

# **LABOUR MARKET PROGRAMS: A REVIEW OF THE LITERATURE**

**Elizabeth Webster**

**Melbourne Institute of Applied Economic and Social Research**

**The University of Melbourne**

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**Melbourne Institute of Applied Economic and Social Research**

**The University of Melbourne**

**Parkville, Victoria 3052 Australia**

*Telephone* (03) 9344 5288

*Fax* (03) 9344 5630

*Email* [r.qin@iaesr.unimelb.edu.au](mailto:r.qin@iaesr.unimelb.edu.au)

*WWW Address* <http://www.econ.unimelb.edu.au/iaesrwww/home.html>

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### **Publications**

Melbourne Institute of Applied economic and Social Research

The University of Melbourne

Parkville, Victoria 3052, Australia

Tel: +61 3 9344 5330

Fax: +61 3 9344 5630

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# Labour market programs: a review of the literature<sup>\*</sup>

*Research makes us more confused at a higher level*

*E Lundberg<sup>1</sup>*

## *Abstract*

Commonwealth labour market programs currently consume \$1.5 billion dollars per annum. Most of this expenditure is aimed at the long term unemployed. Since 1973-74, expenditure on these programs has risen and fallen in line with the unemployment rate. This government behaviour parallels the overseas experiences. Most empirical evidence from Australia and elsewhere indicate that programs improve participants' employment experiences for at least a year or two after leaving the program. However, most of this improvement could well be at the expense of other jobseekers. There is a lack of convincing evidence that the programs reduce wage pressures enough to permit an increase in total employment. Nevertheless, labour market programs appear to have intrinsic worth as an equity instrument, for they provide hope and opportunity to the most disadvantaged of all jobseekers.

## **Introduction**

Labour market programs are specifically designed to affect the demand for or supply of labour in one or several labour markets. Conventionally they have taken the form of a grant or subsidy to the worker, the firm or the job broker, and this century they have become the financial province of governments rather than private charities. They do not (in this paper) include policies

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<sup>1</sup> Cited in Björklund (1990; 12).

intended to change government or enterprise regulations<sup>2</sup>, or those meant to change institutional practices.<sup>3</sup> For partly arbitrary reasons, they do not include the very large body of government spending on ‘normal’ education and training, nor the very large body of government spending on ‘normal’ government employment, even though much of these are directly aimed to affect the operation of the labour market.<sup>4</sup>

Four main types of labour programs re-appear with regular frequency over time and space. The most basic type of program, job creation schemes, provide complete funding for all wage and material costs for projects which employed the target group. Wages subsidy schemes provide temporary subsidies towards the wage costs incurred by employers (private and public) who hire designated jobseekers. It has become increasingly common for wage subsidy and job creation schemes to give the participant some level of informal on-the-job training as well. Training subsidy schemes pay for part or all of the costs of placing a person in a formal training program and finally, placement services offer intensive job counselling to job seekers and a matching service with potential employers.

As a remedy for idleness, labour market programs have a longer tradition than formal economic theory. Their appearance coincided with the transition from agrarian feudalism to industrial capitalism and the emergence of unemployment as we define it today. An early workhouse existed in Amsterdam in 1596, and similar organisations have been found among the writings of seventeenth century English and French authors.<sup>5</sup> Among these, were schemes to provide vocational training for pauper children, to force labour at ‘moderate’ wages, to coerce work for ones’ board and lodgings and to compel service at sea. At times these measures were reinforced by law and penal sanctions and at others, they were run by charitable institutions for the moral benefit of paupers, vagrants and the destitute. Some institutions, such as the French ‘Hôpital Général’, aimed to become self supporting through the work of their inmates, but it has been claimed by historians that these were rarely successful. In part this was attributed to the inefficiency and lack of motivation of the participants, and in part, because the workhouses

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<sup>2</sup> Employment and wage awards, changes to eligibility for government old age pensions and compulsory schooling, schemes to repatriate guest workers and reduce immigration.

<sup>3</sup> Short time work schemes, temporary layoffs or private sector retaining practices firms use to cover low production periods. These appear most common in the USA, Sweden and Austria (see Casey & Bruche 1984). Institutional changes include early retirement pensions plans and policies to induce youth to remain at school longer. These have been popular among most developed economies since the 1980s.

<sup>4</sup> One source of the decline in teenage unemployment has been the fall in recruitment of teenagers to the public sector following the removal of employment barriers to female employment since the mid-1960s. Older women were simply better value for money (see Kalisch & Stretton 1984).

produced a glut of goods which could not be sold.<sup>6</sup> It was commonly believed that poverty, idleness and vice were due to personal defects.

During the Great Depression, labour market programs became more systematic, more clearly the responsibility of governments and larger in size. The US, German, Italian and Swedish governments undertook public work programs on a large scale, but the British, French and Belgium governments used them more sparingly. In Australia, labour intensive capital works were instigated during the major recessions of the 1840s, 1890s as well as the 1930s.<sup>7</sup> These programs however, ended with the ultimate job creator; World War Two.

In the three decades following the war, labour market programs did a complete turn around from their established tradition of ‘doing something’ with the unemployed to doing some-thing about labour shortages. Under the very apt nomenclature of ‘manpower programs’, they were ordinarily aimed at the male labour force and few efforts were made to address regulations and either overt and covert forms of discrimination which kept the female labour force artificially low. Attempts to overcome basic labour shortages were made by assisted immigration programs and guest worker schemes. Skilled labour shortages were met by education, training and mobility grants and subsidies.

Since the notable growth in unemployment during the 1970s, Australian and overseas governments have put increasing amounts of public funds into schemes aimed to mitigate unemployment but this has complemented rather than replaced measures to augment skills in shortage. During 1996-97, the Australian Government appropriated \$1.5 billion for designated programs for the unemployed.<sup>8</sup>

In the remaining sections of this review we will; briefly outline Australian labour market programs since 1974; discuss the objectives of labour market programs; discuss general results from microeconomics evaluations both here and overseas; and finally, canvass the considerable smaller area of macroeconomic evaluations.

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<sup>5</sup> Garraty (1978).

<sup>6</sup> Garraty (1978; Ch 3).

<sup>7</sup> Bureau of Labour Market Research (1984: 20).

<sup>8</sup> This excludes conventional unemployment benefits, Commonwealth Employment Service services, subsidies for vocational training and education.

## Australian labour market programs since 1974<sup>9</sup>

Despite the dominant concern during the 1940s, 1950s and 1960s with labour market shortages, small job creation programs were funded in rural areas during the 1960s and early 1970s as forms of drought relief.<sup>10</sup> The quantum rise in unemployment during 1973-74 caused a major attitudinal shift and a subsequent reallocation of expenditure towards programs to assist the unemployed (see Figure 1). Since then, expenditure has followed the conventional pattern of rising in response to growing unemployment levels and falling off as the recessions eased. However, programs to encourage the formation of trade skills still attract significant funding in absolute terms.

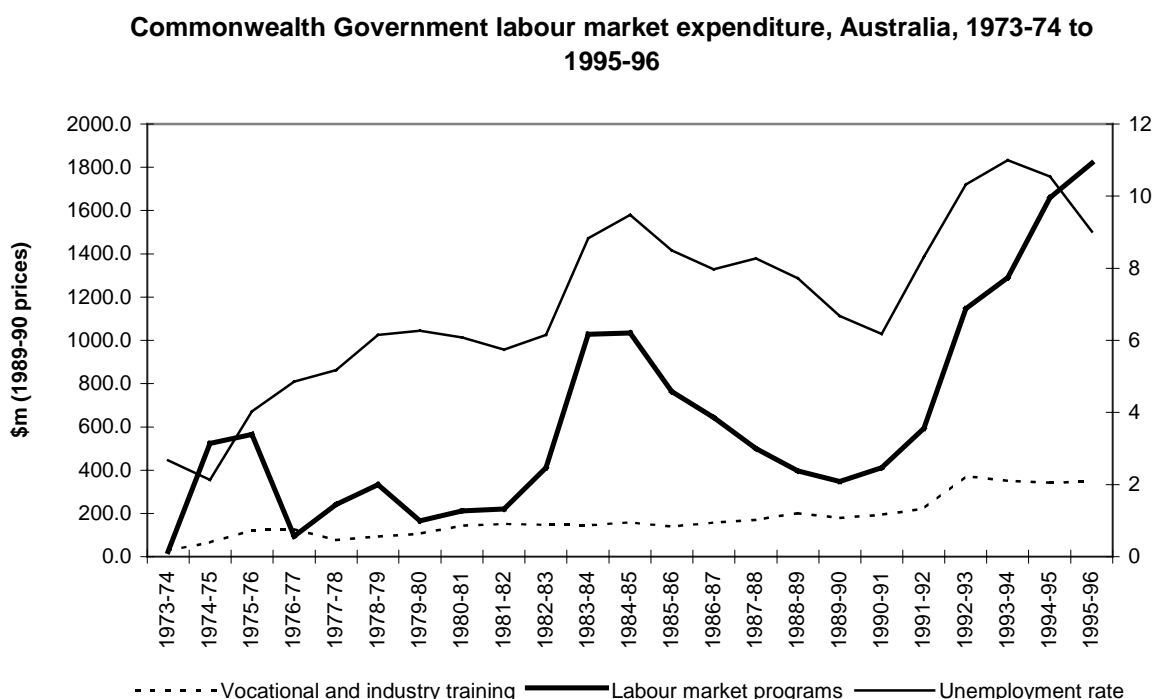


Figure 1

Source: Appendix.

The first major job creation scheme (Regional Employment Development Scheme) ran from 1974 to 1976 as an antidote to rising rural unemployment. Massive job creation was not attempted again until the following recession during 1982-83 when the Commonwealth Government funded two large scale job creation programs (the Wage Pause Program and the

<sup>9</sup> For a good discussion of these see Jarvie & McKay (1993).

<sup>10</sup> Bureau of Labour Market Research (1984: 20).

Community Employment Program). As unemployment fell, greater emphasis was placed on subsidising training positions. The Community Employment Program ended in 1987-88. The recent resurgence in job creation schemes has been due to the introduction of JobSkills (public and non-profit sector job creation with formal training) in 1991, Landcare and Environment Action Program in 1992-93 and New Work Opportunities (NWO) in 1995.

Wage subsidies were introduced around 1978-79 following the large increase in unemployment. A youth wage and training subsidy scheme, SYETP was introduced in 1976 but suffered from a lack of interest from employers during the recession of 1982-83. During 1985 there was a greater integration of labour market programs and incomes support services and increasing emphasis on training. In that year, a new wage subsidy program Jobstart, replaced a series of schemes which had existed since the late 1970s.<sup>11</sup>

Special job placement services are a relatively new form of labour market program. Job Clubs were established in 1988 to provide more intensive placement services. A training subsidy Jobtrain, replaced the Adult and Youth Training Programs during 1988-89. The (old) Newstart program began in 1989 as a job and training subsidy scheme to assist the long term unemployed. It included intensive interviews, a doubling of labour market program places and a change in the unemployment benefits incomes test for these people. In July 1991, it was converted into the (new) Newstart scheme which was extended to all unemployed. Activity agreements and case management was introduced. The Skill Share program was established in 1989 to offer counselling, placement services, work experience and short vocational and personal development courses (via the community sector) to the most disadvantaged jobseekers, especially the long term unemployed. Since 1989, a 'principle of reciprocal obligation' requiring unemployment recipients to accept referral to jobs or training positions has operated.

Between 1991-92 and 1992-93, the Government more than doubled the labour market assistance to jobseekers. Under the nomenclature of Working Nation (formally introduced in May 1994), it re-emphasised intensive counselling services and targeting towards the very long term unemployed (those unemployed for over 18 months) and those deemed at risk of becoming so. In addition to guaranteeing a job through improved access to wage and training subsidy programs, it included access to a new job creation program, NOW, and imposed higher penalties

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<sup>11</sup> These included the Special Youth Employment Training Program (SYETP), the Adult Wage Subsidy scheme (AWSS), General Training Assistance (GTA), the Special Needs Job Seeker Subsidy, and the Disabled on-the-job subsidy.

upon people who did not participate. A new form of program administration and delivery also was introduced.

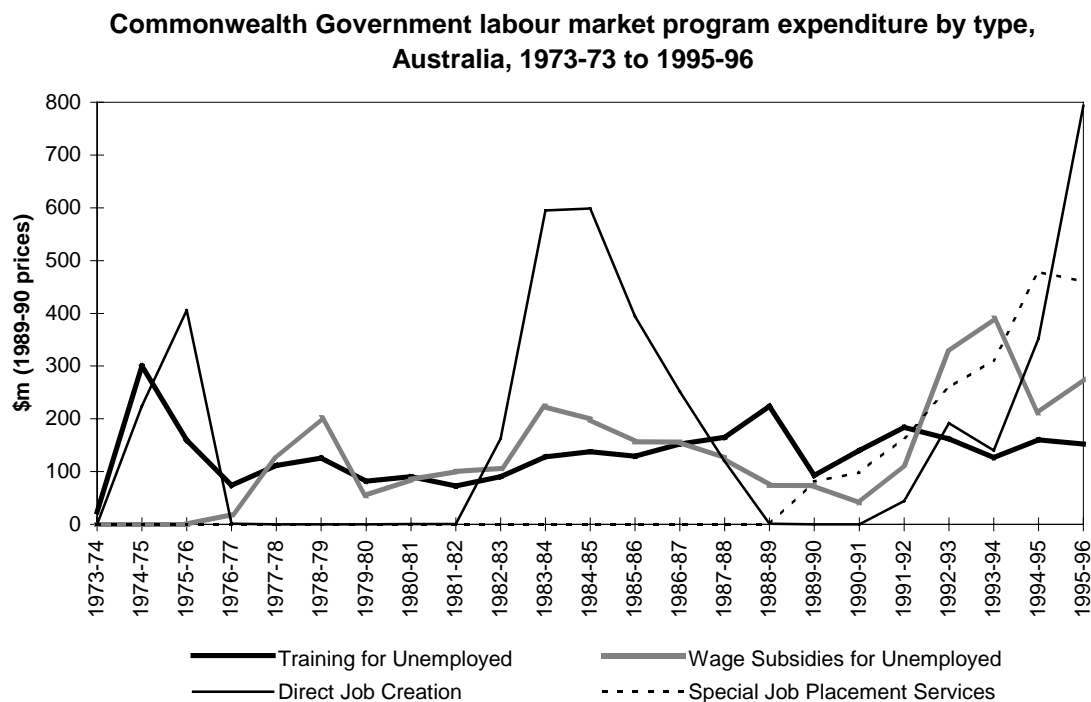


Figure 2.

*Source: Appendix.*

Figure 2 presents estimates of labour market expenditure since 1973-74 by type. The data in this table are indicative only. Not only is labour market expenditure a fuzzy concept, but as discussed in the appendix, shifting annual report definitions over time have made it difficult to trace exactly the same type of expenditure for longer than several years. Accepting these limitations, the data we have compiled allow us to draw a picture of changes to the importance of different forms of labour market programs over time according to fashion, the trade cycle and the received wisdom of the day. Funding for job creations programs appear to be highly sensitive to the level of unemployment. Wages and especially training subsidies have been more stable over time and special job placement services have become progressively more popular over the 1990s.



## Objectives of labour market programs

### Rationale for labour market programs

Labour market programs are justified on the premise that not only will they improve the operative performance of the labour market beyond its existing level, but that the benefits of that improvement outweighs their expense. Strong versions of this argument hold that labour markets do not operate efficiently or equitably in their *laissez faire* state and specific interventions from either labour market programs, or government regulation, can enhance welfare. Adherents of this view regard the labour market as fraught with myopia, uncertainty, bilateral monopolies and imperfect information. A failure to acquire firm-valued skills and locate oneself in an advantageous economic position affects not only the individual, but broader society as well. If the effective operation of each individual depends on efficiency of others, then labour market intervention can be justified on conventional externality grounds. Vicious cycles of poverty can arise if individuals or select groups are allowed to fall too far below socially acceptable standards. Failure breeds failure.

Weaker versions of the pro-labour market program position maintain that while the operation of the *laissez faire* economic state is preferred, its eventuality for political or social reasons<sup>12</sup> is remote, and second-best solutions should be sought. Labour market programs can counterbalance some negative aspects of current economic institutions and regulations, most particularly the disincentive to work and train caused by high taxes and welfare payments and minimum wages which do not allow for training costs.<sup>13</sup> To drive people to work and train through fear and desperation may lead to unacceptable social dislocation and it is preferable to offer positive inducements instead.<sup>14</sup> Both weak and strong camps also may accept the notion that the human costs of unemployment and destitution should figure more prominently in social welfare than the inconvenience suffered by wealthy households due to a loss of income.

Regardless of the different underlying theory of the causes of sustained high levels of unemployment, policy makers basically advocate labour market programs as a way of making it more profitable, in both the short and longer term, to hire the unemployed without significant adverse effects on inflation, the external trade account or the assets markets.

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<sup>12</sup> These are usually related to equity and economic justice.

<sup>13</sup> See Stratton & Chapman (1990), Miller (1994).

<sup>14</sup> Phelps (1994), Fitoussi (1994).

It has been claimed that the theory in support of labour market programs is poorly articulated and decidedly shaky.<sup>15</sup> Many reports on labour programs move straight into the stated objectives without apparent cognisance that from a text book neo-classical view point, the justification for labour market programs resides in the strength of arguments in favour of labour market failure. However, this does not mean that labour market programs *are not* based upon sound economic reasoning, it refers instead to the habit of practitioners not to argue the case for their policy documents from first principles.

Economic theory, especially at the macroeconomic level is not clear cut. Not only is the territory shared by several schools of thought, but the labour market foundations of macro-economics are not as straight forward as we would like to think. Theories which have provided the rationale for labour market programs figure more as add-ons rather than integral parts of the basic model. Mainstream demand side macroeconomic theories often subordinate the labour market (by assuming labour is homogeneous) or assume that the unemployed are found at the tail end of a heterogeneous labour queue. Labour market programs, under these theories, will only rearrange the queue and not solve the basic cause of unemployment.<sup>16</sup> Supply side macroeconomic theories often argue that labour market intervention, either from governments or unions, are the cause of unemployment and inequitable employment opportunities.<sup>17</sup> Accordingly, they would argue for less not more government involvement in the labour market. Labour market programs consequently remain a popular tool for the eclectic economist.<sup>18</sup>

Some arguments against labour market programs have been based upon loose empirical observations. It has been claimed also that labour market programs produce commodities of low social value.<sup>19</sup> However, in principle, apart from the non-competitive nature of the job openings, there is little conceptual difference between jobs created by labour market programs and jobs created by 'normal' government appropriations, for example, to the health, education and environment portfolios. To assume that the political and bureaucratic process will always 'know' and appropriately rank conceivable projects (according to an objective cost-benefit evaluation method) and thus relegate additional expenditures to projects of lesser value, is more a matter of faith than a sound judgement made in the light of serious investigation.

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<sup>15</sup> Sloan & Wooden (1987).

<sup>16</sup> See for example Kirby (1984:4), Committee on Employment Opportunities (1993; Ch 4).

<sup>17</sup> A summary and comment on these laissez faire policies is given in Snower (1995).

<sup>18</sup> Layard *et al* (1991), OECD (1993), Chapman & Piggot (1995), Chapman (1997), Quiggin (1993).

<sup>19</sup> Sloan & Wooden (1987), Mulvey (1994).

The process of government may be better represented as a trial and error search process, rather like the Hayekian process of competition, than the instantaneous perfect foresight optimising model as numerous Auditor-General (State and Commonwealth) reports demonstrate. To dismiss all labour market programs as low value based on isolated anecdotes is ad hoc, and it ignores the high private sector bankruptcy rates which our society tolerates in the name of healthy competition. This does not imply that all labour market programs, or most, or even many, are of high value.<sup>20</sup> It is just to warn against statements based upon little knowledge of the process of government, and the unproved and broad sweeping postulate that the private sector always ‘does it’ better.

### **Sub-objectives**

The unstated consensus of the meaning of an ‘improved labour market performance’ falls within the conventional efficiency-equity genre. Efficiency increases the standard of living of residents and enhances the international standing of a country. Equity is desirable for moral reasons. Not only is a minimum level of equity of opportunity and outcome required for social cohesion and political stability, but most individuals require purpose and work for a sense of self-worth. According to Beveridge, ‘[i]dleness is not the same thing as want; it is a positive separate evil from which [people] do not escape by having an income’.<sup>21</sup> There tends to be some unspoken assumption in the literature that equity reasons alone are not enough to justify labour market programs. They must also deliver an improvement to the material well-being of society. This is unfortunate for, as a political science, economists should be concerned with economic justice as well as material abundance.

It is often assumed that the pursuit of equity occurs at the expense of efficiency, principally via the disincentive to work effects of taxes and welfare payments. Nevertheless, labour market programs may assist the attainment of both goals in other respects. By getting the most disadvantaged into a job, equity may be improved, and, so will efficiency, *provided* the job gained was not at the expense of another person. The most clear cut case of a net rise in employment is when a hard-to-fill vacancy or bottleneck has been filled. A less obvious example

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<sup>20</sup> OECD (1980: 28-29) discusses some of the issues involved in the valuation of program outputs.

<sup>21</sup> Beveridge (1944; 18).

may be when the job is gained in the first instance at another's expense, but it also reduces wages growth and leads in more subtle ways, to an expansion in total employment.<sup>22</sup>

However, inequality may also undermine long run efficiency. By their exclusion from the world of work, the unemployed forego the opportunity to acquire on-the-job skills and work related formal training. As potentially low skilled employees they will be isolated into low skilled jobs which offer little chance for advancement and some economists argue that this encourages firms to continue to create further low skilled jobs.<sup>23</sup> From a more long term perspective, current income and employment inequalities can lead to the creation of an underclass and vicious cycles of poverty may manifest over successive generations. Inter-generational unemployment could impact on the ability and incentive for future young people to acquire education and workplace skills.<sup>24</sup> Labour market programs which increase equality today may well lead to longer term efficiency gains.

Under the efficiency-equity banner, it has been argued that labour market programs have the potential to:

- (a) raise the level of aggregate employment and reduce unemployment;
- (b) increase the skill base of a country, in particular increase skills in shortage;
- (c) reduce income inequality; and
- (d) reduce the disparity of employment opportunities between individuals.

Few labour market program architects claim their programs can or should achieve all goals, and it is increasingly common in Australia to argue that their main impact has been on the equality of opportunity rather than on the aggregate level of employment and the national skill base. However, to cover the full scope of potential benefits of labour market programs we will, in this review, embrace all objectives. This does not imply that labour market programs 'fail' or have no worth if they do not meet some or most objectives. It is rather to establish to what end labour market programs should or should not be used for.<sup>25</sup>

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<sup>22</sup> The issues surrounding this are taken up in the section on macroeconomic evaluations.

<sup>23</sup> Snower (1994).

<sup>24</sup> McClelland (1993).

<sup>25</sup> Stretton had noted in 1984 that the objectives of the labour market programs are often not clear cut and frequently change (Stretton 1984).

Ultimately all the sub-objectives (a) to (d) above are macroeconomic in nature for, as policy makers, we are concerned with the effect on the whole economy, not on separate parts in isolation. If we achieve a rise in employment, a fall in unemployment, some skill enhancement or a rise in real incomes for one group, we are clearly interested in whether this has occurred at the expense of other groups. However, a necessary step in demonstrating whether labour market programs have improved the 'whole', is to determine whether the targeted 'part' (that is, some disadvantaged group) has improved. If we cannot establish a positive microeconomic link, then it is unlikely that there is a positive macroeconomic effect.

In the remaining sections, we will discuss the theories of how and why labour market programs may achieve these goals and the results from local and overseas evaluations. Unfortunately, most evaluations give precedence to efficiency goals and accordingly our discussion is biased in this direction. Essentially there are three possible outcomes which we are trying to distinguish.

1. Labour market programs do not change the outcome for the selected individual both during the program period and after the programs has ended because they would have got the job and/or training position any-way, and/or they returned to the unemployed state after the program has ended.
2. Labour market programs have improved the job prospects of the selected individual, both during and after the program, but this has been primarily at the expense of another person, who may or may not be disadvantaged as well.
3. Labour market programs have improved the work related skills of the selected individual and this has led to higher employment because effective supply of labour has risen, *ceteris paribus*. This may be felt by a fall in the vacancy rate (ie inward shift of the Beveridge curve), a fall in certain real wage rates which now makes employers more willing to offer additional jobs, or a fall in wage inflation which leads governments to adopt a more expansionary monetary and fiscal policies.

Microeconomics evaluations generally assist us in distinguishing between outcome 1 and outcomes 2 and 3 together but are unable to distinguish between 2 and 3. Macroeconomic efficiency evaluations assist us to distinguish between 1 and 2 together and 3 but cannot distinguish between 1 and 2. Macroeconomic equity evaluations (where they to exist) need to

distinguish between all three outcome scenarios and in addition should identify the displaced persons under 2.

## Microeconomic evaluations

Microeconomic evaluations try to estimate the effects of a program on the participants' in-program and post-program labour market experiences. Importantly, these evaluations need to estimate what would have happened to the participant had they not been involved in the program. Would they have got the job, training position or earnings anyway, and are they better off as a result of the program? Outcomes are usually defined as either earnings (especially in the American and Swedish literature) or employability (favoured by the UK and Australian literature).

Wage subsidy and job creations programs raise the in-program employability of the person simply by reducing the costs to an employer of hiring that particular person. The mechanisms for raising the post-program employability, while less direct, are common to all four types of program (placement (or job brokering) services, private sector wages subsidies, training subsidies and public sector job creations programs). First, they may reduce the job search process by improving access to relevant employers. This will not only increase the chances that the participant will get a job offer but should also assist them to find a better paying job *ceteris paribus*. Secondly, labour market programs may raise the intrinsic profitability of hiring the person by improving the participants formal and informal work related skills and increasing their motivation and confidence.<sup>26</sup> Whether these improvements are exploited depends on whether the participant can readily move into open employment, for the benefits are likely to depreciate quickly.<sup>27</sup> Thirdly, by providing the employer with more knowledge about the person, labour market programs reduce the uncertainty associated with hiring them.

As such labour market programs are designed to ameliorate the two main sets of factors that contribute to an individual's chances of being unemployed: their 'permanent' characteristics such as lack of suitable education, training, knowledge of the industry and work skills, and their

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<sup>26</sup> Psychological studies in Australian and overseas have found support for the hypothesis that the experience of unemployment increases the person's feeling of helplessness and loss of control over their lives. These attributes in turn affect the person's ability to recognise problems, retrieve, evaluate and interpret information and their decision making capacities. See Goldsmith, Veum & Darity (1996). A large UK study has found that men's unemployment experience has only a temporary effect on earnings if the man subsequently regains stable employment (Gregory & Jukes 1997).

<sup>27</sup> Stretton & Chapman (1990).

‘transitory’ characteristics which have directly resulted from being unemployed, such as lack of work culture and poor morale.<sup>28</sup>

Notwithstanding these benefits, negative effects may arise if the association with a labour market program (and this is not always known to prospective employers if job or training programs integrate ‘normal’ co-workers or trainees) leaves a greater stigma than the stigma associated with a continuation of their original state. We would expect *a priori* that the negative effects will be more prevalent in programs aimed at the working poor (as in the USA) rather than those aimed at the unemployed or long term unemployed (as in Australia and Europe) for the stigma associated with being unemployed is probably greater than the stigma associated with working, albeit in a low paying job.

As we will find from the following discussions, the immense difficulties of establishing the magnitudes and sign of the benefits arising from programs precludes serious cost benefit analyses based on the cost to tax payers and the costs to program participants.<sup>29</sup> This often leaves readers with the implicit assumption that any established positive employment impact is enough to justify a program. Overlooking program costs may be justified by policy makers on equity or longer term (dynamic) efficiency grounds but it does require explicit acknowledgement.

## **Evaluation method**

Evaluations draw upon empirical information from participant surveys and administrative data. Some Australian evaluations have also included surveys of employers and placement agencies. Ultimately, the evaluator is seeking to measure the difference in labour market experience of participants and an equivalent set of non-participants (control group) at some defined in-program or post-program set of dates. Many evaluations suffer from a lack of a control group population,<sup>30</sup> and for some programs, the program is so large that most of the target group have been touched in some way and a pure control group is not possible.<sup>31</sup> Quasi-control groups involving program drop-outs or unsuccessful applications are often used rather than a sample of non-

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<sup>28</sup> These are referred to in the literature as being the effect of heterogeneity and state dependence on one probability of being unemployed and/or leaving the unemployed state. Empirical studies find that both sets of factors are important (see Baker & Elias 1991, Chapman 1994).

<sup>29</sup> Piggot & Chapman (1995) estimate the government costs of the Job Compact and several DEETYA reports calculate the program costs per successful participant but these are not, and are not intended to be full economic cost benefits analyses.

<sup>30</sup> See OECD (1980: 22).

<sup>31</sup> The Australian Special Youth Employment and Training Program during the 1980s.

program selected target group people. Longitudinal (panel) data has been collected overseas since the late 1970s but there have been few examples in Australia to date.<sup>32</sup>

There are three possible sources of biases in the evaluation which can affect the results although once recognised, several techniques have been suggested to ‘correct’ for them.<sup>33</sup>

1. Survey response rate biases. These biases are prevalent in most surveys. It is assumed *a priori* that the more literate, more motivated, less itinerant and those who had completed the program will have higher response rates.<sup>34</sup> It is likely that people with these characteristics will also experience better labour market outcomes. Thus estimates of coefficients which ignore this sample bias problem will not produce valid unbiased estimates, as the high response group will be over-represented in the estimation process. In a cross-section setting, where the people who ‘drop out’ are not observed, we can correct for ‘choice based sampling’ by weighting the relevant likelihood function according to a variable which characterises the population. That is we give a greater weight to groups which have a greater drop out rate.<sup>35</sup>
2. Selection biases. Many programs are not compulsory and thus we expect that the most interested, motivated, driven and able in the target group will be more likely to desire to undertake a program. If these characteristics are also determinants of labour market success, then an evaluation based upon a single post-program survey is likely to overstate the impact of labour market programs on labour market benefits.

Administrator and employer ‘creaming’ may co-exist and reinforce these self-selection biases. Where some form of bureaucratic or pecuniary reward exists for successful placement

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<sup>32</sup> The main longitudinal labour market surveys include the Australian Longitudinal Survey 1984 to 1989, the Australian Youth Survey 1989 to present, (both Department of Employment Education, Training and Youth Affairs); the Longitudinal Survey of Immigrants to Australia (Department of Immigration, Ethnic Affairs and Local Government) from 1993 to present; the International Social Sciences Survey (Research School of Social Sciences, ANU) 1992 to present; and the Longitudinal Study of Department of Social Security clients (Social Policy Research centre, UNSW) 1995 to present. Government labour market programs are not clearly identified although questions are asked about school to work transition and job training. With labour market programs in mind two new surveys are currently in operation. The ABS Survey of Employment and Unemployment Patterns and the DEETYA longitudinal survey (1995 & 1996).

<sup>33</sup> There are of course other sources of error such as sampling error, error in recording one’s response to a question and the operators error in coding responses but there is no reason to suppose that these errors will be systematic ie they are likely to occur for either group.

<sup>34</sup> See Baker (1984).

<sup>35</sup> A different method is employed in a longitudinal setting. If we will assume that in the first wave everyone is observed, but differing attrition rates occurs across different groups, then the solution is first to identify those particular groups which are more likely to drop out, ie low education, racial origin etc. This is done by estimating a cross-sectional probit on the individuals’ first wave characteristics (1=remain in, 0 if drop out) – if attrition is



of a member of the target group, strong incentives exist for either the person administering the programs and/or the employer to select the ‘best’ of the bunch. When there are a shortage of interested employers, such as for Australian youth programs during the early 1980s, we expect employer selection biases to be more important.<sup>36</sup>

If the relevant characteristics are measurable and measured (such as education, age, qualifications) then these biases can be corrected by either an experimental program design whereby *ex ante* matching pairs of people are randomly assigned either to the program or to the control group or by regression analysis. In experimental evaluations, one has only to compare the average of the post-program outcomes of the two groups to get a measure of the program’s effect, if the randomised allocation eliminates selection biases. However, even under this experimental approach, it is still possible that some randomly selected individuals will fail to fully comply with the program and employers can still exert some selection discretion. Thus biases will be reduced but not totally eliminated.

In non-experimental evaluations, and in experimental evaluations where we believe there still exists selection biases arising from observed individual characteristics, we may in the first instance, use regression analysis to control for these biases. The archetypal equation is:

$$Y_i = \beta X_i + \alpha P_i + e_i$$

where  $Y$  is the post-program labour force experience of individual  $i$  (ie employment rate),  $X$  is a vector of the observed characteristics (ie education, sex),  $P$  is a dummy variable to indicate participation in a program and  $e$  is the error term. However, if people have been selected for the program on the biases of their unobservable characteristics, such as motivation and interest, then  $P_i$  will be correlated with the error term  $e_i$  and OLS will produce biased estimates.

Unfortunately, the possibility of selection biases based on unobservable characteristics can never really be ruled out on *a priori* grounds. Experimental programs should reduce this bias by random assignment to the program, but usually there is scope for non-compliance and employer selection. If we are confident that these unobserved characteristics are closely correlated with the observed characteristics, the methods described above for selection biases

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‘endogenous’ – any of these variables are significant – easiest way is to split the sample according the identified significant characteristics, see Harris (1996).

on observed characteristics will suffice.<sup>37</sup> In general though, there is no reason why they should be. If we are able to design an experimental evaluation we can minimise self-selection by imposing significant penalties for non-compliance and minimising employer bias by instituting compulsory employer take-ups. But the latter is usually viable only in public sector job creation programs.

When these rather stringent options are not available, selection biases may be controlled for by a two stage regression analysis or longitudinal data analysis. Single equation regression analysis will produce biased estimates where we cannot directly control for the factors which have determined program selection. To show this, assume that the true equation determining outcome  $Y$  (eg where  $Y$  may indicate employment status) is

$$(1) \quad Y_i = \beta X_i + \gamma U_i + \alpha P_i + e_i$$

where  $U$  is a vector of unobserved characteristics, and program selection is governed by the unobserved set of characteristics such that

$$Q_i = aU_i + \varepsilon_i$$

$$P_i = 1, \text{ if } Q_i > x, P_i = 0, \text{ otherwise.}$$

If we could measure  $U$ , then an OLS estimation of equation (1) will produce unbiased estimates for  $\alpha$ , since  $U$  and  $P$  are predetermined variables and there is no reason why  $e_i$  is correlated with  $\varepsilon_i$ .<sup>38</sup> This is not possible by definition, but we may get around this problem if a relationship between the unobserved and observed variables exist such that

$$U_i = bX_i + v_i,$$

then

$$(2) \quad Y_i = (\beta + \gamma b)X_i + \alpha P_i + e_i + \gamma v_i$$

$$(3) \quad Q_i = abX_i + \varepsilon_i + av_i$$

$$P_i = 1, \text{ if } Q_i > x, P_i = 0, \text{ otherwise.}$$

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<sup>36</sup> See Vella & MacKay (1984).

<sup>37</sup> See Maddala (1983: 263).

<sup>38</sup> See Maddala (1983: 263).

Estimating equation (1) by itself will produce biased estimates for  $\alpha$  as the error terms in the second equation ( $e_i + \gamma v_i$ ) and ( $\varepsilon_i + \alpha v_i$ ), are correlated. Equations (2) and (3) should be estimated using a 2-stage procedure such as a bivariate probit (see Zweimuller & Winter-Ebmer 1996).

However, this method is only useful if the relationship between  $U$  and  $X$  can be approximated by the simple linear function,  $U_i = bX_i + v_i$ . Generally there is no reason why we should believe *a priori* that the unobserved characteristics such as motivations and enthusiasm should be related to the standard observed characteristics such as education, age and sex. From this perspective then the bivariate analysis is unsatisfactory. Longitudinal data analysis with several before and after the program observations, is a more appropriate approach. Longitudinal analysis eliminates unobservable individual characteristics by looking at the temporal change in each individual's labour market experience. To show this, let

$$Y_{ib} = \beta X_{ib} + \gamma U_i + e_{ib}$$

represent the labour force experiences of individual  $i$  before the labour market program where  $Y$  is the labour force experience,  $X$  is a vector of observed characteristics,  $U$  is a vector of unobserved *ex ante* characteristics (which are assumed not to change over the evaluation period), and  $e$  is the period specific error terms. Let

$$Y_{ia} = \beta X_{ia} + \gamma U_i + \alpha P_i + e_{ia}$$

represent the labour force experience after the program, where  $P$  is a dummy variable indicating participation or not. Any change to motivations or other unobservable characteristics as a result of program participation should be captured by  $\alpha$  if they subsequently affect  $Y_{ia}$ . We can for each individual eliminate  $U$  by subtracting the two equations so that:

$$\Delta Y_i = \beta \Delta X_i + \alpha P_i + e_{ia} - e_{ib}$$

The main advantage of differencing is to remove the effects of unobservable characteristics which are time invariant. It probably requires several waves to identify them however. This equation can be estimated by OLS and  $\alpha$  will represent the impact of the program provided the error term ( $e_{ia} - e_{ib}$ ) is an identically, independently distributed (iid) random variable.

Card and Sullivan (1988) categorise individuals according to their discrete *ex ante* characteristics  $X$  and then calculated  $Y$  as the employment ratio of the group. A difference in  $Y$  between the control and program groups gives the estimated program effect. However this technique is only viable when the variables are discrete and relatively few.

A frequent complication with labour market programs evaluations is the endogeneity of the right hand side variables. Most particularly, labour market experience, which is frequently represented on the left hand side of the estimating equation by an unemployment duration variable, is also an observed characteristic  $X$ . There is reasonable evidence that state dependence exists and one's work and unemployment experience affects the acquisitions of informal work skills, morale and confidence.

3. Snap shot biases. For cost reasons, evaluations often record the labour market experience of the individual at one or perhaps two points in time. Clearly, given the presence of non-economic or irregular events, the greater the number of observations we have of the individual's career, the less influence these non-systematic factors will have on the evaluation. The same is true for a large sample size. However, an additional advantage of having observations over several time periods is that we can estimate the difference between short and long term programs effects, and these may be very different. It has been suggested that the main benefits of training programs as long term.<sup>39</sup>

To minimise these problems longitudinal data is preferred. Analysing longitudinal data sets still requires a subjective decision to be made about the chosen time intervals for the before and after comparisons and unfortunately some evaluations have found results to be sensitive to these choices. The major drawback of panel data series is the cost and high rates of attrition, which usually results in smaller sample sizes and less precise estimates.

## Evaluation results

Results from a broad variety of microeconomic evaluations suggest that labour market programs do have positive economic effects on participants' post-program outcomes, however, the standard errors of the estimates, when presented, are often large. Few evaluations attempt to measure the in-program outcomes (that is whether the participant would have attained a job or training position without the subsidy). With respect to the post-program effects, we may

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<sup>39</sup> Schömann (1996).

tentatively conclude that they are sensitive to the time horizon of the outcome period, and the type of program. Overseas placement programs exhibit the most reliable positive post-program effects and job creation programs the least. There is some indication from overseas that the beneficial effect of short labour market programs decline beyond the first few years after the program, but this effect has not been tested for in Australia. Furthermore, many wage and training subsidy programs and placement schemes have experienced difficulty achieving desired take-up rates when the trade cycle is in decline and recruitment is low due to the greater competition from non-targeted groups for scarce jobs.<sup>40</sup>

The evaluation results discussed below are summarised in Table 1. We generally do not refer to the magnitudes of effects in the discussion below because the large heterogeneity of the various schemes and their target audience (even with in the same genre) and the sensitivity of the results to model specification makes this relatively unmeaningful.<sup>41</sup> To achieve some form of consensus over whether a program is significant (positive or negative) or not is at most the best we can hope for.

**Table 1. Microeconomic labour market programs evaluations by type.**

Type of program	Author (year)	Country	Sample size	Method of analysis	Main results
Wage subsidy	DEETYA (1997)	Australia	6500	Ex post control group	Post program employment rate raised by 30 percentage points after 3 months, but this declined over the subsequent 9 months to about 15.
	DEETYA (1996a)	Australia	ns	Post program employment outcome, no control	41 per cent of very long term unemployed in unsubsidised employment 3 months after program ended.
	DEET (1994a)	Australia	432 100	No control group	57 per cent of participants transferred into open employment. Females, youth, short term unemployed and non-disadvantaged groups have higher employment rates.
	DEET (1993a)	Australia	1900	Ex post control group	Post program employment increased by 30 percentage points over a 6 month period.

<sup>40</sup> Stretton & Chapman (1990).

<sup>41</sup> Program can vary according to their compensation levels, targeting, co-ordination with unemployment benefits, length of operation, types of employers and projects and restrictions by occupation and skills used.

	Crouch (1992)	USA	ns	Experimental. Data from 1972-86.	Increase in post program wage for single parents but not youth.
	DEET (1989)	Australia	700	Survey of employers	Stated that about 15 percent of the jobs they offered were additional to what they would have offered without the subsidy.
	DEET (1989)	Australia	1000	Ex post control group	Post program employability increased on average by 33 percentage points at 3, 5 and 14 months. For people unemployed for over 2 years, increase of 38 percentage points.
	Rao & Jones (1986)	Australia	1500	Quasi-control group (non completers)	Post program continuous full-time employability increased significantly for 2 years after the program.
	Baker (1984)	Australia	2500	Quasi-control group (non completers)	Youth wage subsidy program participants had a higher post-program employment rate than other programs.
	Stretton (1984)	Australia	950	Quasi-control group (non-completers)	Employment based programs participants had better post program outcomes than course based programs. Completers who were not retained by their original employer did no better than those who did not complete.
Training subsidies	DEETYA (1997)	Australia	6000	Ex post control group	Post program employment increased by 7 percentage points, 3 months after the program ended. This is sustained over the subsequent 9 months.
	DEETYA (1996a)	Australia	ns	Post program employment outcome, no control	30 per cent of very long term unemployed in unsubsidised employment 3 months after program ended.
	DEET (1993b)	Australia	3400	Ex post control group	Post program employment increased by 12 percentage points at 10 months.
	BLMR (1984b)	Australia	2800	Quasi-control group (non completers)	Post program unemployment rate 10 percentage points higher in the first 3 years but was smaller in years 3 to 5.
	Ashenfelter & Card (1985)	USA	ns	Longitudinal data set with control group	
	Björklund (1990)	Sweden	ns	Several models tested using data from 1976-80	Positive and significant but weak effects on hourly wage rates.
	Zweimuller & Winter-Ebmer (1996)	Austria	1945	Control group, controls for unobserved characteristics.	Post program unemployment spells reduced considerably.

	Card & Sullivan (1988)	USA		Control group	Post program employment increased by 3 to 8 percentage points. Effect larger when control for unobserved characteristics.
Job creation	DEETYA (1997)	Australia	2200	Ex post control group	Post program employment increased by 11 percentage points at 3 months. This declines over the subsequent 9 months.
	DEETYA (1996a)	Australia	ns	Post program employment outcome, no control	22 per cent of very long term unemployed in unsubsidised employment 3 months after program ended.
	DEETYA (1996b)	Australia	600	Ex post control group	Post program employment level increased by 9 percentage points, at three months.
Special Placement Services	DEETYA (1997)	Australia	5100	Ex post control group	Post program employment level increased by 12 percentage points at 3 months. This difference was sustained over the subsequent 9 months.
	DEET (1994b)	Australia	2800	Ex post control group	Post program employment increased by 10 percentage points.
	Dolton & O'Neill (1996)	UK	5200	Control group.	Median time of exit from unemployment reduced from 13 to 12 months.
Combinations of the above	Friedlander & Hamilton (1996)	USA	4400	Experimental	Post program participation in education was 10 percentage points higher. Post program earning increased for both men and women. This was mainly due to the higher employment rates. Effects reduce over 5 years.
	DEETYA (1997)	Australia	8000	Ex post control group.	Post program employment increased by 7 percentage point, at 3 months. This difference is maintained over the subsequent 9 months.
	DEET (1993b)	Australia	2000	Ex post control group	Post program employment increased by 12 percentage points at about 7 months.
	Dickinson, Johnson & West (1985)	USA	11 500	Longitudinal data set with control group.	No post program effect on the earnings of men but a higher probability of being employed. Positive effects on earning and employability for women.

ns not stated

### *Wage subsidy programs*

Two microeconomic issues generally considered are; whether wage subsidies assist the targeted group to gain a job during the subsidy period, and whether this employment experience leads to a subsequent better labour market experience after the program ends.

Evaluations have not directly addressed the in-program effects, but we may infer the portion of the participants who would otherwise have left unemployment from data available on the transition out of unemployment of a control group. DEETYA (1997) has published this data for a control group based on similar observed characteristics. They estimate that over a 6 month period, 30 per cent of the control group would have left unemployment anyway, and so we can say that the wage subsidy has been critical for only 70 per cent of participants ( the dead-weight loss is 30 per cent). That is, we may very crudely say that 30 per cent of those who took up employment under the wage subsidy schemes would have got a job anyway. We still do not know whether the remaining 70 per cent got a job at the expense of other unemployed, employed or not-in-the-labour-force people. Even if we have evidence that a certain portion of these jobs were additional in that firm, we do not know whether these jobs have been at the direct expense of competitor firms. These latter issues are the subject of the macroeconomic evaluations discussed below.

Most evaluations indicate positive post-program effects. Both the early Australian evaluations during the mid-1980s, and the more recent batch during the 1990s, have found that wage subsidy schemes do raise the employability of participants at least in the immediate year after the program.<sup>42</sup> The employment rate of participants is estimated to rise by between 15 to 30 percentage points. The effects in one evaluation were greatest for the long term unemployed<sup>43</sup> but another found it was greatest for the short term unemployed.<sup>44</sup> The most recent Australian evaluation has found however large positive effects in the first month after the end of the program which progressively lessen as the year unfolds.<sup>45</sup>

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<sup>42</sup> See Stretton (1984), Baker (1984), Rao & Jones (1986), DEET (1989), Stretton & Chapman (1990), DEET (1992), DEET (1993a), DEET (1994a), DEETYA (1996a), DEETYA (1997).

<sup>43</sup> DEET (1989).

<sup>44</sup> Rao & Jones (1986).

<sup>45</sup> DEETYA (1997).



However, because of data limitations the evaluations prior to 1989 did not have proper control groups (usually relying on quasi-control groups selected from program drop-puts or people who were referred but not offered a job, or a comparable DSS/CES group). The evaluations during 1989 and the 1990s constructed *ex post* control groups which were matched according to observable characteristics such as age, sex and prior unemployment duration.<sup>46</sup> It was not possible to measure *ex ante* unobservable characteristics in many evaluations, and although acknowledged, few attempts were made to indirectly cater for these effects.

Three overseas studies in the USA and Sweden during the 1980s found positive post-program results also.<sup>47</sup> Couch (1992) found, using an experimental approach, that women participants benefited but youth did not. However, another American study<sup>48</sup> concluded that not only were the long term effects on earnings and employability dependent on the size of the subsidy, but that the effects generally diminish over time. A 1980 experimental study in the USA a wage voucher schemes found that participants had a lower employment rates, possibly because of the effects of stigmatisation.<sup>49</sup>

Stretton (1984) has argued that the apparent beneficial effects of the wage subsidy program are due to the by-product placement effects of the program. The benefits are concentrated in participants who were retained by the same employer after the subsidy had ended. This is supported by later Australian evidence. If we exclude participants who were retained by their Jobstart employer, Jobstart participants had roughly the same propensity to be employed as the control group.<sup>50</sup>

### *Training subsidy programs*

No studies encountered so far have tried to assess the extend to which people taking up training subsidies would have undertaken a training program in the absence of the program but using the same method described above for wage subsidies we can estimate that 25 per cent of Jobtrain trainees would have left unemployment any-way. Thus the training subsidy was likely to have been critical in obtaining a labour market activity for the remaining 75 per cent.

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<sup>46</sup> The study did not believe that controlling for factors such as educational attainment, location and type of beneficiary would affect the outcomes (see DEETYA 1997: Appendix B).

<sup>47</sup> See Björklund (1990), Couch (1992), OECD (1993).

<sup>48</sup> Cited in OECD (1993).

<sup>49</sup> See Schömann (1996).

<sup>50</sup> DEET (1993a).

We find however, that the post-program effects of subsidised training programs are more mixed than the wage subsidy programs. Findings from Australia, based on post-program employability comparisons between participants and a matched control group, tend to be positive and sustained over both a 6 or 12 month period.<sup>51</sup> The various evaluations put the difference between Jobtrain participants and a matched post-program control group portion in employment in the 7 to 12 percentage point range. An evaluation of Jobtrain in 1991 found that the longer the duration of prior unemployment, the greater the benefit.<sup>52</sup>

Longitudinal studies from the USA and Sweden have found that the effect on earnings is either negligible or negative.<sup>53</sup> On the other hand, other studies from Germany, Canada, the UK, the Netherlands and the USA have found a positive impact on earning and/ or employability.<sup>54</sup> Given the heterogeneity of training programs in terms of their subsidy level, targeted skills or occupations, targeted participants, type, length and duration of training it is not surprising to find such disparate results. Previous surveys of labour market evaluations by Stretton & Chapman (1990), OECD (1993) and Fay (1996) have concluded that training programs seem most successful when orientated towards workplace needs and special groups. In his summary of programs across North America and Europe, Fay (1996), argued in addition that training programs were more successful if they were long and led to a formal qualification. They appeared to be consistently unsuitable for youths with low educational attainment.

### *Job creation programs*

Job creation programs involve the granting of government funds to employers, usually non-profit establishments, for the purpose of providing employment to specified target groups. They imply a wage subsidy of over 100 per cent if moneys are allocated to cover the costs of capital and materials as well as wages. Programs usually produce community goods and services and in some cases complementary formal training is offered. Because of the very high subsidy rates, governments have more control over ‘creaming’ or employer bias against the most disadvantaged people and these rather costly programs are accordingly often reserved for the most hard-to-employ. Participants usually do not have the option of remaining with the employer after the subsidy period ends and thus do not implicitly benefit from implicit placement effects

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<sup>51</sup> DEET (1993b), DEET (1993c), DEET (1994a), Bureau of Labour Market Research (1984b), DEETYA (1996a), DEETYA (1997).

<sup>52</sup> See result cited in DEET (1994a).

<sup>53</sup> Ashenfelter & Card (1985), Björklund (1990), Björklund (1993), Björklund & Regnér (1996).

<sup>54</sup> Card & Sullivan (1988), Björklund (1993), OECD (1993), Zweimuller & Winter-Ebmer (1996).

like the wage subsidy programs. Job creation programs are also favoured during recessions when the take-up rates for wages subsidies and the possibility for open employment for training and placement program participants is limited.<sup>55</sup>

Similar to training programs, little emphasis has been placed on estimating whether the subsidised participant would have gained a job in the absence of the program. Most evaluations have concentrated on the post-program effects which generally are assessed to be marginally positive or negligible.<sup>56</sup> Some of the higher post-program employment levels were due to being retained by the program employer when the participant filled an open vacancy. The latest information from the Australian JobSkills program suggests that these benefits decline over the first 12 months.

### *Placement programs*

Intensive placement programs appear to have the most sanguine results to date, although, this is not necessarily true for Australia.<sup>57</sup> An Australian study undertaken in 1993 estimated that the post-program employability rate for Job Club clients were 10 percentage points higher than a post-program matched control group, however later evaluations estimated the difference at 6 percentage points.<sup>58</sup> As discussed above, these type of evaluations are not able to cater for differences in unobserved characteristics due to selection biases in the decision to partake in a Job Club.

Two large experimental studies, involving sanctions for non-compliance in the UK and USA have found that intensive placement programs raise the exit rates from unemployment. However, a USA study found that the gains were of short duration.<sup>59</sup> Results from two other Swedish studies are either positive or marginally so. A recent summary of overseas evaluations by Fay (1996) has found a more mixed collection of results. Two Canadian studies in 1993 and 1994, did not find any positive results. An experimental US study in 1995 found intensive job counselling reduced the length of unemployment claims by a half to one week. A New Zealand evaluation in 1995 found a slight increase in the transition to full-time employment. Positive

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<sup>55</sup> See Stretton & Chapman (1990).

<sup>56</sup> Bureau of Labour Market Research results as cited in Stretton & Chapman (1990), Björklund (1990), DEETYA (1996a), DEETYA (1997).

<sup>57</sup> DEETYA (1997).

<sup>58</sup> DEET (1994b), DEETYA (1997).

<sup>59</sup> See Björklund & Regnér (1996). Six separate experimental studies found that the time on unemployment benefits for participants was lower by between 0.5 and 4 weeks.

results are consistent with Stretton's indirect findings that the main beneficial effect of wage subsidy programs is attributable to their placement effects.

### *Combination programs*

Perhaps the most comprehensive evaluation of a combined placement, wage subsidy and education/training programs is the evaluation of the experimental SWIM program in the USA by Frielander and Hamilton (1996). Program places were offered to over 10 000 welfare recipients and their labour market outcomes were tracked for 5 years after the program. The use of sanctions against people who did not cooperate further minimised selection biases. Recall and non-response errors were reduced by the use of administrative data. While assignment to the program or the control group was random, regression analysis was carried out to control for any small differences in background characteristics which may have evaded detection. The study found that earnings were significantly higher for participants for the first three years after the program but not for years 4 and 5. An earlier longitudinal evaluation in the USA of the 1973 Comprehensive Employment and Training program (CETA) found a modest positive impact on males earnings and a larger positive impact on female earnings up to 5 years later.<sup>60</sup>

Another longitudinal evaluation of a combined wage and training subsidy program in the USA targeted at the working poor, found that the program actually reduced earning and the probability of obtaining employment (Dickinson, Johnson & West 1985). However these results were found to depend on the time period used for the point of comparison.

Using the same method described above to estimate the in-program effects, we very crudely calculate that 30 per cent of the Australian SkillShare clients would have left unemployment had they not participated in the program.<sup>61</sup> With respect to the post-program effects, an earlier Australian evaluation of SkillShare found that the portion of participants in employment about 7 months after the program had ended was 12 percentage points higher than a matched control group (DEET 1993b). Most of the advantage is gained in the few months after the program had ended and by the fourth month, unemployed SkillShare participants were not more likely to find work than the control group, although retention meant that their employment rate was higher. The estimated gain in the 1997 evaluation was about 5 percentage points.<sup>62</sup>

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<sup>60</sup> See Schömann (1996).

<sup>61</sup> DEETYA (1997).

<sup>62</sup> DEETYA (1997).

## Conclusion

Common to many areas of economic analysis, empirical studies do not provide convenient solutions or unambiguous answers across the board. The use of more sophisticated econometric techniques and better quality data has unfortunately not made our understanding any clearer. On the one hand this is frustrating but on the other it is understandable given the broad heterogeneity of labour market programs across the various countries and over time, and the differing labour market circumstances in which they operate.

To assess the contribution of labour market programs to our equity and efficiency goals, microeconomic evaluations are required both to estimate the degree to which participants would have gained a job or a training position in the absence of the subsidy or extra assistance, and also to estimate the extent to which positive effects flow from program participation after the subsidy period has expired. Few evaluations address the first question and most are concerned with the post-program effects. We cannot be sure that evaluations which do not cater for the unobservable characteristics of participants are biased or not, and only the more recent overseas evaluations have been able to control for these effects.

Nevertheless, of the evaluations which do exist, wage subsidy, placement and combination programs appear to have the best post-program outcomes. Training has mixed results, possibly because of the large heterogeneity of training programs. It may also be because the full effects are long term and lie beyond the evaluation period. Job creation programs appear to have minimal effects on the participants' subsequent labour market performance.

The relative efficacy of different labour market programs for different groups is summarised below:

<b>Program type</b>	<b>Appears to help most</b>	<b>Appears not to help</b>
Wage subsidy	Most unemployed	Youth, groups with low education
Training	Women re-entrants	
Placement assistance	Most unemployed	
Job creation	Very disadvantaged long term unemployed	
Combination programs	Youth, long term unemployed	

*Source: Fay (1996).*

None of the Australian studies to date have controlled for unobservable personal characteristics, but data from the ABS Survey of Employment and Unemployment Patterns available from late 1997 and the DEETYA longitudinal survey should make this possible. It needs to be seen therefore whether the more sophisticated and expensive evaluations based on this data confirms these earlier findings or not. If they do, then the cheaper approach which only controls for observable characteristics is probably a more efficient exercise. While the sensitivity of results to model specification suggests that we will never get results of a precise nature, the various studies do indicate that program participation *can* improve a disadvantaged persons labour market experience. How long these benefits continue to accrue and whether they can justify the cost of the program to all participants successful or otherwise, is less clear. According to MacNeill (1995), summary employment rates could well disguise the fact that many post program open employments are low paid, temporary or part-time positions.

Nevertheless, microeconomic success is a long way from claiming that therefore either social and economic equity has improved or the level of aggregate employment has risen. If labour market programs do not increase the supply of suitable the hard-to-fill vacancies or lead to an expansion of demand for labour, then labour market programs merely redistribute jobs among different labour market groups.

## **Macroeconomic evaluations**

Macroeconomic evaluations must not only judge the outcomes of a program in the light of outcomes under alternative uses of the funds, but must also decide which macroeconomic theory to use. Empirical correlations between macroeconomic variables are common, but these can not tell us why or how factors are related. This is the role of theory. Notwithstanding these problems, it is difficult to get direct evidence on the macroeconomic effects of labour market programs using time series data. The small size of the programs relative to GDP inevitably means that their effects can be swamped by other influences.

Sadly, we also find few international rules of thumb to glean from the aggregate data and the econometric evidence is mixed.<sup>63</sup> Low unemployment in Sweden has frequently been attributed to the Swedish interventionist labour market policies, however at the same time, low Japanese unemployment has always been associated with very low expenditure on labour market

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<sup>63</sup> Calmfors (1993).

programs.<sup>64</sup> Moreover, because government policy stance is often endogenous, that is governments increase labour market program expenditures in response to the (worsening) state of the labour market, care must be taken to disentangle cause and effect in statistical work.<sup>65</sup> One approach has been to enter the labour market program variable as a lagged variable.

We find therefore that the common approach has been to indirectly infer from theory and incomplete evidence, what the effects have been. While the scope of macroeconomic models is large, an unconscious convergence in the reduced form of the two main theories has made our task a little easier. The first broad type of theories may be described as an eclectic demand-side model and is typified by Layard, Nickell & Jackman (1991). The second group is the supply-side labour productivity cum real wage model, and is epitomised by Lewis and Seltzer (1996).

A labour market program's macroeconomic effect must be judged in the light of likely attainable outcomes were the government funds put to some other use. With respect to these alternatives, governments may use the money to finance other government public work or services, grant lower income and corporate taxes, or lower the government deficit. All the alternative scenarios become more complicated when we consider second round effects.<sup>66</sup> If labour market programs are indeed successful in raising the level of aggregate employment and reducing unemployment, then in a sense they may, from the government's perspective, 'pay' for themselves, by lowering unemployment benefit outlays and raising tax receipts. Accordingly labour market programs, should be regarded as a form of (government) investment expenditure.

## Equity evaluations

Equity orientated evaluations should consider how labour market programs affect the distribution of income or the distribution of employment opportunities. Economists conventionally measure and compare equality by the use of Lorenz curves. This curve represents the cumulated share of total benefit going to the bottom  $x$  percentile of individuals, for all  $x$ . In Figure 4, a perfectly equal distribution of, say income, is represented by the 'line of equality' such that the bottom  $i$  percentage of individuals receive  $i$  percentage of incomes, for all  $i$ . The

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<sup>64</sup> OECD (1994). In fact, Calmfors (1993) has argued that Swedish unemployment is more affected by their macroeconomic stance than the level of their labour market program expenditures.

<sup>65</sup> OECD (1993) tried unsuccessfully to model whether labour market programs affected the relationship between aggregate employment growth and GDP growth (via improving labour market matching).

<sup>66</sup> Depending on one's macroeconomic theory, this may arise through better factor supply, more savings, or lower inflation.

further the actual line is from this line of equality, the more unequal the distribution of the benefit is.

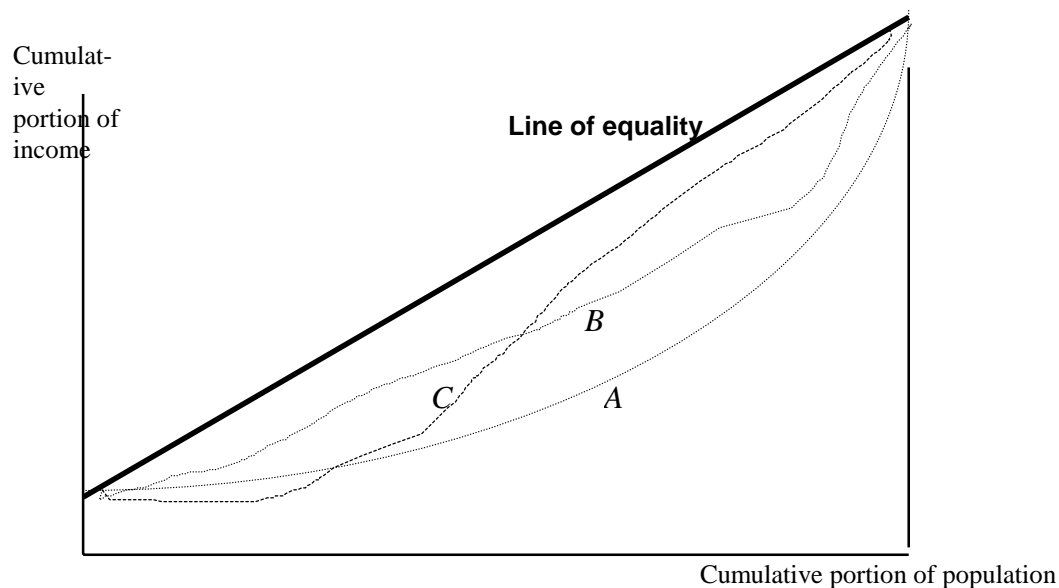


Figure 4

We may say therefore that society *B* is objectively more equal than *A* society for the average income of every cohort is closer to the line of equality. However, it is not possible to make such statements when some groups which are already below the mean have fallen further below it and others also below the mean, have moved closer to it. There is more equality between the lowest income groups in *A* compared with *C* but not the intermediate groups.

Despite the fact that equality of opportunity is becoming the more popular objective, no evaluations to date have directly assessed the equity issue from a full macroeconomic perspective. No account is taken of the effects of alternative uses of the funds nor are their attempts to measure which groups have been replaced in the hierarchy of beneficiaries by the targeted labour market program participants. Most evaluators imply that if the share of benefits acquired by the bottom group (usually the long term unemployed) has risen, then equity has risen. However, it matters considerably whether this has occurred at the expense of the second bottom group or the top group. They may have merely displaced the equally disadvantaged hidden unemployed.



Given this, we must conclude that there has been no serious evaluations of the equity effects of labour market programs, at least in Australia.

## **Efficiency evaluations**

### *Labour market bottlenecks*

There is scarcely an economist, who would not agree that any advance labour market programs make towards filling hard-to-fill vacancies will, to the extent the vacancy is filled earlier than otherwise, constitute a gross efficiency gain. In this situation, the employment increase has been at the expense of overtime work or production forgone and not another person's job. Vacancies may be filled earlier because the program has assisted the job search process, or equipped the participant with better work related skills or reduced the uncertainty associated with hiring them.

While it is certainly desirable to rid one's economy of labour market bottlenecks, it is not clear that mismatch, using the conventional notion of an occupational, qualification or regional mismatch, is either significant or has degenerated over time. Economists frequently point to the worsening unemployment : vacancy (Beveridge curve) relationship in many countries as evidence of worsening mismatch. According to Chapman (1994), this is not an apparition and labour market mismatch was considerably poorer in Australia during the 1980s than in earlier decades. Six per cent unemployment should be a time of skill surplus, but when this occurred during 1989, there were numerous reports from employers of skill shortages.

Layard, Nickell & Jackman (1991) are less enthusiastic about the occupation or regional mismatch explanation. According to their examination of detailed labour market data from the 11 OECD countries, including Australia, there has been no indication of increasing occupational or regional disproportions from the 1970s to mid-1980s. They believe that employers have simply become more choosy about who they hire and would prefer to continue searching than take on a worker who may prove to be unsuitable. Workers also have become more choosy about what jobs they will take. Empirical evidence from Australia supports the former findings.<sup>67</sup>

Placement programs should assist in the reduction of labour market bottlenecks, but only to the extent that the jobs are genuinely hard-to-fill. If a reluctance to employ the unemployed is due to

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<sup>67</sup> See Webster *et al* (1983).

their lack of ‘work readiness’ or the risk employers feel they may be subject to, then wage subsidy programs may assuage these uncertainties. Using data from 14 OECD countries, covering the period 1971 to 1988, Jackman, Pissarides & Savouri (1990) found some evidence to support the theory that labour market programs shift the Beveridge curve inward.

### *Aggregate employment*

An evaluation of the effects of labour market programs on aggregate employment is more complex not only because we have to consider the in-program and post-program effects, but we must also analyse this from the perspective of differing macroeconomic theories. As a prelude to these discussion we will briefly summarise the two main theoretical positions.

### Demand side theories

The eclectic demand side economists argue that while unemployment is caused by a deficiency of aggregate demand, an expansion of demand on its own is not the remedy, due to labour market bottlenecks or concentrations of market power which produce inflation rather than higher employment. The need to repay public debt, external balance problems and overheating in asset markets are also reasons limiting government induced expansion of aggregate demand. However, to keep the discussion simple we will characterise the main difficulty as inflation.

These eclectic demand side theories have evolved out of the family of hypothesis which attempt to explain the historical correlation between wage or price inflation and the rate of unemployment. Beginning with the early Phillips Curve, the ideas metamorphosed into a NRU and subsequently a collation of NAIRU theories. Part of the difficulty of summarising these arguments lies with the inconsistency in the terminology between authors and it will suffice to say here that most economists of this ilk accept that raising aggregate demand will spill over into both prices and employment. Unemployment is a crucial factor which acts to control inflation. The level of unemployment at which average prices are constant *ceteris paribus*, is the equilibrium rate of unemployment (alias NRU or NAIRU).<sup>68</sup> Opinions differ according to whether it is a stable equilibrium<sup>69</sup> or whether the economy needs to be pushed there by

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<sup>68</sup> Inclusion of the term *ceteris paribus* is crucial here for if inflationary expectations are positive and influential in setting wages and/or prices, then the equilibrium rate of unemployment will be associated with a constant rate of inflation.

<sup>69</sup> We mean stable in the sense that tendencies exist for the economy to naturally drift there, say by a real balance effect.

government policy. Depending on one's colours, this equilibrium may be found at either above or below full employment.<sup>70</sup>

The microeconomic mechanism by which a demand stimulus translates into higher wages rather than higher production is the subject of several hypotheses, only two of which we will mention. According to Lindbeck & Snower (1986), incumbent employees - insiders- have considerably greater bargaining power over the unemployed - outsiders - because the firm has invested considerable resources into equipping them with a knowledge and understanding of its internal and external operations. The tighter the labour market, and accordingly the less the threat of dismissal, the greater the incentive for and ability of labour to successfully bargain for higher wages. The presence of active labour unions further adds to workers' power. Variations of this theory also argue that the power of insiders is directly reinforced by the quality of informal work skills held by outsiders. The longer one is out of work, the more they become out of touch with the world of work and subsequently the less wages pressure they may bring to bear upon insiders' wage negotiations.

The distinct but related efficiency wage theory argues that employers initiate wage rises to keep valued employees keen, enthusiastic and hard working and reduce their propensity to quit.<sup>71</sup> These types of employers will not drop nominal wages and will always seek to keep wages above 'market clearing' and in line with their competitors.

The unemployment-inflation trade-off appears to have worsened during the 1980s in many countries.<sup>72</sup> The literature, especially in Europe, suggests that the more removed outsiders are from the world of work and the more depleted and obsolete their skills, the less threat they pose to persons in work. Growing firms would rather poach existing workers from rivals, by offering better wages, than hire some-one who has been out of work for over a year. Thus, it is argued that it is the portion of the labour force in short term unemployment, not the total unemployment rate which acts to keep the labour market competitive and wage pressures low. However, when unemployment is rising, people are more likely to move out of short term unemployment into long term unemployed rather than a job. Thus rising or sustained unemployment over time does

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<sup>70</sup> There are many who believe that the NAIRU is too volatile to have any practical or theoretical value. See Galbraith (1997).

<sup>71</sup> Although the term 'efficiency wage' emerged during the early 1980s, the underlying concepts were 'known' by labour market economists well before then.

<sup>72</sup> See Watts & Mitchell (1990), Layard, Nickell & Jackman (1991), Groenwold & Taylor (1992), Chapman (1993), Mitchell (1994), McDonald (1995).

not progressively increase the portion of short term unemployment and thus act as a brake upon wage demands.

Under these theories, labour market programs can play a role in reducing the anticipated heating of the labour market if they can reverse the skill atrophy of the long term unemployed and maintain them as an effective, work ready labour force. If this transformation is successful it will allow an expansion of aggregate demand, without contributory wage pressures. However, there is little point having measures to contain inflation if you don't exploit their benefits by raising demand.<sup>73</sup> Under this model of the economy, labour market programs are complementary to economic growth and expenditure on labour market programs should increase during cyclical upturns or when the government is taking active steps to raise aggregate demand. This does not appear to have been the case in Australia for labour market program expenditure is very counter cyclical (see figure 1). Overseas literature suggests that active labour market programs, of this sort, are used anti-cyclically as much as pro-cyclically.

### Supply side theories

Supply side macro economists are based on a partial equilibrium model of the labour market, which posits a direct negative and causal link between the price (real wage) and the aggregate demand for labour. Real wage rises encourage employers to use more capital intensive techniques of production and gives consumers a price incentive to buy more capital intensive goods and services. People are unemployed therefore because their productivity, were they to be employed, would be less than the required wage. A disinclination to hire the unemployed arises from a real wage-productivity gap and not a deficiency of demand. If employment levels are too low, the solution is to lower real wages, either across the board or selectively, and reverse the trend away from labour intensive techniques and products.

However, to analyse a market from a partial equilibrium perspective, as is conventionally done by supply-side economics, requires the author to demonstrate that the arguments of the demand and supply functions are independent from each other, and thus the *ceteris paribus* assumptions used to make the functions tractable are not internally inconsistent. As noted by Marshall (1890), this is unlikely in the aggregate labour market for the average level of wages is a major determinant of workers' incomes and thus demand for output and labour. This does not mean

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<sup>73</sup> Quiggin (1993), Mitchell (1994), Heylen, Goubert & Omey (1996).

that real wages have no influence on the demand for labour, it is rather to caution against the use of partial equilibrium analysis.

Under a more general analysis we can argue using the above supply side mechanisms that changes to real wages affect the demand for labour via several routes. In the immediate short period (before the level of employment has had time to respond) a rise in wages, for a given level of prices will:

- lead to a rise in consumption demand, if wage earners have a lower propensity to consume than profit recipients;
- cause consumers to prefer more capital intensive products;
- probably have little effect on existing techniques of production because of the sunk cost nature of capital embedded therein.

The effect on the employment level and subsequent second round effects depend on the net outcome from this initial effect. If the elasticity of demand for labour with respect to real wages is less than one, then the net effect will be a rise in aggregate demand.<sup>74</sup>

The effects on investment demand are more delayed (due to the time it takes to identify, decide and arrange the spending on new capital projects). However we cannot predict *a priori* the direction of this change. The level of real wages can affect both the level of desired investment and the labour intensity of new capital goods. Higher real wages will lower gross profit margins *ceteris paribus*, and thus lower the number of investment projects which are deemed viable, but higher real wages may cause firms to expect a higher demand for their future products *ceteris paribus* and thus cause firms to view more potential projects as viable.<sup>75</sup> The long run effect of real wages on the capital intensity of new production methods depends the level of real wages, the interest rate and the structure of dated labour inputs of alternative techniques of production. However, this last effect is in the future and will only appear after a time lag.

It is not possible to predict *a priori* what the net affect on investment demand will be for each level of the real wage. However, we can deduce that at zero real wages, demand for output will be so low that investment demand will be negligible. When real wages equal average product,

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<sup>74</sup> This could well be the case, see Quiggin (1993: 14).

gross profit margins are zero and it is not worth investing at all. We do not know how investment demand behaves in-between points *A* and *B* on Figure 5, but there must be an upward and down ward sloping portion.

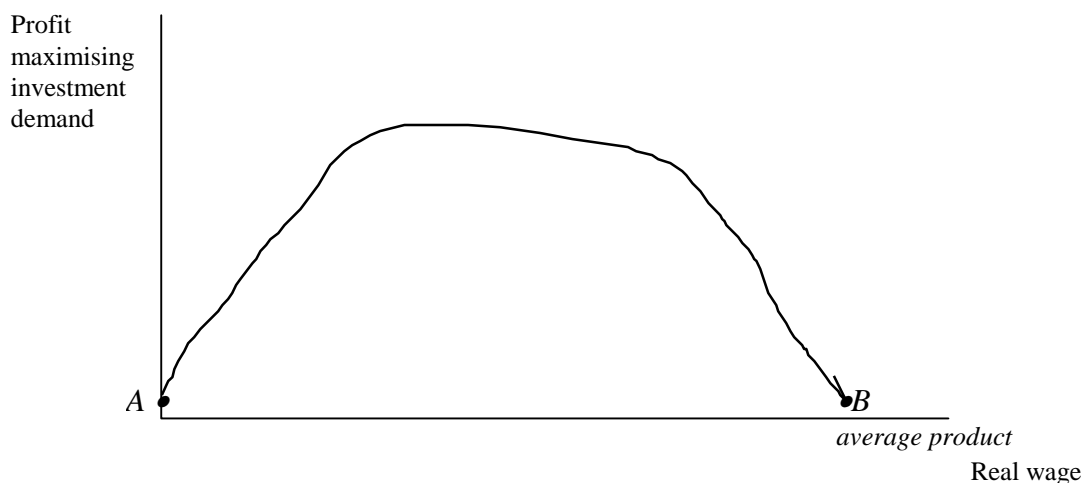


Figure 5

The case for why the economy should be on a downward sloping portion is rarely articulated but for the sake of argument we will assume that the economy since the mid 1970s has been on this portion of the curve.<sup>76</sup> Accordingly, any measure which raises the inherent productivity of the unemployed or reduces the minimum wage, will either increase the profit maximising level of output or raise the optimal ratio of labour to capital. By reversing the decline in work skills due to idleness, labour market programs can raise the productivity of potential employees and thus stimulate demand for labour. Additionally, policies which reduce wage demands can lead to lower real wages if wage rises are not passed on in-full as price rises.<sup>77</sup> Labour market programs for the reasons canvassed above will, by lowering nominal wage demands, lead to a lower real wages and thus stimulate demand for labour.<sup>78</sup> According to Bellmann & Jackman (1996) labour

<sup>75</sup> Additionally, investment demand from capital intensive industries will be stimulated more than labour intensive industries as a result of the shift of product demand.

<sup>76</sup> It is a common assumption in labour market program literature, is Layard, Nickell & Jackman (1991), Calmfors & Skedinger (1995), Bellmann & Jackman (1996).

<sup>77</sup> Fitoussi (1994) found that changes to the minimum wage, Granger-caused a change in the real wages but not vice versa. Sylos Labini (1979, as cited in Reynolds 1996: 83) found that in Italy, USA, UK and West Germany from the early 1950s to early 1970s, between 74 to 93 per cent of cost charges were shifted onto prices. Thus changes to nominal wages can and do affect the real wage. There is a popular theory that argues that real wages are principally determined by the mark-up and thus the level of competition in the output market (see Cornwall (1997) for example). However, to keep the argument general we will include both situation in this review, ie that the real wage is influenced by the levels of competition in both the product and labour markets. For our purposes, only the latter is relevant.

<sup>78</sup> Flatau, Lewis & Rushton (1991).

market programs that target the disadvantaged and contain strong activity tests put greatest competitive pressure on labour markets.

Although the eclectic demand side and supply side views have grown out of distinct and often conflicting theoretical models, they appear to have converged, if only in appearance, in the contemporary theories of labour market hysteresis. At the end of the day, both theories hold that labour market programs will encourage or enable higher employment growth if they contribute to enough additional competition in the labour market to exert downward pressure on nominal wage growth.<sup>79</sup> However, while the supply side model argues that these effects are sufficient to promote employment growth, demand side proponents also require an exogenous growth in demand from either the government or overseas sector. Given the practical similarities between the two schools of thought, it is appropriate to discuss results from both demand and supply side evaluations together.<sup>80</sup>

#### Aggregate employment: in-program effects

Employment based programs (wage subsidy and job creation schemes) may be proposed either because they increase the level of employment during the program period or increase it after the program has ended. Despite the prominence of the former during the 1970s, a relatively small number of policy analysts have continued to promote the in-program effects, and most evaluations only concern themselves with post-program effects. Nevertheless, calculating the in-program effect on aggregate employment requires estimates to be made at three sequential steps.

Pre program	Program period	
	(B) Same person would have gained a job any way	
(A) Unemployed ↗ ↘	(C) Got a job ↗ due to the → subsidy ↘	(D) Replaced another unemployed person (E) Replaced some one already in a job or out-of-the-labour force (F) Took an extra job in (G) Extra job offered at

<sup>79</sup> Swedish economists Calmfors & Lang (1995) have argues that large scale labour market programs can reduce competition in labour markets by removing the fear of unemployment. However, we do not believe that this is likely to apply to Australia where expenditure on labour market programs is both considerably lower and more volatile and uncertain than Sweden.

<sup>80</sup> Especially because difficult to discern a clear theoretical line in some evaluations.

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the firm which was	expense of job in rival
offered because of→	firms
wage subsidy     ↘	
	<b>(H)</b> Extra job a net
	addition to aggregate
	employment

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The size of aggregate employment during the program period, depends on how many people from **(A)** above can be counted among **(H)**. Our crude calculations in the microeconomics section estimate that only 70 per cent move from **(A)** to **(C)**. Little empirical work has been done in estimating how many of these jobs were additional to the firm, that is **(F)** rather than **(D)** or **(E)**. Evaluations from Australia and Europe suggest that between 15 to 30 per cent of the jobs offered were only offered because of the subsidy.<sup>81</sup> The remaining 70 to 85 per cent therefore resulted in a re-ordering of the queue of potential applicants for a job, and a substitution of one person for another. If these estimates are valid, we find that only 10 to 20 percent of the original unemployed from **(A)** end up at **(F)**. The Australian estimates are derived from asking employers whether the job was additional or not and given the difficulties with this method, these estimates should be treated with caution. However, according to the Australian study, employers who said that the job was additional were less likely to retain the participant after the subsidy period had ended which tends to confirm their estimated of additionally. A cross-sectional study of firms in the USA has found the use and knowledge of wage subsidies was related to higher employment growth, however there is a simultaneity problem here for stagnating firms will be less interested in such schemes.<sup>82</sup>

There is unlikely to be any survey method capable of estimating the split between **(G)** and **(H)**. We will only get a rise in aggregate employment if more labour intensive techniques of production are introduced (or preserved) or the profitability of increasing production has risen. We need to account for what the level of employment would have been had the government spent the program funds on other government portfolios, or used it to reduce taxes or the government deficit. Demand side models would reduce this 10 to 20 per cent estimate

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<sup>81</sup> Bureau of Labour Market Research (1984c), DEET (1989), DEET (1994c), OECD (1993), Bellmann & Jackman (1996a).

<sup>82</sup> The 1979 study was by Perloff & Watcher, and was cited in Lewis & Ryan (1985).



considerably.<sup>83</sup> It is not surprising therefore to find that labour market advocates tend to sell labour market programs on the basis of their post-program rather than in-program effects.

### Aggregate employment: post-program effects

In a similar way, we can break down the process by which labour market programs lead to an increase in aggregate employment after the program has ended. In terms of the diagram below, the extent to which we can say that a participant has acquired a job as a result of the program, that is the split between **(K)** and **(L)**, can be estimated from the microeconomic evaluations. However, beyond this point we must infer from theory and indirect evidence. According to the macroeconomic theories discussed above, it is likely that the job is additional if there is greater wage competition, less inflation and the government increases aggregate demand (demand side theories) or there is more wage competition and a lower real wage (supply side theories). All these relativities have of course to be compared with the effect on the labour market of alternative uses for the labour market program funds. The size of the expansion of aggregate employment depends on how many people in **(I)** can be attributed to **(O)**.

Pre program	Program period	Post-program	
		<b>(K)</b> Same person would have gained a job any way	
<b>(I)</b> Unemployed →	<b>(J)</b> Wage subsidy ↗		<b>(M)</b> Replaced another unemployed person
	Training subsidy		
	Job creation		
	Placement services ↘	<b>(L)</b> Got a job due to the program ↗ → ↘	<b>(N)</b> Replaced some one already in a job or out-of-the-labour force
			<b>(O)</b> Took an additional job because the person is considered more profitable to employ than before

<sup>83</sup> The actual effects clearly depend on the labour and import intensity of the alternative expenditures and the subsequent effect this may have on wage pressures. Suffice to say there are too many alternative to trace them

## Evaluations

Many of the papers which discuss the pros and cons of labour market programs are based upon deductive reasoning with no original empirical work, and we will exclude them from this section because we have covered their ground above.

We will find that there is a dearth of published studies which have attempted to estimate the post-program macroeconomic relationship between labour market programs and unemployment using aggregate time series analysis, possibly because of the problems caused by the endogenous policy stance discussed above.<sup>84</sup> Most studies investigate the existence of one or two links in the sequence of the whole argument. The study by Bellmann & Jackman (1996b) used pooled cross-sectional time series data from 17 OECD countries during the period 1975 to 1993 to directly test for the effects of labour market program expenditure on the unemployment rate. They estimates the equation:

Rate of unemployment =  $g$ (labour market program expenditure per unemployed person, the replacement ratio, duration of unemployment benefits, degree of centralisation of wage bargaining, institutional sclerosis, union density and usage of temporary employment).

They did not find that the labour market program had any influence on the rate of unemployment (although it did affect the incidence of long term unemployment) or the rate of growth of employment.

The majority of empirical evidence for labour market hysteresis is based on a time series correlation between a deteriorating unemployment : inflation relationship on the one hand and rising long term unemployed on the other.<sup>85</sup> It is inferred, when found, that a positive relationship exists because the long term unemployed are not an effective supply of labour and thus do not act as a check upon wages. Any measure therefore which transforms the long term unemployed into effectual labour market competitors will reverse this process. However, we know that employment based programs, which are specifically targeted at the long term

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through here.

<sup>84</sup> OECD (1993) tried unsuccessfully, but we have reservations about the specification of their wage equation. If labour market programs increase employment, it does so by raising GDP either because of a lower real wage or because a stimulus to autonomous sources of demand. As such it is double counting to include the real wage and GDP on the right hand side of the same equation.

unemployed will reduce the long term unemployed even if it just involves taking them out of unemployment temporarily, for the duration count will re-set to zero if a person has a job for longer than two weeks. It still needs to be proven therefore that this has converted the long term unemployed into an effective labour supply in the markets most prone to wage inflation.

Connolly & Nicol (1997) tested the proposition that an increase in expenditure on Australian labour market programs (per member of the labour force) will reduce the portion of unemployed with durations over 52 weeks. They found a significant and negative relationship. However, this effect may merely represent a re-setting of duration counts, or the displacement from employment of short term unemployed (or persons not in the labour force or existing employees) and not an improvement in the long run employment performance of the disadvantaged groups. Using Australian data from 1989-95, Leeves (1997) found that labour market programs had no effect on the transition of short term unemployed into employment but had a positive effect on this movement for long term unemployed. However, he notes that some of this movement will be into sheltered employment offered by labour market programs and not open employment. Furthermore, we do not know whether this improvement has been at the expense of people in employment or those out of the labour force (who would now be non-employed). Over a third of flows into employment traditionally come from persons not in the labour force.

A large cross country study by Jackman, Layard & Nickell (1996) covering the periods 1983-88 and 1989-94, found that labour market program expenditures did not reduce the portion of the labour force in short term unemployment and the effect on the portion of long term unemployed was only significant when Sweden was included in the sample.<sup>86</sup> They found instead that the strength of the employment protection laws and the centralised nature of the wages system were more important factors in determining the portion of the labour force in long term unemployed, and subsequently the size of the NAIRU.

Even if we were satisfied that labour market programs did reduce the number of long term unemployed, we still have to establish the subsequent effect on the effective labour supply and from this to an effect on wage competition. Post-program surveys undertaken by the Australian Department of Employment, Education, Training and Youth Affairs (DEETYA, formerly DEET) suggest that participation in a labour market programs does affect the employability of

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<sup>85</sup> See Watts & Mitchell (1990), Layard, Nickell & Jackman (1991), Groenwold & Taylor (1992), Chapman (1993), Mitchell (1994), Olekalns & Crosby (1997).

<sup>86</sup> Jackman, Layard & Nickell (1996).

some, but not all, long term unemployed.<sup>87</sup> However, whether this affects competition in the inflation prone markets is a separate matter. Flatau, Lewis & Rushton (1991) found a positive and significant relationship between the number (not portion) of long term unemployed and the real wage but the size of the effects are very small.<sup>88</sup> Using data from 1983 to 1990, Flatau, Kenyon, Lewis & Rushton (1991) found a positive relationship between the number of long term unemployed and the number of short term unemployed and the real wage. However, the historical effect the short term unemployed have had in reducing wage competition may not continue into the future if the short term unemployed are increasingly made up of re-cycled long term unemployed and persons with broken working careers rather than people with continuous work histories who are temporarily displaced.

Layard, Nickell & Jackman (1991) appear to be part of a minority of economists who have tried to find a direct relationship between labour market programs and inflation. Using data from 20 countries from 1983 to 1988, they estimated:

Change in inflation =  $f$ (duration of unemployment benefits, replacement ratio, expenditure on labour market programs, unions coverage, co-ordination between unions, degree of co-ordination between employers, the rate of unemployment).<sup>89</sup>

They got significant results for all variables. However, they estimate the equations with the change in inflation on the right hand side and unemployment on the left hand side, which incorrectly represents the theoretically derived causal relationship.<sup>90</sup> This casts doubt on the validity of the estimated coefficients. Forslund & Kreuger (1994) re-estimated this equation with 1993 data and found the labour market program variable lost its significance and changed sign.<sup>91</sup>

Using data from 1985-90 and most OECD countries, the OECD itself found that labour market program expenditure exerted a downward pressure on real wages when account was taken of unemployment, productivity and terms of trade. They claimed to have controlled for the relationship from unemployment to labour market program expenditures, but it is not clear that

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<sup>87</sup> See the section on the microeconomic evaluations above. Depending on the type of labour market program and the particular evaluation, DEETYA found that employment rate of the long term unemployed can be as much as double the rate we would have otherwise expected. This however, leaves a lot of participants whose career horizons have not apparently improved.

<sup>88</sup> A 10 per cent increase in the long term unemployed was estimated to cause a 0.3 per cent fall in the real wage. By contrast the Accord had a much large effect on real wage growth.

<sup>89</sup> The first 6 variables were meant to be the structural determinants of the NAIRU.

<sup>90</sup> See Pindyck & Rubinfeld (1981: 65).

<sup>91</sup> See Calmfors & Skedinger (1995: 93).

they catered for the possible two way relationship between real wages and unemployment.<sup>92</sup> Two studies from Sweden, have found contradictory conclusions over whether or not labour market programs have added to or subtracted from wage inflation.<sup>93</sup> A study by Calmfors argued that that labour market programs might raise inflation because they diminished the consequences of losing one's job, however another study by Forskund in 1992, found that wage pressures were reduced by labour market programs. Carling *et al* (1996) did not find any evidence that an increased availability of labour market programs in Sweden makes the unemployed less inclined to search for open employment.

Calmfors & Skedinger (1995) used pooled cross sectional and time series data from Sweden to test for the effects of job creation programs and training programs on regional jobless rates. They tested a variety of models with an equivalent large variation in the results but found some evidence that job creation programs raise the local jobless rate but training programs, especially those targeted at youth, tend to lower the regional unemployment rate. They conclude that training programs are likely to restrain wages but not job creations schemes. However, given the dependent variable is the regional rate, the labour market programs may be merely changing the distribution of unemployment across Sweden and not changing its national rate. After noting their own estimation problem and contrary results from other studies, Calmfors & Skedinger conclude that programs have large effects on employment, either positive or negative, are weak.

## Conclusions

Relative to microeconomic evaluations the ground covered in the macroeconomic field is more patchy. None of the evaluations we have surveyed here have explicitly considered the macroeconomic effects of labour market program expenditures in the light of what would have happened had the government revenues been used elsewhere. At best, we can say that the practice of including labour market program expenditures in regression equations, without compensating changes to the levels of other government spending or taxes, implicitly assumes that the labour market programs are a net addition to the government deficit, and that this addition has been financed in an interest neutral way.<sup>94</sup>

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<sup>92</sup> OECD (1993).

<sup>93</sup> OECD (1993), Calmfors and Lang (1995).

<sup>94</sup> A combination of borrowing from the central bank and borrowing from the public, can in theory be undertaken so the structure of interest rates are not affected and financial flows in and out of the country do not change. Whether this is viable over the long term depends on the real interest rate vis-à-vis the rate of economic growth.

There have been no serious attempts to assess the equity effects of labour market programs across all groups in society. There is good evidence that labour market programs, especially wage subsidy and placement programs, re-order the job queue, certainly while the program is in place but also to a lesser extent after the participant has finished the program. When the programs are targeted at the long term unemployed, this group has gained but it is not clear at whose expense. If they have merely replaced the short term unemployed, discouraged workers or employed person with erratic work histories then our conclusions are less sanguine.

More attention has been given to the effects of labour market programs on the efficiency objectives. Nevertheless, no evaluations have seriously attempted to measure the extent to which labour market programs affect the speed at which vacancies are filled. The in-program effects on the aggregate employment level has received almost no attention in the recent literature, possibly because the demand side models would suggest that were the funds to be spent on alternative government projects, the effects would be negligible.<sup>95</sup> The situation under a supply side model is less clear and more complex.

Evaluations have concentrated instead on the post-program effects, most particularly the effects on wage competition. Evidence to support a strong positive causal link from labour market programs to effective labour supply to wage competition and subsequently inflation or real wages, is patchy and fraught with specification difficulties. Instead, these studies have found evidence that the wage setting institutions (ie whether we have a centralised Accord system or not) and the level and severity of employment protection regulations are more important factors in containing inflation than the total or short term unemployment rate.

## **Conclusions and summary**

Labour market programs are an all time favourite remedy for unemployment. Since their inception several centuries ago, policy makers have used them to rehabilitate and instil good work practices into the involuntarily idle. In modern parlance, economists speak of making the long term unemployed an effective labour supply.

For the supply side economist, labour market programs are usually treated as a second best option for increasing aggregate employment, when the likelihood of reducing minimum and

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<sup>95</sup> The actual effects clearly depend on the labour and import intensity of the alternative expenditures and the subsequent effect this may have on wage pressures. Suffice to say there are too many alternative to trace them through here.

award wages are considered infeasible. However, the literature on this area neither cites nor articulates arguments for why the economy is on the downward sloping portion of the investment demand schedule and more work is required in this area. The eclectic demand side economist regards labour market programs as part of a package of policies, in collaboration with efforts to increase education and training rates and policies to boost aggregate demand. The evidence that labour market programs do in fact reduce wage inflation is ambiguous. This is not surprising when we consider that occupations in greatest shortage and subsequently where wages have grown the fastest (professional, technical, para-professional), usually require a sound general education rather than the type of short vocational training offered by labour market programs. It is often hard to attract people who left school early back into extended education and formal training

If we are only interested in labour market programs as a means of increasing competition in specific labour markets, then one must also ask whether there exist other more effective ways of achieving this. Reducing the very high marginal effective tax rates on households receiving unemployment benefits, increasing the flexibility of the wage setting process, altering wage structures to reflect the costs and benefits of training more closely, minimising the skill loss caused by firms which downsize and shed skilled staff and increasing the transferability of skills between several related occupations, may contribute as much or more to reducing wage inflation as labour market programs. If we find that bilateral monopoly power is a major contributory factor in fuelling inflation, then a broader incomes policy arrangement may be more appropriate.

With respect to the effects that labour market programs have on equality of opportunity, the prospects are more sanguine. However, given the paucity of macroeconomic work in this area, we are unable to give it a full vote of confidence. There is reasonable evidence that the grants and subsidies available under the programs lead to increased employment/training participation rates for the target population during the program periods. The portion of participants whose employment or training position depended on the program is crudely estimated at between 70 to 75 per cent. There is additional evidence that of this group, about 5 to 12 per cent continue to receive benefits for several years after the subsidy has ended.

Much of this evidence is drawn from Australian evaluations, which to date have not been able to eliminate the effects of unobservable variables. We can not be entirely sure that the same type of person would or would not have gained a job or training position and job combined, in the

absence of the program. The programs could have merely selected the more 'job ready' members of the target group at the direct expense of other members of the target group. Alternatively, the successful participant may have gained the job at the expense of members from other less successful sections of the community.

We need to have approximate answers to these issues in order to estimate the effects on both equality of income and access to jobs and the effect of labour market programs on wage competition. While it is wasteful to conduct frequent expensive evaluations of every possible nuance of causes and effects, there is some merit in undertaking a small number of detailed evaluations to see whether they confirm or contradict the more cheaper evaluations currently undertaken. If they do, then the latter are justified on cost-benefit grounds.

Whatever, we may say about the size of the direct economic effects on the target group, existing labour market programs which target the long term unemployed, provide an important intangible benefit: Hope. Without hope, it is difficult to imagine that a person, who has been subject to repeated failures and rejections will exert the extra effort that is required to lift themselves out of their predicament. The alternative could well be vicious long term or inter-generational cycles of poverty.

## **Appendix<sup>96</sup>**

The information presented in the report attempts to measure expenditure on labour market programs, by type of program, over the period 1974 to 1996. It involves a reproduction of time series data originally presented in an earlier paper by Stretton and Chapman (1990). Subsequent to 1989, additional data has been gathered independently to continue the time series.

Expenditures on labour market programs measured exclude:

- Commonwealth Employment Service (CES);
- New Enterprise Incentive Scheme (NEIS); and,
- State Government expenditures.

Real expenditures have been deflated using the General Government Implicit Price Deflator (1989-90 = 100), seasonally adjusted.



## **Estimates of aggregate expenditures: Figure 1.**

13B.1 Vocational and Industry Training, is taken from Commonwealth Budget Papers current item:

13B.2 Labour Market Assistance to Jobseekers and Industry, are taken from Commonwealth Budget Papers current item:

[Item 13B.2 takes expenditure from DEETYA Annual Report current programs:

4.2 Employment Participation

4.4 Case Management Services

4.5 Aboriginal Employment and Training Assistance]

## **Estimate of disaggregated expenditure: Figure 2**

Columns refer to Table 2 below.

*Column 1. Training for employed*

Source: Commonwealth Budget Papers

1990-1994: Item 7C.1 Vocational and Industry Training

1995-1996: Item 13B.1 Vocational and Industry Training

*Column 2. Training for unemployed*

Source: DEETYA Annual Reports

Programs included: JobTrain

*Column 3. Wage subsidies for unemployed*

Source: DEETYA Annual Reports

Programs Included: JobStart

National Training Wage (1995 - )

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<sup>96</sup> This section was compiled by Stephen Knights.

*Column 4. Direct job creation*

Source: DEETYA Annual Reports

Programs Included: New Work Opportunities (1995 - )

JobSkills (1992 - )

Landcare and Environment Action Program (1993 - )

*Column 5. Aboriginal education and training*

Source: DEETYA Annual Reports

Programs Included: Aboriginal Employment

(does not include Education-related assistance)

*Column 6. Special job placement services*

Source: DEETYA Annual Reports

Programs Included: SkillShare

JobSearch Training Programs (eg. JobClubs)

Special Intervention Program (1992 - )

Employment Assistance Australia (1995 - )

*Column 7. Other*

No other programs included for sub-period 1990 to 1996.

Discrepancies between these data in Figure 1 and the sums of columns (except for the first) in Table 2 exist for two reasons:

- 1) Expenditures cited in this report are exclusive of running and other operating costs associated with programs.

- 2) Not all relevant expenditures included by DEETYA sources have been included in this report. Omissions are primarily on grounds of materiality.

**Table 2. Commonwealth Government expenditure on labour market programs by type, Australia, \$million (1989-90 prices).**

	Training for employed	Training for unemployed	Wage subsidies	Direct job creation	Aboriginal education and training	Special job placement services	Other
1973-74	29	23	0	0	0	0	0
1974-75	65	300	0	224	0	0	0
1975-76	123	160	0	406	0	0	0
1976-77	128	74	19	1	0	0	1
1977-78	77	112	124	0	0	0	5
1978-79	94	126	201	0	0	0	7
1979-80	107	82	54	0	24	0	5
1980-81	143	90	85	0	28	0	9
1981-82	152	73	100	0	35	0	13
1982-83	148	91	106	163	40	0	12
1983-84	144	128	223	595	63	0	19
1984-85	159	137	199	599	79	0	19
1985-86	139	129	156	394	80	0	4
1986-87	158	152	156	252	79	0	5
1987-88	171	165	126	119	84	0	6
1988-89	201	224	74	1	89	0	9
1989-90	192	93	73	0	79	81	0
1990-91	175	140	40	0	83	98	0
1991-92	194	184	114	44	94	137	0
1992-93	324	162	327	192	37	259	0
1993-94	341	127	391	140	39	312	0
1994-95	349	160	211	353	42	479	0
1995-96	348	152	276	794	49	460	0

## References

- Addison JT (1979) 'Does job creation work', in *Job 'creation' or destruction?*, IEA, London.
- Australian Auditor-General (1989) *Department of Employment, Education and Training. Jobstart*, AGPS, Canberra.
- Baker M & Elias P (1991) 'Youth unemployment and work histories', in *Life And Work History Analyses: Qualitative And Quantitative Developments*, (ed) S Dex, London, Routledge.
- Baker S (1984) 'A comparative evaluation of the impact on participants of selected youth labour force programs', Bureau of Labour Market Research, Working Paper 50, Canberra.
- Bellmann L & Jackman R (1996a) 'Aggregate impact analysis' in Schmid G, O'Reilly J & Schömann K (1996) (eds) *International Handbook of labour market Policy and Evaluation*, Cheltenham, Brookfield: Edward Elgar.
- Bellmann L & Jackman R (1996b) 'The impact of labour market policies on wages, employment and labour market mismatch' in Schmid G, O'Reilly J & Schömann K (1996) (eds) *International Handbook of labour market Policy and Evaluation*, Cheltenham, Brookfield: Edward Elgar.
- Beveridge WH (1944) *Full Employment in a Free Society*, London, George Allen & Unwin.
- Björklund A & Regnér H (1996) 'Experimental evaluation of European labour market policy' in Schmid G, O'Reilly J & Schömann K (1996) (eds) *International Handbook of labour market Policy and Evaluation*, Cheltenham, Brookfield: Edward Elgar.
- Björklund A (1990) 'Evaluations of Swedish labour market policy', *Finnish Economic Papers*, 3(1).
- Björklund A (1993) 'The Swedish Experience', in *Measuring Labour Market Measures*, Proceedings from the Danish Presidency Conference. Ministry of Labour, Denmark.
- Borland J (1994) 'An assessment of the Green Paper: *Restoring Full Employment*' Australian Economic Review, 11-14.
- Borus ME & Hamermesh DS (1978) 'Estimating fiscal substitution by public service employment programs, *Journal of Human Resources*, 13 (4).
- Brooks C & Volker P (1986) 'The probability of leaving unemployment: The influence of duration, destination and demographics', *Economic Record*, 296-309.
- Bureau of Labour Market Research (1984a) *Public Sector Job Creation: Interim report on the Wage Pause program*, Interim report series no. 1, Canberra, BLMR.
- Bureau of Labour Market Research (1984b) *The National Employment and Training System (NEAT), An Evaluation*. Canberra, AGPS.

- Bureau of Labour Market Research (1984c) *Submission to the Committee of Inquiry into Labour Market Programs*, Bureau of Labour Market Research monograph series, no, 5, AGPS, Canberra.
- Bureau of Labour Market Research (1985) *Public Sector Job Creation: A profile of Wage Pause Program participants*, Interim report series no. 2, Canberra, Bureau of Labour Market Research.
- Calmfors L & Lang H (1995) 'Macroeconomic effects of active labour market programmes in a union wage-setting model', *Economic Journal*, **105**, 601-19.
- Calmfors L & Skedinger P (1995) 'Does active labour market policy increase employment? Theoretical considerations and some empirical evidence from Sweden', *Oxford Review of Economic Policy*, **11**, 91-109.
- Calmfors L (1993) 'Lessons from the macroeconomic experience of Sweden', *European Journal of Political Economy*, **9**, 25-72.
- Card D & Sullivan D (1988) 'Measuring the effect of subsidised training programs on movements in and out of employment', in *The Economics of Training Volume II*, (eds) OC Ashenfelter & RJ LaLonde, Cheltenham UK and Brookfield USA, Edward Elgar, 161-194.
- Carling K, Edin PA, Harkman A & Holmlund B (1996) 'Unemployment duration, unemployment benefits and labor market programs in Sweden', *Journal of Public Economics*, **59**, 313-34.
- Casey B & Bruche G (1984) 'Active labour market policy: An international overview', Bureau of Labour Market Research, Working Paper 53, Canberra.
- CES Advisory Committee (1995) *Review of Labour Market Programs*, Canberra, AGPS.
- Chapman B (1993a) 'The case for addressing the long term unemployment issue', Centre for Economic Policy Research, RSS, ANU.
- Chapman B (1993b) 'Long term unemployment: The dimensions of the problem', *Australian Economic Review*.
- Chapman B (1994) 'Long term unemployment: The case for policy reform', Centre for Economic Policy Research, ANU, Discussion Paper no. 302.
- Chapman B (1997) 'Labour market programs', Industries Commission workshop, *Changing labour markets - Prospects for Productivity Growth*, Melbourne.
- Committee of Inquiry into Labour market Programs (1984) *Report of the Committee of Inquiry into Labour Market Programs (Kirby Report)*, Canberra, AGPS.

- Committee on Employment Opportunities (1993) *Restoring Full Employment*, Canberra, AGPS.
- Connolly G & Nicol D (1997) 'The effect of expenditure on labour market assistance and urban and regional development in the incidence of long term unemployment', DEETYA, Economic Conditions and Forecasting Section, Canberra.
- Cornwall J (1997) 'What remains of Keynes?' *An Encyclopaedia of Keynesian Economics*, Cheltenham, Brookfield: Edward Elgar.
- Couch KA (1992) 'New Evidence on the long term effects of employment training programs', in *The Economics of Training Volume II*, (eds) OC Ashenfelter & RJ LaLonde, Cheltenham UK and Brookfield USA, Edward Elgar, 98-106.
- Council of Social Service of New South Wales (1996) 'A foot in the door. A survey of New Work Opportunities. A labour market program for long term unemployed people' Issues paper no 3, Surry Hills, NSW.
- Creigh SW (1986) 'Public sector job creation: A survey of Wage Pause Program sponsors', Bureau of Labour Market Research, Working Paper 59, Canberra.
- Cross R (1996) 'The natural rate: An attraction of actual unemployment or an attractee?', *Scottish Journal of Political Economy*, **43**(3).
- Dawkins P (1994a) 'A mixed bag: A comment on the Green Paper by the Committee on Employment Opportunities', *Australian Economic Review*, 19-23.
- Dawkins P (1994b) 'Restoring full employment: Further research needs', *Economic and Labour Relations Review*, **5**(1), June.
- Department of Employment, Education and Training (1984) *Community Employment Program: The first year*, Canberra, AGPS.
- Department of Employment, Education and Training (1989) *Jobstart Evaluation*, Program Review and Income Support Branch, Canberra.
- Department of Employment, Education and Training (1993a) *Evaluation of Jobstart*, Evaluation and Monitoring Branch, EMB Report 7/93, Canberra.
- Department of Employment, Education and Training (1993b) *Evaluation of Skill Share*, Evaluation and Monitoring Branch, EMB Report 5/93, Canberra.
- Department of Employment, Education and Training (1993c) *Summary Evaluation of Jobtrain 1990-93*, Evaluation and Monitoring Branch, EMB Report 4/93, Canberra.
- Department of Employment, Education and Training (1994a) *Newstart Evaluation. Interim report on effectiveness*. By MA Sakkara, S Beyers, K Buchanan, P Gatenby, K Patston, AGPS, Canberra.

- Department of Employment, Education and Training (1994b) *Net Impact Study of Job Clubs*, Evaluation and Monitoring Branch, EMB Report 5/94, Canberra.
- Department of Employment, Education and Training (1994c) *Survey of Jobstart Employers*. By A Byrne & K Buchanan, EMB Report 6/94, AGPS, Canberra.
- Department of Employment, Education, Training and Youth Affairs (1996b) *Evaluation of JobSkills Programme*, Evaluation and Monitoring Branch, EMB Report 7/96, Canberra.
- Department of Employment, Education, Training and Youth Affairs (1996a) *Working Nation: Evaluation of the employment, education and training elements*, Evaluation and Monitoring Branch, EMB Report 2/96, Canberra.
- Department of Employment, Education, Training and Youth Affairs (1997) *The net impact of Labour Market Programmes*. Evaluation and Monitoring Branch, EMB Report 2/97, Canberra.
- Department of Employment, Education, Training and Youth Affairs (1997) *The New Impact of Labour market Programmes*, EMB Report 2/97, Canberra, Economic and Policy Division.
- Dickinson KP, Johnson TR & West RW (1985) 'An analysis of the impact of CETA programs on participants earnings', in *The Economics of Training Volume II*, (eds) OC Ashenfelter & RJ LaLonde, Cheltenham UK and Brookfield USA, Edward Elgar, 131-160.
- Dolton P & O'Neill (1996) 'Unemployment duration and the Restart effect: Some experimental evidence', *Economic Journal*, **106**, 387-400.
- Economic Planning Advisory Committee (1996) *Future labour market issues for Australia*, Commission Paper 12, Canberra AGPS.
- Fahrer J & Pease A (1993) 'The U-V relationship in Australia', *Australian Economic Review*, **43**.
- Fay (1996) 'Enhancing the effectiveness of active labour market policies: Evidence from program evaluations in OECD countries', mimeo, OECD.
- Fitoussi JP (1994) 'Wage distribution and unemployment: The French experience', *American Economic Review*, **84**(2), 59-64.
- Flatau P, Kenyon P, Lewis, & Rushton A (1991) 'The Accord, corporatism and outsiders in the labour market', *Contemporary Issues in Australian Economics* Johnson MR, Kriesler P & Owen AD (1991) eds, The Economic Society of Australia, Sydney, Melbourne: Macmillan.

- Flatau P, Lewis PET, & Rushton A (1991) 'The macroeconomic consequences of long term unemployment', *Australian Economic Review*, 48-56.
- Friedlander D & Hamilton g (1996) 'The impact of a continuous participation obligation in a welfare employment program', *Journal of Human Resources*, **XXX**(4), 734-86.
- Galbraith JK (1997) 'Time to ditch the NAIRU', *Journal of Economic Perspectives*, **11**(1), 93-108.
- Garraty JA (1978) *Unemployment in History*, New York, Harper Colophon Books.
- Ginpli S & Hoy M (1984) 'Some factors affecting the completion rates for young people under wage subsidies', Bureau of Labour Market Research, Working Paper 46, Canberra
- Goldsmith AH, Veum JR & Darity W (1996) 'The psychological impact of unemployment and joblessness', *Journal of Social-Economics* **25**(3), 333-58.
- Gregory M & Jukes R (1997) 'The effects of unemployment on subsequent earnings: A study of British men 1984-94', mimeo, University of Oxford.
- Groenewold & Taylor L (1992) 'Insider power as a source of hysteresis in unemployment: Tests with Australian Data', *Economic Record*, 57-64.
- Heckman JJ & smith JA (1996) 'Experimental and non-experimental evaluations', in Schmid G, O'Reilly J & Schömann K (1996) (eds) *International Handbook of labour market Policy and Evaluation*, Cheltenham, Brookfield: Edward Elgar.
- Heylen F, Goubert L & Omev E (1996) 'Unemployment in Europe: a problem of relative or aggregate demand for labour? *International Labour Review*, 135(1).
- Jackman R, Layard R & Nickell S (1996) 'Combating unemployment: is flexibility enough?', Centre for Economic Policy Performance, LSE, London.
- Jackman R, Pissarides C & Savouri S (1990) 'Labour market policies and unemployment in the OECD', *Economic Policy*, 450-92.
- Jarvie W & McKay R (1993) 'Perspectives on DEET labour market programs', Centre for Economic Policy Research, ANU Discussion paper no 296.
- Johnson GE & Layard PRG (1986) 'The Natural Rate of Unemployment: Explanation and policy', in *Handbook of Labor Economics. Volume II* O Ashenfelter & R Layard (1986) eds, North Holland, Amsterdam.
- Johnson GE (1979) 'The labour market displacement effect in the analysis of the net impact of manpower training programs' in *The Economics of Training Volume I*, (eds) OC Ashenfelter & RJ LaLonde, Cheltenham UK and Brookfield USA, Edward Elgar, 317-343.



- Kalisch D & Stretton A (1984) 'Teenage employment in the public sector: Where have all the jobs gone?' Bureau of Labour Market Research, Working Paper 44, Canberra.
- Kenyon P (1993) 'Policy forum on Long term unemployment : Introduction', *Australian Economic Review*.
- Kenyon P (1994a) 'Restoring Full Employment: backing an outsider', *Australian Economic Review*, 31-46.
- Kenyon P (1994b) 'The Job Compact: what does the international evidence on active labour market programs suggest about the likelihood of its success?' *Australian Bulletin of Labour*, 272-97.
- Korpi T (1995) 'Effects of manpower policies on duration dependence in re-employment rates: The example of Sweden', *Economica*, **62**, 353-71.
- Layard R, Nickell S & Jackman R (1991) *Unemployment. Macroeconomic Performance and the Labour Market*, Oxford, OUP.
- Leeves G (1997) 'Duration specific unemployment outflows and labour market training', Australian Labour Market Research Workshop, February 1997, Centre for Labour market Research, Curtin University, Perth.
- Lewis PET & Ryan CA (1985) 'Wage subsidies, their employment effects and how to evaluate them', Bureau of Labour Market Research, Working Paper 51, Canberra.
- Lewis PET (1994) 'Long term unemployment : The role of wage adjustments', *Economic and Labour Relations Review*, **5**(1),
- Lindbeck A & Snower D (1986) 'Wage setting, unemployment and insider outsider relations', *American Economic Review*, Supplement, **76**, 235.
- Lindbeck A (1994) 'The welfare state and the employment problem', *American Economic Review*, **84**(2), 71-75.
- MacDonald H (1995) 'Implementation of the JobSkills program by the Brotherhood of St Laurence', Social Policy and Research Paper no 9507, Brotherhood of St Laurence, Fitzroy, VIC.
- MacNeill K (1995) 'Labour market programs and policy beyond Working Nation', Social Policy and Research Paper no 9509, Brotherhood of St Laurence, Fitzroy, VIC.
- Maddala GS (1983) *Limited Dependent and Qualitative Variables in Econometrics*, Cambridge, New York, Port Chester, Melbourne, Sydney: Cambridge University Press.
- Manski CF (1996) 'Learning about treatment effects from experiments with random assignment of treatments' *Journal of Human Resources*, **XXXI**(4), 709-32.

- Marshall A (1890) *Principles of Economics*, 8<sup>th</sup> edition, London: Macmillan, 1920.
- McClelland A (1993) 'Long term unemployment: Costs and responses', *Australian Economic Review*.
- McDonald I (1995) 'Models of the range of equilibria', in R Cross (1995) (ed) *The Natural Rate of Unemployment*, Cambridge: Cambridge University Press.
- McDonald IM (1993) 'Long term unemployment and macroeconomic policy', *Australian Economic Review*.
- Miller P (1994) 'Wage subsidies', in *Economic and Labour Relations Review*, 5(1), 1-10.
- Mitchell WF (1994) 'Restoring Full Employment : A problem of policy balance', *Australian Economic Review*, 24-30.
- Mulvey C (1994) 'A job creations tax', *Economic and Labour Relations Review*, 5(1), June.
- Norris K (1994) 'Unemployment and the structure of unemployment benefits', *Economic and Labour Relations Review*, 5(1), June.
- Olekalns N, Crosby M & Otto G (1996) 'Inflation, unemployment an the NAIRU in Australia', mimeo, University of Melbourne .
- Organisation for Economic Cooperation and Development (1980), *Direct Job Creation in the Public Sector*, OECD, Paris.
- Organisation for Economic Cooperation and Development (1993) 'Active labour market policies; Assessing macroeconomic and microeconomic effects', *Economic Outlook*, 39-80.
- Organisation for Economic Cooperation and Development (1994) *The OECD Jobs Study: Evidence and Explanations. Part II- The adjustment Potential of the Labour Market*. OECD, Paris.
- Organisation for Economic Cooperation and Development (1996) *The OECD Jobs Strategy: Enhancing the effectiveness of active labour market policies..* OECD, Paris.
- Phelps ES (1994) 'Low wage employment subsidies versus the welfare state', *American Economic Review*, 84(2), 54-58.
- Piggot J & Chapman B (1995) 'Costing the Job Compact', *Economic Record*, 71, 313-28.
- Pindyck RS & Rubinfeld DL (1981) *Econometric models and economic forecasts*, London: McGraw-Hill.
- Plowman D (1994) 'Wage differential and youth unemployment', in *Economic and Labour Relations Review*, June 5(1).
- Quiggin J (1993) 'A policy program for full employment', *Australian Economic Review*, 41-47.

- Quiggin J (1993) 'The rise in unemployment: An analysis and a program', Centre for Economic Policy Research, ANU Discussion paper no 294.
- Rao GL & Jones FL (1986) 'Effectiveness of youth manpower programs', Bureau of Labour Market Research, Working Paper 61, Canberra.
- Reynolds PJ (1996) 'Kalecki's theory of prices and distribution', in *An alternative Macroeconomic Theory: The Kaleckian Model and Post-Keynesian Economics*, (ed) JE King, Boston, Dordrecht, London, Kluwer Academic Press.
- Robinson R (1995) 'The decline of the Swedish model and the limits to active labour market policy', Centre for Economic Performance, Discussion paper no. 259, LSE.
- Schmid G, O'Reilly J & Schömann K (1996) 'Introduction', in Schmid G, O'Reilly J & Schömann K (1996) (eds) *International Handbook of labour market Policy and Evaluation*, Cheltenham, Brookfield: Edward Elgar.
- Schömann K (1996) 'Longitudinal designs in evaluation studies' in Schmid G, O'Reilly J & Schömann K (1996) (eds) *International Handbook of labour market Policy and Evaluation*, Cheltenham, Brookfield: Edward Elgar.
- Sloan J & Wooden M (1987) 'Labour market programs', in *Spending and Taxing: Australian Reform Options*, Freebairn J, Proter M & Walsh C (1987) eds. Allen & Unwin.
- Sloan J (1993) 'Some policy responses to long term unemployment', *Australian Economic Review*, **2**.
- Sloan J (1993) 'The effectiveness of labour market programs and training strategies', Centre for Economic Policy Research, ANU Discussion paper no 297.
- Snower DJ (1994) 'Converting unemployment benefit into employment subsidies', *American Economic Review*, **84**(2), 65-70.
- Snower DJ (1995) 'Evaluating unemployment policies: What do the underlying theories tell us?', *Oxford Review of Economic Policy*, **11**, 110-35.
- Stretton A & Chapman B (1990) 'An analysis of Australian labour market programs' Centre for Economic Policy Research, Discussion Paper no. 247.
- Stretton A (1984) 'The short term impact on participants of youth employment and training programs', *Journal of Industrial Relations*, 76-90.
- Stromback T (1994) 'Job creations: from public works to a job compact', *Economic and Labour Relations Review*, **5**(1), June.
- Tobin J (1995) 'The natural rate as a new classical macroeconomics', in R Cross (1995) (ed) *The natural Rate of Unemployment*, CUB, Cambridge, 32-42.

- Towers B (1994) 'Unemployment and Labour market policies and programs in Britain: Experience and evaluations', *Journal of Industrial Relations*, **36**(3).
- Travers P (1994) 'Restoring full Employment : Income support', *Australian Economic Review*, 15-18.
- Vella F & MacKay K (1984) 'Factors affecting the number of persons commencing employment under the SYETP scheme', Bureau of Labour Market Research Working Paper 47, Canberra.
- Webster EM, B Taylor, R Niall, S Roberts, & J Skinner (1988) 'Study into labour shortages in 13 occupations in the Victorian manufacturing industry', Victorian Department of Labour, Melbourne.
- Wooden M (1994) 'The green paper on employment opportunities, or don't you worry about that', *Australian Economic Review*, 6-10.
- Zweimuller J & Winter-Ebmer R (1996) 'Manpower training programs and employment stability' *Economica*, **63**, 113-30.