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## **Indigenous Job Search Success**

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The Australian National University

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April 2005

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# **INDIGENOUS JOB SEARCH SUCCESS**

**M.C. GRAY AND B.H. HUNTER**

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## FOREWORD

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This Discussion Paper is based on the second of three reports which analyse and document the Department of Employment and Workplace Relations (DEWR) data from the longitudinal survey of Aboriginal and Torres Strait Islander (ATSI, or Indigenous Australian) job seekers. The Centre for Aboriginal Economic Policy Research (CAEPR) at the Australian National University (ANU) co-ordinated a consortium of policy analysts, labour economists and statisticians to analyse these data. The consortium included researchers from CAEPR, the Centre for Economic Policy Research (CEPR) at the ANU, York University in Canada, and a private consulting company (Quantitative Evaluation and Design Pty Ltd).

Three reports, all published in 2000, were completed for DEWR. The first, *An Analysis of Data from the Longitudinal Survey of ATSI Job Seekers: Labour Market Participation Patterns and Pathways to Employment*, by Boyd Hunter, Matthew Gray and Roger Jones, focused on describing the strengths and weaknesses of the data and provided an overview of how Indigenous labour market behaviour has changed over time. The second, *An Analysis of Data from the Longitudinal Survey of ATSI Job Seekers: Job Search Behaviour*, by Matthew Gray and Boyd Hunter, focused on job search behaviour amongst Indigenous Australians and how search effort translates into employment outcomes. That report forms the basis for this Discussion Paper. The third report, *An Analysis of Data from the Longitudinal Survey of ATSI Job Seekers: Labour Market Programs and Indigenous Australians*, by Boyd Hunter, Matthew Gray and Bruce Chapman, examined the extent to which DEWR's data can be used to evaluate the efficacy of labour market programs in enhancing employment outcomes for Indigenous participants.

Taken together, the three reports represent a major advance in our understanding, providing the first insights into labour force dynamics among Indigenous job seekers. The results provide particularly useful information on how Indigenous employment and labour force status adjusts in the short term. It may be a long time before another data collection exercise of this type is conducted and therefore the findings of this survey could provide the only source of insight for policy makers about the dynamics of Indigenous labour market participation for the foreseeable future.

I commend this Discussion Paper as making an important contribution to our understanding of the relationship between the job search behaviour of Indigenous job seekers and labour market success. The paper also contains important information for assessing the effectiveness of policies which attempt to increase the employment rates of Indigenous Australians by increasing job search effort.

Professor Jon Altman  
Director, CAEPR  
April 2005



# CONTENTS

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Foreword .....	iii
Figures and tables .....	vi
Abbreviations and acronyms .....	vii
Abstract .....	viii
Acknowledgments.....	viii
Introduction .....	1
Institutional background .....	2
The literature on job search behaviour .....	3
Theory of job search .....	3
The empirical literature.....	5
Data: The Indigenous Job Seeker Survey.....	6
Job search activity and successful employment outcomes .....	8
How different 'types' of jobs are found .....	8
Search intensity.....	11
Search method.....	13
Econometric analysis of the probability of employment and job retention .....	14
Empirical specification .....	15
Probability of finding employment.....	16
Probability of finding and retaining employment .....	18
The Impact of the Job Search Diary .....	18
Concluding comments and policy implications.....	20
Notes .....	21
Appendix A: Determinants of finding, and finding and retaining, employment.....	23
References .....	25



## FIGURES AND TABLES

---

Fig. 1. Choice of reservation wage in a model of job search.....	5
Table 1. Initial sample sizes for each sample and number successfully interviewed at each wave.....	7
Table 2. Search method used to find current job, by occupation (%), 1996.....	9
Table 3. Job search method used to find employment (%), by job characteristics, 1996.....	10
Table 4. Career preference by job search method (%), 1996.....	10
Table 5. Number of jobs applied for by those unemployed at wave 1, by whether found employment (%), 1996-97 .....	12
Table 6. Number of jobs applied for by employment retention (3 plus months of employment) (%), 1996-97 .....	12
Table 7. Search methods used by the unemployed, by whether employment found (%), 1996-97 .....	14
Table 8. Search methods used by the unemployed, by employment retention (3 plus months of employment) (%), 1996-97 .....	15
Table 9. Marginal effects on the probability of labour market success (%), 1996-97.....	17
Table 10. Changes over time in the number of jobs applied for and receipt of job offers by the unemployed, 1996-97.....	19
Table A1. Estimates of the determinants of finding employment, 1996-97 .....	23
Table A2. Estimates of the determinants of finding and retaining employment, 1996-97.....	24

## ABBREVIATIONS AND ACRONYMS

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ANU	The Australian National University
ATSI	Aboriginal and Torres Strait Islander
CAEPR	Centre for Aboriginal Economic Policy Research
CDEP	Community Development Employment Projects
CEPR	Centre for Economic Policy Research
CES	Commonwealth Employment Service
DEET	Department of Employment, Education and Training
DEETYA	Department of Employment, Education, Training and Youth Affairs
DEWR	Department of Employment and Workplace Relations
DEWRSB	Department of Employment, Workplace Relations and Small Business
IJSS	Indigenous Job Seeker Survey
JSD	Job Search Diary
LMP	labour market program
TAFE	Technical and Further Education
YTI	Youth Training Initiative

## ABSTRACT

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One important and under-researched aspect of labour market policy is the extent to which policy interventions are effective in modifying job search behaviour. Furthermore, there is little extant research on whether certain job search behaviours lead to labour market success. Our analysis uses the only existing large-scale longitudinal survey of Indigenous Australians to examine the effects of job search behaviour over an 18-month period from March 1996. One major finding is that the introduction of the Job Search Diary during the survey period was effective in increasing search intensity—but this increase in intensity did not result in increased employment rates. Another finding is that the job search methods used were not generally related to the probability of finding and retaining employment when a range of other personal and regional factors are taken into account. Those with a greater level of search intensity (as measured by the number of jobs applied for) at the first wave of the survey did have a significantly higher probability of finding employment than those searching less intensely. However, search intensity is unrelated to the probability of job retention. Other factors, such as educational attainment, health status, region of residence and having been arrested, account for the majority of labour market success (or lack of it) among unemployed Indigenous job seekers.

## ACKNOWLEDGMENTS

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The origin of this paper dates back to a report presented to Department of Employment and Workplace Relations (DEWR) in 2000 that was eventually published on their web site in 2003. The authors are sincerely grateful to the relevant DEWR staff who provided detailed feedback on previous versions of this paper, especially Kim Grey and Eric Hubbard. We would like to thank Jon Altman, Alex Heath, Di Smith, and John Taylor for their comments on a previous version of this paper. Thanks are also due to Frances Morphy for editorial assistance, to John Hughes for layout, and to Geoff Buchanan for proofing.

## INTRODUCTION

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One of the key ways in which governments attempt to increase workforce participation is through policies that seek to influence the job search behaviour of the unemployed. In general, these policies aim to increase the effectiveness and/or the intensity of job search behaviour. This paper examines the job search behaviour of Indigenous job seekers and identifies the characteristics of successful job search behaviours of the respondents to a longitudinal survey of Indigenous job seekers, the Indigenous Job Seeker Survey (IJSS), which collected data over an 19-month period from March 1996. This is an issue on which there is virtually no other Australian data, and certainly no other longitudinal data. Indeed, the IJSS remains the sole reasonably large longitudinal social survey on Indigenous Australians. In this paper, success in the labour market for the unemployed is measured by whether employment is found, as well as whether an individual remains in employment for a period of time.

An important policy intervention which occurred during the period covered by the IJSS was the introduction of the Job Search Diary (JSD) in July 1996—a policy that aimed to increase the search intensity of the unemployed through work search verification. At this stage there is only one study of the impact of the JSDs in Australia (Borland & Tseng 2003). Borland and Tseng, in a study of the general job seeker population, found that those who were required to comply with the JSD were more likely to find employment than job seekers who were not required to comply, but were otherwise comparable to other job seekers. The IJSS data provide a unique opportunity to examine the impact of the JSD on the job search behaviour of Indigenous Australians, and to explore the effectiveness of this type of policy in improving labour market outcomes for a particularly disadvantaged group of job seekers.

The remainder of this paper is structured as follows. The next section introduces the relevant institutional background for Indigenous job search activity and describes in detail the JSD. Relevant literature on job search behaviour is briefly described. The data used in the paper are then discussed and briefly summarised. The search methods used to find different types of jobs are described. Evidence is provided on the relationship between search intensity and search methods used by the unemployed, and on whether labour market success was achieved. The results of a regression analysis of the relationship between search behaviour and labour market success are then outlined. The penultimate section provides an analysis of the impact of the introduction of the JSD on search behaviour and whether there was an impact on employment outcomes. The final section discusses the implications of the results for policy.

This paper can be read in conjunction with Hunter and Gray (2004), which provides a comprehensive description of the patterns of job search activity among Indigenous Australians. The present paper focuses on the relative success of the various job search strategies pursued by Indigenous people in finding and retaining employment and evaluates the likely success of specific policy interventions, especially the JSD.

## INSTITUTIONAL BACKGROUND

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In order to receive an unemployment payment in Australia, an unemployed person must demonstrate that they are available for and actively seeking paid work. The second of these criteria is referred to as the 'activity test' which requires the recipient to apply for jobs. In practice, the 'activity test' is not always enforced. The unemployed can be granted an exemption from the activity test in areas where there are no locally accessible job markets, labour market programs or vocational training courses (Sanders 1999).<sup>1</sup> However, the survey data used in this paper covered areas where there was no general exemption from the activity test.

In 1996 and 1997, the *Working Nation* labour market initiatives introduced by the Keating Labor Government in May 1994 were still in operation. *Working Nation*, which involved a substantial increase in government spending on labour market programs, was introduced in response to a rapid increase in the unemployment rate and relatively high rates of long-term unemployment. While many of the *Working Nation* initiatives focused on training and job creation programs, there were a range of job search interventions with a number of the programs providing job search training.

The number of jobs that unemployment benefit recipients were required to apply for was increased in March 1996, and in July 1996 the new JSD was introduced to encourage intensive job search in the early stages of unemployment (Sanders 1999). The JSD is a work search verification program that requires unemployment payment recipients to complete a fortnightly diary in which details of a specified minimum number of job applications must be recorded. The JSD is issued to all new unemployment payment recipients (i.e. those with job search as their main activity type), or in other circumstances such as at a 'review interview' where a judgement is made about the adequacy of job search efforts. The number of job searches per fortnight required in the diary-based activity test ranged from two to eight, and was calculated with reference to a number of factors including level of education, age, labour market conditions, transport difficulties, and cost and language barriers. However, it should be noted that there are provisions within the Social Security legislation for unemployment payment recipients to be allowed to meet the activity test through a broader range of activities than just job search.

May 1998 saw the introduction of the Job Network, a national network of employment service providers (private sector, community and public sector organisations) contracted by the Commonwealth government to provide services to eligible unemployed people. As part of the shift to the Job Network, Commonwealth Employment Services (CES) offices were closed and most of the functions previously undertaken by the CES were privatised. While most of the established wage and training subsidy and job creation projects were abolished after 1998, the same generic programs may re-appear because employment service providers in the Job Network have the discretion to offer whatever assistance they deem necessary for their clients.

As argued in Hunter and Gray (2004), the Job Network may not be the radical break that it may first appear to be, particularly for Indigenous people. The 1980s and 1990s were distinguished by: diversification in

the delivery mechanisms of programs; a reduced reliance on public training infrastructure and public sector employment; a broad mix of private sector and local government employment, self-employment, community sector, Technical and Further Education (TAFE) and private provider training, counselling, referral and placement services (Jarvie & McKay 1993). Indigenous-specific program funding continued to rise after 1996 despite an overall decline in expenditure on labour market programs.<sup>2</sup> That is, the Job Network can be seen as part of an ongoing trend towards public funding of programs delivered by the non-government sector. Notwithstanding some continuity, the Job Network is the most 'hands off' method of delivering employment services in Australian policy history.

## THE LITERATURE ON JOB SEARCH BEHAVIOUR

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### THEORY OF JOB SEARCH

Because information about job opportunities and workers' characteristics is imperfect, the process of job search takes time and effort, and therefore is not costless. There are several economic models of job search behaviour which make predictions about both the choice of search method and intensity, the effectiveness of job search, the length of time a person will search for a job, and when they will accept a job offer.

In order to clarify the role that job search behaviour plays in finding employment a simple economic model of job search is described. The following discussion draws on Ehrenberg and Smith (2003: 510–13).<sup>3</sup> Job seekers (employed or unemployed), in general, need to search for job offers in order to find employment. Employers with vacancies may advertise or they may be approached by job seekers without advertising. The model used assumes that wages are associated with the characteristics of jobs, not with the characteristics of the specific individuals who fill them. Suppose that employers differ in the set of minimum hiring standards they use. Hiring standards may include educational requirements, job training, work experience and so on. We assume that this set of attributes can be summarised in a single variable,  $K$ , which denotes the minimum skill level a job requires. Associated with each job is a wage,  $W(K)$ , that is assumed to be a function of the required skill level (but not of the particular characteristics of the people hired). We also assume that the wage rate is an increasing function of the minimum required skill level, and that two employers using the same hiring standards will offer the same wage.

However, employers have differing hiring standards and hence there will be a distribution of wage offers associated with job vacancies in the labour market. The distribution of wage offers is denoted by  $f(W)$  in Fig. 1. As we move to the right in the Figure, the minimum skill level and offered wage for a job increase. Since  $f(W)$  represents a probability distribution of wage offers, the area under the curve sums to 1. Each wage offer (on the horizontal axis) is shown in relation to that offer's share in the distribution (on the vertical axis).

Suppose that a given job seeker has skill level,  $K^*$ . The maximum wage this job seeker could hope to receive is  $W^*(K^*)$ . Because information about the job market is imperfect, job seekers do not know what each particular

firm's wage offer or hiring standard will be.<sup>4</sup> The job search process can be conceptualised as a process in which job seekers search for vacancies. If the firm's hiring standard exceeds  $K^*$  the job seeker is rejected for the job, but if the hiring standard is  $K^*$  or less, the job seeker is offered the job. In this model, the job seeker must decide relatively quickly whether to accept a job offer, because otherwise the offer will be extended to a different applicant.

In deciding whether they will accept a particular job offer, individual job seekers decide on a reservation wage ( $W_r$ ), and then accept only offers above this level. This reservation wage is set so that the expected marginal benefit of continuing to search is equal to the marginal cost of not accepting the job offer. The marginal benefit of continuing to search is that a higher wage offer may be received. The marginal cost of continuing to search is the forgone income they would have received had they accepted the job offer. In general, the reservation wage will be greater the higher non-employment income is relative to wages, and the larger the value to an individual of non-market time. The reservation wage will also increase as the offer distribution moves to the right, and as the overall rate of job offers increases.

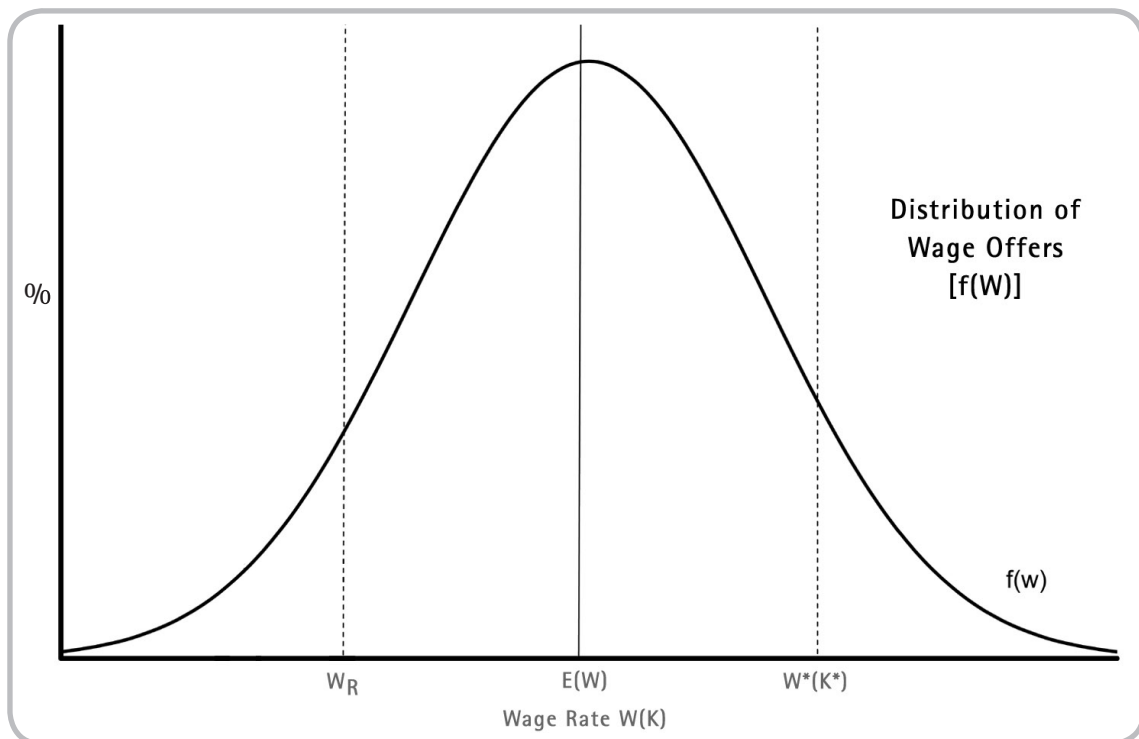
Within this model, job search behaviour can influence the probability of employment by affecting the number of job offers received or by increasing the quality of job offers (wage offers). Job search behaviour can be characterised by both the intensity of job search and the methods used to obtain information about job opportunities.

It is customary to divide the channels through which information about job opportunities is obtained into two categories—formal and informal (Norris 1996). Formal information networks include the former CES, private employment agencies, newspapers, journal advertisements, and increasingly the internet. Informal information channels include job noticeboards posted on business premises, and information gathered from friends and relatives. Job search behaviour can also be described in terms of the intensity of search. This has variously been measured as the number of contacts made (Blau & Robins 1990; Holzer 1988); the time spent using search methods (Holzer 1988); and the number of search methods used.

Studies have consistently found that informal networks are an important means of finding employment (Granovetter 1995). An influential hypothesis concerns the 'strength of weak ties', in which it is argued that having ties with persons in networks distant from oneself enables one to access the resources of that network, for personal gain (Granovetter 1973, 1974).

The burgeoning field of social capital theory also has important implications for the analysis of Indigenous job search behaviour—especially in the networks view of social capital which stresses the 'importance of vertical as well as horizontal associations between people and of relations within and among such organisational entities as community groups and firms' (Woolcock & Narayan 2000: 230). Indigenous Australians are less likely to have access to networks in which a high proportion of members are in paid employment or who are in a position to assist with finding employment than are many other groups of Australians. This will almost certainly reduce the effectiveness of friends and relatives of Indigenous Australians as a conduit for finding employment.

**Fig. 1. Choice of reservation wage in a model of job search**



Source: Ehrenberg and Smith (2003: 511, Fig. 15.3).

## THE EMPIRICAL LITERATURE

Within sociology (and to a lesser extent economics) there has been considerable interest in the role that social networks play in job search (Granovetter 1973, 1974; Lin 1999). Using data on unemployed US youth for 1981, Holzer (1988) finds that consulting 'friends and relatives' is the most heavily used job search method, followed closely by direct application. These methods are also the most effective at generating job offers. While informal methods of job search are clearly important, an earlier study by Holzer (1987) finds that informal methods may not work for everyone. Virtually all of the difference in employment probabilities between black and white young Americans can be explained by differences in the number of job offers produced by each search method rather than differences in search methods used or the rates at which job offers are accepted.

McGregor (1983) suggests that the job-information network provided by friends and relatives is local in nature. This suggests in turn that the Indigenous unemployed, who often live in depressed local labour market regions, may find friends and relatives of comparatively little use in finding employment. Blau and



Robins (1990) find that individuals who search for a new job while working are, on average, more successful at finding a job than otherwise similar unemployed searchers.

On the demand side of the labour market, Holzer (1988) suggests that employers regard referrals from employees as more informative and reliable than direct applications and use them as a relatively cheap screening and signalling mechanism. In some models employers use informal information recruitment methods (e.g. friends and relatives) as a way of screening potential employees to ensure that they are highly productive, and suited to the job and workplace culture (Montgomery 1991).

After reviewing the literature, Borland and Tseng (2003: 2–3) conclude that:

- participation in job search programs improves labour market outcomes;
- the higher the intensity of job search programs and the earlier in the spell of unemployment the more effective the intervention;
- job search programs appear to improve labour market outcomes primarily by increasing the intensity of job search; and
- job search programs are most effective where they do not distort the type of job search activities undertaken.<sup>5</sup>

For the purposes of this paper, Borland and Tseng's most relevant finding was that job seekers who were required to comply with the JSD were more likely to find employment than job seekers who were otherwise similar but were not required to comply with the JSD.

## **DATA: THE INDIGENOUS JOB SEEKER SURVEY (IJSS)**

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In order to document job search behaviour by Indigenous job seekers we use the IJSS. The IJSS tracked the labour market experiences of Indigenous Australians over an 18-month period. The sample consisted of Indigenous Australian job seekers who were registered with the CES. Information was collected in three waves, with the first wave interviews being conducted between March and June 1996 and the last wave between June and September 1997. The interviews were conducted face-to-face, and predominantly involved Indigenous interviewers. For further details of the survey methodology see Roy Morgan Research (1998) and Hunter, Gray and Jones (2000).

The sample includes job seekers living in metropolitan areas (Sydney, Brisbane–Ipswich, Hobart, Cairns), large rural centres (Dubbo, Shepparton, Launceston, Port Augusta) and 'remote' centres (Broome–Derby, Alice Springs). These areas were selected because each had employment options other than the Community Development Employment Projects (CDEP) scheme. Areas more than 100 kilometres from the selected city or town centre were excluded to limit interviewer travel costs.

The selection of the sample was complicated, involving the selection of four separate samples of Indigenous job seekers registered with the CES. The first sample was selected from Indigenous job seekers aged 18 to 64

**Table 1. Initial sample sizes for each sample and number successfully interviewed at each wave**

	Initial sample extracted	Number interviewed		
		Wave 1	Wave 2	Wave 3
General sample	6,362	2,162	1,596	1,367
YTI sample	859	330	252	213
Total	7,221	2,492	1,848	1,580

Note: Wave 3 interviews include 57 remote area respondents, 45 from the general sample and 12 from the YTI sample, missing from wave 2 and successfully recontacted in wave 3 (see discussion below). The wave 1 interviews were conducted between March and June 1996, the wave 2 interviews between October and December 1996 and the wave 3 interviews between June and September 1997.

Source: Gray and Hunter (2000, Table 1).

years who were registered with the CES as a job seeker as at 31 January 1995. The second sample consisted of younger job seekers (aged 15 to 17 years) who were selected from those registered with the CES as a job seeker as at 31 March and 31 July 1995, were eligible for the Youth Training Initiative (YTI), and first registered with the CES on or after 1 October 1994.<sup>6</sup>

These two samples comprised 5,094 names. Because a higher than expected proportion of the sample could not be contacted during the first enumeration period, an additional sample totalling a further 2,127 names was selected. This additional sample covered six of the nine original regions, plus additions to the Brisbane and Hobart samples drawn from Ipswich and Launceston respectively as insufficient sample numbers were available in the originally selected areas. Only the remote areas (Alice Springs, Broome and Port Augusta) did not require additional sample names.

The total sample selected for wave 1 was thus 7,221 names (6,362 from the general sample and 859 from the YTI sample), of whom 2,503 Aboriginal and Torres Strait Islander job seekers were successfully interviewed for the wave 1 interview, in March–June 1996. This figure represents a 35 per cent response from the sample selected from the administrative data.<sup>7</sup> Table 1 shows the number of useable responses for the respective interviews. A slightly higher proportion of the initial YTI sample was successfully interviewed (38.4%) than of the sample of 18–64 year olds (34.0%). Although the proportion of the initial sample interviewed is a little lower than on some other surveys of samples drawn from administrative data, it is not exceptionally low.<sup>8</sup>

There was a relatively high rate of attrition of the sample between the survey waves. Of those interviewed at wave 1, 74.2 per cent were successfully interviewed at wave 2 and 63.2 per cent were successfully interviewed at wave 3.

While the IJSS is a unique and valuable source of data on Indigenous job search behaviour it has several limitations. First, the survey is not representative of Indigenous job seekers as a whole since the CES disproportionately registered the long-term unemployed, and jobseekers who had never been unemployed

would not, in general, be registered with the CES.<sup>9</sup> Second, the proportion of the initial sample selected from the administrative data who were successfully interviewed was only 35 per cent (Roy Morgan Research 1998). Third, the attrition rates were relatively high, although not exceptional given the nature of the sample. (For example, the Household Income and Labour Dynamics in Australia survey had only 86.8 per cent of respondents in wave 1 successfully re-interviewed in wave 2). Finally, major changes were made to the IJSS questions about job search behaviour between the survey waves. This limits the extent to which the data on job search is comparable between waves.

## **JOB SEARCH ACTIVITY AND SUCCESSFUL EMPLOYMENT OUTCOMES**

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Linking labour market success to job search behaviour is an integral part of characterising successful labour market outcomes. Certain patterns of job search behaviour may be more effective than others. This section presents information on how jobs were found in different occupations. It also relates job search behaviour to two measures of job search success. The first is whether employment is found and the second is whether employment is found and then retained. The effects of both search intensity and method are considered.

### **HOW DIFFERENT 'TYPES' OF JOBS ARE FOUND**

The existing empirical literature has found that there are large differences in the recruitment methods used by employers to fill vacancies in different occupations (Hunter & Hawke 2002). The CES tended to offer vacancies in jobs that do not require many qualifications. Highly qualified people are more likely to be recruited through advertisements in national newspapers, specialist journals and private employment agencies. Table 2 shows how employment in different occupations was found by IJSS respondents. A striking finding is that friends and relatives were a common way of finding employment in all occupations. The CES and CES job boards were the most common way of finding employment for all occupational groupings with the exception of managers, professionals and para-professionals for whom friends or relatives were the most important. The CES or CES job boards were particularly important for clerical jobs, with over 40 per cent of jobs found through them. Although only a very small proportion of jobs were found through a CDEP program, it accounted for 6.4 per cent of employment in labouring and related occupations.

Overall, the most common way in which employment was found was through the CES (29.8%) followed by through friends or relatives (24.3%). Other methods that were relatively common were approaching the employer (12.6%) and responding to an advertisement in the newspaper (9.4%).

One of the most dramatic changes in the Australian labour market is the increase in casual employment over the last 20 years. Casual workers can usually be dismissed at short notice and are not entitled to benefits such as sick leave or paid annual leave. These factors lead to high rates of turnover and lower levels of training in casual jobs compared to permanent jobs. Approximately 43 per cent of the Indigenous workers in the IJSS were in casual employment, a figure which is much higher than the approximately 22 per cent

**Table 2. Search method used to find current job, by occupation (%), 1996**

Job search method	Occupation					Total
	Managers, professionals and para-professionals	Tradespersons and plant/machine operators	Clerks	Sales & personal services	Labourers & related	
Advertisement in newspaper	11.2	9.4	10.1	12.6	6.8	9.4
CES/CES job boards	17.5	30.2	40.3	27.6	32.6	29.8
Through a CDEP program	2.8	1.4	0.0	0.0	6.4	2.9
Through friends or relatives	26.6	22.3	20.2	26.4	25.8	24.3
Through case manager	1.4	4.3	1.7	1.1	3.8	2.8
Approached employer	9.8	13.7	6.7	14.9	15.7	12.6
Approached by employer	10.5	7.9	5.0	6.9	3.4	6.3
Private employment agency	9.1	1.4	4.2	3.4	2.5	4.0
Other	11.2	9.4	11.8	6.9	3.0	7.7
Number of respondents	143	139	119	87	236	724

Notes: Excludes CDEP employment. Based on sample of respondents who were employed at wave 1.

Source: Gray and Hunter (2000, Table 20).

of non-Indigenous workers who were in casual employment in 1996 (Wooden 1998). The difference in casual employment rate between the Indigenous and non-Indigenous workforce is in large part a result of differences in the occupation and industry mix of employment.

The high level of casual employment and the consequent turnover in employment and low levels of on-the-job training were particularly problematic for Indigenous workers. While low levels of skills make it difficult for Indigenous workers to find employment, lifestyle and cultural factors make it particularly difficult to find and maintain steady employment patterns (Öther-Gee 1999).

There were some major differences in the recruitment methods used for jobs which are permanent and those which are casual (Table 3). Permanent jobs were relatively more likely to have been found through recruitment methods which involve external advertisement—CES or CES job boards, and newspaper advertisements. Correspondingly, casual employment was more likely to have been found through friends or relatives, direct approach to the employer, or through a private employment agency.

Since permanent workers often receive more training, the costs to the employer of hiring an employee who is not suited to the position or who leaves unexpectedly can be quite high since the employer has invested

**Table 3. Job search method used to find employment (%), by job characteristics, 1996**

Job search method	Job characteristics			
	Permanent	Casual	Not seasonal	Seasonal
Advertisement in newspaper	12.4	5.7	9.6	5.9
CES/CES job boards	35.2	23.0	30.8	20.6
Through a CDEP program	3.5	1.9	3.0	0.0
Through friends or relatives	19.7	30.6	23.7	35.3
Through case manager	2.3	2.8	2.8	1.5
Approached employer	9.9	16.4	12.1	14.7
Approached by employer	6.3	6.9	6.1	10.3
Private employment agency	3.3	5.4	4.3	4.4
Other	7.3	7.3	7.6	7.4
Number of respondents	426	317	675	68

Note: Based on the sample of respondents who were employed at wave 1.

Source: Gray and Hunter (2000, Table 23).

**Table 4. Career preference by job search method (%), 1996**

Job search method	Is this the sort of job that you want to keep working in as a career?			No. of respondents
	Yes	No	Can't say	
Advertisement in newspaper	47.9	45.1	7.0	71
CES/CES job boards	63.2	29.2	7.5	253
Through a CDEP program	43.4	44.6	12.0	83
Through friends or relatives	43.9	45.8	10.4	212
Through case manager	64.0	32.0	4.0	25
Approached employer	50.0	43.0	7.0	100
Approached by employer	61.8	32.7	5.5	55
Private employment agency	60.6	33.3	6.1	33
Other	52.5	32.8	14.8	61

Note: Based on the sample of respondents who were employed at wave 1.

Source: Gray and Hunter (2000, Table 24).

time and money in that employee. Employers will therefore spend more money on ensuring that they recruit the right employee for permanent jobs than they will for casual jobs. The higher cost recruitment methods (which presumably result in better employment matches) were external advertisements (CES and newspaper advertisements) and were more likely to be used by employers to recruit workers into permanent than casual positions.

Seasonal workers have limited job security and were more likely to receive low levels of employer-based training. While only a minority of employees were employed in seasonal jobs they were nonetheless an important component of Indigenous employment. The recruitment methods used for seasonal jobs were similar to those used for casual jobs.

In summary, it appears that permanent and non-seasonal jobs which offer a higher degree of job security and often greater training opportunities were more likely to have been found through recruitment methods which involve external advertisement (CES and newspaper advertisements). This provides some evidence that the CES matched job seekers with higher quality jobs than did the more informal hiring mechanisms, such as through informal networks (through friends or relatives) and direct approach to the employer.

The level of job satisfaction is clearly an important component of labour market success. Its importance is underlined by the research of Graetz (1993) and Winefield, Tiggeman and Winefield (1993) who find links between job satisfaction and psychological health. The IJSS contains the following question of the employed on job satisfaction: 'Is this the sort of job that you want to keep working in as a career?' Over half of the employed responded that they would like to keep working in this sort of job as a career, nearly one-third said that it was not the sort of job they would like for a career and the remainder did not state a preference. Table 4 shows whether or not employees wanted to keep working in their current sort of job as a career by how they got their job. The recruitment methods classified as 'through friends or relatives', 'through a CDEP program', and 'through a newspaper advertisement' were associated with the lowest probability of finding a job in which the respondent wants a career. The recruitment methods that were most likely to result in employment in jobs in which the employee wants a career include those found through a case manager and the CES-based recruitment methods. Private employment agencies and directly approaching employers also result in a high level of employment in jobs in which the employee wants to keep working in as a career.

## SEARCH INTENSITY

This section analyses the relationship between job search methods, search intensity and future labour market success for unemployed job seekers. Two measures of success are considered: finding employment and sustaining employment. It is particularly important to consider the sustaining of employment because Indigenous job seekers had quite high rates of movement between employment and non-employment over the 19 months covered by the IJSS (Hunter, Gray & Jones 2000). It is possible, using the IJSS, to identify months in which an individual was employed. However, it is not possible to determine whether employment was for the entire month or only for a part. In this paper employment retention is defined as having three

**Table 5. Number of jobs applied for by those unemployed at wave 1, by whether found employment (%), 1996–97**

No. of jobs applied for	Whether found a job	
	Yes	No
None	28.2	42.4
One	9.4	11.1
Two	18.5	10.3
Three	9.1	10.7
Four	12.1	11.4
Five	5.7	3.7
Six or more	17.1	10.3
Number of respondents	298	271

Notes: Based on sample of respondents who were present in all three waves and were unemployed at the wave 1 interview. Includes CDEP employed as being employed. Number of jobs applied for is measured over the previous four weeks.

Source: Gray and Hunter (2000, Table 25).

**Table 6. Number of jobs applied for by employment retention (3 plus months of employment) (%), 1996–97**

No. of jobs applied for	Employment retention	
	Found and retained employment	Did not find employment/found and did not retain employment
None	30.8	39.1
One	10.8	8.5
Two	16.8	12.2
Three	9.6	10.5
Four	10.8	12.6
Five	6.0	3.7
Six or more	15.2	13.3
Number of respondents	250	294

Notes: Based on sample of respondents who were present in all three waves and were unemployed at the wave 1 interview. For employment spells which started less than 3 months before the final interview (wave 3) we do not know whether that employment spell will satisfy the criteria for employment retention. The small numbers of respondents with right-censored employment spells are excluded.

Source: Gray and Hunter (2000, Table 27).

or more consecutive months of employment.<sup>10</sup> The measures of job search behaviour are search methods and intensity in the four weeks prior to wave 1.

Table 5 shows the relationship between number of jobs applied for in the four weeks prior to wave 1 and whether employment was found in the 19 months (approximately) between waves 1 and 3. On average, those who found employment applied for a larger number of jobs than those who did not find employment. For example, amongst those who did not find employment, 42.4 per cent did not apply for any jobs, compared to only 28.2 per cent of those who found employment. At the other extreme, 17.1 per cent of those who got a job applied for six or more jobs as compared to only 10.3 per cent of those who did not get a job.

Table 6 presents information on the relationship between job search intensity and whether employment is found and retained. Job seekers who found and retained employment were more likely to have applied for one job, two jobs, five jobs or six or more jobs than those who did not find employment or found and did not retain employment (Table 6). While this suggests that more intense job search is associated with a higher probability of job retention, the relationship is relatively weak. Those who either did not find employment, or found and then did not retain employment, were more likely to have not applied for any jobs in the four weeks prior to the wave 1 interview (39.1%) compared to job retainers (30.8%).<sup>11</sup>

## SEARCH METHOD

There were some differences in the search method used between those who found employment and those who did not (Table 7). Those who got a job were more likely to use the proactive search techniques than those who did not. For example, 45.4 per cent of the 'successful' job seekers answered a newspaper advertisement as compared to only 32.4 per cent of the 'unsuccessful' job seekers. Similarly, successful job seekers were more likely to have contacted employers to find out if there was a job going or to have contacted other organisations that help people find work. While these search methods were the most common ways of finding employment, other less successful search methods were used by more job seekers. Note that about 80 per cent of job seekers either looked at advertisements in newspapers or checked CES job boards, irrespective of whether they got a job between waves 1 and 3.

There were some differences apparent in the search methods used by the job retainers in the four weeks prior to the wave interview as compared to the non-retainers (Table 8). Those who found and retained employment were more likely to have looked at the job advertisements in newspapers, answered newspaper advertisements, contacted employers to find out if there was a job going and contacted any other organisation that helps people find work.<sup>12</sup>



**Table 7. Search methods used by the unemployed, by whether employment found (%), 1996–97**

Job search method	Whether employment found	
	No job	Got any job
Looked at the job ads in newspapers	84.0	85.3
Answered a newspaper job ad	32.4	45.4
Checked CES job board	80.4	79.2
Attended a Skillshare or a Job Club	11.3	17.3
Checked noticeboards or signs on an employer's premises	37.5	41.5
Contacted employers to find out if there was a job going	48.0	55.9
Asked friends or relatives about jobs	70.9	72.8
Contacted any other organisation that helps people find work	20.0	31.6
Advertised or tendered for work	3.6	4.8
Started a business or became self-employed	0.0	1.0
None of these	2.5	1.9
Number of respondents	275	313

Notes: Based on sample of respondents who were present in all three waves and were unemployed at the wave 1 interview. Includes CDEP employed.

Source: Gray and Hunter (2000, Table 26).

## ECONOMETRIC ANALYSIS OF THE PROBABILITY OF EMPLOYMENT AND JOB RETENTION

While there is some association between search behaviour and labour market success for unemployed Indigenous Australians, the important question for policy is whether the link is causal. It may be the case that job seekers who have certain personal characteristics—such as a high level of educational attainment—which mean that they have a higher probability of employment, also search more intensely. Alternatively job seekers who live in geographic areas with more job vacancies and therefore have a greater chance of finding employment may search with greater intensity.

In this section we present the results of regression modelling of the effects of search method and intensity on labour market success. The advantage of using a regression model is that it allows us to take account of the effects of a range of other variables that influence labour market success. The effects of search behaviour on both the probability of finding employment and the probability of finding and retaining employment are modelled.<sup>13</sup>

**Table 8. Search methods used by the unemployed, by employment retention (3 plus months of employment) (%), 1996–97**

Job search method	Employment retention	
	Found and retained employment	Did not find employment/ found and did not retain employment
Looked at the job advertisements in newspapers	92.6	79.9
Answered a newspaper job advertisement	47.1	34.0
Checked CES job board	82.5	78.9
Attended a Skillshare or a Job Club	15.2	14.2
Checked noticeboards or signs on an employer's premises	37.7	40.6
Contacted employers to find out if there was a job going	55.3	48.5
Asked friends or relatives about jobs	72.8	71.6
Contacted any other organisation that helps people find work	28.8	22.4
Advertised or tendered for work	5.1	3.3
Started a business or became self-employed	0.8	0.0
None of these	0.8	3.3
No. of respondents	257	303

Note: Based on sample of respondents who were present in all three waves and were unemployed at the wave 1 interview.

Source: Gray and Hunter (2000, Table 28).

## EMPIRICAL SPECIFICATION

Because the dependent variables—finding employment, and finding and retaining employment—are binary (i.e. they take one of two possible values), an appropriate statistical technique is logistic regression. The empirical specification for the probability of finding employment is fairly conventional, with a range of human capital, demographic and regional characteristics included as explanatory variables. Explanatory variables include highest level of educational attainment; being in education; having poor health; having been arrested in the previous five years; and region of residence. The sample used in the regression model is restricted to respondents who were present at all three waves. Explanatory variables are measured at their wave 1 values.<sup>14</sup>

As in the earlier sections, job search behaviour is measured by the number of jobs applied for in the last four weeks and the search methods used. Due to the small numbers of respondents who used some of the categories of search methods, in the regression analysis unsolicited types of direct approach to potential

employers are combined into a single category which includes: contacted employers, advertised or tendered for work, or started a business/became self-employed. The other search methods used are essentially the same as presented in the tables above. Search intensity is measured using a set of dummy variables for having applied for one job, two to five jobs and six jobs or more. The omitted category is 'applied for no jobs'.

It is not possible to include both the search methods used and the search intensity in the same regression because they are highly correlated. That is, respondents who applied for many jobs also tended to use a large number of different search methods. Therefore, two specifications are estimated. The first includes the variables that measure job search methods used but not search intensity, and the second includes search intensity but not search methods.

The specification for the model of the probability of finding and retaining employment for three months or more is identical to that for the probability of finding employment.<sup>15</sup>

## PROBABILITY OF FINDING EMPLOYMENT

The effect of changes in the explanatory variables on the probability of employment varies with the value of all the explanatory variables in the model, and hence estimated coefficients are difficult to interpret. The effects of the explanatory variables can be intuitively illustrated using 'marginal effects', which are presented in Table 9. The marginal effect for each variable shows the effect of a unit change in the value of a variable on the probability of finding employment, holding constant the value of all other explanatory variables. For binary variables the marginal effect is for a change in the value of the variable from zero to one.<sup>16</sup>

While increases in educational attainment are estimated to increase the probability of finding employment, only having an 'other' post-secondary qualification is statistically significant. Having an 'other' post-secondary qualification increases the probability of finding employment by 13.6 percentage points as compare to not having such a qualification. Having poor health is estimated to reduce the probability of finding employment by 16 percentage points. Everything else being equal, females are less likely than males to find employment. An apparently anomalous result is that unemployed job seekers living in remote centres (Alice Springs, Broome-Derby) are estimated to have a higher probability of finding employment than the unemployed job seekers living in major urban areas (Sydney, Brisbane-Ipswich, Hobart, Cairns). This result probably arose from the fact that only a small number of the rural unemployed were present at all three waves of the survey.

The estimates of the effects of search method show that only two search methods are statistically significant in relation to the probability of finding employment. Answering a newspaper advertisement is estimated to increase the probability of finding employment by 14.5 percentage points, and contacting other organisations is estimated to increase the probability of finding employment by 11.3 percentage points.

**Table 9. Marginal effects on the probability of labour market success (%), 1996–97**

	Probability of finding employment		Probability of finding and retaining employment	
	Search method	Search intensity	Search method	Search intensity
Trade qualification	11.7	12.6	14.6*	15.8*
Other post-secondary qualification	13.6*	14.6*	21.2*	21.2*
Degree/diploma	16.5	18.7	19.3	21.1*
Year 12	2.0	1.2	18.6	18.2
Year 11	4.8	4.5	7.0	6.7
In education	-0.5	4.9	-1.8	-2.0
Health	-16.0*	-15.0*	-10.2	-9.0
Arrest	-9.4	-9.3	-17.1*	-15.7*
Female	-17.7*	-16.9*	-17.5*	-17.1*
Rural Centres	-5.4	-6.2	-1.2	-3.2
Remote Centres	34.8*	34.6*	-15.8	-19.7*
Answered newspaper advertisements	14.5*		10.7*	
Looked at job advertisements	-9.0		15.8	
Attended a Skillshare or Job Club	6.4		-8.5	
Contacted employers, advertised or tendered for work or started a business/became self-employed	2.3		3.0	
Asked friends or relatives	-2.9		-5.0	
Contacted other organisations that help unemployed people find work	11.3*		5.6	
Applied for one job		1.5		10.7
Applied for two to five jobs		10.8*		3.0
Applied for six or more jobs		19.2*		6.1
Base Case	54.3	54.2	45.4	45.5

Note: An asterisk denotes that the underlying coefficient is statistically significant at the 5 per cent level.

Source: Derived from Tables A1 and A2.

Both of the methods with significant effects on employment may be correlated with intensity of job search. For example, newspaper advertisements provide weekly or, in some cases, daily information on the number of vacancies available in the labour market and can be used repeatedly and relatively anonymously. Other search methods tend to be updated less frequently and some rely on services provided by agencies—factors that limit intensive use.

The direct estimates of the effects of search intensity show that having applied for between two and five, or six or more jobs in the last four weeks significantly increases the probability of finding a job as compared to having applied for no jobs in the previous four weeks. Applying for only one job does not increase the probability of finding employment as compared to applying for no jobs. Applying for between two and five jobs increases the probability of finding employment by 10.8 percentage points, while having applied for six or more jobs increases the probability by 19.2 percentage points.

## PROBABILITY OF FINDING AND RETAINING EMPLOYMENT

For the determinants of employment retention the overall pattern of results for educational attainment, having been arrested, sex, and region of residence are similar to the estimates of the probability of gaining employment, and hence are not discussed in detail. The major differences between the model of finding employment and the model of retaining employment once found arise from the effects of search methods used and search intensity. In terms of the effects of job search methods, contacting other organisations that help unemployed people find work has no effect upon the probability of employment retention, whereas this method significantly increases the probability of employment in the first place. Similarly search intensity is not related to the probability of retaining employment (as opposed to either not finding or finding but not retaining employment) whereas it is estimated to increase the probability of finding a job.

Therefore, in contrast to the result for the probability of finding employment, there is no evidence that search intensity increases the probability of job retention. The difference in results between the probability of finding employment and employment retention probably reflects the types of jobs being secured, with many Indigenous workers being employed in the secondary labour market where employment duration is relatively short (Hunter, Gray & Jones 2000).

## THE IMPACT OF THE JOB SEARCH DIARY

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In this section, the impact of the JSD on the job search intensity of Indigenous job seekers is analysed and an assessment is made as to whether it increased employment rates for Indigenous job seekers. The JSD was introduced in July 1996, at a time when there was an increased emphasis on enforcement of the activity test. The first wave of the IJSS survey conducted in March to June 1996 collected data prior to the introduction of the JSD, while the later waves were conducted after its introduction.

The number of job searches required per fortnight in the diary-based activity test ranged from two to eight, and was calculated with reference to a range of factors including level of education, age, labour market conditions, transport difficulties and cost and language barriers.

The proportion of unemployed job seekers not applying for any jobs decreased substantially between wave 1 (35.0%) and wave 2 (20.1%), and then remained roughly constant at 18.0 per cent at wave 3 (Table 10). The average number of jobs applied for also increased over the period covered by the survey. At the time of

**Table 10. Changes over time in the number of jobs applied for and receipt of job offers by the unemployed, 1996–97**

	Wave 1	Wave 2	Wave 3
No jobs applied for in last 4 weeks (%)	35.0	20.1	18.0
Average no. of jobs applied for	2.2	4.3	4.4
Received job offer in last 4 weeks (%)	12.0	10.7	6.8

Notes: This table is constructed for the sample present at all three waves. Appropriate questions were not asked for employed respondents in the wave 2 and wave 3 interviews. Number of jobs applied for refers to the last four weeks.

Source: Gray and Hunter (2000, Tables 11 and 15).

the wave 1 interview, the average number of jobs applied for by unemployed job seekers was 2.2. This had nearly doubled to 4.3 by the wave 2 and by wave 3 it was 4.4. While the number of jobs applied for increased over the period of the survey there was a decrease in the proportion of unemployed job seekers receiving job offers.

An alternative explanation is that the changes in search intensity can be explained by changes in the composition of the pool of unemployed over time with the most employable leaving and the least employable remaining unemployed. However, the observed changes in search intensity are unlikely to be explained by selection effects because job seekers who search more intensely were the most likely to find and retain employment. Another possible reason is that there is a large amount of movement out of unemployment, both to employment and out of the labour force. Of those who were unemployed at the wave 1 interview, just 49 per cent were still unemployed at the wave 3 interview. If anything these selection effects suggest that search intensity would have fallen in the absence of the introduction of the JSD.

The actual increase in intensity of job search notwithstanding, there was no corresponding increase in the number of job offers received, with the proportion receiving any job offer falling from 12 per cent in the four weeks prior to wave 1 to 6.8 per cent in the lead-up to wave 3. This period was one of strong macroeconomic employment growth, so the lack of change in the number of job offers received cannot be attributed to a low rate of growth in employment. It appears that the intensification of job search that resulted from the implementation of a stricter activity test had no positive impact on employment outcomes.

## CONCLUDING COMMENTS AND POLICY IMPLICATIONS

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One important, under-researched aspect of the labour market is the extent to which policy interventions are effective in modifying job search behaviour. Furthermore, there is little extant research on whether certain job search behaviours lead to labour market success. Prior to our study there were no existing studies of the impact of job search behaviour on whether employment is found for Indigenous Australians, and relatively few studies for general Australian population (Borland & Tseng 2003).

There are two main findings arising from our analysis. In general, the job search methods used were not related to the probability of finding and retaining employment when a range of other personal and regional factors were taken into account. Only the direct response to newspaper advertisements is significantly associated with the prospect of finding and retaining employment. However, increases in job search intensity (as measured by the number of jobs applied for) significantly increases the probability of finding employment, but is found to be unrelated to the probability of job retention. Other factors, such as educational attainment, health status, region of residence and having been arrested, account for the majority of labour market success among unemployed Indigenous job seekers.

The second finding is that the introduction of the JSD, and associated increases in the number of jobs which the unemployed were required to apply for, were effective in increasing search intensity—but this did not result in increased employment rates. This finding can be contrasted to the finding of Borland and Tseng (2003) that the JSD reduced the amount of time spent on government benefits. However, Borland and Tseng also find that the largest effects of the JSD occur for the unemployed for whom labour demand conditions are the most favourable. Many Indigenous job seekers face low demand for their labour, in part because they are more likely to live in regions with relatively low labour demand and in part because of their human capital characteristics which reduce the range of jobs for which they are suitable.

While policies focused on job search may slightly improve Indigenous employment, increasing the human capital in order to address the low level of demand for Indigenous labour and sound macroeconomic policies are probably more effective instruments in improving employment outcomes. It is also necessary to ensure that safeguards are in place to minimise discrimination against Indigenous workers, using industrial relations and related policies.

## NOTES

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1. Exemptions can also be given for other reasons including sickness.
2. One important contemporary institutional feature is the Indigenous Employment Program, a significant component of which is the Wage Assistance Program. Under this program, employers are given a subsidy if they employ an Indigenous person in a permanent job for more than 26 weeks. However, overall, wage subsidies under the Job Network are now a much smaller feature of mainstream employment assistance than they were under *Working Nation*.
3. An extensive overview of empirical literature and theoretical models of job search is provided by Kiefer and Neumann (1989).
4. However, job seekers may know about the overall distribution of wage offers,  $f(W)$ .
5. Studies reviewed by Borland and Tseng (2003) include Gorter and Kalb (1996) and van den Berg and van der Klaauw (2001) for the Netherlands, Blundell et al. (2001) for the United Kingdom; and Ashenfelter et al. (1999) and Myer (1995) for the USA.
6. Job seekers were excluded from the original sample where: duplicate records were obtained; they were recorded as deceased; they were indicated by the CES as being violent; or they had participated in a known survey since 31 August 1995 according to the monitoring system run by the Evaluation and Monitoring Branch of the Department of Employment, Education, Training and Youth Affairs (DEETYA).
7. An additional 1,505 respondents were drawn as a supplementary sample. This supplementary sample was drawn by DEETYA from the Jobsystem database as at 31 August 1996 and comprised Aboriginal and Torres Strait Islander people aged 18–25, living in Sydney and Brisbane, who had had contact with the CES in the previous three months. Since this sample was first interviewed at wave 2 they are excluded from the analysis in this paper.
8. The relatively low rate of obtaining interviews from the initial sample may in part be the result of the relatively long period of time (up to 12 months) between sample extraction and the interviews being conducted. This is likely to have been exacerbated by the relatively high geographic mobility rate of Indigenous Australians. Evidence for this explanation is provided by the fact that of those not interviewed, in almost one-third of cases this was because the person had moved and the new address was not available.
9. A detailed discussion of the representativeness of the IJSS is provided by Hunter, Gray and Jones (2000).
10. We also considered the alternative definition of job retention as 'employment in the same job'. The results were similar to the results for consecutive months of employment presented in this paper. We also considered different lengths of time including employment for six months or more and twelve months. Again the results were similar to the results for three months presented in this paper. Respondents whose employment spell is right censored are problematic for the analysis because we cannot be sure that they will not lose their job tomorrow. If they did lose their job before the three-month period, then they should not be considered as successfully retaining employment. On the other hand, they may keep their job or remain in employment indefinitely. Given that we cannot accurately anticipate what will happen, any person who has been in employment for less than the operational definition of job retention is excluded from the sample used in the formal econometric analysis, to eliminate the problem of right censoring.



11. The patterns for job retention—defined as being employed for three or more months in the same job—are almost identical to the patterns for being employed for three or more consecutive months.
12. The patterns for job retention—defined as being employed for three or more months in the same job—are almost identical to the patterns for being employed for three or more consecutive months.
13. In order to define job retention, it is necessary to determine how labour market programs (LMPs) are treated in terms of establishing employment status. The logistic regressions of employment retention include LMP employment. Sensitivity analysis of this assumption show that when LMPs are excluded the results are very similar to those reported in this section.
14. The only exception is the arrest variable, which is measured at wave 3 since this is the only interview in which this question was asked. This potentially creates a problem because the arrest variable asks about arrest during the previous five years and therefore overlaps with the period of time over which job retention is measured. If lack of labour market success is related to the probability of arrest, then the arrest variable will be 'endogenous'. Arrest was included in the final specification because sensitivity analysis of the results showed that other results were not significantly affected by its inclusion. This is probably because the arrest variable mostly captures arrest before the first wave of the survey.
15. Respondents who have right-censored employment spells are excluded from the models of the determinants of labour market success.
16. The coefficient estimates are presented in Appendix Tables A1 and A2.

## APPENDIX A: DETERMINANTS OF FINDING, AND FINDING AND RETAINING, EMPLOYMENT

**Table A1. Estimates of the determinants of finding employment, 1996–97**

	Search method		Search intensity	
	Coefficient	T-statistic	Coefficient	T-statistic
Age	-0.0004	-0.01	-0.0021	-0.04
Age squared	-0.0004	-0.44	-0.0003	-0.42
Trade qualification	0.4859	1.65	0.5211	1.80
Other post-secondary qualification	0.5620	2.18	0.6053	2.37
Degree/diploma	0.7079	1.60	0.8088	1.85
Year 12	0.0829	0.20	0.0496	0.12
Year 11	0.1964	0.72	0.1837	0.69
Year 10 or less (omitted category)				
In education	-0.0207	-0.07	0.1996	0.72
Health	-0.6458	-2.72	-0.6066	-2.58
Arrest	-0.3772	-1.76	-0.3727	-1.77
Female	-0.7161	-3.43	-0.6818	-3.34
Major urban (omitted category)				
Rural Centres	-0.2167	-1.08	-0.2478	-1.27
Remote Centres	1.7769	3.80	1.7526	3.81
Answered newspaper advertisements	0.5904	2.83		
Looked at job advertisements	-0.3696	-0.95		
Attended a Skillshare or Job Club	0.2603	0.97		
Contacted employers, advertised or tendered for work or started a business/became self-employed	0.0941	0.48		
Asked friends or relatives	-0.1157	-0.55		
Contacted other organisations that help unemployed people find work	0.4623	2.13		
Applied for no jobs (omitted category)				
Applied for one job			0.0600	0.18
Applied for two to five jobs			0.4381	2.12
Applied for six or more jobs			0.8218	2.80
Constant	0.6882	0.70	0.3844	0.42
Number of respondents	579		579	
Pseudo R <sup>2</sup>	0.0937		0.0811	

Source: Gray and Hunter (2000, Table B1).

**Table A2. Estimates of the determinants of finding and retaining employment, 1996–97**

	Search method		Search intensity	
	Coefficient	T-statistic	Coefficient	T-statistic
Age	0.0000	0.00	-0.0045	-0.08
Age squared	-0.0005	-0.64	-0.0005	-0.56
Trade qualification	0.6014	2.02	0.6604	2.26
Other post-secondary qualification	0.9011	3.43	0.9009	3.47
Degree/diploma	0.8160	1.87	0.9055	2.08
Year 12	0.7520	1.79	0.7420	1.80
Year 11	0.3077	1.10	0.3078	1.12
Year 10 or less (omitted category)				
In education	-0.1246	-0.44	-0.1562	-0.56
Health	-0.4030	-1.64	-0.3624	-1.50
Arrest	-0.7208	-3.30	-0.6609	-3.08
Female	-0.7623	-3.58	-0.7501	-3.59
Major urban (omitted category)				
Rural Centres	-0.0733	-0.36	-0.1700	-0.85
Remote Centres	-0.8940	-1.99	-1.1212	-2.57
Answered newspaper advertisements	0.4658	2.21		
Looked at job advertisements	0.7024	1.61		
Attended a Skillshare or Job Club	-0.3469	-1.32		
Contacted employers, advertised or tendered for work or started a business/became self-employed	0.1086	0.55		
Asked friends or relatives	-0.1771	-0.83		
Contacted other organisations that help unemployed people find work	0.1863	0.85		
Applied for no jobs (omitted category)				
Applied for one job			0.4281	1.26
Applied for two to five jobs			0.0838	0.40
Applied for six or more jobs			0.2497	0.85
Constant	-0.2656	-0.26	0.4759	0.50
Number of observations	566		566	
Pseudo R <sup>2</sup>	0.0943		0.0807	

Source: Gray and Hunter (2000, Table B2).

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