As a result, the (then) Bureau of Labour Market Research was commissioned to undertake a longitudinal study of Australian youth.

It should be noted that while there have been a number of longitudinal surveys conducted in Australia, the ALS was the first large scale survey, in the sense of covering large numbers of both people and data items. Most of the other longitudinal surveys have been based on school leavers; with an initial interview at school and mail follow-ups at different periods (Blandy and Richardson 1982, Williams 1981, and Dowling and O'Brien 1979). While these surveys have been valuable, it has not been possible for them to closely control attrition nor to ask a wide range of questions. The ALS therefore represents the most substantial longitudinal study in Australia of both the unemployed and the wider community.

## 4. Objectives of the ALS

The main objective of the ALS is to enhance understanding of the dynamics of the youth labour market. This is a very broad statement, encompassing many issues such as:

- How many people experience unemployment, and how many people experience unemployment for protracted periods? Is unemployment concentrated in one small group, or is it spread thinly over a large group? (see 8.1)
- Does early experience of unemployment increase chances of later prolonged spells of unemployment? (See 8.1)
- Do people who experience protracted periods of unemployment suffer the same/more/less difficulties than people who experience a large amount of unemployment in a number of spells spread out over a period of time?

- How do people who experience protracted spells of unemployment change over the period of the spell, with respect to, for example, health, income, job search activity and family formation?
- Should job creation programs aim at producing many short-term jobs or few long-term jobs – that is, do people benefit in the long-term from having short-term jobs?
- What are the effects of education on later labour force experience? (See 8.2)
- What is the influence of part-time work while at school on later labour market outcomes? (See 8.2)
- What are the standard patterns of transition from school to work? What are 'normal' patterns of youth labour turnover? Which groups are likely to experience short/long transition durations?
- Do incomes increase more for persons who change their occupation than for those who remain in the same occupation? (See 8.4)
- Does the probability of leaving an unemployment spell increase or decrease with the duration of the spell? (See 8.6)

## 5. Structure of the ALS

The ALS consists of 2 samples of people who were aged 15-24 in 1984 – a sample of long-term unemployed youth who had been registered with the Commonwealth Employment Service (the CES sample), and a nationally representative sample of young people of the same age (the Youth sample).

The CES sample was first interviewed in 1984, with data collected from about 2400 respondents. They were interviewed again in 1985, 1986 and 1987. The aim of this sample was to provide information about the particular problems of the long-term unemployed, and to identify factors which predispose people to entering this group.

The Youth sample commenced in 1985, with 9000 young people (aged 16-25 in 1985) selected randomly across Australia. This group was reinterviewed in each of the years 1986, 1987 and 1988.

Following reviews in 1987 and 1988 changes were made to the ALS program. Enumeration of the CES sample was discontinued after 1987. The Youth sample, whilst continuing, is now conducted as a telephone survey (prior to 1989 information was collected by personal interview), with a subset of the original sample – respondents now leave the sample after the year in which they turn 25.

## 6. Data Collected

The core of data collected in the ALS is labour market experience. There is a major section on current labour market status which includes considerable detail on the nature of the current job and other jobs held in the last year, as well as the nature of job search activity. Recall information on the labour market experience of respondents over the last 12 months is plotted in some detail on a calendar, which provides a weekly record of all jobs held and spells of looking for work.

In order to explain labour market experience, data are collected on the person's background, education and current household information. In addition, issues which are related to labour market experience, such as training, working conditions, job satisfaction, health, housing and income are also covered.

A description, in outline, of the data collected in the ALS is provided below:

Household Details:	Age, sex, employment status and income of all household members. Data to allow derivation of household and income unit codes.
Family Background:	Birthplace of respondent and parents, where lived at age 14 and who lived with, education and occupation of parents when respondent was 14, languages spoken.
Marital Details:	Marital history, education and labour force background of current spouse.
Secondary Schooling:	Level of schooling reached, reasons for leaving or staying, aspirations, ability.
Educational Details:	When left school, highest level of education achieved, current education.
Transition from School to Work	Duration from study to first full-time job, duration of first full-time job, occupation in first job.
Labour Force Status:	Current labour force status, details of current job, details of job search methods and difficulties finding work, reservation wages, reasons not looking for work, childcare problems.
Calendar:	History of all jobs, periods of job search and periods of study in the preceding 12 months.
Commonwealth Employment Service:	Whether registered, number of referrals, main occupation in working life.
Job History:	Details of up to 4 most recent jobs.
Job Training:	Whether had job training, purpose of training, benefits of training, use of Government Training programs.
Job Satisfaction and Employment Conditions:	Satisfaction with a wide range of aspects of employment conditions such as sick leave, recreation leave, private use of vehicle.
Health:	Disability limiting amount or type of work respondent can do, changes in health over last 12 months, general health questionnaire.
Income:	Details of current and financial year income, housing and motor vehicle ownership.



## 7. Recent Developments

### 7.1 Specific Purpose Data Sets

To facilitate access to some of the data collected from the Youth sample, DEET has created two specific purpose data sets. One of these summarises each respondent's labour market history over the 4 years to 1988; the second describes the process of transition from school to (further education and) work.

#### 7.1.1 Labour Market History

As previously noted, the calendar section of the ALS records details of each respondent's labour market history in the period between surveys. This is achieved by entering on the calendar the start and finish date of each job and period of job search. This information has now been linked over the 4 years to 1988 to give a continuous record of each job, period of job search, period of unemployment, period out of the labour force, and period of employment.

Other variables in the data set summarise the number of spells and total weeks in employment, unemployment and weeks out of the labour force. As well, there is a variable which identifies each job held in the survey period, so that by linking to the main data set, individual job detail can be accessed.

#### 7.1.2 Transition from School

This file summarises the data collected on the process of transition from school. Summary variables created describe the transition path (whether into further full-time study or work); whether or not the transition has been completed; transition duration (i.e. time between school/study and first full-time job); date left school/study; duration of first full-time job; occupation and industry of first full-time job; and first full-time job identifier.

This file will be useful for researchers interested in the transition process. Again, unit records can be linked back to the main data set to enable access to variables such as sex, age, school type, educational achievement etc.

### 7.2 Australian Youth Survey

When the Youth sample was first interviewed in 1985, respondents were aged 16-25 years. Now, 5 years later, it continues to provide data about labour market entry and advancement, and post-school education. Its ageing, however, means it is of little use in analysing current school retention, or school to work transition. To maintain up-to-date data on these and other issues, DEET has introduced another cohort to its longitudinal survey program. Known as the Australian Youth Survey, this cohort was interviewed for the first time in 1989. It comprises 7000 people aged 15-19 (the 15 year olds are not interviewed until they turn 16), who provide similar data to that provided by the Youth sample.

## 8. Selected Findings

Following are some selected results based on the labour force experience of the Youth sample between 1985 and 1988.

### 8.1 Unemployment

Over the 4 years to 1988, nearly half of all respondents experienced at least one completed spell of unemployment (i.e. a spell of unemployment that had both a start and finish date which fell within the 4 year period). Of these, 46 per cent experienced less than 3 months total unemployment. Unemployment experience is unevenly distributed among the unemployed - for example, 49 per cent of the unemployed experienced one completed spell of unemployment but accounted for only 27 per cent of all weeks spent in unemployment.

The average completed spell of unemployment was 13.1 weeks. Two choices mark the end of a spell of unemployment: people either get jobs or leave the labour force. Individuals who got jobs were unemployed on average for 12.3 weeks, while individuals who left the labour force were unemployed on average for 15.7 weeks.

Almost three-quarters of all survey participants changed their labour force status sometime during the survey. Of those leaving employment, more moved out of the labour force than moved to unemployment. Of those leaving unemployment, more moved to employment than moved out of the labour force.

Over half (59 per cent) of the unemployed in 1985 had found either full-time or part-time work by 1988. This early period of unemployment however, was strongly associated with later unemployment experience. Individuals unemployed in 1985 represented a third of all unemployed persons in 1988. The longer the experience of unemployment in the first 12 months of the survey, the greater the average duration of unemployment in the last 12 months.

The median duration of unemployment experienced in the first 12 months of the survey by those who were ever unemployed in this period was 14 weeks. Of those persons who were unemployed for long periods (over 14 weeks) some types of individuals were more likely than others to be in jobs in 1988. These individuals are more likely to be male; to have had a high level of psychological well-being in 1985; to have a father in a 'white collar' occupation; or to have lived with both parents at age 14.

Even when individuals found work after undergoing long periods of unemployment, many continued to occupy disadvantaged labour market positions in 1988. These individuals were more likely to be in short-term jobs; to be in 'blue-collar' jobs; not to have employment benefits such as paid recreation leave, paid sick leave, or employer based superannuation; and to be paid less.

Four groups of people were especially prone to unemployment. They were people aged 16 or 17 years in 1985; who were not living with both parents at age 14; who at age 14 had a father who was not employed; or who in 1985 had health problems which affected their ability to work.

### 8.2 Education

Of those students who were in Year 12 in 1985, approximately half were studying full-time in 1988 (mostly in higher education), 18 per cent were studying part-time and, of the remainder, almost all were employed.

By 1988, 58 per cent of all 1985 school students had either reached or were studying at a level, that equalled or exceeded their educational aspirations as expressed in 1985. Socio-demographic characteristics, however, had a major affect on educational achievement. 1985 school students with the highest rates of achievement by 1988 tended to be those who were female, who had a parent with a degree, had a father in a 'white-collar' job or had a private school education.

Of persons who obtained their last educational qualification in 1985, university and college graduates were more likely than other graduates to have a job in 1988 which was 'white-collar'. Moreover, university and college graduates experienced less unemployment in 1988 and were more highly paid.

Full-time students in 1985, who also had a job, were more likely to be in full-time employment in 1988 than their counterparts in education who did not have a job in 1985. Moreover, full-time students who held a job in 1985 tended to have better quality jobs in 1988 than those students who did not work in 1985.

For persons who left school in the 12 months prior to the 1985 survey, the full-time wage was higher in 1988 for Year 12 leavers than for leavers from any of the earlier grades. Of those persons who left school before completing Year 12, males were earning more in 1988 than females. In contrast, the earnings in 1988 of males and females who left school after Year 12 were about the same.

### 8.3 Health

Changes in psychological health are strongly associated with changes in labour force status. Between 1985 and 1988, people who moved from unemployment to employment experienced, on average, an improvement in their psychological well-being while those who moved in the opposite direction suffered a deterioration. On the other hand, there did not appear to be any link between the (self-perceived) physical health of respondents and changes in their labour force status.

An interesting feature of the survey is that as people age, they experience (on average) an improvement in their psychological well-being, even assuming no change in their labour force status.

### 8.4 Occupational Change

For all full-time workers except those in the managerial/professional group in 1985, real incomes increased more for those who changed their occupational group between 1985 and 1988 than for those who stayed in the same occupational group.

Thirty-eight per cent of full-time employed persons were in a different occupational group in 1988 from that of 1985. Those who changed their occupational group tended to be male, to have no higher education, to have been employed in a manual, sales or processing occupation in 1985, to have not received any formal job training in their 1985 job and to have been dissatisfied with their 1985 job.

More than half of all persons who left the trades group of occupations after 1985 had moved to a 'white collar' job by 1988. Of those who left, the great majority had moved into a managerial/professional occupation by 1988. With this exception however, most people who left 'blue collar' occupations moved to other 'blue collar' occupations. In addition, most people who left 'white collar' occupations moved to other 'white collar' occupations.

### 8.5 Industry Change

Forty per cent of full-time employed persons were in a different industry sector in 1988 from that in 1985. Those who changed their industry sector tended to be males, to be younger (i.e. less than 22 years), to have been employed in the public administration or transport/storage sectors in 1985, to have not received any formal job training in their 1985 job and to have been dissatisfied with their 1985 job.

## 8.6 Expected Duration and Probability of Leaving Unemployment

The experience of the survey sample over the 4 years to 1988 showed that as the duration of an unemployment spell increased, so the average number of weeks of unemployment remaining within the spell also increased. For example, persons unemployed for 1 month, remained (on average) unemployed for a further 17 weeks; persons unemployed for 3 months remained unemployed for a further 21 weeks.

The survey also showed that the probability of leaving unemployment decreased as the duration of an unemployment spell increased. For example, persons unemployed for 1 month had a 29 per cent chance of not being unemployed 1 month later; persons unemployed for 3 months had an 18 per cent chance of not being unemployed 1 month later.

## 9. Access to ALS Data

There are 3 ways of accessing ALS data:

- Published research (see 10.)
- Requests for statistical tables from the Economic Analysis Branch of DEET
- Publicly available unit record data files held at the Australian National University Social Science Data Archive.

It should be noted that the ALS is a voluntary survey and all information collected is strictly confidential. Consequently, no information can be obtained which would allow identification of individual respondents.

## 10. Research Based on the ALS

A list of all research undertaken using ALS data will soon be available in a DEET publication entitled **Australian Longitudinal Survey, 1990 – A Research Bibliography**. Some of the major research papers are listed below:

Bureau of Labour Market Research, *Structural Change in the Labour Market*: Chapter 9. BLMR Report No 11, Canberra, 1987.

Bradbury, B., McRae, I., Woyzbun, L., *Families & Early Labour Market Experience: An Analysis of Siblings*. Australian Journal of Statistics, Vol 31a, August 1989.

Brooks, C., *An Analysis of Factors Influencing the Probability of Transition from Unemployment to Employment for Australian Youth*. BLMR Working Paper No 63, Canberra, June 1986.

Brooks, C., Volker, P., *The Influence of Unemployment Duration and Heterogeneity on the Transition from Unemployment for Australian Youth*. BLMR Working Paper No 55, Canberra, May 1985.

Dawkins, P., Robertson, F., *Part-time Employment in the Labour Market*. Paper for Australian Labour Market Research Workshop, ANU, September 1989.

Economic Analysis Branch, *State Effects in School Retention*. DEET, Canberra, June 1988.

Eyland, A., *Young Unemployed and the Search for Work*. BLMR Working Paper No. 58, Canberra, January 1986.

Eyland, A., Johnson, L.W., *Dynamics of Long-Term Unemployment among Australian Youth*. Paper to 57th Anzaas Congress, James Cook University, August 1987.

Eyland, A., Johnson, L.W., *Transition from Full-time Study to Work*, Australian Journal of Statistics, Vol 31a, August 1989.

Flatau, P., *Involuntary Unemployment in the Youth Labour Market*. Paper to 1988 Economics Conference, University of Western Australia.

Kryger, T., *The Australian Longitudinal Survey, 1985 to 1988 – Dynamics of the Youth Labour Market*, Monograph Series No. 4, DEET, June 1990.

Maas, F., *The Abolition of Junior Unemployment Benefit – Who Should Bear the Cost?* Bulletin of the National Clearing House for Youth Studies, Vol 6, No 3, pp 14-16, August 1987.

Maas, F., *Young People's Incomes, Living Arrangements and Labour Force Status*, Report to the Youth Affairs Council of Victoria, February 1988.

McRae, I., *Young People Looking for Work*, Bulletin of Labour Market Research No 8, March 1986.

McRae, I., *What Happens to the Young Unemployed – Some Facts from the Australian Longitudinal Survey*, ALS Working Paper No. 9, Canberra, September 1986.

McRae, I., *Flexibility in the Youth Labour Market*, Paper to Anzaas Centenary Conference, Sydney, May 1988.

McRae, I., *Data About Young People – The Australian Longitudinal Survey*, Paper to Econometrics Department, The Faculties, ANU, August 1986.

McRae, I., *Entering the Labour Force: Who are the New Workers?* Seminar Paper to International Sociological Association, Canberra, November 1987.

McRae, I., Karmel, T., *What Happens to Unemployed Kids*, Paper to Social Research Conference, Brisbane, September 1988.

McRae, I., Merrilees, B., *Long-Term Unemployed Youth: Who are they and how do they improve their Employment Status?* Paper to 16th Conference of Economists, Surfers Paradise, August 1987.

Miller, P., *Trade Unions and Job Satisfaction*, Mimeo, Dept of Economics, January 1989, University of WA.

Miller, P., *The Structure of Aboriginal & Non Aboriginal Youth Employment*, Australian Economic Papers, (Forthcoming)

Miller, P., *Training in the Youth Labour Market in Australia*, Report to Department of Employment, Education & Training, Canberra, January 1989.

Miller, P., *Low Wage Youth Employment: A Permanent or Temporary State*, Economic Record, pp 120-135, June 1989.

Miller, P., Volker, P., *Socio-Economic Influences on Educational Attainment: Evidence & Implications for the Tertiary Education Finance Debate*, Australian Journal of Statistics, Special Volume 31a, August 1989.

Miller, P., Rummery, S., *Unionism and the Structure of Male Wages in the Youth Labour Market*, Dept of Economics, University of WA, January 1989.

Miller, P., Volker, P., *The Youth Labour Market in Australia*, Economic Record, pp 203-219, September 1987.

Prior, H., Beggs, J.J., *Influence of Family Background on the Educational & Labour Force Outcomes of Year 12 School Leavers*, Australian Journal of Statistics, Volume 31a, August 1989.

Scott, A., *Youth Wages Relegated to the Past*, Journal of Youth Affairs, Vol 4, No 2, Winter 1989.