They Get Knocked Down. Do They Get Up Again?
Displaced Workers in Britain and Australia*

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"I get knocked down, but I get up again"
Chumbawomba, 1997

1. Introduction

Industrial restructuring, changes in technology, and recession are all associated with worker displacement, the involuntary separation of an employee from a job. Workers also leave jobs for personal reasons, but because these are considered voluntary actions and presumably not as closely linked with economic hardship, there is less concern over the consequences of this type of movement. The media in Britain and Australia, and perhaps because of this the general public, are also preoccupied with the idea of declining job security (see for example, Dawkins et al., 1998). Whilst job security is difficult to quantify, public concern could arise not only from a belief that a long-term employment relationship is now less likely, but also be from a belief that, if unlucky enough to lose a job, the replacement job is likely to be of lower quality, to pay lower wages and be less stable.

In this chapter we examine the consequences of job loss for displaced workers in Britain and Australia. Fallick (1996) and Kletzer (1998) provide useful summaries of over ten years of research into the issue in North America. As yet, however, the evidence from Britain and Australia is sparse.

For Britain, Gregory and Jukes (1997) provide the first evidence of the effects of unemployment on the subsequent earnings of a sample of unemployed male benefit claimants. They find, on average, an earnings penalty of around 10 per cent compared with men who remain in jobs. The research in this chapter draws on data from the British Household Panel Survey, (BHPS), over the period 1991-96 to broaden the scope of inquiry on job displacement in Britain by including all unemployment spells (claimant or otherwise) and spells of economic inactivity, (allowing for discouraged job seekers), together with information for women and/or part-time working. The analysis highlights which groups are most likely to experience displacement, which groups are most likely to get back into work and the earnings changes

associated with re-entry into work.

For Australia, a range of case study-type evidence is available which suggests that displaced workers face considerable difficulties in obtaining new jobs, but does not provide clear conclusions on the effects of displacement on future wages (Borland, 1998). In this chapter data from two sources is used to seek to extend existing research. First, aggregate-level data from the Australian Bureau of Statistics (ABS) and Labour Force Survey (LFS) is used to describe patterns and trends in the incidence of displacement and labour market outcomes for displaced workers. Second, individual-level data from the Youth in Transition Survey (YTS) is used to examine the consequences of displacement for young workers in Australia in the mid-1980s and early 1990s. The analysis provides a more detailed treatment of post-displacement employment and wage outcomes for displaced workers in Australia than in previous studies - for example, by presenting information on average employment outcomes over the two-year period following displacement.

The next section provides background information on the labour markets in Britain and Australia in the 1980s and 1990s. Section 3 describes the institutional and legal framework surrounding job displacement in Britain and Australia. Section 4 outlines the data sources used for each country, and presents findings from analysis of the incidence of displacement and the consequences of job loss. Section 5 presents a summary of the main results for each country, as well as attempting to present a comparative perspective on how institutional differences between Britain and Australia might have affected wage and employment outcomes for displaced workers in those countries. Differences between the data sources - in particular, the Australian data source is restricted to younger workers whereas the British data source covers all age groups - mean that the scope for such comparisons is somewhat limited. However, some conclusions regarding the role of institutional factors are attempted.

2. Labour Market Background

a. Britain

At the beginning of the nineties, Britain entered a recession that was to last until the end of 1992. Unemployment reached a peak, of around 3 million, some 10.5% of the workforce, in the Spring of the following year[1]. The recession primarily affected men. Male employment fell by 1.3 million in the three years between 1990 and 1993, whilst female employment fell by only

150,000 over the same period. The economic downturn helped increase the movement of many men, mostly, but not entirely, over 50, into economic inactivity. The number of men outside the labour force grew by around 700,000 over the recession period and continued to rise over the rest of the nineties, albeit more slowly. Manufacturing and the distribution and retail sectors bore the brunt of the fall in employment. 600,000 jobs were lost in manufacturing between 1990 and 1993 and 400,000 jobs in distribution and trade. Younger workers were worst hit by the recession. The employment rate for those aged 20-24 years fell from 75.5% to 66.0%, some 500,000 workers, from 1990 to 1993, compared with the national fall from 75.2% to 70.6% over the same period.

The labour market in the early years of recovery was dominated by a rise in the share of part-time and temporary jobs. By the end of 1996, when the British sample ends, the employment rate had recovered to 72%, up by some 600,000 from its 1993 low. 200,000 of net new job creation was full-time and 400,000 part-time work. Half of the net growth in employment was accounted for by temporary jobs. Youth (20-24) employment, however, fell by a further 300,000. This may, in part, be explained by an increased enrolment in tertiary education. Three quarters of all net employment growth between 1993 and 1996 was accounted for by the public sector and finance industries. Over the same period the increase in earnings inequality begun at the start of the eighties continued apace until 1996, since when inequality has stopped rising. By 1996, the gross hourly earnings of the lowest decile had fallen to 53% of the median, whilst hourly earnings of the top decile had risen to 220% of median earnings. The typical entrant back into work after a spell of non-employment could expect to receive earnings around the bottom quartile of the aggregate earnings distribution, some 69% of median earnings in 1996.

b. Australia
Individual-level data on displaced workers in Australia used this study are from the early to mid-1980s and early 1990s, and primarily for workers aged 18 to 22 years. Hence in this sub-section a range of descriptive information on the Australian labour market in the 1980s and 1990s - in aggregate and for persons aged 15-24 years - is presented.

Figure 1 displays the rates of unemployment in Australia for persons aged 15-24 years and 15-64 years between 1978 and 1995. Throughout the period the rate of unemployment for younger persons has been higher than for the whole working age population. Time-series movements in

each series have however been similar. In the early 1980s - between 1981 and 1983 - the rate of unemployment increased significantly, but this change was largely reversed by the late 1980s. From 1989 to 1993 the rate of unemployment again increased. Some reversal of this increase has now taken place. In May 1998 the rate of unemployment for the working age population was at 8 per cent. The incidence of unemployment - as well as being higher for younger than older labour force participants - has been particularly high for labour force participants with low levels of educational attainment or whose last job was in an unskilled blue-collar occupation, and for some immigrant groups (Borland and Kennedy, 1998).

Changes in employment/population and labour force participation rates have also taken place in the 1980s and 1990s. The aggregate employment/population rate has varied pro-cyclically but has displayed little overall trend. However, the stability of the aggregate employment/population rate disguises opposing trends for males and females. Figures 2a and 2b show that the employment/population rate for males has declined from the late-1970s onwards and for females has increased over that period. Aggregate labour force participation has varied pro-cyclically while also displaying a slight upward trend. In particular, large increases in labour force participation occurred during the period of economic recovery in the 1980s. For females labour force participation has increased since the mid-1970s while for males there has been a decrease in participation over this period (Gregory, 1991, and EPAC, 1996). Figure 3 presents information on employment and labour force participation for persons aged 15-24 years between 1978 and 1995. Labour force participation has remained relatively constant throughout this period. However significant changes have occurred in the composition of employment - the full-time employment/population rate has declined whereas the part-time/employment population rate has increased fairly consistently. Underlying the change in the composition of employment has been an increase in schooling and university participation.

Figure 4 shows that average real weekly earnings increased in the early 1980s, declined during the rest of the 1980s, and then increased somewhat during the first part of the 1990s. These changes have been similar for adults and youths - although declines in the 1980s were larger for youths than adults. (This latter finding is most likely due to effects of changes in the composition of the full-time youth labour force.) Earnings dispersion was relatively stable from the early to late 1980s, but then increased during the first half of the 1990s (Gregory, 1993 and Borland and Wilkins, 1996).

3. Institutions

Institutional factors are generally supposed to have an important role in determining both the incidence of worker displacement and subsequent outcomes for displaced workers. In this section we identify the key institutional features which are likely to be relevant for understanding what happens to displaced workers - employment protection legislation; the unemployment benefit system; and wage-setting institutions. Employment protection legislation may affect whether and how firms are able to lay-off workers. Differential costs of lay-offs may also influence the incidence of worker displacement. Unemployment benefits may affect the jobless duration and search activities of displaced workers. Wage-setting institutions help determine both the wages displaced workers surrender and wages at re-employment.

a. Britain

i. Employment protection

How easy is it for firms to make their employees redundant in Britain and what are the costs to firms? Employment Protection Legislation, as covered by the Statutory Redundancies Payments Scheme (1965), has operated largely unchanged since its inception. This covers mandatory severance pay, advance notice, legal requirements and procedures for dismissal. There are relatively few legislative constraints on the ability of firms to make redundancies. The qualifying period before general rights exist to claim redundancy payments and unfair dismissal was extended first from 6 months to 1 year in 1979, and then to 2 years in 1985 for full-time jobs and 5 years for part-time jobs. In 1995, an EU anti-discrimination ruling was brought in which equalised the qualification period at 2 years tenure for all. If the worker qualifies for redundancy rights then the entitlements are as follows:

-there is a minimum notice period of 1 week for each year of service, up to a maximum of 12 weeks.

-an employer must make a lump sum payment to any employee dismissed because of redundancy, calculated using a formula based on length of service and age. This is then multiplied by the worker's weekly earnings, (with a ceiling imposed currently at £210), as follows

   0.5 weeks' pay for each complete year of service between ages 18-21,

   1 weeks pay for each complete year of service between ages 22-40,

   1.5 weeks pay for each complete year of service between ages 41-60.

There is a maximum, notional, service period of 20 years. Service before age 18 and after age 60 does not count towards redundancy compensation entitlement. Since qualification for these general rights requires 2 years tenure, then the minimum notification period is 2 weeks, irrespective of hours worked, and the minimum compensation lies between 1-3 weeks' pay. The maximum possible amount an employer must pay as a statutory redundancy payment is £6,300, (20*1.5*210), around one third average annual earnings. Unions tend to negotiate supplements that raise the compensation and notification period substantially. Employers sometimes therefore make larger payments as an incentive for the workforce to take "voluntary" redundancy. A statutory redundancy payment is not liable to tax, and any non-statutory 'golden handshake' is also tax free if it is under £30,000. If the employer doesn't make the statutory payment, the employee must present a complaint in writing to an Industrial Tribunal within 6 months. The right to time off, to look for work or make arrangements for training, during the period of dismissal notice, exists after 2 years of employment. There is a penalty of 2/5ths of weekly pay for each week overlooked if the employer does not allow this. The employee also has the right to have recognised trade unions consulted by employers before redundancy proposals are put into effect. This requires no minimum length of employment. Employers wishing to make 100 or more workers redundant at the same time are obliged to give 90 days notice to the Secretary of State for Employment and consult with the employee's representatives. Firms wishing to make between 20 and 100 workers redundant are obliged to give 30 days notice to the same parties, (Selwyn, 1996). Workers on fixed term contracts are excluded from redundancy rights if they agree in writing to exclude their rights to make any claim, even if the post lasts for more than two years. Such a clause is now common to many fixed term contract agreements. General rights apply against 'unfair dismissal' after 2 years with award of compensation by an Industrial Tribunal if a claim is made within 3 months of the dismissal. For example, any employer who dismisses a woman for some reason connected to her pregnancy may well be dismissing her unfairly.

ii. Unemployment Benefits

Once displaced, what can workers expect to receive from the state? To receive any benefit the worker must first register with the state Employment Service and sign a, weekly, declaration that they are available for, and actively seeking work. The British unemployment benefit system encompasses both contribution based insurance, (UI) and means tested assistance, (UA). Both benefits are paid out of general taxation revenue. National Insurance Contributions (NIC) are

compulsory for all employees earning above a minimum level, currently £63 a week, as a given percentage of gross pay. Employees who do not pay NICs are not eligible for UI payments and must therefore apply for means tested assistance. No contributions are required on jobs paying below £63 a week, but NICs are levied on all earnings once the wages rise above this threshold. This profile creates what is called an 'entry fee' whereby crossing the line incurs a sharp rise in the tax burden. So more part-time jobs may be created than otherwise and this may affect the new job wage offer distribution and hence the cost of job loss[i].

To be entitled to contributory unemployment benefit a displaced worker must have been employed for 2 years continuously immediately prior to displacement and earned a wage higher than the contribution lower limit (£63 per week). Before 1988 a worker could have been credited with NICs during a spell of unemployment and still qualified for benefit. Since 1983, unemployment benefit in Britain has been paid at a flat rate irrespective of previous earnings, £48.25 in 1996, for a set period. In 1996, the duration period for receipt of UI was reduced from 12 to 6 months. After exhaustion of UI, claimants are transferred to means-tested assistance payments. This benefit is levied at the level of the household rather than the individual, and pays a claimant the difference between the household's weekly net income and their needs level or 'applicable amount'. UI claimants can claim a UA top up simultaneously as the flat rate UI payment is normally below the amount a family would get on UA. In addition those living in rented accommodation can claim, means-tested, help with their housing costs, (Housing Benefit). Successful claimants will normally have all of their rent paid, save a nominal amount. Those in owner occupation can claim help with their mortgage payments after a spell of unemployment of 6 months. Council Tax Benefit, help with local authority taxes, is also paid to those on means tested benefit, such that 100% of Council Tax is paid.

Individuals can receive means tested assistance indefinitely, provided they satisfy eligibility requirements. For an unemployed worker this requires a weekly declaration of availability for work at the local Jobcentre, administered by the government Employment Service. Recent attention has been given to the growing numbers of economically inactive men of working age. Over most of the period covered by this paper, many of these individuals are claiming long-

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[i] The government explicitly recognised this problem in its 1998 Budget, raising the zero contribution threshold by one third and imposing a flat NIC rate of 12.5% on all earnings above this threshold. This change came too late for the period covered by our data.

term sickness benefit, (SI). This is a means tested benefit paying around £30 above the rate for UA with eligibility determined by a General Practitioner. Claimants could move off unemployment benefit into SI after a period of 6 months claiming means tested Income Support. Claims were also allowed after a 6 month period off work receiving, employer contributed, Statutory Sick Pay. It is possible therefore that some displaced workers who could not find a job immediately may have ended up receiving sickness Benefit. In 1995, concerned with the growth in claims, the government replaced SI with Incapacity Benefit. The role of the General Practitioner restricted to an 'objective' test of medical basis for ability to perform work-related activities.

These myriad variations in benefits and the uncertainty surrounding likely wage offers make the calculation of potential replacement rates facing displaced workers very difficult. OECD estimates of 'typical replacement ratios' for the UK are in Table A1 in the Appendix. Replacement rates are relatively low until housing benefits are taken into account. Thereafter they approach parity with the income brought home by a worker earning two-thirds of the average production worker's salary.

The Employment Service offers a range of training, advice and support schemes aimed at helping the unemployed back into work. Claimants are required to produce evidence that they are actively seeking work, had "good cause" for turning down a job and are encouraged, but not obliged, to complete a Back to Work Plan containing goals that the job seeker had to achieve during the unemployment spell. This is reviewed after an unemployment spell of 13 weeks and from then on the claimant was referred to the plethora of support schemes and advisory networks that were launched at the same time. These initiatives target various categories of unemployment duration -currently *JobClubs* (6 months unemployed), *JobPlan Workshops* (12 months), *Restart* Courses (24months); and try to match jobseekers to notified vacancies, placement in relevant employment subsidy programmes, re-motivation counselling and 'improved' extent and quality of job search. Recruitment Subsidies and work programmes were not in place during the sample period, though the government has recently introduced a wage subsidy scheme, *The New Deal*, for those unemployed in excess of 6 months. Schmitt and Wadsworth (1998) provide more details on changes to the benefit system over time and the consequences for unemployment outflows.

iii. Wage Setting Institutions

What are the principal forces shaping wages in Britain and what might be the consequences for displaced workers looking to re-enter work? Wages are relatively free of regulations governing pay determination. Over the sample period, the Conservative administration encouraged, but did not mandate, decentralised determination of wages. There was no national minimum wage regulation applicable in the UK over the sample period. Wages Councils, which had set minimum rates of pay for around 2 million low paid workers in selected industries, were abolished in 1993, except in agriculture. Union density in Britain continues to fall, currently estimated to be around 30%, and only around 20% in the private sector. Collective bargaining coverage has no legal status. Employers must agree as to whether unions are recognised for negotiation purposes. Recent estimates show that collective representation has also been considerably undermined with just 37% of employees covered by collective agreements in 1996, but with 70% coverage in large public sector workplaces (Cully and Woodland, 1997). If pay is not determined through collective bargaining, then management or a 'review body' in the public sector decides (Beatson, 1993). Gregg and Wadsworth (1997) provide an analysis of the changing nature of wages on offer to the non-employed.

b. Australia

The Constitution of the Commonwealth of Australia assigns powers to make legislation between State and Federal governments. The power to regulate industrial relations matters is divided between State and Federal governments. Federal powers are explicitly stated in the Constitution, and residual powers are assigned to the States. For example, section 51(xxxv) of the Constitution allows the Federal government to make laws with respect to 'conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one state'.

Regulation of the terms and conditions of employment in Australia occurs through:

(a) Provisions of State and Federal government workplace relations legislation; and

(b) The 'award system' whereby a system of industrial tribunals specify and enforce a set of minimum terms and conditions for workers in specific occupation or industry groups.

i. Employment protection

In Australia any employment contract of indefinite duration between an employer and employee

will generally be terminable by notice (Creighton, 1993, p.225). Currently, regulation of the appropriate notice period for worker retrenchment in Australia occurs through workplace relations legislation, and through the wage-setting system. First, some states in Australia have enacted legislation which requires (or can be used to require) employers to provide advance notification of dismissal (Social Justice Consultative Council, 1992). Second, awards setting out minimum terms and conditions of employment may contain provisions relating to minimum notice periods.

Prior to 1984 most awards (Federal and State) contained provisions to the effect that "Employment...shall be terminated by a week's notice on either side given at any time during the week or by the payment or forfeiture of a week's wages at the case may be" (Creighton et al., 1993, p.225). The Termination, Change and Redundancy (TCR) Test Case decision handed down by the Federal Conciliation and Arbitration Commission in 1984 however provided a stronger set of conditions governing worker retrenchment which could henceforth be included in awards. These conditions specify minimum requirements for advance notification of retrenchment, severance payments, and other employer obligations such as providing time off for job interviews.

Provisions from the TCR Test Case relating to advance notice and severance payments for retrenched workers are as follows (Creighton et al., 1993, pp.225-226):

• Advance Notice:

"(i) Where an employer has made a definite decision that the employer no longer wishes the job the employee has been doing done by anyone and this is not due to the ordinary and customary turnover of labour and that decision may lead to termination of employment, the employer shall hold discussions with the employees directly affected and their union.

(ii) The discussions shall take place as soon as practicable after the employer has made a definite decision...

(iii) For the purposes of the discussion the employer shall, as soon as practicable, provide in writing to the employees concerned and their union, all relevant information about the proposed terminations including the reasons for the proposed termination, the number and categories of employees likely to be affected, and the number of workers normally employed and the period over which the terminations are likely to be carried out".

- Severance Pay:

"...an employee whose employment is terminated [made redundant]...shall be entitled to the following amount of severance pay in respect of a continuous period of service:

Period of continuous service	Severance Pay
1 year or less	nil
1 year and less than 2 years	4 weeks pay
2 years and less than 3 years	6 weeks pay
3 years and less than 4 years	7 weeks pay
4 years and over	8 weeks pay

"Week's pay" means the ordinary time rate of pay for the employee concerned".

Incorporation of these TCR Test Case conditions into awards seems to have been far from complete. Pearce et al. (1995, p.20) report that in 1990 only 25 per cent of federal awards included provisions from the TCR Test Case. Moreover, it is important to note that the redundancy conditions from the TCR Test Case do not apply to employees with less than one year's continuous service, where an employer can demonstrate incapacity to pay, and in some circumstances, to employers who employ less than 15 workers. On the other hand, there are other groups of employees - such as public sector employees for whom redundancy conditions are specified in special legislation regulating public sector employment - who would have much stronger notice provisions than those specified in the TCR Test Case.

ii. Unemployment benefits

The Australian social security system is primarily a social assistance scheme. Payments are funded from general taxation revenue, and are based on a person's current need rather than on previous levels of earnings or duration of employment. Payments are generally available to all residents of Australia subject to eligibility and duration of residency.

Unemployment benefit payments are available to persons who have lost or left employment, and to persons who are unable to obtain work on leaving school. Receipt of benefits is subject

to an income test that allows some non-benefit earnings before benefits are withdrawn at a dollar-for-dollar rate. A waiting period of 13 weeks applies for persons who should be able to support themselves during the initial period of an unemployment spell (for example, persons who have received recreation leave or termination payments from an employer, or who have considerable financial assets).

There is no limit on the duration of receipt of unemployment benefits provided that an unemployed person is willing and able to undertake paid employment, and is actively seeking work (for example, for some unemployed persons the 'activity test' involves keeping a job search diary).

Unemployment benefit replacement rates vary depending on whether an unemployed person is single or married, has any children, and owns or rents housing. For example, in 1983 unemployment benefit for a married person with dependent spouse was $137.30, for unmarried persons aged 16-17 years without dependents was $40.00, for unmarried persons aged 18 years and above without dependents was $68.65, for unmarried persons aged 18 years and above with dependents was $82.35, and was $10 for each child of an unemployed person with dependents (Commonwealth Department of Social Security, 1983). At the same time average weekly earnings for a full-time employee were $172 for a 15-19 year old, $270 for a 20-24 year old, and $318 for all employees (ABS, Weekly Earnings of Employees (Distribution) Australia, catalogue no.6310.0, August 1983).

Table A1 in the Appendix presents some more recent summary information on replacement rates in Australia compared to average rates for the OECD. Three main features are evident. First, for none of the cases where an unemployed person would shift to full-time employment at the average earnings level do unemployment benefits exceed average earnings. Second, both in absolute terms and relative to OECD averages, replacement rates in Australia are higher for couples with children than couples with no children, and higher for couples than for single persons. Third, the longer duration of unemployment benefits in Australia than in most other countries means that, whereas replacement rates in Australia are below the OECD average in the first month of unemployment, this ordering is reversed in the 60th month of unemployment. It is also important to note that in Australia persons receiving unemployment benefits are eligible for other non-cash benefits - in particular, the Health Care card provides access to

reduced cost medicines and public transport travel.

Displaced workers who shift out of the labour force will also be eligible for social security benefits. Age pensions are available to males aged over 65 years and females aged over 61 years. Persons who have a medical condition which prevents full-time work are eligible for disability support pensions. And service pensions are available to male war veterans aged over 60 years and female war veterans aged over 55 years. Each of these pensions is subject to income and assets tests (see Commonwealth Department of Social Security, 1997).

iii. Wage Setting Institutions

There are three main dimensions to the regulatory structure for wage-setting in Australia:
a) Regulation of the wage bargaining process and of the form of agreement over terms and conditions of employment which can be made between a worker and employer;
b) Regulation providing for intervention by a third-party (industrial tribunal) in the process of wage bargaining, and in the determination of terms of conditions of employment; and
c) Regulation promoting collective organisation of workers and providing a right for collective organisations to represent workers in negotiations over terms and conditions of employment.

Most workers in Australia have minimum terms and conditions specified in 'awards'. These are written documents which are ratified and enforced by industrial tribunals at either the State or Federal level. Individual awards generally cover workers within specific occupation or industry groups. Each award specifies a range of minimum wage rates for workers with different skill levels in that occupation or industry group. Hence a multitude of different minimum wage rates exist in the economy. The conditions in an award may be agreed by consent between a union and employers and then ratified by the relevant industrial tribunal; or may be arbitrated on by the industrial tribunal.

The principle of 'common rule' means that any decision of an industrial tribunal about conditions in an award will be extended to all workers in the workforce group covered by that award regardless of union status. Award coverage remained high and relatively constant in the period from the 1950s to 1990s. In 1954 the proportion of workers covered by awards was 90 per cent (Dabscheck and Niland, 1981, p.274), and in May 1990, this proportion was 80 per cent - 33.5 per cent covered under Federal awards, and 46.5 per cent under State awards

(Australian Bureau of Statistics, <u>Award Coverage, Australia</u>, May 1990, catalogue no.6315.0). It is important to note however that for a large proportion of these workers minimum wage conditions specified in awards are not binding. Estimates for 1995 suggest that about 25 per cent of workers had rates of pay at award levels (Australian Industrial Relations Commission, 1997, p.124).

Industrial tribunals have an important function in wage determination in Australia. These tribunals exist at both Federal and State level, and may have general coverage (for example, the Federal Industrial Relations Commission) or coverage restricted to specific occupation groups (for example, the Federal Coal Industry Tribunal). At the Federal level the wage determination process involves a three-tier system:
(a) National wage cases where the Federal industrial tribunal adjusts wages for all workers covered by Federal awards (often with flow-ons to workers covered by State awards); (b) Industry cases where the Federal industrial tribunal is concerned with setting conditions in a specific award; and (c) Over-award negotiations or enterprise-level negotiations which occur directly between employers and employees and do not involve an industrial tribunal. Although a greater proportion of workers are covered by State tribunals than Federal tribunals, it would generally be considered that it is Federal tribunals which are more important in regulation of wage-setting in Australia (see for example, Dabscheck and Niland, 1981, p.273). In particular, wage increases granted to workers covered by federal awards in national wages cases would usually flow-on to workers covered by state awards.

The importance of industrial tribunals in wage-setting - and hence the degree of centralisation in wage bargaining - has varied across time. In some periods uniform national wage increases have constituted the only source of wage increase for workers covered by awards (for example, wage indexation phases of 1975-1981 and 1983-1985). At other times the most important source of wage increases is from over-award or enterprise-level negotiations (for example, between 1974-75).

Trade unions have a key role in representing workers in bargaining over terms and conditions of employment in Australia. The important function of unions, and incentives for union organisation, have been effected through legislation which assures access to industrial tribunals for registered trade unions, and which provides exclusive jurisdiction over members through

the process of registration (Creighton et al., 1993, pp.923-925). The main types of unions in Australia are occupational unions which cover workers performing tasks in a single generic category (for example, Federated Clerks Union); partial industrial unions which draw members from a single industry but do not have exclusive jurisdiction of that industry (for example, Australian Railways Union); and general unions which organise workers irrespective of occupation or industry classification (for example, Australian Workers' Union).

As in a number of other industrial countries union density has declined in Australia over the past two decades. In 1976 51 per cent of workers were union members; but by 1996 this had declined to 31 per cent (Australian Bureau of Statistics - Trade Union Members, Australia, catalogue no.6325.0). Between 1990 and 1996 a dramatic decrease in the number of trade unions from 299 to 132 also occurred, largely reflecting a process of union amalgamations.

The description of the regulation of wage-setting in Australia applies to most of the period after the 1940s. Beginning in 1993 however there have been a number of important developments in regulation of wage bargaining in Australia. Since these developments have not had a significant effect on wage outcomes until very recently, they are not directly relevant for the analysis of the experiences of displaced workers in Australia that will be undertaken in this chapter. Nevertheless it seems worthwhile presenting a brief overview of the main changes. The main recent developments in Federal regulation of wage bargaining in Australia (Commonwealth Department of Industrial Relations, 1996) have been to:

• Change legislative provisions for wage bargaining so that enterprise-level bargaining is the main method for workers to obtain changes in terms and conditions of employment.

• Reduce the role of the Federal industrial tribunal in wage-setting, its main function now being to guard the interests of employees not able to gain wage increases through enterprise bargaining via arbitration on general 'safety net' wage increases.

• Provide scope for employers to enter formal agreements with workers without a legal requirement for union involvement in the wage bargaining process.

c. Summary

A fair degree of similarity appears to exist between institutional factors in Britain and Australia. In both countries, levels of employment protection are relatively low. The OECD ranks Britain and Australia as having respectively the 4th and 7th lowest levels of employment

protection out of 20 OECD countries (see Nickell and Layard, 1997). The unemployment benefit system in each country is also quite similar. Benefits are provided for an unlimited period, but subject to a job search activity test (which has been progressively tightened in each country from the 1980s onwards). Benefit replacement rates in both countries are below the OECD average in the first month of unemployment for single adults and couples with no children. They are about the same as the OECD average for couples with children. In the sixtieth month benefit replacement rates in Britain and Australia are above the OECD average for couples with and without children. The main difference between the two countries appears to be in wage-setting institutions. Wage-setting in Australia - over the relevant periods for this study - appears to have been more highly regulated than in Britain. There has been a more comprehensive system of minimum wages in Australia, and wage-setting has involved a much greater role for centralised regulatory bodies. Trends in union density in each country have however been quite similar.

What do institutional factors suggest about the experiences of displaced workers in Britain and Australia? First, the similarity in levels of employment protection indicates that this should not be a source of significant differences in rates of worker displacement between Britain and Australia (although employment protection might be important for explaining differences between these countries and European countries with much stricter regulation of worker dismissals). Second, differences in wage-setting institutions might be expected to cause differences in the way in which displaced workers respond to job loss. In particular, the system of minimum wages and centralised wage-setting in Australia - compared to Britain - may reduce the chances that displaced workers find new jobs with earnings below earnings in their pre-displacement jobs. Hence, differences in wage-setting institutions may cause adjustment to job loss to occur through non-employment to a greater degree in Australia than Britain. By contrast, the unemployment benefit system in each country does not seem likely to be a source of differences in job search behaviour or non-employment durations of displaced workers adjustment in each country

4. Results
This section presents findings on the experiences of displaced workers in Britain and Australia. The data sources used for the empirical analysis for each country are described, and some descriptive information on the incidence of worker displacement is presented. The main parts

of the empirical analysis involve an examination of the earnings and employment consequences of job loss for displaced workers.

Several authors have provided evidence from the United States to the effect that job displacement involves reductions in wages (Hamermesh 1989, Topel 1991, Jacobson, LaLonde and Sullivan 1993, Huff Stevens, 1995 and Farber 1993, 1997). The reasons advanced for this are loss of firm-specific human capital, loss of good job match capital or loss of wage premia. US evidence also suggests that the costs of job displacement rise with age, tenure in previous job and with loss of a union job. Moreover earnings appear to fall within the job prior to displacement. Earnings do recover after a new job is secured, but not all these losses are recouped after re-entry. Huff Stevens (1995) suggests that this largely occurs because of subsequent, repeated job loss.

For Britain, Gregg and Wadsworth (1997) have shown that the wages of jobs taken by those who were out of work have fallen relative to others in work. In part this decline is due to higher job-specific returns, rewards to seniority and experience at the firm, which can not be transferred. As the wage returns to experience rises within any occupation or skill group, then the job currently held is likely to pay more than any new job gained after a displacement. The longer a worker has been in the job, the greater will be this penalty, if some or all of the returns to accumulated on-the-job experience are lost in the next job. So the costs of job loss may be higher among older and more experienced workers or wherever job loss is a relatively rare event.

Evidence from the United States also suggests that displaced workers experience increases in non-employment and a reduction in hours of employment following displacement (Swaim and Podgursky, 1991, Ruhm, 1991, and Farber 1993). Important determinants of the duration of non-employment for displaced workers appear to be macroeconomic conditions prevailing at the time of displacement, and factors such as a worker's job tenure and union membership status which affect the extent of earnings losses from cross-industry mobility (and hence determine the scope of a displaced worker's job search).

Kletzer and Fairlie (1998) find that earnings losses for young displaced workers in the United States are substantial and persistent (around 10% five years following job loss). Gustafson

(1998) obtains similar results on earnings losses, and also finds that young displaced workers have significantly lower employment probabilities and (for those obtaining jobs) lower hours of work than young labour force participants who have not experienced displacement. This research suggests that young workers potentially have as much to lose from displacement as their older counterparts.

a. Britain

i. Data

There is no equivalent to the Displaced Workers Survey in Britain with which to try and investigate the costs of displacement. Our estimation of the cost of job loss utilises the information contained within the labour market histories embedded in the BHPS, a panel survey of around 5500 households. The BHPS has been carried out annually since 1991 and currently runs for six waves. Information on labour market status for around 8000 working age individuals, together with gross monthly pay, hours and other job characteristics, if in work, is recorded between September and December of each year. Details of any changes in labour market status from the September of the previous year until the interview date are recorded in a series of job history spell data[ii]. Data on monthly earnings in each spell are also recorded. Respondents are also asked why they left their previous employment.

Our basic strategy is to compare earnings data in the current job with earnings in the previous job, with or without an intervening spell out of employment. The principal earnings information in the BHPS is the individual's usual gross monthly pay in the job. Because hours of work are only asked at the date of interview and not in the job history data, we are unable to calculate hourly earnings. There is information on whether each job is full or part-time and we use this wherever possible. We exclude those who report very low earnings, below £5 a week. At these earnings, if true, most recipients will be transitory labour market participants. Earnings

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[ii]   Attempts to match the current spell in the last wave to a particular spell in the job history data in the following wave proved fraught with errors. The September data across the waves matches better. This is because the September 1st information is requested in every wave. The spell histories then count forward from this point until the date of interview and backwards to September 1st of the previous year. Matching the current job from the previous wave is hampered both because the interview date floats between September and April of the following year and then due to resulting recall error in dating events between last September and the previous interview date. See Halpin (1997) or Paull (1996) on problems in spell data and recall error across waves in the BHPS.

are deflated by the Retail Price Index into September 1995 prices. Students in full-time education and those on maternity leave are removed from the sample, as are those under the age of 18 and those over pensionable age. Missing data on several variables, notably previous job tenure, reduces the final sample to 25,442 person years, of which 791 are displaced workers with weekly wage information before and after displacement.

We focus on the earnings changes of four groups: 1) workers reporting no change in employer over the year, (stayers). Those promoted internally are counted as stayers; 2) workers who lost a job either through redundancy or dismissal (displaced); 3) workers who came to the end of a temporary contract, (temporary); and 4) workers who left their last job for other reasons such as for family or health or retirement, (leavers). The sum of the displacement, temporary and leaver rates gives the total separation rate. We also distinguish between those who found a job without an intervening spell of joblessness and those who did not.

The British institutional system often blurs the distinction between the four categories. If employed for less than two years prior to displacement, a worker is not eligible for redundancy pay. Yet the term "redundancy" is a commonly accepted phrase used to cover any involuntary separation. Also, unlike in the US, "getting the sack" is a common phrase that does **not** necessarily imply that due cause was given for the dismissal by the behaviour of the individual, (for example, poor time keeping). Hence for many workers the terms are essentially interchangeable. We do however distinguish between displaced workers from industries where employment is falling and from industries where employment is rising in an attempt to enforce some exogeneity over the cause of job loss. Temporary contract holders are exempt from redundancy rules and so are best looked at separately. Unlike in continental Europe a temporary contact is not normally a probationary period prior to starting a permanent job

ii. Incidence of Displacement

Our first step is to identify the principal characteristics associated with displacement in Britain. Table 1 outlines average annual separation and displacement rates derived from pooling the six years of the BHPS. We calculate for each wave how many are in work at September 1 of the previous year, and then count how many are observed separating from that job within a year. On average, one in five employees, some 5 million workers, will separate from their jobs over a year. Some 4.7% of employees lose their jobs each year as the result of

displacement. Of these, one third did not experience any joblessness. The ending of a temporary contract is around one third as common as displacement in the stock of jobs as a whole, but as only 7% of employees are on such contracts the separation rate is very high. Displacement rates are around 1 percentage point higher in industries in which net employment falls over the year. One in eight displacements are classified as a sacking by the respondent but when focusing on those with more than two years job tenure this falls to one in twelve. The final 2 rows contrast separation rates across industries with growing and industries with falling workforces. Separation rates in the former are higher, because a larger quit rate dominates the lower displacement rate.

Men are more than twice as likely to be displaced than women, 6.4% compared to 2.9%, (Table 2). The displacement rate for younger workers, under the age of 25, is 7.3%, is nearly twice that of other age groups. There is less evidence that education affects displacement. The difference between the highest and lowest education groups, at around 0.7 percentage points, is not large. There is some variation in displacement rates across industries. Construction has the highest rate at 13.2% and the public services the lowest, at around 1.4. Displacements in the service sector are less common than in manufacturing. The incidence of displacement falls with job tenure. There is a 7.9% job that a worker in a job for less than 12 months will lose their job and a less than 4% chance of displacement for a worker in a job for 5 years or more. These numbers are consistent with the findings of Gregg and Wadsworth (1998) for Britain using a different data source. Longer job tenure is not associated with a lower likelihood of displacement followed by a spell out of employment. This is a little surprising, since longer tenured workers should have longer official notification periods with which to try and find alternative work.

In order to determine the principal characteristics associated with displacement holding other observed factors constant, we next present multinomial logit estimates of the probability that, within a year, the worker will be either displaced, quit their job or come to the end of a temporary contract. The default category is the set of job stayers. Table 3 gives the results. The coefficients are marginal effects relative to the sample mean probabilities of belonging to each category[iii]. Consistent with Table 2, young, single, males with lower qualifications working in

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[iii]   The marginal effect of variable x_i on the probability of being in category j, P_j is given by $dP_j/dx_i = P_j [b_j - \Sigma_k P_k b_k]$ where b_j is the coefficient on variable i in category j. The sample

full-time job in a small firm in manufacturing or construction with job tenure under two years are all more likely to be displaced from work. The second panel of Table 4 gives marginal effects from a binary logit estimation of the probability that a displaced worker will find a new job only after a spell of joblessness. Here we remove those in temporary contracts from the sample so that the base category is the set of displaced workers who undertake a job-to-job move. The estimates are less precise, but part-time and low tenured workers appear much more likely to experience a spell out of work between jobs.

iii. Time Out of Work

We next examine the duration pattern of joblessness following displacement in more detail. Table 4 takes the sample of workers in a job in September of the year prior to the survey and compares the likelihood of being in work one year later by type of job separation. The numbers are annual averages over the six waves. Around one half of all displaced workers are in employment one year on from the initial September observation, compared with around two thirds of all those who separate from their jobs. Those displaced workers with no non-employment spell between jobs are nearly twice as likely to be in work in the two observation points than displaced workers who are out of work for some finite length of time.

Kaplan-Meier estimates of monthly survival and hazard rates for the time taken to return to work, allowing for censoring based on the Cox likelihood model, are outlined in Table 5. We follow Gu and Kuhn (1998) by including any displaced workers with no jobless spell in the likelihood function with duration set to one month and all other durations increased by one month[iv]. Any displaced workers not back in employment are treated as right censored at the number of months of the ongoing jobless spell. The first observation on the hazard is therefore the proportion of displaced workers who find a new job without a spell of joblessness, (21.6%). Thereafter the hazard falls steadily with the duration of joblessness to around 10% at month 10.

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means of the stayer, quit, temporary and displaced categories are .78, .14, .03 and .03 respectively.

[iv]   Gu and Kuhn (1998) show that the Cox likelihood function depends only on the ranking of the durations and therefore is invariant to the addition of a scalar. This allows the inclusion of the zero duration job-to-job displaced in the likelihood, unlike other parametric models.

The determinants of the probability of displacement and the time taken to return to work are given in Table 6. Columns 1 and 2 present Cox proportional hazard estimates of joblessness duration including and then excluding job-to-job movers. Men are both more likely to lose their jobs and are some 10% less likely to return to work. Long job tenure is associated with a quicker return to work. However, as column 2 shows, once job to job moves are excluded long job tenure is no longer associated with a longer period of joblessness.

iv. Earnings Consequences of Job Loss

How much do displaced workers lose? Table 7 summarises the mean of the difference in weekly log real earnings before and after displacement. As a comparison we show the annual earnings change recorded for workers who remain in the same job over the year. Weekly wages of the average displaced worker are around 10% lower in the new job than in the job lost, (row 3). If the displaced worker moves from one full-time job to another the penalty is only around 4%[v]. Weekly earnings of those who remain with their employer rise by around 5% over a year. So displaced workers not only experience wage losses relative to their previous job but they also forego general increases in wage levels. The total pay penalty is then 14% and 10% for those working full-time both before and after displacement. For those moving directly from one job to another the wage falls by just 2%. Hence wage falls are mainly limited to those displaced workers experiencing some time out of work and some of the observed fall is due to shorter hours after displacement. The wage gaps for all exits into non-employment (including quits and those leaving temporary jobs) are smaller, which suggests that displacement does have distinct labour market effects. Those leaving temporary jobs or quitting a job and moving directly into a new job achieve wage gains above those staying with the same employer.

There is considerable variation around these averages. Comparison of earnings changes by individual characteristics are given in Table 8. Women experience weekly wage losses around twice that of men, but the gap is lower for full-time job changes. Older workers and those out of work longer also face higher pay cuts than the average. The weekly wage loss for those over

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[v]   These numbers are similar to Gregory and Jukes (1997) findings for unemployed men. There is only a very small hourly wage penalty, on average, to being displaced but this is mainly a selection effect, as the monthly wage gap is much smaller for those where hourly wages are defined. T tests on the equality of the means of the stayer and displaced groups confirm that the weekly and hourly mean pay changes are significantly different in the two groups.

50 is around 18%. Education is not correlated with the size of earnings loss. There is little evidence that the pay gap widens with job tenure, beyond one year in the previous job. Coming from a declining industry also makes little difference. The biggest variations however, remain where displacement results in a spell out of work.

We now explore the size of these wage changes controlling for observed differences in worker and firm characteristics in Table 8. We present weekly, full-time to full-time moves only and regressions with part-time status controlled for to be as clear as possible what is going on. Displacement that results in time out of work remains a strongly significant but his increases only a little with longer durations out of work. The biggest falls in earnings are associated with those coming back in smaller firms than the ones they left. The results do not confirm the effect of job tenure on displacement found elsewhere, (Kletzer 1998). Age is a weakly significant determinant of earnings changes but the point estimates for over 50s are large. Gender only matters for weekly wages reflecting a greater propensity for women to return part-time after displacement. Displacement from a declining industry makes little difference. This is important as displacement here is perhaps a little more exogenous to the abilities of the worker.

Table 9 examines whether there are any distinguishing characteristics amongst displaced and temporary contract workers that are associated with lower earnings on return to work. We present results for the entire set of displaced and temporary workers with or without a spell out of work and the subsets who move full-time to full-time. The results are not always well determined, but the length of time out is negatively associated with the change in earnings for displaced workers. Those out for more than 12 months experience a cost of job loss 17% greater than displaced workers that moved immediately to another job. For the full-time sample, older workers experience wage losses around 15% above the base group. Table 10 estimates the cost of job loss for displaced workers relative to stayers conditional on the characteristics outlined in Table 8. We present simple OLS estimates of the difference in log wage growth between job stayers and displaced workers. Other types of separation are included as intercept terms. The raw weekly cost is 16.9% if a spell out of work is observed. Controlling for worker and firm characteristics makes little difference to these estimates. Termination of a temporary contract that results in a spell out of work reduces earnings growth by only around 2%. Moving to a new job directly after displacement leads to a loss of earnings in the order of 6%. However, compared to those quitting and moving to a new job the gap is

large.

b**. Australia**

i. Data

The empirical analysis in this section draws on two main types of data. First, aggregate-level evidence on the rate of worker displacement and re-employment probabilities for displaced workers are available for various years between 1975 and 1997. Second, individual-level data on earnings and employment outcomes of young workers in Australia – which allows displaced workers to be identified – are used.

The sources for the aggregate-level data are the ABS Labour Force Survey - Supplementary Labour Mobility Survey (ABS, Labour Mobility, Australia, catalogue no.6209.0), and two population-type surveys of displaced workers: (a) a supplementary survey to an ABS Labour Force Survey undertaken in 1993 in Victoria (one state in Australia) (ABS, Retrenched Workers and Workers Who Accepted Redundancy Packages, Victoria, October 1993, catalogue no.6266.2); and (b) a supplementary survey to an ABS Labour Force Survey undertaken in 1997 for Australia (ABS, Retrenchment and Redundancy, Australia, July 1997, catalogue no.6266.0). The displaced worker surveys collected information on whether a respondent had been displaced from a job in the previous three year period; the characteristics of the job from which the respondent had been displaced; reason for displacement; respondent's labour force status at the survey date; and the respondent's personal characteristics.

The data source for detailed analysis of displaced workers in Australia is the Youth in Transition Survey. This is a series of longitudinal surveys conducted by Australian Council for Educational Research. Surveys of cohorts born in 1961, 1965, 1970 and 1975 have been undertaken.[vi] Individuals in each cohort were initially sampled in their mid-teens (for example, the 1961 cohort were initially sampled as 14-year olds), and then in each subsequent year through to 1995.[vii] In the initial survey for each cohort a range of background information was collected - relating for example, to country of birth, parents' educational attainment, and maths

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[vi] Further details on the Youth in Transition survey are available from Marks (1997) and from http://www.acer.edu.au/lsay/longitud.htm.

[vii] The only exception is that a survey for the 1961 cohort was not undertaken in 1985 and 1988 due to resource constraints.

aptitude. In each subsequent annual survey two main types of information relevant to this study have been collected. First, respondents complete a diary showing educational and labour force status in each month over the preceding year. Second, respondents provide information on details of labour force status, earnings, hours and weeks worked, and occupation in the survey month (October).

A sample of displaced workers is extracted from the YTS by defining displacement to occur where being 'laid off' was a 'very important' or 'fairly important' reason for a person losing their last job. Information on reason for job loss in the preceding year is available for persons in the 1961 cohort for 1981, 1982, 1983 and 1993, and in the 1965 cohort for 1983, 1984, 1985 and 1993. Information on the construction of other variables is presented in the Data Appendix.

Data from the YTS has a number of shortcomings for analysing experiences of displaced workers. The main shortcoming is that the sample is likely to display length sampling bias. That is, since the sample of displaced workers is drawn from a subset of respondents who were unemployed at the survey date (only those persons were asked questions about reasons for job loss), displaced workers who have relatively long spells of unemployment will tend to be over-represented, and those with short spells of unemployment will tend to be under-represented. To attempt to overcome this problem each observation is weighted by the inverse of the duration of the completed non-employment spell. The rationale for making this correction is that, in a steady state, the probability of sampling a spell at any instant of time is proportional to its completed length. Hence, by weighting each observation by the inverse of its length, the entire density function for completed new spell durations is obtained.[viii] For an incomplete spell a completed spell duration is estimated as the weighted average of all completed spells lasting longer than that incomplete spell. The weights are used in all subsequent analysis of the sample of displaced workers.[ix]

[viii] Let f(d) be the density of completed new spell durations, and g(d) be the density of completed durations of spells observed at any point in time. In a steady state:
f(d) = k(g(d)/d) where k is a constant. Because f(d) must integrate to one, therefore k is equal to the integral over d of g(d)/d. Hence, weighting each observation by the inverse of its length gives the density for all new completed spell durations.
[ix] An alternative approach would be to use maximum likelihood techniques to jointly address the length-sampling bias and censoring issues in a more flexible manner.

One aspect of the length bias problem which cannot be addressed is that - since a displaced worker must be unemployed to be observed as displaced - there is no information on displaced workers who had an immediate transition to employment following displacement. For this reason the data are likely to over-estimate non-employment probabilities and non-employment durations for displaced workers. Two other shortcomings should also be noted. First, since a question on reason for job loss was asked only in four years for each cohort, the sample of displaced workers which can be obtained is quite small. Second, the sample of displaced workers from the YTS is unrepresentative of the general population of displaced workers in that it is restricted to a group of relatively young workers who were displaced at trough points in the Australian labour market.[x] For example, Farber (1993) finds that the difference in employment outcomes between displaced and non-displaced workers is greater during recessions than expansions.

ii. Incidence of Displacement

Time-series information on annual rates of job separation from the ABS Labour Mobility Survey - together with the rate of unemployment - are displayed in Figure 5. 'Rate of job separations - displacements' can be interpreted as the rate of worker displacement. This is equal to the number of workers who ceased a job during the year whose reason for ceasing that job was being laid off or a business closure divided by the total number of persons who held a job during the year. Other rate of separation measures are similarly defined[xi] It is evident that the annual rate of aggregate job separation is about 25 per cent. The annual rate of job separation due to displacement is about 5 per cent; and the rate due to job loss is about 9 per cent. The aggregate rate of job separation is inversely correlated with the rate of unemployment. Job separation rates due to displacement and job loss display a positive correlation with the rate of unemployment. Over the period between 1975 and 1997 the aggregate rate of job separation displays a slight downward trend. The rate of job separation due to displacements does not display any particular trend.

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[x] Cyclical peaks in the rate of unemployment occur in quarter 2/1983 and quarter 3/1993.

[xi] 'Rate of job separations - aggregate' is equal to the number of workers who ceased a job during the year divided by the total number of persons who had a job during the year; and 'Rate of job separations - job losers' is equal to the number of workers who ceased a job during the calendar year whose reason for ceasing last job was retrenchment/ill-health/seasonal or temporary job divided by the total number of persons who had a job during the year.

Average displacement rates for workers in disaggregated gender and tenure categories can also be calculated using information from the ABS <u>Labour Mobility Survey</u>.[xii] Table 10 shows the average rate of displacement in Australia from 1983 to 1997. A number of findings emerge – first, displacement declines with years of tenure of an employee (in particular for employees with up to five years of tenure); second, the rate of displacement is generally higher for male than female workers; and third, the amount of cyclical variation in the rate of displacement is largest (in absolute terms) for workers with low tenure.

Other evidence on the incidence of worker displacement is available from the population surveys of displaced workers undertaken in Victoria in 1993, and for Australia in 1997. The main findings from the surveys – summarised in Table 11 - are that:

• Between October 1990 and 1993 about 10 per cent of workers in Victoria were displaced from a job. Between July 1994 and 1997 about 7 per cent of workers in Australia were displaced.

• Rates of displacement are higher for male than female workers, but do not display a strong correlation with age.

Farber (1997, p.121) reports that the proportion of persons in the United States displaced from employment between 1991 and 1993 was 12.8 per cent, and between 1993 and 1995 was 15.1 per cent. Over the period from 1981 to 1995 in the United States the 3-year displacement rates for various sub-periods are found to range from 9.0 to 15.1 per cent. Hence it appears that the 3-year job displacement rate found from the Australian displacement survey is quite similar to rates found for the United States.

[xii] Average rates of job separation - displacement for employees in disaggregated tenure (or gender) categories are calculated as:

$$\text{Prob}(D_{it} = 1 | T_{it} = j) = [\text{Prob}(T_{it} = j | D_{it} = 1) * \text{Prob}(D_{it} = 1] / [\text{Prob}(T_{it} = j)]$$

where $\text{Prob}(D_{it} = 1 | T_{it} = j)$ is the probability that an employee is displaced in time period t given that the employee is in tenure (or gender) category j; $\text{Prob}(T_{it} = j | D_{it} = 1)$ is the probability that an employee is in tenure (or gender) category j given that the employee has been displaced in time period t; and $\text{Prob}(D_{it} = 1)$ and $\text{Prob}(T_{it} = j)$ are respectively the probabilities that an employee is displaced and that an employee is in tenure (or gender) category j in time period t (Farber, 1993, p.89).

iii. Time out of Work

Aggregate-level information on labour market outcomes for displaced workers is available
from the ABS surveys of retrenched workers. This information – on the labour force status at
the survey date of workers displaced in the previous three years – is presented in Table 11. It
shows that:

• In October 1993 the rate of employment of persons in Victoria who had been displaced in
previous three year period was 50.8 per cent; and in July 1997 the rate of employment of
persons displaced in Australia in the previous three years was 54.7 per cent.

• The probability of re-employment amongst displaced workers is lowest for persons in older
age groups (50+ years), whose last job was in a blue-collar occupation, and who are from a
NESB country, is higher for males than females, and lower for persons without post-school
qualifications than with post-school qualifications.

Information on the employment status of displaced workers from the ABS retrenched worker
surveys appears comparable to information presented by Ruhm (1998, Table 4) on the labour
force status at February 1996 of workers displaced in the United States between 1993 and
1995. Ruhm finds that 71.6 per cent of displaced workers are in employment at the survey
date. This is considerably higher than the employment ratios for displaced workers of around
50 to 55 per cent found from the Australian surveys. It suggests the possibility that employment
costs of displacement are higher in Australia than the United States. However, it is also
necessary to take into account that the labour market in the United States was much stronger
than in Australia during this period of the mid-1990s, so that at least part of the difference in
employment outcomes for displaced workers may be explained by cyclical factors.

Tables 12 to 15 present information on labour force outcomes for young displaced workers
using individual-level data from the YTS. These tables are based on a sample of persons who
were unemployed at the survey dates who are classified as displaced workers. In the
calculations for each table the weighting method (using the inverse of completed duration of
spell of non-employment) described above has been applied.

Table 12 presents information on the labour force status of the sample of displaced workers at
six and twelve months after the date of displacement. First, a substantial proportion of

displaced workers remain unemployed and out of the labour force in the year after displacement. Second, there is no significant change in the non-employment probability of displaced workers between six and twelve months. What does happen however is that the composition of employment for displaced workers in employment shifts to some degree from part-time to full-time jobs. Third, some effect of educational attainment is apparent - in particular, having completed high school and/or having a post-school qualification is associated with a higher probability of full-time employment for female displaced workers.

An alternative aspect of labour force transitions for displaced workers is to examine the duration of spells of non-employment which follow displacement. Table 13 presents the Kaplan-Meier hazard function for exit from non-employment and survival function in non-employment for displaced workers. Over the 12 months following displacement the hazard rate displays a downward trend; however, there is a relatively large degree of month-to-month volatility.

To explore further the process of transition to re-employment, regression analysis of the determinants of the time to exit from non-employment for displaced workers was undertaken. The analysis involved estimation of a weighted probit regression where the dependent variable is a monthly observation of whether a displaced worker exited from non-employment in that month. Explanatory variables included are age at time of displacement, reading and mathematical aptitude test scores (with interactions with a dummy variable for the 1961 cohort to allow for differences in the tests between cohorts), rate of unemployment in last occupation, and dummy variables for gender, year, country of birth, and whether a respondent completed high school or had a post-school qualification.

The main results from the regression analysis of determinants of exit from non-employment are shown in Table 14. A first main finding is that - consistent with the Kaplan-Meier hazard function - the probability of re-employment declines with spell duration. For each extra month of non-employment the probability of exit from non-employment declines by about one per cent (evaluated at the mean value of other explanatory variables). Alternative specifications of the spell duration variable (quadratic and cubic specifications) were also tested; however, F-tests could not reject that the extra explanatory terms were insignificant. The second finding is that a range of other explanatory variables - age, country of birth, whether completed high school

and/or have a post-school qualification, and reading aptitude - are found to affect the probability of exit from non-employment. Age is inversely related to the probability of re-employment suggesting that older (above 30 years) displaced workers find it relatively more difficult to find a new job. One explanation for this finding may be that rates of job turnover are higher for workers aged 15-24 years than 25-34 years, so that the flow of job vacancies may also be higher for the younger group of workers (Borland and Kennedy, 1998). However, it is important to note that - due to collinearity between the age and year variables - age is only significant in specifications without year dummy variables. Hence the age variable may be proxying for year effects. Immigrant workers who are displaced are found to have a significantly higher probability of re-employment than Australian-born workers. Finally, it appears that high skill workers - who have completed high school and/or have a post-school qualification, and with higher levels of aptitude in reading - have higher exit probabilities from non-employment than low skill workers. Other explanatory variables - such as gender and the rate of unemployment in a displaced worker's last occupation - are not found to affect the probability of exit from non-employment.

An alternative perspective on the labour force experience of displaced workers is to examine average hours and weeks of work in the period following displacement. Table 15 shows the weighted average ratio of weeks and hours of work in the quarter preceding displacement to weeks and hours of work in each of the first 8 quarters after displacement. Displaced workers are found on average to have worse employment outcomes in every quarter in the two years following displacement than in the quarter preceding displacement. This difference is generally statistically significant for the first 6 to 7 quarters following displacement.

Findings from the YTS therefore suggest that the costs to displaced workers from time out of employment may be quite substantial. However, in interpreting results on employment outcomes for displaced workers from the YTS a number of factors must be taken into account. First, since the sample of displaced workers excludes those displaced workers who moved immediately to a new job - the adverse employment consequences of displacement may also be over-estimated. Second, labour force mobility (for example, transitions into and out of employment) is higher for younger than older labour force participants so that the apparent employment consequences of displacement may be in some part due to the age of the sample of workers.

iv. Earnings Consequences of Job Loss

The other main cost of job loss occurs through changes in earnings following displacement. Information on earnings consequences of job loss for the sample of young displaced workers in Australia can be derived from the YTS. Tables 16 presents descriptive information on average weekly earnings pre and post-displacement, and Table 17 shows the results from regression analysis of the determinants of weekly earnings pre and post-displacement.

Data on weekly earnings for both displaced and non-displaced workers are available from the YTS. Data are taken from the years prior to and following each sample year in which information on reason for job loss is available. For displaced workers weekly earnings in pre-displacement job are observed for the sample of workers who were in their pre-displacement job 12 months prior to the time of the survey question on displacement (that is, in the preceding October). Hence this information on earnings ranges from 1 to 11 months prior to displacement. Weekly earnings in post-displacement jobs are observed for the samples of workers in employment 12, 24 and 36 months following the time of the survey question on displacement (that is, in October in subsequent years). For non-displaced workers weekly earnings data to match with data for displaced workers is obtained by using the same set of years around those sample years in which information on reason for job loss is available. All displaced and non-displaced workers with observations on weekly earnings are included in the respective samples.

As an example, for the 1961 cohort information on reason for job loss is available in 1981. Hence, information on weekly earnings is obtained (if available) for 1980, 1982, 1983 and 1984 for all workers who were displaced and non-displaced in October 1981. This means that the sample of non-displaced workers may include some workers who experienced job loss during this period but did not have the status of a displaced worker at October 1981; and it will also include voluntary job switchers. Unfortunately the data set does not allow these separate types of workers to be identified.

Weekly earnings in different years are adjusted to constant dollars using the Consumer Price Index. Note that since the information is on weekly earnings it may reflect changes in weekly hours of work as well as hourly wage rates. Information on hours of work is not available for a

sufficient number of observations to allow the analysis to be undertaken using hourly wage rates.

A factor to take into account in interpreting findings on the effect of job loss on earnings is the potential role of selection effects. One aspect of selection effects is that to the extent that displaced workers who obtain re-employment are not representative of all displaced workers - and as seems likely are higher ability than average - the change in weekly earnings may be an over-estimate of the change for all displaced workers.

Table 16 shows the weighted average difference between log real weekly earnings in displaced workers' jobs 1-2, 2-3 and 3-4 years after displacement and log real weekly earnings in the pre-displacement job, and data on average changes in log real weekly earnings for non-displaced workers taken from the same time periods as for displaced workers. It is evident that both displaced and non-displaced workers experience growth in weekly earnings over time. Some differences however do emerge in comparing earnings changes across time. Focusing on the sample of full-time workers (in order to minimise composition effects) it appears that the difference in earnings outcomes between displaced and non-displaced workers tends to increase over time. In the period 1-2 years after displacement there is no significant difference in the change in log weekly earnings for displaced and non-displaced workers. In the period 2-3 years after displacement earnings of non-displaced workers are about 7 per cent higher than for displaced workers, and by 3-4 years this difference has become 16 per cent. (These latter findings however are based on a very small number of observations for displaced workers.)

To conclude the analysis of earnings outcomes for displaced workers a regression analysis of the determinants of earnings and changes in earnings was undertaken using data on real weekly earnings pre-displacement and 1-2 years post-displacement. The effect of displacement is examined by including as an explanatory variable a dummy variable for whether a worker was classified as displaced at the relevant survey date.

The findings are presented in Table 17. Log weekly earnings in pre and post-displacement years are significantly lower for females than males, are decreasing with the rates of unemployment in a worker's occupation category, higher for full-time than part-time workers,

and follow a quadratic pattern with age. Displaced workers have lower weekly earnings than non-displaced workers although the effect is only statistically significant for post-displacement earnings where year dummies are included as explanatory variables. The change in log weekly earnings is significantly negatively related to age (reflecting a decreasing rate of increase in earnings), and is significantly affected by switching between part-time and full-time employment. The effect of displacement on the change in log real weekly earnings is not statistically significant. Hence these findings provide some limited evidence that displaced workers have a lower level of earnings than non-displaced workers, but little evidence of short-term earnings losses due to job loss.

v. Summary

Analysis of the experiences of displaced workers suggests two main findings. First, these workers experience substantial periods of non-employment following displacement. Second, for younger displaced workers there do not appear to be significant short-term earnings consequences from displacement.[xiii] One possible explanation for these findings is the type of labour market institutions in Australia. The absence of wage adjustment for displaced workers - or more generally in response to adverse demand conditions - would suggest that adjustment should then take place through employment. This appears to be consistent with the findings on employment outcomes for displaced workers observed. It is also worth noting that other case study evidence on displaced workers has generally found on average little effect on earnings of displaced workers who are re-employed but significant effects on employment outcomes for displaced workers (see Borland, 1998).

As has been noted earlier, it is also however necessary to recognise how selection effects might have affected the findings. First, the sample of displaced workers excludes those workers who shifted to a new job without an intervening period of non-employment. Second, the sample of displaced workers in new jobs – from whom earnings information is obtained – may be of greater average ability than the entire group of displaced workers. Hence, estimates of the employment and wage costs of job loss for Australia derived in this chapter are likely to respectively over and under-estimates of the true consequences.

[xiii] These findings seem consistent with Gray (1999) who finds – using a different longitudinal data set covering young workers in Australia in the early 1990s – that in general unemployment experience does not

5. Conclusions

Every year around 5 to 6 per cent of workers in Britain and Australia will lose their jobs as a result of layoff, plant closure or the end of a contract. Job loss is most likely to occur within the first year of any job. Most displaced workers will return to work within a year, though a significant proportion do not.

In Britain, median length of joblessness is around 3 months. Displaced workers will enter jobs that pay weekly wages, on average, around 10 percentage points less than those they left behind. Compared with those who remain continuously in the same post, the wage gap is around 15 per cent. However, much larger penalties are experienced by displaced workers with longer seniority and those out of work for 12 months or more.

In Australia, for the sample of young displaced workers examined, it is found that job loss has significant consequences for future employment. A large proportion of displaced workers remain out of employment for some period following displacement, and average hours of work per quarter post-displacement remain below average hours of work in the quarter preceding displacement for the two years after job loss. By contrast, for the sample of young workers examined, there do not appear to be significant short-term consequences for labour market earnings due to job loss.

What do these findings suggest about the role of institutional factors in determining experiences of displaced workers? Differences between the data sources make it very difficult to provide any definitive answers to this question. One point to emerge is that rates of separation and worker displacement do appear quite similar in Britain and Australia in the 1990s. In both countries the average rate of separation is about 20 per cent; and the average rate of worker displacement around 5 per cent. Hence displacements constitute about 25 to 30 per cent of total separations. This compares with average shares of separation accounted for by worker displacement in France and Germany in the 1980s of about 12 and 23 per cent respectively (Bender et al., 1998). To the extent that employment protection laws are important in explaining cross-country differences in the incidence of worker displacement, it therefore seems more likely to apply to differences between countries such as France and Britain or

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have a strong effect on future hourly wages, but does have a significant influence on future hours of work.

Australia, rather than to differences between Australia and Britain.

It is more difficult to make comparisons of the process of adjustment to job loss for displaced workers in Britain and Australia. The case of Australia - with its fairly high regulated system of wage-setting where there have been relatively large costs to displaced workers in the form of time out of employment but little apparent effect on earnings from job loss – does seem consistent with the hypothesis that where institutional factors prevent wage adjustment to an adverse demand shock that there will be greater employment adjustment. However, it is also necessary to note that for Britain there is no evidence of large earnings losses for young displaced workers. This suggests that it would be necessary to exercise caution before attributing the absence of earnings losses in Australia to the effects of wage-setting institutions rather than to age-specific determinants of the adjustment process.

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Appendix - Data Construction

a. Britain

Each wave of the BHPS has an individual file and a job history file. The individual file contains 3 reference points about jobs, the *current* job, the *Sept 1 this year* job and the *Sept 1 last year* job. These have a job identifier, in the form of the spell number in the spell history that relates to this reference point. For some individuals whose current state is the same as that in the previous year, the *current spell identifier* in later waves links these jobs. Otherwise linking job spells between waves is tenuous, based upon matching information about the jobs. The simplest way to join the waves is to assume that the Sept 1 reference points can be reasonably linked. Thus the *Sept 1 this year* of the wave previous should correspond to the *Sept 1 last year* of the current wave.

Problems can arise, resulting from the nature of the *current* job, which corresponds to the interview date in that wave. This job spell has the only recorded information about certain important job description variables, specifically the variables for the number of hours worked, full-time/part-time status, temporary/permanent status, as well as union membership. Only 6 observation points are available for these variables. It can be difficult to match this *current* job spell to a subsequent wave, except by matching basic information about the jobs such as the start date, occupation, industry. Inconsistencies in recorded information can make this very difficult, since even the labour force state for the spell does not always match for the best link points of *Sept 1 this year* and *Sept 1 last year*. The design of the survey provides some overlap information when the waves are linked, and also when the job history is linked to the individual response, such that corresponding dates/periods of any state might be matched.

Defining displacement

To define a displaced worker, responses are coded on the basis of a self-defined 'reason for leaving last job'[xiv] question. The range of classifications allow us separate '*lay-offs*' from '*redundancy*' and '*end-of-temporary-job-contract*' . In Britain the 2 categories '*lay-offs*' and '*redundancy*' are usually synonymous. 'short-term lay-offs', after which workers can be recalled to the same job, over quite a long period of time, do not occur in Britain. Britain also differs from many mainland European countries, where (sometimes enshrined in law) short-term contracts must be followed by a permanent job if the contract is renewed. In Britain, short-term contracts are used but are not linked explicitly to any future permanent status.

However the tenure of the job is an important part of statutory redundancy provisions, with 2 year's tenure being the significant threshold within this law beyond which entitlement to redundancy and sickness pay begins.

Inconsistencies in recorded information, can mean that the spell lengths are not always clear - an obvious example is that some exit job spell lengths are greater than the age of the respondent. Both start and end dates suffer problems and spells can overlap, or there can be undefined gaps, even when only months and years are used.

[xiv] with the following choices - promoted/left for a better job, left for a different job, was made redundant/company went bankrupt, was dismissed or sacked, a temporary job ended, took retirement, stopped for health reasons, left to have a baby, children/home care, care of other person, other reason.

Reconciling the data from the individual (indresp) and job-history (jbhist) record files, sourced from different question specifications and sequences within the survey, there is a reasonable level of agreement, but some differences which are not generally systematic. Reconciling information within a wave (matching the indresp and jbhist) results in generally better agreement than reconciling consecutive waves, but data conflicts between them result in multiple possible records rather than a single panel record for some individuals. The analysis relies on spell lengths, so for missing start dates substantial effort was spent in processing the data, but only if the start year was not missing since it was deemed too difficult to make any reasonable assumptions about the year. Thus an effort was made to reduce *untrue* left and right censoring. Following Paull(1996), only months and years are used for dates. Seasons are recoded to months. We assume that years suffers less recall error than months and any time gap is an error, since spells in the job history are recorded consecutively. Where consecutive spells exist within a wave, the previous spell end month is substituted for a missing start month *if* the year is the same, and for the current spell the interview month is substituted if the start year is the same as the interview year. For end dates, (which only exist for job history spells, not the current job), where consecutive spells exist within a wave, the missing previous spell end month is replaced with the following spell start month.

Spell lengths for the current spell are created by taking the recorded tenure variable measured in days and divding by 30, since no end date exists. For all other spells, (the end year * 12 plus the end month)-(start year * 12 plus the start month) is constructed.

Race, age and sex are only ever asked when the respondent first enters the panel, and must be copied across. Spell identifiers and job identifiers are used to match job information in the spells and the indresp file data where a job descriptor data-item is missing.

The annual *employment by industry* is also added to the data set in the form of a change variable. This data is sourced from the published statistics 1990-1995 in the Employment Gazette. It is matched to the industry the displaced worker left from.

In order to minimise selection bias due to attrition, we use all individuals observed at any wave, and do *not* restrict the panel to only those present in all waves.

b. Australia

Variable Definitions:
Displaced worker - Persons who did not have a job at the time of the survey and who responded that being 'laid off' was a 'very important' or 'fairly important' reason for ending their last job. Questions on reasons for job loss were asked in October 1981, 1982, 1983 and 1993 for 1961 cohort, and in October 1983, 1984, 1985 and 1993 for 1965 cohort.

Months since displacement - Date of displacement is identified as first month prior to survey date in which the respondent did not work full-time or part-time.

Educational attainment - Variable constructed from information on years of schooling and on whether a post-school qualification obtained. Individuals reporting having completed high school or reporting having any post-school qualification are classified as being in the category 'Complete HS/Post-school qualifications'.

Age - Equal to year of displacement minus year of birth.

Year - Equal to year of displacement.

Reading aptitude/Maths aptitude - Scores from tests administred to respondents as 14-year olds by Australian Council of Education Research.

Rate of unemployment in last occupation - Rate of unemployment by 1-digit CCLO occupation - From ABS, Labour Force Survey, catalogue no.6203.0, selected issues.

Weekly earnings in pre-displacement job/Weekly earnings X to (X+1) years after displacement - Information obtained from question on 'weekly earnings last week'.

Total weeks of work in quarter X months after displacement - Information from labour market diary. Respondents answering that they were employed part-time or full-time in a month were assumed to have 4 1/3 weeks of work in that month.

Total hours of work in quarter X months after displacement - Information from labour market diary. Respondents answering that they were employed part-time in a month were assumed to have worked for 85 hours in that month. Respondents answering that they were employed full-time in a month were assumed to have worked 170 hours in that month.

Total weeks/hours of work in quarter prior to displacement - Information from labour market diary. Date of displacement is identified as first month prior to survey date in which the respondent did not work full-time or part-time. Total weeks/hours of work in the preceding quarter are then calculated using the same assumptions as for weeks/hours of work per quarter after displacement.

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[1]   All figures taken from the UK Labour Force Survey Historical Supplement (1997), Government Statistical Service.

Table 1. Average Annual Separation and Displacement Rates in Britain, 1990-96.

	Total Separations (%)	Job to Job	of which: Temporary job	Quits	Displacement	Of which displacements: Redundant	Sack	Exit Rate	of which: Temporary job	Quit	Displacement	Of which displacements: Redundant	sack	All displacem
All industries	20.9	11.9	0.7	9.8	1.6	1.4	0.2	9.0	0.9	5.0	3.1	2.7	0.4	4.7
Declining industry	19.4	10.9	0.7	9.8	1.6	1.4	0.2	8.2	0.7	4.0	3.5	3.2	0.3	5.1
Growing industry	22.8	12.9	0.7	9.8	1.5	1.3	0.2	9.9	1.0	6.1	2.8	2.3	0.5	4.3
Tenure in previous jobs>=2														
All industries	15.9	8.7	0.4	7.1	1.2	1.1	0.1	7.1	0.3	4.3	2.5	2.3	0.2	4.0
Declining industry	14.8	8.2	0.4	6.5	1.3	1.2	0.1	6.5	0.2	3.4	2.9	2.7	0.2	4.5
Growing industry	17.0	9.2	0.3	7.8	1.1	1.0	0.1	7.7	0.4	5.2	2.1	1.9	0.2	3.5

Table 2. Separation and Displacement Rates by Worker and Firm Characteristics

	Separation Rate	Displacement Rate	Job-to-Job Displacement	Exit and Displacement	% job to job in displacements
Female	18.6	2.9	1.0	1.9	35.0
Male	23.1	6.4	2.1	4.3	32.7
Age					
Youths <25	35.9	7.3	2.1	5.1	29.8
Prime 25-49	18.9	4.3	1.6	2.7	37.6
Mature 50+	16.9	4.4	1.1	3.3	23.9
Marital status					
Single	26.1	5.8	1.8	4.0	30.6
Married	18.8	4.4	1.5	2.8	34.7
Qualifications					
None	19.0	5.5	1.4	4.1	26.0
Lower Intermediate	21.8	4.8	1.7	3.1	35.6
Upper Intermediate	19.2	2.6	1.1	1.5	41.2
Degree	20.6	6.2	2.0	4.2	31.9
Job tenure					
0-1 years	35.9	7.9	2.8	5.1	36.0
1-2 years	23.8	5.3	1.7	3.6	31.5
2-5 years	16.7	3.7	1.1	2.6	30.9
5-10 years	13.1	3.3	1.2	2.1	37.2
10+ years	13.6	3.5	1.0	2.5	28.5
Industry					
Agriculture/Energy	18.3	5.4	2.0	3.3	38.0
Manufacturing	21.9	7.8	2.1	5.6	27.6
Construction	36.9	13.2	5.0	8.2	37.7
Distribution	24.4	5.0	1.9	3.1	37.4
Transport	18.7	4.7	1.7	3.0	36.5
Banking	22.8	4.8	2.0	2.8	42.1
Private services	23.9	2.5	1.2	1.2	50.0
Public services	14.6	1.4	0.4	1.0	27.7

Table 3. Who is Displaced? Multinomial Logit and Binary Logit Estimates - Britain

Independent Variables	Multinomial Logit			Of Displaced
	Quit	Temporary	Displaced	Pr. (Out Spell)
Male	-.042**	-.003	.002	.075
	(.004)	(.001)	(.002)	(.045)
Single	-.001	.003	.004	.004
	(.005)	(.001)	(.003)	(.050)
Children	-.044**	.004**	.001	.049
	(.005)	(.001)	(.003)	(.047)
Age > 25-49	.032**	.010**	.003	.052
	(.008)	(.002)	(.004)	(.082)
Age >=50	-.009	.002	-.001	-.056
	(.007)	(.002)	(.003)	(.065)
Qualifications				
-Upper intermediate	-.030**	-.006**	.009**	-.013
	(.008)	(.002)	(.004)	(.085)
- Lower level	-.018**	-.010**	.006	-.003
	(.006)	(.002)	(.004)	(.073)
-None	-.034**	-.011**	.012**	.058
	(.009)	(.002)	(.004)	(.091)
Occupation				
Professional	.010	.005	.005	.017
	(.008)	(.003)	(.003)	(.067)
Other non-manual	.044**	.012**	.005	-.023
	(.008)	(.002)	(.004)	(.067)
Unskilled manual	.035**	.007**	.005	-.077
	(.006)	(.002)	(.003)	(.055)
Job Tenure				
<1 year	.049**	.016**	.028**	.220**
	(.005)	(.002)	(.003)	(.048)
1-2 years	.013**	-.001	.006**	.073
	(.006)	(.001)	(.003)	(.058)
5-10 years	-.056**	-.017**	-.009**	-.106
	(.007)	(.003)	(.003)	(.068)
10+years	-.068**	-.023**	-.008**	-.193**
	(.008)	(.004)	(.003)	(.077)
Industry				
Agriculture/	.004	.007**	.030**	-.022
Energy	(.007)	(.003)	(.007)	(.128)
Manufacturing	.005	-.001	.040**	-.023
	(.007)	(.002)	(.003)	(.092)
Construction	.028**	.005	.049**	-.217**
	(.013)	(.003)	(.005)	(.108)
Retail	.050**	-.002	.034**	-.061
	(.006)	(.002)	(.004)	(.090)
Transport	.010	-.001	.028**	-.167
	(.010)	(.003)	(.005)	(.114)
Financial sector	.018**	-.002	.028**	-.149
	(.007)	(.002)	(.004)	(.097)
Private Services	.061**	.001	.029**	-.082
	(.009)	(.002)	(.007)	(.119)

Industry Declining	-.015**	-.005	.002		.025
	(.004)	(.003)	(.002)		(.046)
Firm size					
<10	.035**	.001	.011**		-.005
	(.005)	(.001)	(.002)		(.053)
10-25	.014**	.003**	.008**		-.006
	(.005)	(.001)	(.002)		(.054)
Part-time	-.121**	-.004**	-.014**		.310**
	(.007)	(.002)	(.003)		(.083)
N	23346				781
Psuedo R	.095				.135

Notes: Coefficients in logits are marginal effects and their standard errors relative to sample mean of each category. Standard errors in brackets with ** significant at 5% level. Equations also include controls for region and year.

Table 4. Labour Force Status One Year On

	Self-employed	Employed	Unemployed	Inactive
All separations	6.3	65.3	15.9	12.5
All displaced:	7.0	53.6	34.9	4.5
- Job to job displaced	13.4	79.5	5.2	1.9
- Exit displaced	3.8	40.5	49.9	5.8
All not displaced:				
- Job to job Not displaced:	7.8	88.6	2.8	0.8
- Temporary job	8.6	84.3	6.6	0.5
- Not temporary job	7.8	88.9	2.5	0.8
- Exit not displaced:	2.9	33.6	23.6	39.8
- Temporary job	4.7	47.0	35.6	12.7
- Not temporary job	2.6	31.3	21.5	44.6

Table 5. Kaplan-Meier Estimates of Hazard and Survival Rate of Return to Work - Britain

Time out after displacement (months)	Hazard rate	Survival rate
0	.366	.633
1	.204	.504
2	.178	.414
3	.201	.331
4	.154	.279
5	.128	.243
6	.172	.202
7	.120	.178
8	.110	.158
9	.132	.137
10	.106	.123

Note: Job-to-Job moves all measured as ending spell at month 0. Initial sample = 853, of which 313 are job-to-job, 475 displaced and 75right censored.

Table 6. Cox Estimates of Time to Return to Work for Displaced Workers - Britain

Independent Variables	With Job	Job-to-Job	Exit Only	Displaced
Male	.049 (.089)	1.05	.093 (.119)	1.09
Single	-.010 (.093)	.99	-.014 (.122)	.98
Children	-.241** (.091)	.79	-.304** (.121)	.74
Age > 25-49	.252 (.157)	1.28	.321 (.194)	1.38
Age >=50	.367** (.128)	1.44	.338 ** (.170)	1.40
Qualifications -Upper intermediate	-.065 (.167)	.94	.001 (.230)	1.00
- Lower level	-.061 (.143)	.94	.019 (.200)	1.01
-None	-.036 (.174)	.96	.134 (.234)	1.14
Occupation Professional	-.010 (.131)	.99	.016 (.172)	1.01
Other non-manual	-.200 (.131)	.82	-.362** (.171)	.70
Unskilled manual	-.059 (.110)	.94	-.233 (.150)	.79
Job Tenure <1 year	-.496** (.095)	.61	-.481** (.124)	.62
1-2 years	-.187 (.116)	.83	-.198 (.155)	.82
5-10 years	.167 (.134)	1.18	.072 (.206)	1.07
10+years	.076 (.151)	1.07	-.264 (.247)	.77
Industry Agriculture/ Energy	.376 (.249)	1.45	.489 (.329)	1.63
Manufacturing	.330 (.173)	1.39	.369 (.224)	1.44
Construction	.525** (.207)	1.69	.425 (.281)	1.52
Retail	.315 (.171)	1.37	.326 (.221)	1.39
Transport	.444** (.214)	1.55	.404 (.291)	1.50
Financial sector	.369** (.184)	.45	.196 (.246)	1.22
Private Services	.706** (.228)	2.02	.852** (.313)	2.35

Industry Declining	-.046	.95	-.002	1.00
	(.090)		(.114)	
Firm size				
<10	-.076	.93	-.129	.88
	(.103)		(.138)	
10-25	-.053	.94	-.116	.89
	(.102)		(.134)	
Part-time	-.544**	.58	-.299	.75
	(.141)		(.166)	
N	853		540	
Psuedo R				

Notes: Additional coefficients in Cox are measured relative to baseline hazard. Standard errors in brackets with *
significant at 5% level. Equations also include controls for region and year.

Table 7. Mean Log Weekly Wage Growth by Labour Market Status

Labour Market Status	Mean Change	Full Time – Full Time
Stayers (22,113)	.045	.055
	(.302)	(.283)
All exits (1770)	-.073	-.004
	(.582)	(.503)
All displacements: (791)	-.097	-.044
	(.581)	(.509)
- Job to Job & displaced: (297)	-.015	.009
	(.486)	(.469)
- Exit & displaced : (494)	-.146	-.081
	(.626)	(.534)
All temporary: (485)	.013	.086
	(.552)	(.495)
- Job to Job & temporary: (199)	.066	.098
	(.553)	(.502)
- Exit & temporary: (286)	-.023	.076
	(.548)	(.491)
Exit & quit: (990)	-.052	.013
	(.566)	(.487)
Job to job & quit: (1754)	.210	.237
	(.572)	(.554)

Note: Sample size in brackets in column 1. Standard errors in brackets in columns 2 and 3.

Table 8a. Mean Weekly Wage Growth by Labour Market Status

	Stayers	All Displaced	Job to job and Displaced	Exit and Displaced	Temporary	Other Exits
Women	4.9	-15.9	-4.3	-24.7	-0.1	-6.4
Men	4.2	-6.2	0.4	-9.7	3.8	-4.0
Age						
Youth<25	10.7	-5.2	1.8	-7.9	4.3	-3.4
Prime 25-49	4.4	-9.6	0.0	-16.1	0.9	-2.9
Mature 50+	1.3	-18.0	-15.1	-19.8	-6.4	-20.9
Time Out						
<6 months	-	-11.8	-	-11.8	-1.9	-12.4
6+ months	-	-15.6	-	-15.6	-5.2	-24.0
Qualifications						
None	2.6	-10.2	-0.5	-16.4	-8.8	-7.5
0 level & equivalent	5.0	-10.0	-2.3	-14.5	1.2	-4.0
A level/degree	4.5	-8.6	-0.2	-13.8	7.4	-8.1
Job tenure						
0-1 years	6.1	-13.3	-3.9	-16.4	0.8	-3.7
1-2 years	6.4	-7.7	-4.0	-9.8	3.6	0.4
2-5 years	5.1	-6.5	3.5	-14.1	6.4	-5.8
5-10 years	2.7	-7.9	-1.9	-15.9	-13.2	-8.6
Industry						
Expanding Industry	5.1	-8.2	0.9	-14.3	2.7	-4.0
Declining Industry	3.9	-10.7	-3.4	-14.7	-0.2	-6.3

Table 8b. Mean Log Weekly Wage Changes: Full-time – Full Time

	Stayers	All displaced	Job to job and displaced	Exit and displaced	Temporary	Other exits
Women	7.0	-5.6	0.4	-12.3	10.1	2.5
Men	4.6	-3.9	1.2	-6.8	7.4	0.3
Age						
Youths<25	11.7	3.2	7.0	1.7	14.8	4.4
Prime 25-49	5.2	-5.6	0.8	-10.7	6.5	2.3
Mature 50+	2.7	-11.5	-7.1	-14.6	-0.7	-11.0
Time Out						
< 6 months	-	-7.3	-	-7.3	7.8	-0.4
6+ months	-	-8.4	-	-8.4	5.8	-15.3
Qualifications						
None	3.3	-2.3	7.5	-10.4	-5.8	-2.1
0 level & equivalent	6.1	-6.7	-2.0	-9.9	10.0	1.1
A level/Degree	5.4	0.5	3.4	-1.6	13.2	2.3
Job tenure						
0-1 years	7.6	-5.7	-3.1	-6.8	9.1	3.7
1-2 years	6.9	0.5	-0.3	1.0	14.2	4.2
2-5 years	6.1	-5.2	5.2	-14.3	4.9	-1.4
5+ years	3.5	-6.5	0.5	-17.5	3.6	0.6
Industry						
Expanding Industry	6.5	-2.6	3.0	-7.2	10.1	3.0
Declining Industry	4.7	-5.6	-0.8	-8.6	6.9	-0.2

Table 9. OLS Log Wage Growth Regressions for Separating Groups - Britain

Independent	Displaced		Temporary Contract	
Variables	All	FT-FT	All	FT-FT
Constant	.089	.101	.105	.197**
	(.066)	(.069)	(.072)	(.070)
Male	.018	.050	-.002	-.003
	(.042)	(.042)	(.052)	(.054)
Age 25-49	-.063	-.098	-.012	-.094
	(.052)	(.056)	(.056)	(.056)
Age 50+	-.112	-.152 **	-.049	-.133
	(.070)	(.071)	(.089)	(.094)
Higher Intermediate	.050	.072	.065	.061
	(.044)	(.044)	(.056)	(.059)
Degree	.081	-.016	-.155	-.191
	(.053)	(.053)	(.236)	(.293)
Tenure 2-5 years	.004	-.030	.025	-.063
	(.054)	(.054)	(.077)	(.079)
Tenure 5+ years	.019	-.075	-.082	-.049
	(.093)	(.040)	(.106)	(.122)
Firm size down	-.102**	-.021	-.086	-.089
	(.039)	(.039)	(.052)	(.050)
Industry declining	-.012	-.106	-.002	-.012
	(.039)	(.046)	(.048)	(.050)
Out 0-6 months	-.096**	-.105**	-.040	-.035
	(.045)	(.046)	(.065)	(.067)
Out 6-12 months	-.113 **	-.110**	-.040	-.047
	(.054)	(.055)	(.063)	(.064)
Out 12 months+	-.179	-.170**	.314	.141
	(.110)	(.111)	(.191)	(.223)
Part-Time then	.519**		.139	
	(.147)		(.131)	
Part-Time now	-.611**		-.496**	
	(.147)		(.085)	
R^2	.150	.027	.131	.025
N	791	688	485	398

Note: White adjusted standard errors in brackets. ** indicates significant at 5% level.

Table 10. OLS Log Wage Change Estimates - Britain

	Weekly		FT-FT	
Constant	.046**	.095**	.044**	.088**
	(.002)	(.006)	(.003)	(.006)
Job to job & displaced	-.061**	-.054**	-.061**	-.055*
	(.028)	(.027)	(.026)	(.028)
Exit & Displaced	-.169**	-.169**	-.131**	-.152**
	(.028)	(.026)	(.023)	(.027)
Job to job & temp	.020	.022	.009	.015
	(.039)	(.038)	(.032)	(.036)
Exit & temp	-.069**	-.040	.042	-.013
	(.034)	(.031)	(.033)	(.034)
Exit & quit	-.098**	-.077**	-.047**	-.057**
	(.018)	(.017)	(.016)	(.016)
Job to job & quit	.164**	.161**	.166**	.159**
	(.014)	(.015)	(.013)	(.014)
Men		-.025**		-.020**
		(.005)		(.005)
Youth<25		.058*		.068**
		(.007)		(.007)
Age 50+		-.024**		-.023**
		(.006)		(.006)
Degree		-.001		-.014**
		(.005)		(.006)
Previous Tenure 2-5 years		-.012**		-.014**
		(.006)		(.006)
5-10 years		-.025**		-.025**
		(.005)		(.006)
Industry Declining		-.020**		-.016**
		(.004)		(.005)
Sample Size	25276	25276	22424	22424
R^2	.023	.101	.026	.036

Note: White adjusted standard errors in brackets. ** indicates significant at 5% level

Table 11. Average Rate of Job Displacement - Australia – 1983 to 1997

	1983	**1985**	**1987**	**1989**	**1991**	**1993**	**1995**	**1997**
Gender								
Male	0.059	0.043	0.046	0.045	0.073	0.060	0.052	0.048
Female	0.050	0.038	0.041	0.043	0.052	0.043	0.039	0.038
Tenure								
Less 1 year	0.136	0.096	0.097	0.095	0.131	0.104	0.098	0.096
1 to 3 years	0.051	0.036	0.042	0.044	0.084	0.062	0.045	0.046
3 to 5 years	0.040	0.022	0.030	0.023	0.045	0.044	0.028	0.031
5 to 10 years	0.023	0.016	0.019	0.017	0.028	0.027	0.024	0.026
More 10 years	0.020	0.015	0.012	0.014	0.029	0.024	0.020	0.020

Source: ABS, Labour Mobility Australia, February 1984-1998, catalogue no.6209.0.

Table 12. Incidence of Displacement and Re-employment of Displaced Workers – Australia

	Probability of Displacement	Probability of Re-employment at Survey Date
A. Victoria: 1990-93		
Total	0.108	0.508
Gender		
Male	0.129	0.525
Female	0.082	0.472
Age		
18-24	0.103	0.501
25-34	0.117	0.597
35-44	0.105	0.571
45-54	0.100	0.471
55-64	0.122	0.197
Education		
Uni. Degree +		0.584
Trade Qualification		0.648
Completed HS		0.490
Not Completed HS		0.358
Country of Birth		
Australia		0.528
Immigrant - ESB		0.581
Immigrant - NESB		0.418
Tenure		
Less 1 year		0.430
1 to 3 years		0.595
3 to 5 years		0.581
5 to 10 years		0.587
More 10 years		0.386
Occupation		
Manager/Professional		0.591
Tradesperson		0.604
Clerical/Sales		0.517
Plant and machine		0.383

operators, Labourers etc.		
B. Australia: 1994-97		
Total	0.073	0.547
Gender		
Male	0.091	0.552
Female	0.052	0.536
State – Victoria		
Total	0.078	0.536
Male	0.098	0.560
Female	0.055	0.466
Age		
18-24		0.486
25-34		0.593
35-44		0.620
45-54		0.575
55-64		0.326
Tenure		
Less 1 year		0.451
1 to 3 years		0.606
3 to 5 years		0.634
5 to 10 years		0.626
More 10 years		0.579
Occupation		
Manager/Professional		0.648
Tradesperson		0.591
Clerical/Sales		0.550
Plant and machine operators, Labourers etc.		0.452

Sources: ABS, <u>Retrenched Workers and Workers Who Accepted Redundancy Packages, Victoria</u>, October 1993, catalogue no.6266.2; and ABS, <u>Retrenchment and Redundancy, Australia</u>, July 1997, catalogue no.6266.0.

Table 13. Labour Force Status of Displaced Workers - Australia

A. Time since displacement - Six Months

	Employed - Full-time	Employed - Part-time	Unemployed	Out of Labour Force	Observations
A. Aggregate					
Male	0.44	0.18	0.26	0.12	198
Female	0.36	0.21	0.31	0.12	178
B. Educational Attainment					
Male -					
NCHS	0.43	0.15	0.30	0.12	104
CHS/Post-school qualification	0.46	0.21	0.22	0.11	94
Female -					
NCHS	0.27	0.25	0.35	0.13	73
CHS/Post-school qualification	0.42	0.19	0.29	0.10	105

B. Time since displacement - Twelve Months

	Employed - Full-time	Employed - Part-time	Unemployed	Out of Labour Force	Observations
A. Aggregate					
Male	0.51	0.10	0.22	0.17	179
Female	0.43	0.09	0.26	0.22	162
B. Educational Attainment					
Male -					
NCHS	0.48	0.13	0.21	0.18	88
CHS/Post-school qualification	0.54	0.07	0.22	0.17	91
Female -					
NCHS	0.28	0.08	0.38	0.24	60
CHS/Post-school qualification	0.52	0.10	0.19	0.19	92

Table 14. Estimated Kaplan-Meier Hazard and Survival Rate of Return to Work - Australia

Time out after displacement (months)	Hazard rate	Survival rate
1	0.284	0.716
2	0.168	0.596
3	0.241	0.454
4	0.184	0.365
5	0.145	0.314
6	0.134	0.274
7	0.114	0.246
8	0.108	0.224
9	0.183	0.190
10	0.083	0.178
11	0.065	0.170
12	0.159	0.151

Notes: Sample size is 390 of whom 305 are observed returning to work. Maximum observed duration in sample is 40 months.

**Table 15. Determinants of Probability of Exit from Non-employment –
Marginal Effects - Australia**

	(1)	(2)
Covariates		
Spell duration	-0.0082*	-0.0077*
	(0.0010)	(0.0010)
Age	-0.0063*	0.0078
	(0.0019)	(0.0222)
Immigrant	-0.0458	-0.0382
	(0.0246)	(0.0243)
Completed High School/Post-school qualification	0.0307*	0.0342*
	(0.012)	(0.0123)
Reading aptitude	0.0028	0.0040
	(0.0026)	(0.0027)
Reading aptitude* cohort 1	0.0001	-0.0019
	(0.0031)	(0.0038)
Math aptitude	0.0024	0.0016
	(0.0020)	(0.0021)
Math aptitude* cohort 1	-0.0005	-0.0007
	(0.0021)	(0.0030)
Female	-0.0238*	-0.0271*
	(0.0115)	(0.0115)
Rate of ue in last occupation	-0.0074*	-0.0074*
	(0.0023)	(0.0025)
Year Dummies	No	Yes
Observations	4403	4403

Note: a) Marginal effects are calculated at average values of other explanatory variables.
Marginal effects for dummy variables are for effect of a change from 0 to 1 in that variable; and b)
Standard errors are in parentheses. Asterik denotes significant at 5 per cent level.

Table 16. Pre-displacement and Post-displacement Work Time - Australia

Ratio of worktime per quarter post-displacement to worktime in quarter prior to displacement:

	Total hours			Total weeks			Observations		
Quarter post-displacement	All	Males	Females	All	Males	Females	All	Males	Females
1	0.213*	0.214*	0.220*	0.221*	0.203*	0.223*	389	205	184
2	0.518*	0.533*	0.519*	0.556*	0.585*	0.520*	377	198	179
3	0.576*	0.591*	0.578*	0.598*	0.599*	0.597*	354	189	165
4	0.631*	0.649*	0.631*	0.619*	0.651*	0.578*	345	183	162
5	0.701*	0.740*	0.676*	0.677*	0.727*	0.616*	332	176	156
6	0.717*	0.802*	0.630	0.703*	0.776*	0.610*	309	165	144
7	0.743*	0.780	0.718	0.723*	0.767	0.664	276	152	124
8	0.791	0.831	0.764	0.748	0.796	0.684	268	148	120
Average pre-displacement	425.13	433.97	398.34	12.06	12.06	12.06			

Note: Asterik denotes ratio significantly different from one at 5 per cent level.
.

Table 17. Pre-displacement and Post-displacement Average Weekly Earnings - Australia

**A. Average Log Weekly Earnings –
Post-displacement Job (1-2 Years after
displacement) Minus Pre-Displacement Job**

	Full-time + Part-time			Full-time		
	All	Males	Females	All	Males	Females
A. Displaced						
Difference	0.456	0.456	0.455	0.342	0.355	0.312
	(0.058)	(0.070)	(0.112)	(0.048)	(0.064)	(0.060)
Observations	94	61	33	74	47	16
B. Non-displaced						
Difference	0.428	0.407	0.449	0.324	0.336	0.310
	(0.017)	(0.022)	(0.026)	(0.014)	(0.019)	(0.019)
Observations	1085	539	546	921	492	429

**B. Average Log Weekly Earnings -
Post-displacement Job (2-3 Years after
displacement) Minus Pre-Displacement Job**

	Full-time + Part-time			Full-time		
	All	Males	Females	All	Males	Females
A. Displaced						
Difference	0.593	0.637	0.518	0.460	0.511	0.366
	(0.063)	(0.086)	(0.101)	(0.061)	(0.073)	(0.113)
Observations	56	35	21	43	28	15
B. Non-displaced						
Difference	0.700	0.700	0.700	0.537	0.561	0.511
	(0.024)	(0.034)	(0.035)	(0.019)	(0.027)	(0.028)
Observations	670	329	341	549	282	267

**C. Average Log Weekly Earnings -
Post-displacement Job (3-4 Years after
displacement) Minus Pre-Displacement Job**

	Full-time + Part-time			Full-time		
	<u>All</u>	<u>Males</u>	<u>Females</u>	<u>All</u>	<u>Males</u>	<u>Females</u>
A. Displaced						
Difference	0.764	0.723	0.819	0.581	0.592	0.561
	(0.123)	(0.159)	(0.193)	(0.100)	(0.145)	(0.191)
Observations	33	19	14	27	17	10
B. Non-displaced						
Difference	0.903	0.877	0.929	0.746	0.775	0.713
	(0.032)	(0.042)	(0.050)	(0.026)	(0.035)	(0.036)
Observations	412	207	205	345	181	164

Table 18. Determinants of Ratio of Pre-displacement and Post-displacement Weekly Earnings - Australia

Dependent variable:

Explanatory Variables:	Log [Weekly earnings - Post-displacement (1-2 years)]		Log [Weekly earnings - Pre-displacement]		Log[Weekly earnings - Post-displacement (1-2 years)/Weekly earnings – Pre-displacement]:	
Constant	-2.806*	-3.136*	1.013	2.082*	1.222*	1.310*
	(0.759)	(0.937)	(0.596)	(0.771)	(0.106)	(0.324)
Displaced	-0.137	-0.199*	-0.084	-0.055	0.007	0.070
	(0.084)	(0.084)	(0.066)	(0.070)	(0.089)	(0.091)
Female	-0.086*	-0.068*	-0.092*	-0.093	-0.003	-0.022
	(0.025)	(0.024)	(0.019)	(0.020)	(0.027)	(0.026)
Age	0.517*	0.547*	0.257*	0.154*	-0.036*	-0.044*
	(0.066)	(0.082)	(0.052)	(0.068)	(0.003)	(0.017)
Age squared	-0.008	-0.008*	-0.003*	-0.001		
	(0.001)	(0.001)	(0.001)	(0.001)		
Complete HS/Post-school qualificns	-0.012	-0.010	-0.011	-0.010	-0.006	-0.008
	(0.026)	(0.025)	(0.021)	(0.021)	(0.028)	(0.027)
Rate of ue in last occupation	-0.014*	-0.002	-0.011*	-0.011*	0.003	-0.009
	(0.004)	(0.004)	(0.003)	(0.004)	(0.005)	(0.005)
Immigrant	0.023	0.024	0.012	0.015	-0.007	-0.007
	(0.044)	(0.042)	(0.034)	(0.034)	(0.047)	(0.046)
FT	1.007*	1.067*	0.056*	0.086*		
	(0.034)	(0.033)	(0.031)	(0.031)		
FT to FT					-0.090	-0.139*
					(0.054)	(0.053)
FT to PT					-0.859*	-0.914*
					(0.082)	(0.079)
PT to FT					0.926*	0.934*
					(0.067)	(0.065)
Year dummies	No	Yes	No	Yes	No	Yes
Observations	1177	1177	1177	1177	1177	1177
Adj. R-squared	0.720	0.750	0.652	0.654	0.427	0.421
F-statistic	380.39*	268.79*	277.49*	172.45*	98.44*	75.01*

Note: Standard errors are in parentheses. Asterik denotes significant at 5 per cent level.

Table A1: Unemployment Benefit Replacement rates for Single-Earner Households, 1995

a. Britain

		1st month *no* social assistance			**60th** month *with* social assistance	
	gross		net of tax/other		gross	net of tax/other
	single	couple, no children	couple, no children	couple, 2 children, housing benefit	couple, no children	couple, 2 children, housing benefit
% of APW	16	26	35	77	25	77
%of2/3 APW	24	39	52	90	38	90

b. Australia

	Australia	OECD
A. Replacement Rate in First Month of Unemployment		
I. Gross Replacement Rate		
Single	22	52
Couple (No children)	40	52
II. Net Replacement Rate		
Couple (No children)	49	60
Couple (2 children)	64	68
Couple (2 children, housing benefits)	71	73
B. Replacement Rate in Sixtieth Month of Unemployment		
Gross Replacement Rate		
Couple (No children)	40	19
Couple (2 children, housing benefits)	71	67

Note: a) Gross replacement rates are before tax. Net replacement rates are after tax and other benefits; and b) APW = Average Production Worker Earnings.

Source: OECD (1996, Table 2.1).

Table A2. Log Real Wages of Displaced Workers, (Full-Time to Full-Time)

	Weekly		
	Old Job	NewJob	Ln(New/Old
Constant	5.554*	5.890*	0.124
	(0.152)	(0.127)	(0.178)
Male	0.222*	0.231*	0.017
	(0.054)	(0.041)	(0.056)
Age < 25	-0.282*	-0.190*	0.089
	(0.056)	(0.040)	(0.058)
Age >=50	0.127	0.050	-0.085
	(0.069)	(0.051)	(0.076)
Qualifications			
Upper	-0.100	-0.182*	-0.138
Intermed.	(0.075)	(0.058)	(0.078)
Lower	-0.254*	-0.267*	-0.066
Intermed.	(0.095)	(0.078)	(0.103)
None	-0.264*	-0.351*	-0.164
	(0.083)	(0.068)	(0.096)
Job Tenure			
1-2 years	0.070		-0.056
	(0.054)		(0.058)
2-5 years	0.036		-0.044
	(0.075)		(0.075)
5 years +	0.167*		-0.216*
	(0.058)		(0.071)
Industry			
Constrct.	0.240*	0.081	-0.092
	(0.073)	(0.072)	(0.080)
Retail	-0.192*	-0.211*	0.028
	(0.062)	(0.048)	(0.064)
Transport	-0.062	-0.165*	-0.026
	(0.079)	(0.069)	(0.077)
Finance	0.185*	-0.035	-0.232*
	(0.087)	(0.057)	(0.087)
Private	-0.359*	-0.371*	0.135
Serv.	(0.130)	(0.076)	(0.154)
Public	-0.092	-0.212*	-0.166
Serv.	(0.085)	(0.065)	(0.085)
Industry	-0.011	0.011	-0.004
Declining	(0.050)	(0.036)	(0.055)
Change		0.027	
Industry		(0.049)	

Firm Size

10-24 emps.	0.032	0.100*	0.068
	(0.072)	(0.054)	(0.077)
25-99	0.145*	0.188*	0.026
	(0.069)	(0.050)	(0.080)
100+	0.190*	0.218*	-0.048
	(0.065)	(0.047)	(0.069)

# obs :	637	647	637
Adj. R^2	0.371	0.391	0.145

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Notes: Heteroskedastic adjusted standard errors in brackets with $p<0.05$ = *. Regressions also include controls for ethnic origin, marital status, presence of children, 11 regions, union membership and 5 year dummies.

Table A3. Difference in Difference Estimates of Cost of Job Loss, (Full-Time to Full-Time)

	I	II	III	IV
Weekly				
Displaced	-.089 ** (.021)	-.111** (.021)	-.189** (.023)	-.186** (.034)
Out 6-11 mths				.013 (.054)
Out 12 mths+				.014 (.103)
Adj. R2	.010	.027	.043	.032
N	21756	21756	21756	21756
Hourly				
Displaced	-.075 (.033)	-.092** (.033)	-.215** (.041)	-.190** (.054)
Out 6-11 mths				-.097 (.091)
Out 12 mths+				-.564 (.329)
Adj. R2	.011	.022	.031	.025
N	16889	16899	16899	16899

Notes: I Displaced dummy and year dummies only. II as I with age, gender, marital status and qualification controls. III as II with occupation, industry, tenure, region and firm size controls. IV as III with time out controls. Heteroskedastic adjusted standard errors in brackets. ** significant at 5% level.

Figure 1a: Rate of Unemployment - Australia - Persons - 1978 to 1995 (August)
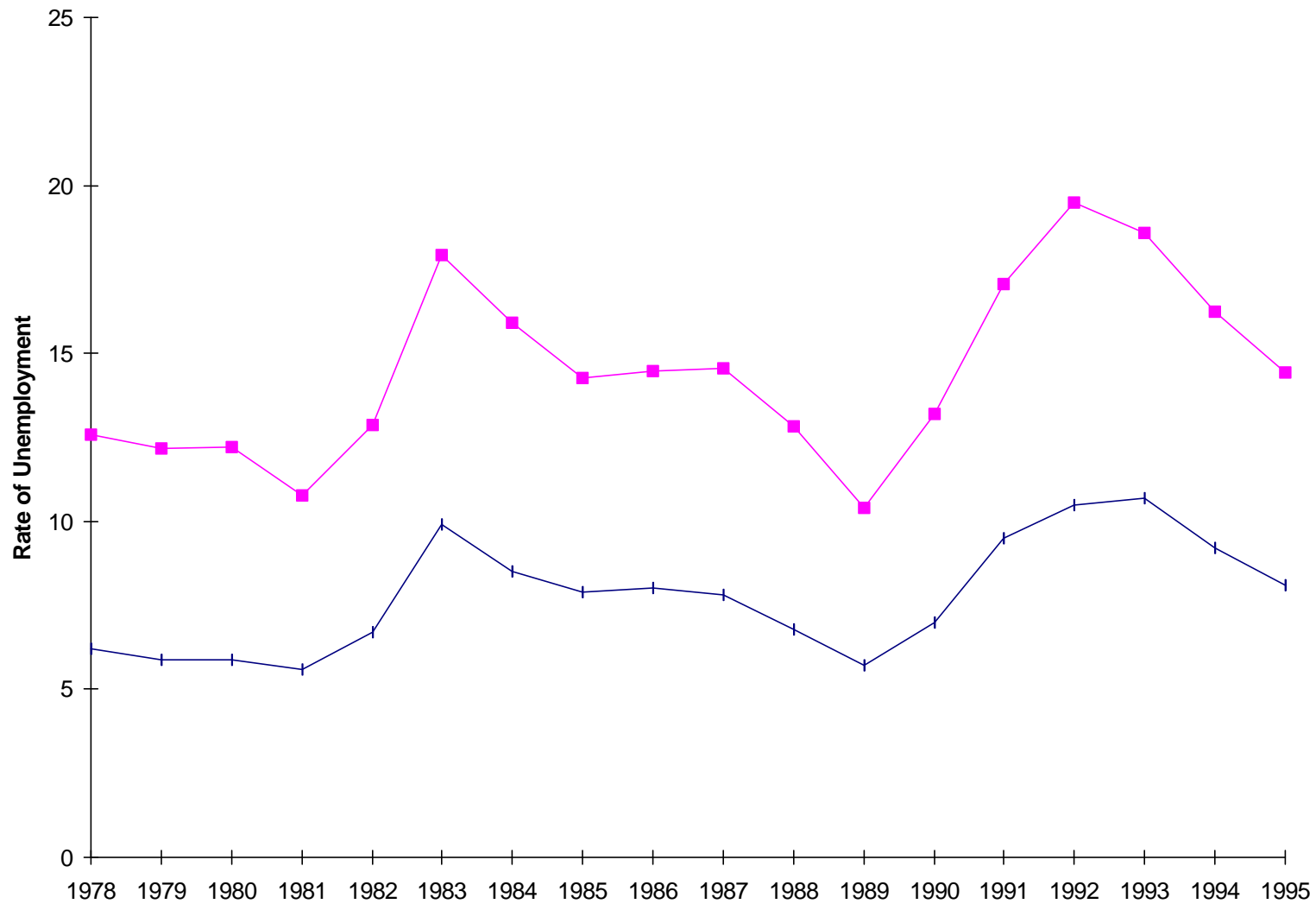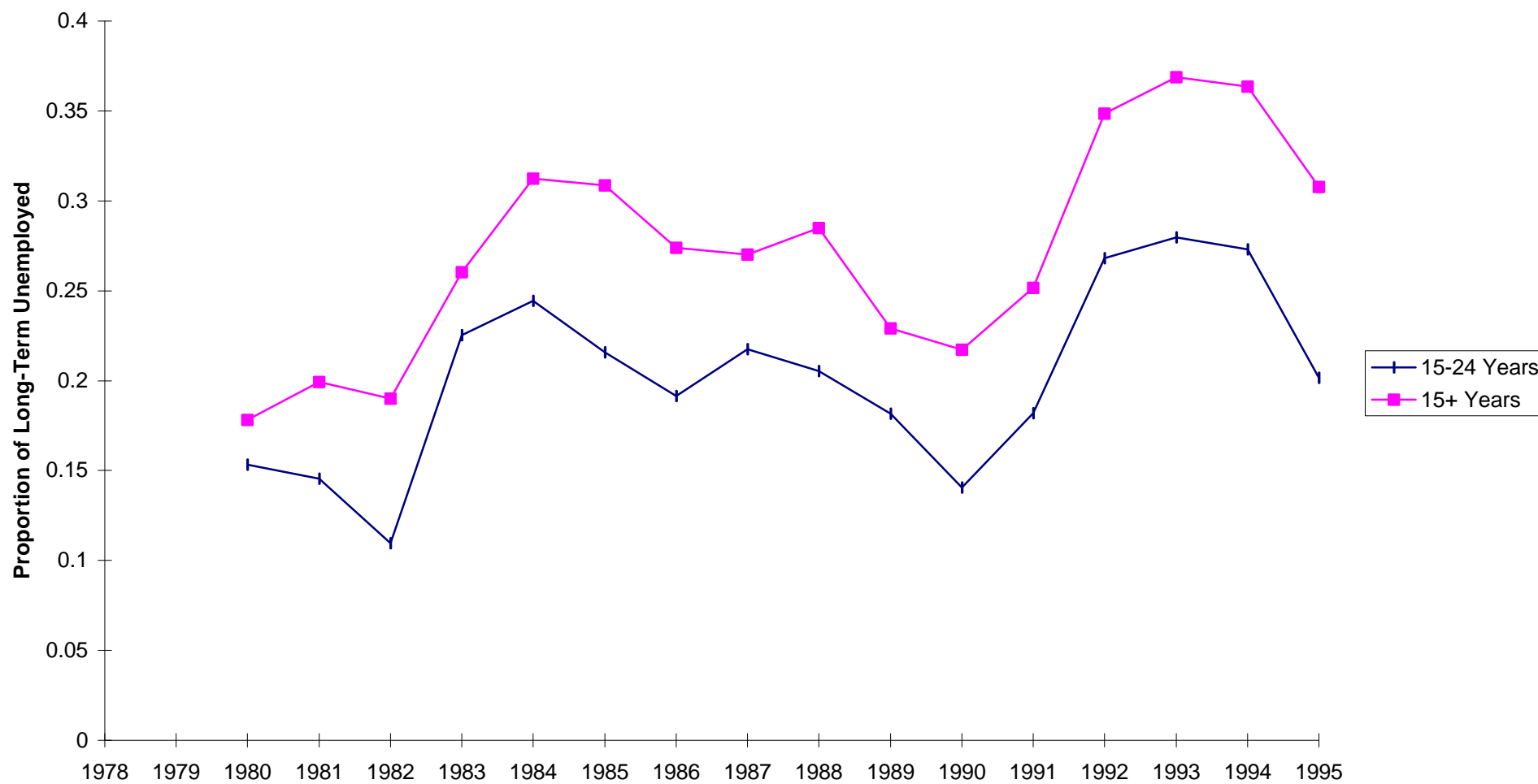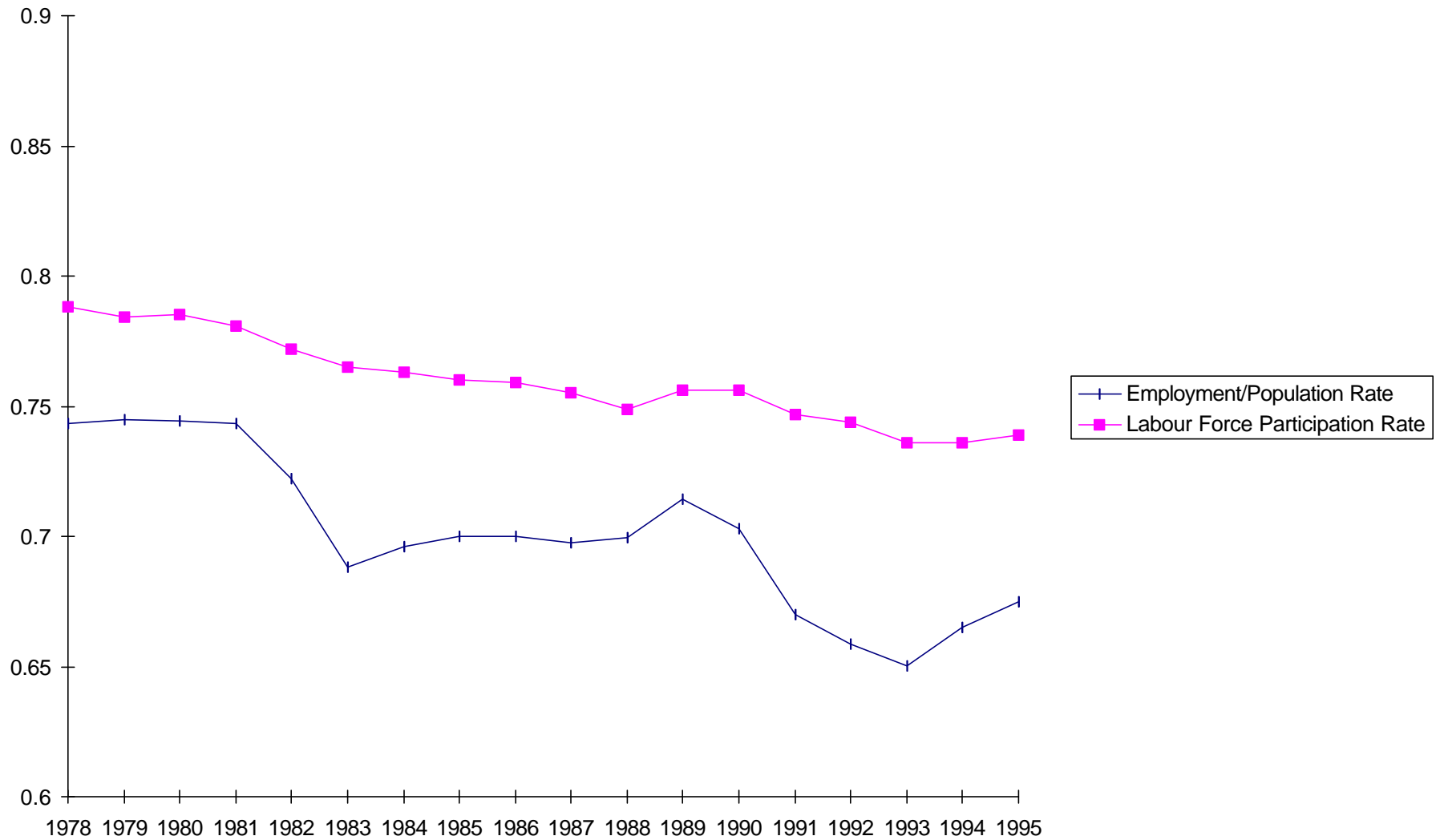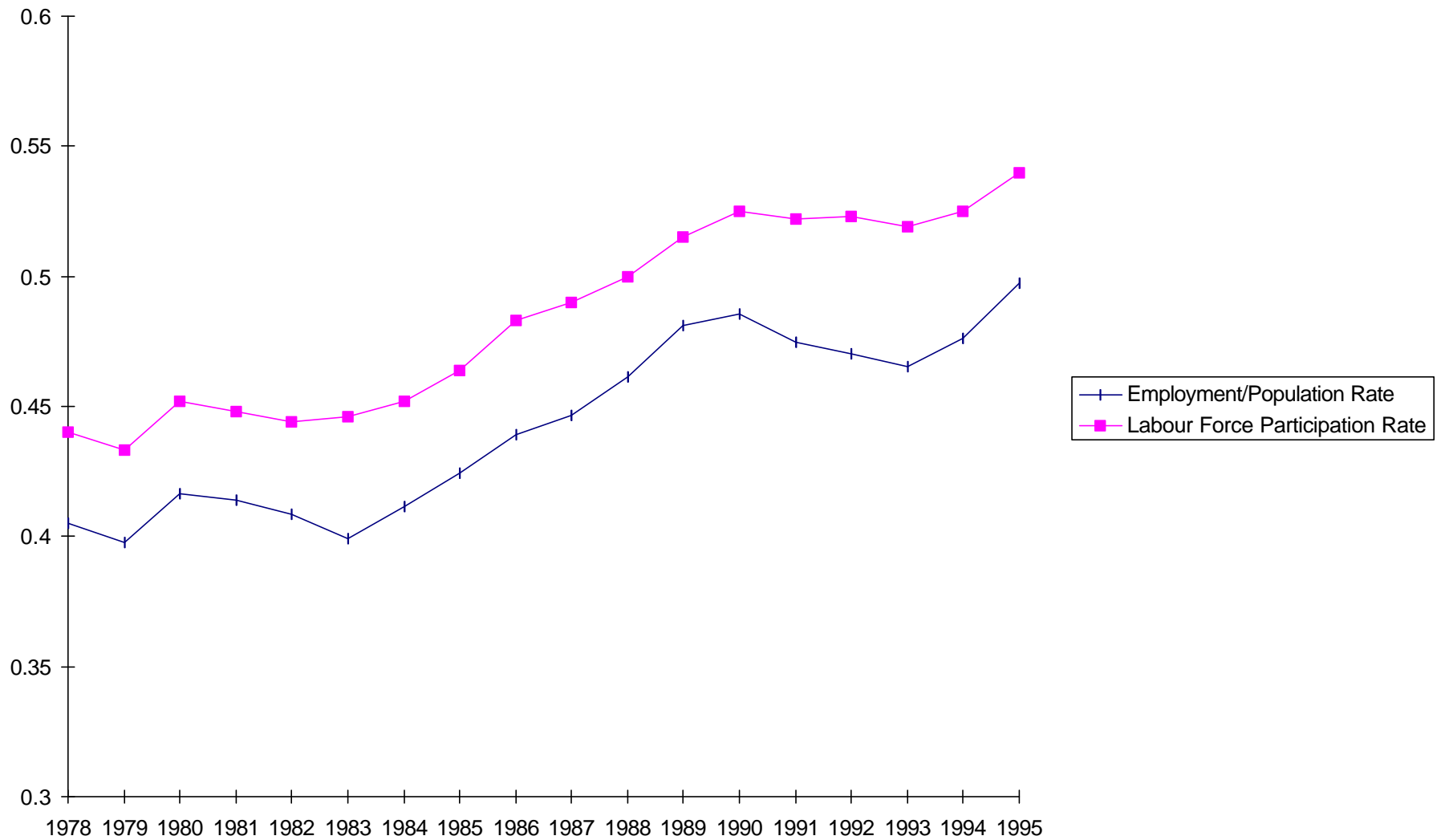
Figure 1b: Proportion of Long-Term Unemployed (52 weeks +) in Total Unemployment - Australia - Persons - 1978 to 1995 (August)
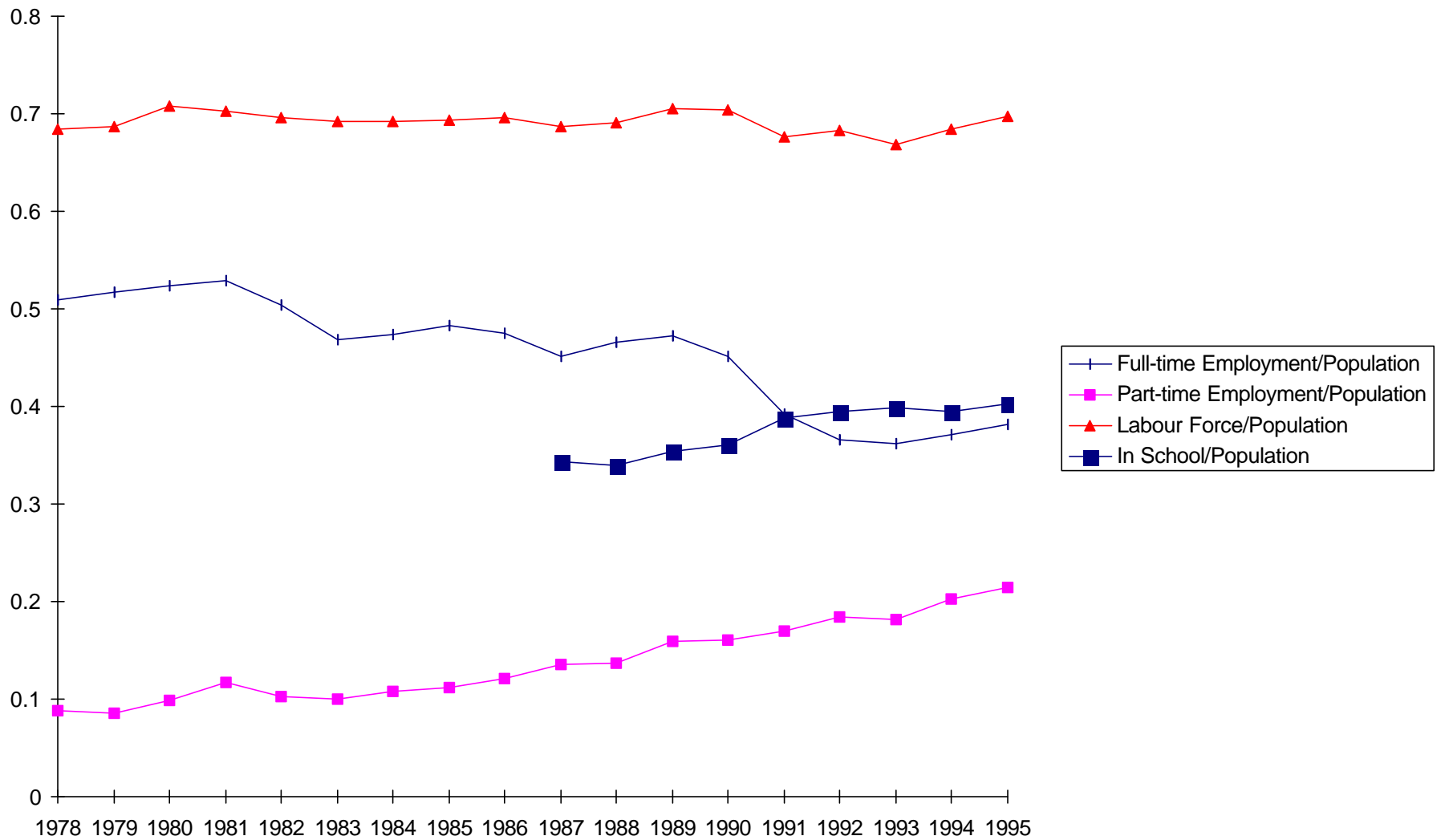
Figure 2a: Employment and Labour Force Participation - Australia - Males - 1978 to 1995 (August)

Figure 2b: Employment and Labour Force Participation - Australia - Females - 1978 to 1995 (August)

Figure 3: Employment, Labour Force and Schooling - Australia - Persons - 1978 to 1995 (August)

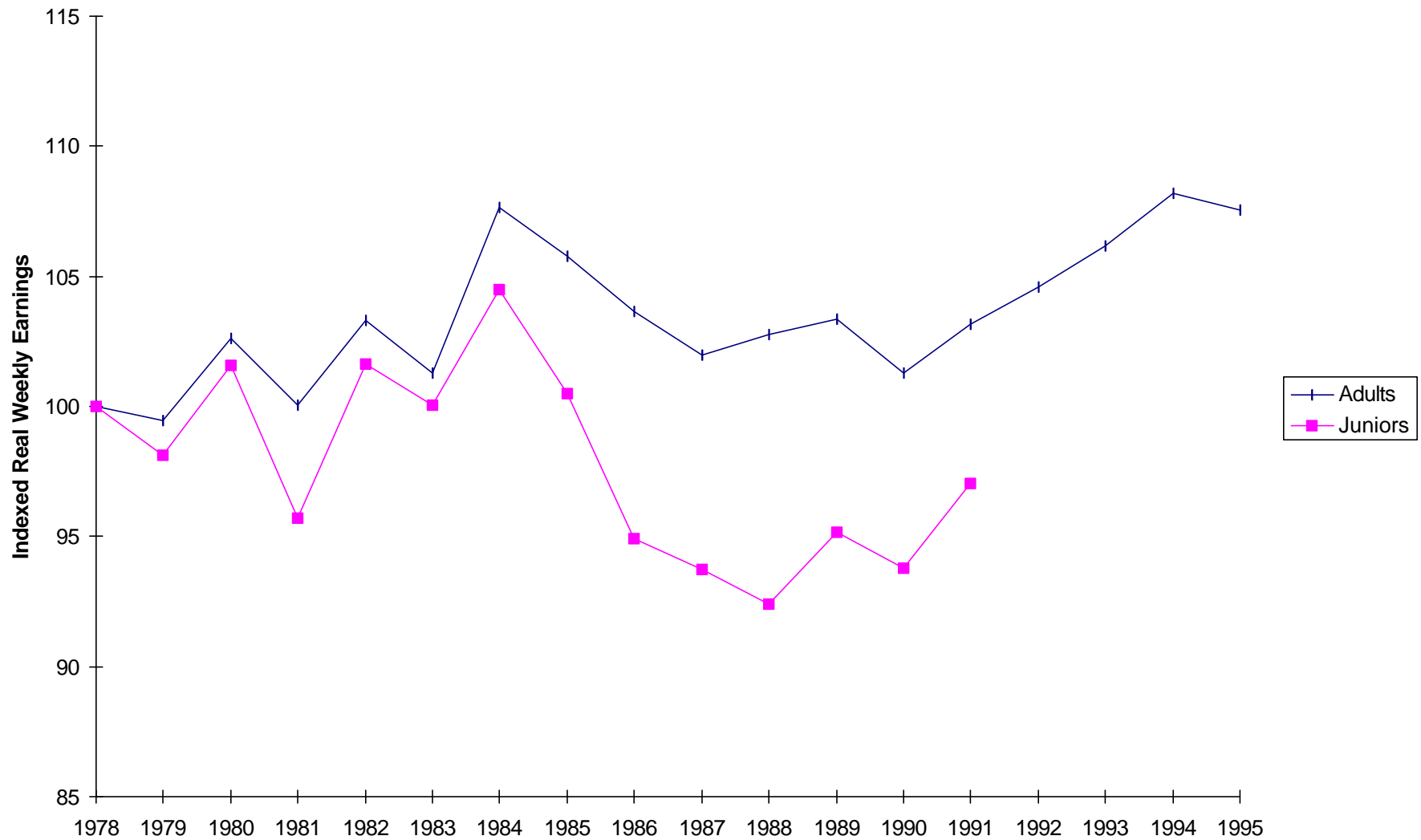**Figure 4: Real Weekly Earnings - Full-time Employees - Australia - Persons - 1978 to 1995**

Figure 5: Annual Rates of Job Separation and Rate of Unemployment - Australia - Persons - 1975 to 1997