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The job finding methods of young people in Australia : an analysis of the longitudinal surveys of Australian youth, year 9 (1995) sample

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The Job Finding Methods of Young People in Australia: An Analysis of the *Longitudinal Surveys of Australian Youth*, Year 9 (1995) Sample

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EXECUTIVE SUMMARY

It is widely recognised that recent changes in occupational structure and the declining demand in the labour market for young people, have made it more difficult for school-leavers to find employment. In response to this, policy makers have focused attention on firstly identifying and then removing barriers to school-leavers finding work. The methods used by school-leavers to find employment are the primary concern of this report.

Why is the method used by young people to find employment important?

The proportion of young people entering full-time employment directly from school has declined over the years as a higher proportion of young people elect to continue studying full-time at a tertiary level. However, a significant proportion of young people leave school in order to find employment. Not all of these young people make smooth school-to-work transitions and youth unemployment remains high. In order to improve school-to-work transitions, it is important to understand how young people obtain employment and to assess the value of particular job-finding strategies.

Data and method

This paper uses data gathered from a panel survey of youth who were first surveyed as Year 9 students in 1995 as part of the *Longitudinal Surveys of Australian Youth* (LSAY). The data comes from self-completed questionnaires administered in 1995 and 1996 and telephone interviews conducted in each year from 1997 to 2000. At the time of the 2000 data collection, most of the sample had left school and were either in further study or in the labour market. This analysis focuses on early labour market entrants — those school-leavers who went directly from secondary school into the labour force, either into work or in search of work, rather than on to further studies.

Main findings

Three sets of analyses were completed. The first set explored the job search strategies employed by the young people in the sample. The second set investigated the method used to actually obtain employment, while the third explored the relationship between the method used to obtain employment and the quality of employment obtained on six measures of job quality.

The analysis shows: the most common job-search methods used by the young people were:

1. checking for employment advertisements in newspapers;
2. contacting an employer directly;
3. asking friends or relatives; and
4. registering with the Commonwealth Employment Agency (CES/Centrelink).

Most employment was obtained through informal methods, including obtaining work through friends and relatives (36.6 - 32.4 per cent) or approaching an employer (34.4 - 20.0 per cent). In the year 2000, just over 20 per cent of jobs obtained by school-leavers in the sample were obtained in the open labour market, although it appears advertised

vacancies increase in importance as a means of finding jobs for the cohort over time. Informal channels play a greater role in allocating part-time employment. Formal channels of advertisements and the public employment agency are relatively more important for the full-time labour market**.**

To explore the possibility that the students' backgrounds influenced their choice of job-search strategy, several models of job-seeking behaviour were developed. However, few distinctive patterns were identified. In contrast, differences between groups emerge when it comes to *obtaining* employment. Males are significantly more likely to gain their job through friends and relatives, while females are far more likely to obtain theirs through responding to advertisements or through the CES/Centrelink. Young people who had left home, relative to those at home with at least one parent working, were more likely to use the CES/Centrelink.

There is evidence to suggest that use of the CES/Centrelink is less effectual in helping young school-leavers find work. The use of informal job search methods appears particularly effective in generating employment opportunities and those who obtained employment by approaching friends and relatives or employers directly were more likely to be in work one year later, relative to those who used other methods to obtain employment. Moreover, jobs gained through informal methods were found to offer higher hourly wages (reflecting, in part, the tendency for these jobs to be part-time). However, the advantages of informal methods of obtaining employment did not appear to extend beyond the higher wages earned and they are associated with lower levels of satisfaction, both with the type of work done and with the training and promotional opportunities offered. Such methods of obtaining work are also less likely to lead to the type of employment one would want as a career.

In sum, informal methods appear to provide young people (particularly males) with employment opportunities more readily and at good hourly wage rates, but the participants perceive these jobs to lack the career path, training and promotional opportunities necessary for ongoing accumulation of human capital.

The Job Finding Methods of Young People in Australia: An Analysis of the *Longitudinal Surveys of Australian Youth*, Year 9 (1995) Sample

1. INTRODUCTION

It is widely believed that jobseekers compete for employment in an open labour market. However, this assumption was challenged by Granovetter (1974) who showed that access to employment was strongly influenced by access to social networks. He argued that those who had access to social networks were advantaged in the labour market ahead of those who did not. In particular, Granovetter proposed a theory of information flow that alerted researchers to the way in which information that is transmitted through 'weak ties' leads to jobs that are more highly paid than those obtained through 'strong ties'. This is because 'weak ties' expose jobseekers to employers beyond the jobseekers' immediate social class group. Although Granovetter's study was unique in that he focussed on the job seeking behaviours of 282 professional and managerial men, previous research, conducted since the 1930s by American labour-market economists exploring the job-finding behaviour of blue-collar workers, has shown that formal mechanisms of job allocation rarely accounted for more that 20 per cent of all placements (Granovetter, 1974, p. 5). Formal mechanisms included such methods as commercial and public advertisements, while informal mechanisms included personal contacts and also direct application to employers not previously known to the jobseeker.

Granovetter's research inspired numerous studies all of which have confirmed the view that informal methods, such as recruitment through social networks, play an important role in helping employers to find workers and workers to find employers (Grieco, 1987; Jenkins et al, 1983; Miller and Rosenbaum, 1997; Okano, 1995; Rosenbaum et al, 1990; Strathdee, 2001; Wallace et al, 1993; Wong and Salaff, 1998). One reason why social networks are used to recruit new workers is because employers believe they get trustworthy information about their skills and abilities – information that appears to be poorly reported by basic school qualifications. Moreover, although there are variations in the results generated by different methodologies and differences between studies conducted in different settings, the importance of social networks to the recruitment process remains intact despite modernisation and technological change in the economy (Granovetter, 1995).

The findings of the social network theorists challenge the view that improving labour market outcomes is primarily dependent on raising overall levels of achievement and improving school-leaver qualifications. While this view has been extremely effective in mobilising political support and resources for investment in education and training, it is primarily a *theoretical* assertion that lacks adequate historical and empirical evidence (Marginson, 1993). For example, despite high levels of investment in education and increasing levels of achievement, youth unemployment remains high. It is important to note, however, that education and training can improve an individual's relative position in the labour market and it can improve employment outcomes for some groups. For example, youth unemployment is concentrated amongst those with low levels of school qualifications. Although evidence demonstrates the benefits of staying on in education to young people as a group, it is important to stress that some early leavers make successful

school-to-work transitions and that completing Year 12 does not guarantee an individual a successful school-to-work transition.

Just as there are important differences between males and females in terms of the kinds of jobs they enter upon leaving school, it is also likely that differences exist in terms of their job finding strategies. For example, the little research there has been on the subject suggests that in Australia informal methods of job-finding were much more productive for males than they were for females (Brosnan and Wilson, 1978). Research conducted overseas by Ensel (1979) suggests that men have greater access than women to social network capital (as measured by the status of the contact). Women were more likely to use female contacts and males were overwhelmingly more likely to access male contacts. Females' use of other females as contacts translated to disadvantage in accessing high status contacts. Where women used male contacts, their disadvantage in reaching high status contacts was reduced. Thus, it was shown that men had greater access to social network capital than women (Ensel, 1979). Similarly, it is likely that networks have been used to exclude women from forms of employment that males traditionally entered, such as the blue-collar trades. Finally, there are also ethnic and racial differences in the way social networks connect jobseekers to job opportunities (Reingold, 1999).

Unlike earlier research, recent work has focused on the relationship between social networks, qualifications and employment. This development is useful because the relative contributions made by social networks and qualifications to securing jobs for work-bound school-leavers is better explained (Rosenbaum et al., 1990).

Identifying the relationship between qualifications and networks has important policy implications. For example, should careers advisors encourage a young person to leave school early if a good quality job is offered through a student's social network? Should policy makers attempt to improve the social infrastructure through, for example, improving the transport system, or should energy be directed into keeping young people in education and training? Similarly, should greater attention be devoted to improving the signalling function of school leavers' credentials?

Aim and scope of this report

This report seeks to enhance our knowledge and understanding of the school-to-work transition in Australia, looking particularly at important social processes that have been largely excluded from the human capital framework. To do so, we explore the job-finding methods and outcomes of a cohort of young Australians who made school-to-workforce transitions in the period 1997-2000. Specifically, the report aims to assess the following:

- the relationship between schooling, social background and job finding methods;
- the relationship between the method to find employment and the quality of employment obtained;
- the relative importance of informal methods of job seeking behaviour in helping different groups of young people to find employment. For example, females and males, and low SES and high SES students; and
- the role of social network capital in determining job search strategies and outcomes.

Data and method

The report uses data gathered through the 1995 Year 9 cohort of the *Longitudinal Surveys of Australian Youth* (LSAY). The *Longitudinal Surveys of Australian Youth* comprise a series of panel surveys of young Australians aimed at collecting information on the transition from school to work. Detailed background and technical information on these and associated surveys, the *Australian Youth Survey* and the *Youth in Transition Survey*, can be found in a series of information papers from the Australian Council for Educational Research (ACER). The particular data-set used in this analysis is from a panel survey of youth who were first surveyed as Year 9 students in 1995. The sample was selected by a two-stage process in which a random sample of schools was selected, and then a random selection of Year 9 classes from within those schools. The data comes from self-completed questionnaires administered in 1995 and 1996 and telephone interviews conducted in each year from 1997 to 2000. At the time of the 2000 data collection, the most recent available, most of the sample had left school and were either in further study or in the labour market.

Structure of the report

The rest of the report is organised as follows. Part two provides a brief summary of some of the research that has explored job-finding methods employed by work-bound school-leavers in Australia and elsewhere and describes the efficacy of these methods. In part three, a brief background to the LSAY and a descriptive analysis of the cohort sample is provided. Part four presents an overview of the sample with respect to the major variables used in the subsequent analyses. In part five, the analysis is extended by reporting the job-search experiences of the school-leavers. Part six looks more specifically at employment outcomes in terms of six measures of job quality. Part seven concludes this report and in part eight some implications for policy arising from this study are noted.

2. THE JOB-SEEKING BEHAVIOURS OF WORK-BOUND SCHOOL-LEAVERS

To the Authors' knowledge, few quantitative studies have directly explored the methods used by Australian school-leavers to find employment. However, a limited amount of research has explored the job-seeking behaviours of teenagers and young, unemployed people. This research suggests informal job-finding methods are an important means of young people finding employment. For example, a study of data gathered in the *Australian Youth Survey*, which covers the period 1989 to 1994, found that over 60 per cent of Australian teenagers reported obtaining employment by using 'direct methods', such as obtaining job information through family or friends, or by directly contacting employers (Heath, 1999). These findings are consistent with studies conducted overseas, (See Rosenbaum et al. (1990) and Granovetter (1995) for useful summaries of the literature). Miller and Volker (1987) draw on data from the 1985 *Australian Longitudinal Survey* to show that respondents using the Government employment agency, Commonwealth Employment Service (CES/Centrelink), or the newspaper to find employment, are less likely to find work than those using friends and relatives or directly contacting employers. Jobs obtained through the CES/Centrelink are also likely to be shorter in duration. This research is also consistent with that conducted overseas. For example, many studies from the United States have estimated that over one half of all unemployed people subsequently found employment through their social networks. (See Montgomery (1992) for a summary of the literature).

Heath (1999) suggests some groups of teenagers are using job-seeking strategies that appear to be less effective. For example, receiving an unemployment benefit increases the probability of young people using ineffective methods, such as CES/Centrelink, by almost 20 per cent and decreases their chances of using other methods, such as personal networks or newspapers, by 10 per cent. One reason posited by Heath (1999) for unemployed people using ineffective job-searching strategies is that effective strategies may have already been tried but without success. For example, young people who grow up in work poor environments may lack access to a social infrastructure in which information about the availability of employment flows, a claim which is consistent with the work of other Australian researchers (Gregory and Hunter, 1995; Kelly and Lewis, 2000; Miller, 1998) and other research based on the LSAY (Andrews, Green and Mangan, 2002). Crockett (1994) has found that search intensity for young jobseekers declines with the benefit to income (replacement) ratio, but that the effect is very small. Heath (1999) also reports that family background impacts on the method used to search for employment - unemployed young people who had more highly skilled or better-educated parents were more likely to use effective job-finding methods (i.e. direct methods) and they were less likely to use the CES/Centrelink as their main job-seeking method. In this respect, there is some international evidence suggesting young people from high status backgrounds have superior access to information about employment opportunities than those from low-income or minority backgrounds (Parnes and Kohen, 1975).

Research based on the *High School and Beyond Survey* in the United States, that explored the impact for 'at-risk' students working part-time while attending high school on future employment, concluded that although working part-time increased the risk of dropping out of school, 'working in high school is likely to benefit youth in the long run, in spite of its effect on schooling' (Chaplin and Hannaway, 1996, p. 5). One reason identified by Chaplin and Hannaway for this was that, in the case of work-based learning organised by

secondary schools, such work created connections with employers in settings where such connections are likely to be weak.

School qualifications and job-seeking behaviour

Unlike earlier research, recent work into the functioning of social networks has focused on the relationship between social networks and school qualifications. This development is useful because the relative contributions made by social networks and school qualifications to securing jobs for poorly qualified school-leavers, is more fully explored. It is also important because it challenges the view that in an efficient labour market, school students obtain the kinds of qualifications that employers desire and that this leads to employment. This view proposes that those who have obtained more desirable qualifications will be more highly rewarded and educational systems will, to a greater or lesser extent, produce the kinds of workers demanded by employers. However, while many employers are calling for school-leavers to have higher levels of qualification, particularly as they relate to basic skills, there is little evidence to suggest that employers actually refer to basic school qualifications when making hiring decisions. For example, a number of social network theorists argue that in the United States high-school performance has little influence on whether or not school-leavers secure jobs (Granovetter, 1995; Rosenbaum et al, 1990). Evidence from the United Kingdom supports this in relation to employers seeking to recruit young people for manual positions (Manwaring, 1984). There are at least three possible explanations for these findings.

First, employers may not receive good information about potential recruits. This may reflect inadequacies in the information provided by educators about the performance of school-leavers. This is a distinct possibility in the United States where a high-school diploma only indicates that a student has satisfactorily attended high-school.

Second, employers may be unwilling to use the information provided by schools about potential recruits. For instance, researchers in the United States report that employers do not seek more detailed information about student performance by requesting grade transcripts from schools (Rosenbaum and Binder, 1997). This may be because employers distrust the information provided.

Third, it may be there is no route for the information about potential recruits to reach employers. In this regard, there is a growing literature which explains labour-market failure among work-bound school-leavers by arguing that labour-market transactions are embedded in a social infrastructure (Granovetter, 1995; Miller and Rosenbaum, 1997). If this infrastructure, which includes social networks, is absent, then labour markets will not function efficiently. Thus, even if school-leavers have the kinds of skills desired by employers there is no method through which employers can easily receive this information. In a similar vein, it has been argued that as the number of people who hold qualifications increases, the usefulness of the information conveyed to employers decreases. In such circumstances, employers may come to rely more heavily upon their social networks (Breen and Goldthorpe, 2001).

Although the relationship between school qualifications and the labour market is less strong than is often assumed, more highly qualified work-bound school-leavers are less likely to be unemployed and are more likely to use productive job-seeking strategies than

their less qualified peers. However, the precise relationship between obtaining qualifications and labour market outcomes remains unclear. For example, it may be that, because students who achieve highly in school are more likely to come from work-rich backgrounds, they are better placed to access employment rich networks. Similarly, success in school might speak of other, unmeasured qualities employers desire in new recruits. It is also likely that qualifications and social networks interact. For example, there is some qualitative evidence which suggests qualifications are required before young people can access employment resources through their social networks (Strathdee, 2001). This is most likely to occur in areas of the labour market where the skills required are accurately measured by school qualifications. If this theory is accurate, it is likely to have important implications for school-leavers, a greater proportion of whom are entering the service sector today than has traditionally been the case. Service sector occupations typically rely more heavily upon the so called 'soft skills', such as interpersonal skills, than on technical skills. Unless qualifications systems can accurately measure 'soft skills', it is reasonable to expect that social networks will continue to play an important role in securing employment for young people.

It is important to note that access to social networks, that may initially lead to labour market advantage in the short-term, may be a source of labour market disadvantage over a longer term. For example, it is possible that those who obtain employment in declining sectors of the labour market through their social networks may be disadvantaged relative to those who are forced, through their lack of valuable network capital, to obtain educational qualifications that enable them to secure a place in expanding sectors of the economy.

Finally, social capital in the form of networks can enhance the production of human capital and human capital induces the creation of social capital. In the case of the former, well-connected parents help individuals obtain better human capital by, for example, providing trustworthy information on the kinds of qualifications needed in order to obtain employment.

3.   DATA AND DESCRIPTIVE OVERVIEW

This report uses the 1995 Year 9 cohort of the *Longitudinal Surveys of Australian Youth* (LSAY) to investigate job-finding methods of school-leavers in Australia. In this section we provide a brief background to the LSAY and the cohort sample.

The LSAY 1995 Year 9 cohort

The LSAY comprises a series of panel surveys of young Australians aimed at collecting information on the transition from school to work. Detailed background and technical information on these and associated surveys, the *Australian Youth Survey* and the *Youth in Transition* surveys, can be found in a series of information papers from the Australian Council for Educational Research (ACER). The data used in this study come from a panel survey of youth who were first surveyed as Year 9 students in 1995, the year in which nearly all turned 14. The sample was selected by a two-stage process in which a random sample of schools was selected, and then a random selection of Year 9 classes from within those schools. The data come from self-completed questionnaires administered in 1995 and 1996 and telephone interviews conducted in each year from 1997 to 2000.

A total of 13,613 valid returns were gained from those completing the initial survey in the first year, the attrition rate over the five waves to date stands at 42 per cent as shown in Table 1. A total of 6,792 individuals participated in all six surveys.

Table 1   LSAY 1995 cohort: Sample responses

	1995 (Age 14)	1996 (Age 15)	1997 (Age 16)	1998 (Age 17)	1999 (Age 18)	2000 (Age 19)
Valid Responses	13613	9837	10307	9738	8783	7889
Surviving (%)	100.0	72.3	75.7	71.5	64.5	58.0

The transition from school to work

In this report we will focus on individuals who began to search for work or entered work directly from leaving school, rather than going on to post-secondary education. A high proportion of the cohort, most of whom turned 19 in 2000, remained in the higher education system in that year. Table 2 shows the cumulative proportion of those who had left school, and their main current activity at the time of each survey. Note that this is not the same as following a cohort of school-leavers from a particular year over time – each year the school-leavers from previous years are joined by a new set of school-leavers.

It can be seen that by 1999 (median age of 18) 97 per cent of the sample had left school. A similar proportion had left school and was mainly working (43.5 per cent) as had left school and was mainly studying (44.3 per cent). A very minor proportion had left school and was looking for work. In 2000, less than 1 per cent of the cohort remained in (or had returned to) school. For those in the labour force the proportion whose main current activity is working increases in 2000 while the proportion whose main current activity is studying declines.

Table 2   Whether left school and current activity

	1996[a]	1997	1998	1999	2000
Still at school (%)	94.9	86.1	78.7	3.3	0.4
Has left school and main current activity is (%):					
Working[b]	*1.8*	*9.2*	*14.9*	*43.5*	*46.5*
Study[b]	*0.3*	*1.8*	*1.1*	*44.3*	*40.5*
Work and study[c]	*0.0*	*0.3*	*0.1*	*1.4*	*5.7*
Looking for work	*0.7*	*2.0*	*3.8*	*4.9*	*4.4*
Other	*0.2*	*0.6*	*0.9*	*1.4*	*2.4*
Missing	*2.0*	*0.1*	*0.5*	*1.0*	*0.1*
Total not in school (%)	5.1	13.9	21.3	96.7	99.7
Total (%)	100.0	100.0	100.0	100.0	100.0
Number of persons	9837	10307	9738	8783	7889

Notes: a. Data for 1996 relates to main activity since leaving school and is not strictly comparable to other years.

b. An individual's main current activity is deemed to be working if they are working and not studying or if they are working full-time and studying part-time. The reverse applies for defining study as the main current activity.

c. were working and studying, but doing neither full-time.

The "school-leaver" sample

In the remainder of this report we will concentrate on the labour market experience of a group henceforth referred to as "school-leavers". The school-leavers are a group who left school and who reported some labour market participation since leaving school (had either worked or looked for work), and whose main activity in the year following leaving school was not study. They may or may not have attained their secondary school certificate. By and large, this is the group who *did not* go directly on to university or other post-secondary studies after completing high school.

There are 4,722 such individuals in the data set (see Table 3). Almost two-thirds of these left in Year 12. Leaving in a year does not necessarily imply that the student completed that year of schooling. Certainly in each year most of those who left school departed in November or December, suggesting that they did complete that year of schooling. In the vast majority of cases the school year in which they left corresponds to the expected calendar year, indicating that relatively few persons repeated years of schooling or skipped ahead. For example, of the 2,980 persons who left from Year 12, 2,809 of them left in 1998. Just 165, or 5.5 per cent, left Year 12 in 1999 suggesting they had deferred or repeated a year of schooling.

Table 3   School-leavers by last year of school

Year	Year 9	Year 10	Year 11	Year 12	Year 13	Total
Number	43	737	905	2987	50	4722

4. ENTERING THE LABOUR FORCE – AN OVERVIEW

Before embarking on a more detailed analysis of the links between job search strategy and labour market outcomes, this section provides a descriptive overview for the school-leaver sample with respect to some of the main variables to be used in the analysis. These are the methods of job search used by those school-leavers looking for work; the methods of job attainment for those who had found work; and reported levels of satisfaction with various aspects of their jobs.

In each year from 1997, individuals were asked whether or not they had looked for work at any time in the four weeks leading up to the survey and, if so, the steps taken in search of work. In each year the number of individuals who indicated they looked for work is considerably larger than the number whose "main activity" has been looking for work. This reflects the fact that a significant proportion of job search activity takes place while people are employed or studying. There were some changes to the response categories used in the surveys in 1999 and 2000, largely as a result of the replacement of the CES with Centrelink and the Job Network in 1998 and the accommodation of Internet based job search activities in the surveys.

For the "school-leaver" sample, the most common form of job search is checking for employment advertisements in newspapers (Table 4). This category was later expanded to include advertisements on the Internet, but the vast bulk of these responses would still have referred to newspaper advertisements, as the Internet is yet to capture a significant proportion of the employment matching activity. Across the years between 33 per cent and 75 per cent of those individuals then went on to reply to an advertisement. Contacting employers directly is also a common approach, with roughly three-quarters of jobseekers using this method in each year. Over half the jobseekers contacted friends and relatives about prospective jobs, while the utilisation of CES/Centrelink services seems to increase over the period.

Table 4   Methods used to look for work in the four weeks prior to survey

	1997	1998	1999	2000
Contacted an employer	67.1%	79.0%	84.3%	77.6%
Looked in newspapers	76.2%	82.7%	91.8%	
Looked in newspapers/on internet				92.1%
Answered newspaper ad.	33.8%	49.8%	64.5%	
Answered ads in newspapers/internet				74.0%
Checked factory/CES notice boards	39.2%	43.1%		
Used touchscreens at CES/Centrelink			63.6%	66.2%
Checked factory noticeboards				15.4%
Registered with CES/Centrelink	24.3%	41.7%	70.0%	63.4%
Contacted Job Network member				60.4%
Registered with other agency	8.9%	26.7%	52.5%	51.1%
Contacted friends/relatives	58.0%	55.8%	53.9%	58.0%
Asked school/other org. for advice	31.8%	32.1%	18.3%	18.1%
Posted resume on internet				13.3%
Number of individuals	869	677	453	331

Note: The CES was replaced by the Centrelink and the Job Network agencies in 1998.

The results present a different picture to that presented in Heath's (1999) analysis of data from the *Australian Youth Survey*. In that survey jobseekers were asked to indicate all methods they were using and then to nominate which of these was their "main" job-search method. Concentrating on the data for the main method used, Heath reports that "newspapers/media" is the most common method used by unemployed jobseekers as their main method. She finds, in the case of unemployed youth, use of the CES to be more common than directly contacting employers and, most importantly, contacting friends and relatives to be used very infrequently as the main method of job search (6 per cent of jobseekers - Heath 1999, Table 1). Asking friends and relatives requires little proactive effort after initially alerting friends and relatives to the fact that one is in need of work, whereas checking newspapers, approaching employers or maintaining registration with the CES/Centrelink — particularly as a benefit claimant — requires ongoing efforts. We suspect it is for this reason that asking friends and relatives is less likely to be given as the "main" method used.

For those who had a current job, Table 5 reveals the most common methods of finding that job were, in fact, via contacts made through friends and relatives or by directly approaching employers. This is consistent with Australian Bureau of Statistics surveys on successful and unsuccessful job search methods. The reported categories are again different for the 2000 survey and caution should be exercised in making comparisons to earlier years. However, it appears the use of advertised vacancies increased as a means of finding jobs. This may indicate that familial and neighbourhood networks are important for early school-leavers and formal channels increase in importance for those with more schooling and experience.

Table 5   Methods of job attainment

	1997	1998	1999	2000
Referred to employer				
CES/Centrelink	4.6	6.8	5.2	
Centrelink				2.2
Job Network member				5.4
Other employment agency				8.5
Job was advertised	9.3	14.7	18.3	20.2
Job through friend/relatives	36.6	36.5	33.8	32.4
Approached by employer	5.9	6.9	6.2	5.8
Approached employer	34.3	25.3	22.5	20.0
Through school/uni	4.5	6.3	5.7	2.9
Other	5.0	3.6	8.3	2.6
Total	100.0	100.0	100.0	100.0
(n)	2549	1224	3419	2875

Note: Applicable to persons currently working in a new job – that is a job observed in the survey for the first time.

Job satisfaction

At the time of the 2000 survey, just under 5950 respondents reported currently having a job. Hourly wages could be calculated for 5,401 of these, and the average gross hourly wage reported was $11.90. At $12.00 per hour, the average wage for males was slightly higher than the $11.82 per hour reported for women, although 18 cents difference is not significant in statistical terms.

The survey asked workers to indicate their degree of satisfaction on a range of aspects of their job using a four-point scale. These have been coded such that a response of 1 means "very dissatisfied"; 2 "fairly dissatisfied"; 3 "fairly satisfied"; and 4 "very satisfied". The means for these responses are reported in the table below. A score of 2.5 would imply that, on average, the group felt neutral about that aspect of their jobs. From the last column, it can be seen that in general, these young workers are quite satisfied with their jobs. The aspect of work with which people report being least satisfied is the opportunity for promotion, but even here the feeling is positive. The differences between males and females appear very minor, however formal statistical tests show that some of these are highly significant[1]. Females are significantly more satisfied with the people they work with. This difference is highly significant, or significant at the 1 per cent level, meaning that there is less than a one in a hundred chance of observing such a difference in the means just through chance variation in the sample. Females are also more satisfied with the recognition received for tasks well done (significant at the 5% level), with the kind of work they do and the pay they get (significant at the 10% level).

Table 6   Job satisfaction, mean scores

	Male	Female	All
The kind of work you do	3.34	3.30	3.32
Your immediate boss or supervisor	3.38	3.39	3.39
The people you work with	3.48	3.56	3.51
The pay you get	3.05	3.10	3.07
Opportunities for training	3.15	3.15	3.15
The tasks you are assigned	3.23	3.24	3.24
Recognition you get for tasks well done	3.06	3.13	3.09
Your opportunities for promotion	2.95	2.99	2.97

Note: Mean scores from scale ranging from 1 (very dissatisfied) to 4 (very satisfied).

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[1]   The tests are the standard t-tests for the difference in means between two sample populations.   The results stand as significant whether the test is performed under the assumption of equal or unequal variances.

5.   THE JOB SEARCH EXPERIENCE OF SCHOOL-LEAVERS

The classical economic treatment of job search views jobseekers "sampling" job offers from a set of vacancies existing in the labour market. When searching, job offers arrive at a rate determined by a certain probability distribution, possibly a function of search intensity as well as macro-economic or regional economic conditions, and they arrive as if drawn from a known wage-offer distribution. There is a set cost to undertaking a job search in each period. The jobseeker sets a reservation wage. This is the wage at which the value of taking a job (namely the stream of future wages at that wage rate offered) equates to the expected returns from further search, which is a function of the likelihood of gaining a higher wage by rejecting the offer and continuing to search, less the cost of search. Thus jobs offering a wage above the reservation wage are accepted, and those offering wages below it are rejected.

The theory, however, has very little to say about how one might undertake a job search. The logical extension of the model is that jobseekers will prefer search methods that: (a) result in a greater number of job offers; (b) result in job offers with higher wages; and (c) incur lower search costs per period. It is unlikely that one method will be best on all attributes and the optimal search strategy is likely to involve trade-offs between the three. To our knowledge, no work has attempted to differentiate between search methods or strategies with respect to these outcomes. In this area sociologists have had more to contribute, particularly in recognising that social networks, neighbourhood effects and family background may be critical in determining the number and types of job opportunities an individual is exposed to.

The proportion of persons looking for work in the previous four weeks and using a range of job search techniques, were reported above. Here we look more closely at the characteristics of the school-leavers choosing the following techniques[2]:

1.   Contacting an employer
2.   Looking in newspapers
3.   Registering with CES/Centrelink
4.   Contacting friends/relatives

We pooled all observations from the four 1997-2000 waves of the survey such that the unit of observation becomes an "episode" of job search, rather than an individual occurrence. The main difference is that it is possible for an individual from our school-leaver sample to have multiple episodes included in the models. For example, a person who had looked for work in the previous four weeks at the time of the 1997 survey and at the time of the 1998 survey would contribute two observations to the data analysed. For those two periods some data items will be fixed while others will vary. For each of the four methods of job search listed above, separate models were developed to test how different factors impact upon the likelihood of a jobseeker using that search method. The variable we seek to explain is binary, taking on a value of 1 if the person did use that method, and zero if they did not. Hence we use the standard logistic regression model

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[2]   We also investigated the job search activity of checking factory or CES/Centrelink noticeboards, an option that was one of the responses available in the 1997 and 1998 waves. The results are very similar to those with respect to registering with the CES/Centrelink, showing these two job search activities are highly complementary. As they offer little in the way of additional information the results have not been reported.

which predicts the likelihood of a jobseeker using each method, conditional on their individual characteristics.[3]

There is a very wide range of potential variables that could be included to explain whether a jobseeker does or does not use a particular job search technique. By necessity we must limit it to those we expect may have an impact and, as discussed, neither theory nor previous empirical work offer much guidance in this respect. The results from this exploratory analysis are shown in the following table. The negative and significant coefficient for males in the model for whether or not the jobseeker looked in newspapers for advertisements indicates that, relative to females, males are less likely to have used this job search method in the four weeks leading up to the interview. Aboriginal and Torres Strait Islander jobseekers appear less likely to register with the CES or Centrelink. This may be due to lower access to agencies in the areas in which they live. For this group, the chances of identifying statistically significant patterns is reduced by the small sample size. The coefficient is only weakly significant and just fails to attain significance at the 10 per cent level when the robust standard errors are used (see footnote 3).

The effect of academic ability appears to be limited to reading ability for these school-leavers. Those who achieved higher scores on the reading tests in 1995 were more likely to directly contact an employer or to look in newspapers. They were also less likely to have used the CES/Centrelink, although this result is only weakly significant. The maths achievement score had no significant effect in any of the models. There is also greater utilisation of the CES/Centrelink among jobseekers who did not complete Year 10.

School-leavers who had only recently started looking for work (less than four weeks) were less inclined to use any of the methods. This may reflect lower search intensity in the early stages of a job search spell, but may also simply be a result of having less time to try different methods. The question related to the methods the individual used if they had looked for work in the previous four weeks and the "comparison" group for these variables is those who had looked for work for between 5 and 13 weeks throughout the year. If a person had only been unemployed for one week in total, clearly they are unlikely to have used as many methods in that time, even if they are searching as actively. For those who had been unemployed for more weeks throughout the year, the likelihood of looking in newspapers and being registered with the CES/Centrelink increases, suggesting longer durations of job search may be associated with greater search intensity.

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[3]   All regression models reported in this report are estimated using SAS and the procedures adopt the classical regression assumption that the error terms are independently distributed across observations. In this case, however, the sample is stratified by school, raising the possibility that errors are not independently distributed across the strata (ie. there may be school specific variation) and this may result in invalid statistical inferences. To allow for this, we also estimate each model using STATA's "cluster" command across schools. The "robust" standard errors generated from this procedure require the weaker assumption that the error terms are independently distributed within clusters (see STATA Release 7 User Guide, pp. 254-258). We draw attention in the text to any instances in which the significance levels reported are invalidated when the robust standard errors are employed.

Table 7   Factors affecting use of job search methods — logit model results

	Approached an employer		Looked in newspaper		Registered with CES/Centrelink		Asked friends, relatives	
Intercept	1.936		3.080	**	-0.451		0.549	
Male	-0.104		-0.283	***	-0.146		-0.046	
Aboriginal/TSI	0.025		-0.279		-0.463	*	0.103	
Had disability'95	0.344		-0.449		0.031		0.231	
Reading Score (0 to 20)	0.046	***	0.034	**	-0.029	*	-0.002	
Maths Score (0 to 20)	-0.014		-0.017		0.016		0.004	
Level of Schooling								
- did not finish Yr 10	—		—		—		—	
- did not finish Yr 12	0.431	*	0.323		-0.790	***	-0.005	
- finished Yr 12	0.452	*	0.175		-0.983	***	0.304	
Duration looking for work								
- 0-4 weeks	-0.413	***	-0.603	***	-0.574	***	-0.005	
- 5-13 weeks	—		—		—		—	
- 14-26 weeks	0.023		0.384	**	-0.076		-0.040	
- >26 weeks	-0.032		0.277	*	0.397	***	-0.026	
Looking for pt work only	-0.612	***	-0.912	***	-1.495	***	-0.754	***
Receiving Ut Benefits	0.948	***	0.221		2.113	***	0.218	*
Living status								
- home, parent/s work	—		—		—		—	
- left home	0.261		0.041		0.425	***	0.690	***
- home, no parent works	0.209		-0.238		0.317	*	0.123	
School averages								
- Father's occ status[a]	-0.181		-0.288		0.252		-0.338	*
- Father works	0.338		0.816		1.695	**	-0.375	
- Mother works	-0.949	*	-0.653		0.084		0.254	
- Parents' edu. level[b]	-0.169		-0.455	*	-0.370		-0.017	
Observations	2098		2098		2098		2098	
Deg. of freedom	18		18		18		18	
Model Fit Criteria (χ^2)								
-2 Log Likelihood	154.1	***	195.9	***	925.2	***	123.3	***
Score Statistic	142.0	***	192.1	***	812.4	***	122.8	***
Wald Test Statistic	128.8	***	174.6	***	550.5	***	116.6	***

Notes: ***, ** and * denote significance at the 1%, 5%, 10% levels respectively.

    a. The variable for father's occupation ranges from 1 to 4, where 1 is the category of highest occupational status.

    b. Original variable ranges from 1 (low education) to 4 (high education).

Persons looking only for part-time work were clearly less likely to have used each of the job search methods. Being in receipt of benefits is strongly associated with utilisation of the CES/Centrelink. This is to be expected since registration with the CES/Centrelink is a prerequisite to claiming unemployment benefits. Not claiming benefits does not preclude one from registering and using at least some of the services available, such as checking vacancies posted on noticeboards and touchscreens. An important finding is that claiming unemployment benefits is also associated with a greater likelihood of using other job search methods, including directly approaching an employer (significant at the 1% level) and of asking friends or relatives (10% level). This is contrary to Heath's conclusion that receiving benefits reduces jobseekers' use of direct job search methods (approaching employers and friends or relatives) or looking for advertisements in newspapers (1999: 19). We believe Heath's focus on the "main method" of job search reported in the *Australian Youth Survey* has led to a misdiagnosis.

Compared to those school-leavers still living at home and with at least one parent working, those who had left home display a markedly higher tendency to look for work by directly approaching employers, registering with the CES/Centrelink, and asking friends or relatives. The result for directly approaching an employer just fails to gain significance at the 10% level. This may reflect a greater level of personal financial commitment. Those who lived at home, where there was no working parent, also displayed greater tendencies to register with the CES/Centrelink, possibly for the same reason.

The school related variables, which we had hoped would capture neighbourhood and/or social network effects, appear to have little effect on job search methods and it is not clear what is driving the results for these variables. Jobseekers from schools where students' fathers had high average occupational status were more inclined to use friends or relatives as a channel for finding work[4]. This may indicate neighbourhood or social network effects whereby the fathers of classmates provide positive role models or advantageous connections. A school with a high proportion of fathers in work was associated with greater likelihood of jobseekers registering with the CES/Centrelink. Jobseekers from schools with a higher average level of parents' education were less inclined to look in newspapers. School-leavers from schools with a high proportion of mothers in work were less likely to contact an employer directly. These results are only weakly significant and the latter is not significant when robust standard errors are used.

Ideally we would like to include variables on the individual's parents' characteristics (eg. occupational and educational status), however there are data constraints for such variables. We do not know if a person's mother or father is working until the third (1997) survey and then only in those cases where the parent is living with the respondent. Questions are asked in the first two surveys regarding the occupations of the respondent's mother and father, either now or when they previously worked, from which an occupational SES (socio-economic status) is derived but this is missing for a large proportion of the sample. This is also true for parents' educational levels. The variables for school averages, on the other hand, can be derived for everyone (i.e. there are no missing values) since, as long as any one person responded from a school, an average can

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4   Note that the coding of socio-economic status for this variable is such that a value of one represents the highest category of SES and four the lowest. Thus the coefficient on the variables is interpreted as the effect of lower SES.

be calculated. School averages for the proportion of fathers/mothers working are taken from the 1997 survey and based on all persons in the survey, not just our more limited school-leaver sample.

When respondents' own parental characteristics are included (not reported), fathers' occupational status is negatively associated with the likelihood of approaching employers directly but no other significant impacts are identified. If we are to believe that higher socio-economic status of one's father is associated with higher social capital, then the implication is that directly approaching employers is a strategy adopted in the absence of social networks. The absence of further parent effects is unexpected and may be partly due to reduced sample sizes.

It is noticeable that registration with the CES/Centrelink is more common among persons facing labour market disadvantages. Registration is more prevalent among persons with lower reading scores, who did not finish Year 10, who had spent more than 26 weeks looking for work in the last year, or who had left home. There is also evidence that registration is more prevalent among young people living in a home where no parent works, though the result is not significant when the robust standard errors are used to reflect school-specific differences. In interpreting the significance of this finding with regards to job search strategies, it must be remembered that registration with the CES/Centrelink is necessary in order to claim unemployment benefits. Thus the decision to register may not be related to one's strategy for finding employment.

Modelling how jobs were attained

The approach used to model whether or not particular job search methods were used can be applied to model the likelihood that the jobs school-leavers are working in were attained by a particular method. The unit of observation is jobs reported for the first time in the survey and again it is possible for an individual to contribute multiple observations to the data if they are observed to be working in several different jobs over the duration of the survey. Unlike methods of job search, methods of job attainment are mutually exclusive. While one could have used any number of job search techniques during a period of looking for work, reporting that a job was attained by *Method A* means that no other method of attainment can be attributed to that job. However, it should not be taken that the method of attainment for a job was the main method of job search used.

Table 5 above reported the main means by which jobs were attained by the school-leaver sample. We investigate in more detail the factors associated with attaining a job through the following four methods:

1. approaching an employer
2. the job was advertised
3. referred to employer by CES/Centrelink
4. through a friend or relative

The logit model results are reported in Table 8. Information relating to whether or not a person was claiming an unemployment benefit is largely not applicable to persons once they are in a job, and it is not possible to identify whether or not they were claiming unemployment benefits immediately prior to gaining their current job. Hence this variable has not been included in these models. Although we found few significant

differences by gender in the choice of job search methods, in terms of job attainment a strong gender pattern is apparent. Females are far more likely to have attained their jobs by responding to an advertisement or through the CES/Centrelink and marginally more likely to have gained their job by approaching an employer directly. Males, on the other hand, were far more likely than females to have found their job through a friend or relative. This is consistent with previous research cited above that has found informal channels of job-finding to be more productive for males and that males have greater access to social network capital.

Table 8   Factors related to selected methods of job attainment – employed school-leavers

	Approached an employer		Job was advertised		Referred by CES or Centrelink		Through a friend or relative	
Intercept	-0.001		-1.958		1.953		0.764	
Male	-0.100	*	-0.324	***	-0.372	***	0.410	***
Aboriginal/TSI	-0.118		-0.257		0.448		-0.239	
Achiev. score (quartile)	0.058	**	0.054		-0.006		-0.050	*
Year left school	-0.081	*	0.077		-0.300	***	0.059	
Time to find FT job after school - < 1 month	0.032		-0.114		-0.595	***	0.029	
- 1-3 months	-0.020		0.133		0.045		-0.152	*
- 4-6 months	0.005		0.342	***	0.186		-0.451	***
- > 6 months	0.028		0.251		-0.179		-0.356	**
Job is part-time	0.756	***	-0.715	***	-0.718	***	0.300	***
Living status								
- home, parent/s work	—		—		—		—	
- left home	-0.008		0.102		0.308	**	-0.147	**
- home, no parent works	-0.063		0.278	*	0.324		0.028	
Father's Occ status[a]	-0.010		-0.105	***	0.065		0.069	**
School averages								
- Parents work	0.192		-0.118		-1.398	*	0.211	
- Parents' education[b]	-0.115		0.298		-0.337		-0.351	**
- Mother's Occ status[a]	-0.590	***	0.757	***	0.285		-0.235	
- Father's Occ status[a]	0.300	**	-0.113		-0.621	**	-0.052	
- Wealth	0.033		-0.194	***	0.157		-0.058	
Observations	6349		6349		6349		6349	
Deg. of freedom	17		17		17		17	
Model Fit Criteria (χ^2)								
-2 Log Likelihood	184.9	***	167.2	***	124.5	***	136.9	***
Score Statistic	184.7	***	166.0	***	126.6	***	134.3	***
Wald Test Statistic	180.4	***	160.8	***	120.4	***	131.5	***

Notes: ***, ** and * denote significance at the 1%, 5%, 10% levels respectively.
      a. Variables range from 1 to 4, where 1 is the category of highest occupational status.
      b. Original variable ranges from 1 (low education) to 4 (high education).

Few other clear patterns are evident in the results. There is some evidence that Aboriginal or Torres Strait Islander school-leavers, who find work, are more likely to have done so through the CES/Centrelink, rather than through other methods, when compared to the non-indigenous population. For this group, the chance of identifying statistically significant patterns is limited by the small sample size. Higher academic achievers tended to gain jobs by directly contacting employers[5]. Persons who stayed on at school longer were less likely to have gained their job through the CES/Centrelink and more likely to have gained their job by approaching an employer[6]. This is consistent with the patterns of use of job search methods reported in Table 7.

Data is available on the time taken to find a full-time job since leaving school. That first full-time job may not be the current job observed in the data to which the method of attainment relates. However, it does provide additional information on time spent in unemployment after leaving school. It can be seen that the CES or Centrelink are markedly less likely to be the source of jobs for people who found work immediately or within a month of leaving school. Those who spent longer looking for full-time work after leaving school are also less likely to have gained their current job through a friend or relative. There is clearly a strong difference between the methods of attainment for part-time jobs and full-time jobs. The "informal" methods of job attainment of approaching employers directly or through friends and relatives, are prominent for part-time jobs. The formal methods of advertised vacancies and referral by the CES or Centrelink are relatively more likely to lead to full-time jobs. As a rule the CES did not deal with part-time vacancies. This policy has been relaxed under Centrelink and the Job Network, although matching and placement continues to concentrate on jobs that offer a minimum of 15 hours per week.

People who had left home were less likely to have found their jobs through friends or relatives. Recalling that these individuals are also more likely to ask friends and relatives as a method of job search, it appears that this method of job search is far less effective once one has moved out of home. This is possibly because moving out of home weakens or severs some of the important networks that facilitate this avenue into employment. Home leavers were more likely to have found work by responding to advertisements or by referral from the CES/Centrelink.

We found the individual's parents' characteristics – occupational or educational status — to have little influence on how workers found their jobs. The exception again relates to the scale of socio-economic status based upon the father's occupational status. Workers with a father of higher occupational status are actually less likely to have gained their job through friends or relatives (significant at the 5% level) and are more likely to have secured advertised positions (significant at the 1% level and at the 5% level using robust standard errors).

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[5]   A number of measures of academic achievement are available in the data, including the raw scores out of 20 for reading and mathematics ability tests. These were tested and the quartile measure included here proved the preferred specification. Math scores are again insignificant in all models.

[6]   In the models for job search methods, three dummy variables were used for whether an individual did not complete Year 10; finished Year 10 but not Year 12 or finished Year 12. These were constructed using the month individuals left school to determine whether the particular year was completed. In the current models, the direct variable relating to what level an individual was in when they left (ranging from 9 to 13) performed better.

The school averages for the individual seemed to have most influence on the likelihood of having attained a job through approaching an employer directly and answering advertised vacancies. Surprisingly, the average occupational status of mothers from the school has a more pronounced effect than for fathers. The implication of the coefficients is that youth from schools with a higher average SES of mothers were more likely to have gained their job through approaching an employer and less likely to have gained their job through an advertised vacancy. The inclusion of the occupational status of the individual's mother (as opposed to the school average) gives the opposite result and both are highly significant![7]

A high average SES of fathers was associated with a lower likelihood of a school-leaver's job being gained by directly approaching an employer and a higher likelihood of referral by the CES or Centrelink (both significant at the 5% level). These results are somewhat contrary to expectations. A variable is constructed to proxy the level of wealth of the youth's family.[8] The average value of the wealth index is highly significant in one model indicating that youth from wealthier schools were less likely to have gained their jobs through an advertised vacancy. Several other coefficients for the school-average variables attain weak levels of significance but, overall, it is difficult to decipher a consistent message with respect to these effects.

There is no substantial change to the findings when robust standard errors are used to account for the stratification of the sample by school. The school average for whether or not individuals' parents were in work is no longer significant at the 10% level. Reported significance levels fall marginally for some other estimates, and it increases from 10% to 5% for the effect of the school leaver having taken from 1 to 3 months to find their first job in the final model.

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[7]   The variable is not significant in any other models and has not been included in the model reported in Table 8 due to the number of missing observations and the resulting reduction in sample size.

[8]   In the 1996 survey the students were asked whether they had a number of items at home: a washing machine, dishwasher, colour television, microwave oven, mobile phone, CD player, video camera, computer, piano and swimming pool. These were assigned 1 if present, zero otherwise, and summed to give a wealth "score".

6. EMPLOYMENT OUTCOMES

It is accepted that individuals with favourable individual characteristics, such as higher educational achievement, find work more readily and secure better, higher paying jobs. But such relationships are not strict ones and there is much to be learned about the processes by which job seekers with different attributes are matched to different jobs. How much do the methods of job search used by different individuals matter in determining employment outcomes? How important are the social networks that provide access to different channels of job attainment in determining outcomes? This section investigates these questions by estimating models of employment outcomes that include explanatory variables on the workers' characteristics and the method of job attainment.

Effectiveness of job search methods: Did they find a job?

First we look at the basic indicator of whether or not school-leavers who were looking for work in one year of the survey had found work at the time of the following survey. The cohort was asked about job search activity in the 1997 to 2000 surveys. We can observe outcomes one year later for those who were looking for work during 1997 to 1999. In the explanatory variables we include whether or not the person had used particular job search methods. Again the dependent variable is a binary outcome variable: 1 if the jobseeker was employed a year later, 0 if he or she was not. Logit models are estimated on the likelihood of the person being in employment. The results are summarised in Table 9.[9]

Looking at the model for all jobseekers, most results accord with our expectations. Aborigines and Torres Strait Islander jobseekers have less favourable employment prospects. Although the result does not attain significance in these models, the estimated coefficient in the model for all jobseekers is weakly significant when robust standard errors are used. This time achievement in mathematics rather than reading has the dominant effect. Those in higher quartiles of achievement scores for maths in Year 9 were significantly more likely to have found work.[10] Those jobseekers who had been unemployed for more than half the preceding year and those who were looking only for part-time work were also less likely to be working. However, contrary to existing evidence, it does not seem to make much difference whether the individual left school before Year 10, completed Year 10 or completed Year 12.

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[9]   When robust standard errors are used to allow for stratification of the sample by school the reported significance levels are effected for only a handful of variables and then only marginally.

[10] Again, a variety of measures for academic achievement were tested, including raw test scores out of 20. The quartile scores proved at least as useful as the other specifications and have been selected for ease of interpretation.

Table 9   Factors affecting jobs seekers' employment status one year on

	All jobseekers		Females		Males	
Intercept	-1.491	*	-1.669		-1.301	
Aboriginal/TSI	-0.365		-0.477		-0.260	
Reading Score (quartile)	-0.026		0.014		-0.041	
Maths Score (quartile)	0.174	***	0.106		0.221	***
Level of Schooling						
- did not finish Yr 10	—		—		—	
- did not finish Yr 12	-0.128		-0.561		0.152	
- finished Yr 12	0.021		-0.302		0.234	
Duration looking for work						
- 0-4 weeks	-0.079		0.161		-0.205	
- 5-13 weeks	—		—		—	
- 14-26 weeks	-0.145		-0.358		0.093	
- >26 weeks	-0.303	**	-0.446	**	-0.161	
Looking for pt work only	-0.580	***	-0.400	**	-0.738	***
Receipt unemployment benefits	-0.148		-0.142		-0.166	
Living status						
- home, parent/s work	—		—		—	
- left home	-0.611	***	-0.739	***	-0.421	*
- home, no parent works	-0.334	**	-0.399		-0.233	
Job search methods used						
- approached employer	0.280	**	0.525	***	0.123	
- looked in newspaper	-0.133		-0.109		-0.144	
- registered with CES/CL	-0.375	***	-0.415	**	-0.339	*
- asked friends, relatives	0.800	***	0.920	***	0.734	***
School averages						
- Fathers' occ status[a]	0.344	**	0.528	*	0.147	
- Mother works	1.390	***	1.063		1.688	***
Observations	1692		767		925	
Deg. of freedom	18		18		18	
Model Fit Criteria (χ^2)						
-2 Log Likelihood	134.2	***	79.3	***	71.3	***
Score Statistic	128.3	***	75.3	***	68.0	***
Wald Test Statistic	118.9	***	68.4	***	63.2	***

Notes: ***, ** and * denote significance at the 1%, 5%, 10% levels respectively.

a.   Original variable ranges from 1 to 4, where 1 is the category of highest occupational status.

Again the group who had left home at the time they were looking for work stand out as being significantly different. In this case, they are significantly less likely to be in work one year on. This is also true for those living in a home with neither parent working, when compared to the base category of persons living at home with at least one parent working. Both these may represent weaker social connections with the workforce. None of the variables relating to the parents' labour force status, level of education, or socio-economic status of occupation were found to be significant in terms of being employed one year later. This is somewhat surprising given existing evidence of the effect of family background on labour market destiny. In some cases the school averages for these variables are significant but we obtained some peculiar results. In particular, having attended a school with a low average socio-economic status of fathers' occupations is associated with a higher likelihood of having found work one year later (significant at the 5% level). This is contrary to the expectation that this would be associated with lower social capital. Having attended a school where a high proportion of mothers worked was also strongly associated with the likelihood of being in employment. In terms of shaping students' labour market and educational destiny, it might be assumed the father's activities are of greater significance, since it is the father who is more often the one participating in the labour market. When the regression is run separately for males and females, it is only for male school-leavers that the mother's effect seems significant. In the models of females' employment outcomes, the estimates are not significant. This is not the effect of the jobseeker's own mother's activity but the average for their school. (This effect is assumed to permeate through expectations and attitudes of others around them – intended as neighbourhood or network effects. It may be that the proportion of mothers working in a sector of the community is a particularly robust indicator of socio-economic status.)

Of most interest is the estimated impact of the variables relating to the job search methods used in the four weeks leading up to the survey. If a person had approached an employer directly they were more likely to be in work a year later than those who had not. This effect is strongest for females. Those who had looked in newspapers did not appear to fare significantly better than those who had not. The dominant effect is for persons who had approached friends or relatives, and this is highly significant in each model. Having used this method markedly increased the probability of being in work a year later. Even though we saw that male school-leavers were more likely to have attained their current jobs through this avenue, it appears that it is just as effective for females when they use it. Possibly females are more selective in their approaches. Being registered with the CES/Centrelink, however, is negatively associated with the chance of being in work a year later. This is highly significant for the model for all jobseekers and significant at weaker levels for the models for females (5%) and males (10%).

In interpreting these findings, recall that the sample consists of all those who had been looking for work in the four weeks prior to the survey. Thus the "comparison" category for those who used a particular method is all those who did not use that particular method, but who were looking for work. For example, the result for "asked friends and relatives" is the estimated effect of having used this method compared to being a jobseeker who did not use this method. Persons in the comparison category may or may not have used the other three main methods, and this is controlled for by the inclusion of the other dummy variables. The potential responses regarding the methods used are listed in Table 4, and undoubtedly some jobseekers used "other" methods that were not

reflected in the response options. A variable based on the number of different job search methods used, intended to capture intensity of job search, was also tested and found not to be significant.

To gain an idea of the magnitude of the various effects, we use the estimated coefficients from the logistic regressions to calculate the predicted likelihood of an individual being in employment given selected characteristics (Table 10). The base case is calculated with all the explanatory variables evaluated at their sample means. Thus a person who has the average characteristics of the sample is predicted to have a 58.1 per cent chance of being in employment. A person with a maths achievement score in the bottom quartile, but all other characteristics equal to the mean for the sample, has a lower predicted probability of leaving employment (53.1 per cent). But had that person had a maths achievement score in the top quartile, their predicted probability of having found work is 65.6 per cent. The difference as we change from one value of the selected characteristic to another is given in the column entitled "diff". In this case, moving from the lowest to highest quartile of maths scores improves the predicted likelihood of finding a job by 12.5 percentage points.

Table 10 Predicted likelihood of jobseekers being in employment 12 months on: selected characteristics (per cent)

	All Persons		Females		Males	
	%	Diff	%	Diff	%	Diff
Base case	58.1		56.1		60.0	
Maths achievement – lowest quartile	53.1		53.3		53.0	
Maths achievement – highest quartile	65.6	12.5	61.1	7.8	68.6	15.6
Duration looking for work – >26 weeks	54.6		47.1		62.2	
Duration looking for work – 5-13 weeks	61.6	7.0	60.2	13.1	62.2	0.1
Looking for part-time work only	51.4		51.8		50.8	
Not looking only for part-time work	65.4	14.0	61.6	9.8	68.3	17.6
Left home	45.2		41.3		50.8	
Living at home with a parent working	60.4	15.1	59.5	18.3	61.1	10.3
Job search methods used						
- did not approach an employer	52.9		46.0		57.8	
- approached an employer	59.8	6.9	59.1	13.0	60.8	3.0
- looked in newspaper	57.2		55.3		58.9	
- did not look in newspaper	60.4	3.2	58.0	2.7	62.3	3.4
- registered with CES/Centrelink	52.3		49.6		54.7	
- did not register with CES/Centrelink	61.5	9.2	59.9	10.2	62.9	8.2
- did not ask friends, relatives	52.1		49.1		54.6	
- asked friends, relatives	70.8	18.7	70.7	21.7	71.5	16.9
Low % of mothers from school worked[a]	53.8		52.7		54.7	
High % of mothers from school worked[a]	62.4	8.6	59.4	6.7	65.0	10.3

Notes: a. Low (high) figure calculated as mean minus (plus) one standard deviation of the independent variable.

From this it can be seen that some of the stronger effects are whether a person is seeking only part-time work and whether they had left home when they were searching for work, as opposed to living at home with at least one working parent. In this context we can see that the effect of having asked friends or relatives in search of work has a very large effect, increasing the predicted likelihood of being employed one year later from 52.1 per cent to 70.8 per cent. Having directly approached an employer increased the chance of being in employment by almost 7 percentage points. The negative effect of having registered with the CES/Centrelink is also of considerable magnitude.

On face value the results imply that using contacts, such as friends and relatives, and cold-calling employers are effective job search strategies. Registering with the CES/Centrelink, on the other hand, is estimated to have a negative impact on the jobseekers' chance of securing employment. However, we stress this is the *prima facie* interpretation and there are important caveats to be made. These are discussed in the conclusion. These relate to selection issues – whether or not other variables provide adequate controls for the characteristics of those who chose to use the various job search methods. With respect to the CES/Centrelink, it is known that the public agency services jobseekers are likely to have less favourable labour market characteristics. We have already seen some evidence of this in Section 5. Thomas (1997) shows a negative effect of using a public employment agency can be incorrectly identified because of the failure to adequately control for prior time in unemployment. Jobseekers tend to turn to the public agency only after unsuccessfully trying other methods, thus creating an association between longer periods of unemployment and usage of the public agency, relative to other methods of job search. On the other hand, it is also well recognised that jobseekers using public employment agencies become stigmatised because employers perceive agency referrals as inferior to other referrals.

Here we have controlled for a considerable range of individual characteristics. As unemployment duration is a strong indicator of labour market disadvantage, including otherwise unobservable disadvantages, we further divide the sample into those jobseekers who had been unemployed and looking for work for less than half of the past year and those who had been unemployed and looking for work for more than half the year. For the shorter-term unemployed, the negative impact of using the CES/Centrelink persists and remains highly significant. For the longer-term unemployed, the negative coefficient remains but is no longer significant in the smaller sample. The positive effect of approaching friends or relatives holds for both portions of the sample. Thus we are unable to dismiss the observed negative effect of registering with the CES/Centrelink as purely a function of the longer prior duration of unemployment among its clientele. However, it remains likely that those school-leavers using the CES/Centrelink possess other characteristics detrimental to their employment prospects, which we have not been able to observe.

The quality of jobs and how they were attained

The methods being used to search for a job do not necessarily accord with the method by which one eventually finds a job. The school-leavers who were working in survey 1997 through to 2000, were asked how they got their jobs and a range of other questions about the nature of that job. As shown in Table 4, the most common means of job attainment was through friends or relatives, followed by approaching employers and answering advertisements. A small proportion of those working had found jobs through the CES or

Centrelink. We now consider the relationship between these four methods of job attainment and job quality. In the 2000 survey, the possible categories for having been referred to a job included "Centrelink", "Job Network member" and "Other agency". For the purpose of this analysis we excluded "other agencies" in an attempt to keep the definition consistent with previous years but it must be acknowledged jobseekers are sometimes unaware of the status of agencies they use with respect to the Job Network.

As with the models of methods of job attainment, the unit of analysis is now jobs rather than individuals. If an individual responded with reference to two different jobs in various waves of the survey those jobs will be included as two different observations in the data. However, if a person is in the same job in two different years of the survey, we ensure that job is included as only one observation and the data on aspects of the job, such as hourly wages and job satisfaction, are taken from the last year in which the person responded with respect to that job. Of course, information on how the job was attained and when it commenced remain constant for the duration of the job.

We investigated six indicators of the quality of jobs. The first is simply the hourly gross earnings. The second is determined by the person's response to whether or not it is the type of job they would like to have as a career. The remaining measures of job quality are the levels of satisfaction with the type of work, the pay, the opportunities for training, and the opportunities for promotion as reported by the workers.

Gross hourly wages

Earnings are well known to have a log-normal distribution[11] thus the accepted approach to modelling earnings in economics is to use the log of the wage as the dependent variable in an ordinary least squares regression. This is the approach we take here. To guard against the identification of spurious relationships, a number of different specifications of the wage equation are estimated. Our starting point is to test the variables for the main individual characteristics expected to have an influence on wages as well as the school average variables designed to capture neighbourhood and social network effects. Due to the number of missing observations, we have not included the variables relating to individuals' parental occupation or level of education.

The results for this model are reported as Equation 1 in Table 11. The range of measures of academic achievement is again tested. No relationship is observed between earnings and mathematical ability for school-leavers. The measure based on achievement quartiles is preferred although the reading score produces almost identical results. In estimating hourly earnings, a number of variables have been tested and found not to be significant, including whether or not the individual had a disability and whether or not they were Aboriginal or Torres Strait Islander. In the case of these two factors, it may be that the small number of observations prevented them from attaining significance, though it is also the case that neither coefficient had the anticipated negative sign. The variable designed to proxy the level of wealth of a youth's family was also insignificant, although it is far from a perfect measure.

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[11]   That is, when the log is taken of the earnings the distribution of the resulting variable approximates the normal distribution – the well-known "bell shaped" curve around the mean.

Of the variables based upon school averages, only the socio-economic status of fathers' occupation and the proportion of fathers in work are found to be significant (the latter only weakly if robust standard errors are used). The estimated equation can explain just 23 per cent of the variation in hourly wages, which is quite typical for a wage equation. Some key results are:

- The average hourly earnings for this sample of school-leavers was $8.86[12];

- Female school-leavers earn about 2.4 per cent more than males, after controlling for other characteristics;

- Earnings are higher for those who attained higher achievement scores in the tests sat in Year 9, increasing by about 1.7 per cent each quartile;

- We find no significant difference in earnings between those who left before Year 10, completed Year 10 or completed Year 12;

- Hourly earnings increase by around 16 per cent, or around $1.50, with each year of age (NB: earnings are nominal); and

- Earnings increase by about 1 per cent for each year of tenure.[13]

For the variables relating to neighbourhood or network effects, we find that youth from schools with a higher average occupational status for fathers, had higher earnings, while those from schools with a higher proportion of working fathers had lower earnings. Although the coefficient on this latter variable is large, there is little variation in the value of the variable. A variation of 2 standard deviations in the value of this variable (thus covering around two thirds of the sample) leads to a change in expected earnings of just 2.8 per cent.

Turning to how the job was attained we see that, after allowing for these other factors, higher hourly earnings were observed for those who gained their jobs through friends or relatives (+6.8 per cent) and for those who approached employers (+4.8 per cent). Having got the job through an advertised vacancy was associated with higher wages of around 3 per cent but this difference is only weakly significant. The coefficient on having gained a job through the CES or Centrelink is not significantly different to zero. In other words, there is no positive or negative wage premium associated with the CES/Centrelink relative to the comparison category, which is those who gained their job by any means other than these four methods.[14] We can say, however, that wages for persons gaining their jobs through the CES or Centrelink are significantly lower than for those who gained jobs through the informal methods of approaching employers or friends and relatives.

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[12]   This is lower than the figure reported in Section 4, where the calculation is based only on jobs observed in the final year of the survey.

[13]   In Equations 2 and 4 the tenure variable becomes significant at the 10% and 5% levels, respectively, when robust standard errors are used.

[14]   The methods of job attainment encompassed by the comparison category can be seen in Table 5. They include a default category of "other" that could be chosen by respondents if none of the provided options adequately described how they got their job.

Table 11 Wage equation: Dependent variable = log of hourly gross wage

	Equation 1	Equation 2	Equation 3	Equation 4
Intercept	-0.216**	-0.157	-0.680***	-0.201*
Male	-0.024**	-0.019*	-0.005	-0.022**
Achievement Score (quartile)	0.017***	0.014***	0.015***	0.016***
Level of Schooling				
- did not finish Yr 10	—	—	—	—
- did not finish Yr 12	-0.029	-0.009	-0.043*	-0.031
- finished Yr 12	-0.034	-0.018	-0.077***	-0.030
Age	0.153***	0.153***	0.174***	0.153***
How job was attained:				
- CES/Centrelink	-0.030	-0.039	-0.030	-0.030
- was advertised	0.030*	0.025	0.027*	0.030*
- friends or relatives	0.068***	0.055***	0.048***	0.065***
- approached employer	0.048***	0.041**	0.022	0.046***
Tenure in job (months)	0.001**	0.001	3.9E-04	0.001*
School average				
- Father's occ status[a]	-0.070***	-0.068***	-0.054***	-0.068***
- Father works	-0.117**	-0.103	-0.068	-0.111*
Parental characteristics				
- Mother's occ status[a]		-0.022***		
Job is part-time			0.136***	
Time taken to find first FT job after leaving school				
- got job straight away				-0.015
- up to 3 months				-0.041***
- 4 to 6 months				-0.040**
- 7 or more months				-0.071**
Observations	5723	4132	5723	5723
Degrees of freedom	12	13	13	16
R-Square	0.2310	0.2377	0.2518	0.2329
Adjusted R-Square	0.2293	0.2353	0.2501	0.2308
Dep mean (log)	2.181	2.183	2.181	2.181
Dep mean (hrly earnings)	$8.86	$8.88	$8.86	$8.86

Notes: ***, ** and * denote significance at the 1%, 5%, 10% levels respectively.

  a. Original variable ranges from 1 to 4, where 1 is the category of highest occupational status.

In the results discussed thus far, variables relating to the individual's own parents' occupational and educational status are excluded due to the large number of missing values and the consequent drop in sample size. The effects of the socio-economic status of father and mother and parental educational attainment were tested. Parents' levels of education are not found to have a significant effect. If included separately, both father's and mother's occupational status are significant, with higher socio-economic status occupations of either parent associated with higher earnings. When included together the socio-economic status of the mother's occupation dominates and the variable for the

father becomes insignificant. The greatest explanatory power is achieved with only the mother's occupational status included and this is the reported Equation 2. The magnitude of the effect is that a school-leaver with a mother in the category of highest occupational status (1) earns around 6 per cent more compared to a person whose mother's occupation is in the lowest category of socio-economic status (4). Again, it is interesting that the occupational characteristics of a school-leaver's mother should generate a stronger effect than those of the father. The important thing to note is that the coefficients on the other variables, notably the job attainment methods, remain relatively unaffected.

In the results for the third equation reported, a variable is included as to whether or not the job was part-time. We find that part-time workers actually had around 15 per cent higher hourly earnings. This is probably due to casual or part-time loadings in lieu of holiday leave, sick leave, superannuation and so on. This variable was not included in the initial estimation due to its possible correlation with the methods of job attainment. For example, if certain methods of job attainment are more likely to lead to part-time work, which in turn is likely to offer higher wages, we do not necessarily want to disguise the link between the method of attainment and higher wages by standardising for hours worked. Again there is little change in the other coefficients once this variable is included, although it should be noted that the coefficient on having attained the job through approaching an employer loses significance, suggesting this method results in higher earnings because it is more likely to lead to part-time employment. Also, the gender wage gap now disappears, indicating the positive wage premium observed for females in the other models reflects a higher propensity for females to be in part-time work.

Finally, we included a variable indicating the time persons took to gain their first full-time job after leaving school (Equation 4). As expected, those who took longer to find work generally had lower earnings. Even with this included, the finding that gaining a job through friends or relatives and by approaching employers attracts higher earnings still holds, and these strategies are associated with significantly higher earnings than for jobs found using the CES/Centrelink. Note, however, that this job search period may not relate to the time taken to find the current job, as individuals may well have changed jobs since their first full-time job after school.

Other equations, estimated but not reported, tested the effects of the school-leavers' living arrangements and of restricting the sample to full-time jobs. The school-leaver having moved out of home has been identified as having significant impact on labour market behaviour and outcomes. Here we have excluded these variables due to the likely problem of reverse causality – that the wage earned influences whether or not the school-leaver lives at home. From including these variables, we find that those not living at home do typically earn a 5 to 6 per cent higher hourly wage compared to those living at home with at least one parent working. In addition, those living at home with no parent working, earn hourly wages which are 3 to 4 per cent lower. Other results are largely unaffected. However, restricting the sample to only those with full-time jobs increases both the magnitude and significance of the wage premium associated with having gained a job through either an advertised vacancy, friends or relatives or approaching an employer. The estimated wage premiums associated with gaining a job through each of these three methods range from 5 to 9 per cent and each estimate is now highly significant. The coefficient for the CES/Centrelink remains negative but insignificantly different from zero.

Table 12 Logit estimates: Probability of current job being the type of job you want as a career

	Equation 1	Equation 2 - inc parental variables	Equation 3 – full-time jobs only
Intercept	-7.667***	-8.320***	-2.282***
Male	0.577***	0.546***	0.408***
Achievement score (quartile)	-0.091***	-0.085***	-0.021
Level of schooling			
- did not finish Yr 10	—	—	—
- did not finish Yr 12	-0.170	-0.314*	0.026
- finished Yr 12	-0.976***	-1.169***	-0.418***
Age	0.370***	0.389***	0.091***
Living status			
- home, parent/s work	—	—	—
- left home	0.174**	0.245***	-0.003
- home, no parent works	0.034	0.066	-0.115
How job was attained:			
- CES/Centrelink	-0.370***	-0.472***	-0.317**
- was advertised	-0.199**	-0.223**	-0.063
- friends or relatives	-0.756***	-0.720***	-0.511***
- approached employer	-0.729***	-0.737***	-0.318***
Tenure in job (months)	-0.010***	-0.012***	0.001
School average			
- Father's occ status[a]	0.511***	0.514***	0.395***
- Mother works	-0.739***	-0.416	-0.601*
- Father works	0.930**	0.796	0.425
Parental characteristics			
- Mother's occ status[a]		0.126***	
Observations	6472	4621	3568
Deg. of freedom	15	16	15
Model Fit Criteria (χ^2)			
-2 Log Likelihood	840.0***	643.9***	132.4***
Score Statistic	788.1***	602.2***	130.3***
Wald Test Statistic	700.1***	529.5***	126.0***

Notes: ***, ** and * denote significance at the 1%, 5%, 10% levels respectively.

a. Original variable ranges from 1 to 4, where 1 is the category of highest occupational status.

Is it a career job?

As mentioned above, respondents who were working were asked whether their job was the sort of job that they would want as a career. While they had to choose between "yes", "no", or "unsure/can't say", these were recoded as "yes" = 1 and the other options = 0. We then modelled the probability that a school-leaver would indicate that their current job was one that they would like to have as a career. The binary nature of the dependent variable leads to the use of the standard logit model.

We estimate the base model first (Table 12, equation 1), then on the reduced sample for which observations on parental characteristics are available (equation 2) and finally for full-time jobs only (equation 3). We find that school-leavers who were significantly less likely to see their current job as the type they would like as a career were female, had higher achievement scores and had completed Year 12. Older school-leavers and those who had left home were more likely to be in "career" jobs. The results for the school average variables show that students from schools with a higher socio-economic status, based on fathers' occupations, were also less likely to be in a career job, and this finding is consistent across the three models. The likelihood of the current job being seen as one the school-leaver would want as a career also declines with time spent in that job. A broad pattern is that favourable labour market characteristics are actually associated with a lower likelihood of being content with one's current job as a future career. This may be interpreted as suggesting that, at this early stage of their working lives, those school-leavers with more favourable characteristics or from better backgrounds have higher expectations of their career job. It is clear that this pattern is not so strong when we restrict the sample to those in full time jobs. Indeed, evaluating all variables at their means, the predicted likelihood of indicating the job is a career job is 35 per cent for the full sample compared to 56 per cent for those in full-time work.

Paradoxically, all methods of job attainment modelled were associated with a lower likelihood of seeing the current job as a career job relative to those who got their jobs by "other" methods. In particular, those who gained their jobs through friends or relatives or by approaching employers were unlikely to see their current jobs as the sort of career they would like. The channel of advertised vacancies fares better on this score. In Table 13 the predicted likelihood of a school-leaver responding positively to seeing their current job as a career job, is derived from the logit model estimations. The first column is derived from the results for equation 1 above and includes all jobs, while the second relates to full-time jobs only and is derived from the results for equation 3.

Table 13 Predicted likelihood of seeing current job as the type of job wanted as a career by how job was attained (per cent)

How job was attained	All jobs	Full time jobs
Other method	47.5	61.8
CES/Centrelink	38.4	54.1
Was advertised	42.6	60.4[a]
Friends or relatives	29.8	49.3
Approached employer	30.3	54.1
Means (all sample)	35.4	55.6

Notes: a. Not significantly different from the figure for "other methods".

It is apparent that those in full-time jobs are far more positive about their current vocation as a prospective career.[15] Both the informal channels show a lower likelihood of leading to a career job. For all jobs, the percentage of favourable responses being about 12 percentage points less for these methods of job attainment when compared to jobs attained through an advertised vacancy. For persons employed full-time, the difference remains large for those who found their job through friends and relatives, but is reduced for those who directly approached their employer.

In models tested but not reported here, we find weak evidence that time taken to find the first full-time job after school reduces the likelihood of seeing the current job as a career job. Note the caveat, however, that this job seeking period does not necessarily relate to the time prior to finding the current job, and the sample size is reduced when these variables are included.

Job satisfaction

School-leavers' satisfaction with four different aspects of their current job — the kind of work they do, pay, opportunities for training and opportunities for promotion — was ranked on a 4-point scale ranging through very satisfied, satisfied, dissatisfied and very dissatisfied. The limited range of the dependent variable prompts the use of a probit model in analysing the factors contributing to satisfaction levels. The same range of explanatory variables is tested as detailed in the previous models. A drawback of the multiple response probit model is that it is difficult to provide a practical interpretation of the results. However, in Table 14 a positive coefficient indicates that higher values of that variable are associated with a greater degree of satisfaction or, more correctly, a higher probability of indicating very satisfied rather than satisfied, satisfied rather than dissatisfied, and dissatisfied rather than very dissatisfied.

A number of results stand out as being contrary to *apriori* expectations. We believe the reason for this is that reported satisfaction levels are determined jointly by the quality of individuals' jobs and their *expectations* regarding the quality of job they may have been able to secure. For example, individuals from wealthier families, who gained higher reading achievement scores and who went on to complete Year 12, display generally lower levels of satisfaction with various aspects of their jobs, yet these are the people we may have expected to have secured higher quality jobs.

Males are more satisfied than females with respect to the type of work they do but this is the only significant gender difference identified. Persons with a disability tend to be dissatisfied with their training opportunities, although this effect is only weakly significant and is no longer significant when robust standard errors are used. Satisfaction appears to increase with age on all aspects with the exception of the pay received, while satisfaction decreases with tenure in a particular job. This latter finding is unexpected as one would expect a relationship to arise through "reverse causality" — those who were more satisfied would stay longer in their jobs. The greater level of satisfaction of older workers may be because they have had more time in the workforce to decide upon and gain the job they wish to work in.

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[15]   This is strongly confirmed by the inclusion of the part-time dummy in equations 1 and 2 of Table 12.

Table 14 Probit estimates of job satisfaction ratings

	The type of work you do	The pay you get	Training opportunities	Opportunities for promotion
Intercept	-1.970***	-1.510***	-0.309	-1.165**
Male	0.084**	-0.049	0.016	-0.048
Had disability (95)	0.005	-0.140	-0.211*	-0.191
Wealth index	-0.014	-0.012	-0.026**	-0.020*
Reading score (quartile)	-0.047***	-0.005	-0.054***	-0.077***
Level of schooling				
- did not finish Yr 10	—	—	—	—
- did not finish Yr 12	-0.130	-0.115	0.037	-0.035
- finished Yr 12	-0.290***	-0.065	-0.104	-0.167*
Age	0.069***	-0.003	0.039***	0.060***
How job was attained:				
- CES/Centrelink	-0.139*	-0.181**	-0.133*	-0.069
- was advertised	-0.103*	-0.025	0.043	0.008
- friends or relatives	-0.181***	0.144***	-0.134***	-0.029
- approached employer	-0.295***	-0.019	-0.216***	-0.157***
Tenure in job (months)	-0.005***	-0.002*	-0.006***	-0.005***
School average				
- Father works	0.475**	0.255	-0.076	0.080
- Father's occ status[a]	0.153**	0.008	0.195***	0.104
- Wealth index	0.017	0.069*	-0.041	-0.019
Inter.2[b]	1.793	1.656	1.296	1.351
Inter.3 [b]	2.504	2.403	2.128	2.211
Observations	4959	4945	4641	4291

Notes: ***, ** and * denote significance at the 1%, 5%, 10% levels respectively.

    a. Original variable ranges from 1 to 4, where 1 is the category of highest occupational status.

    b. Parameters generated by the estimation procedure for each level of the response variable. When an intercept term is included, there are k-2 such parameters, where k represents the number of response levels.

Several of the proxies for neighbourhood or network effects, as measured using the school averages, do attain significance. The strongest of these is for socio-economic status of fathers' occupations. Those from higher status areas are less satisfied with both the work they do and with training opportunities and this may be related to youth from those schools having higher initial expectations. Having attended a school with a higher proportion of working fathers is associated with greater satisfaction with the type of work done. Interestingly, persons from schools with "wealthier" families seem to be more satisfied with the pay they receive, even though neither this variable nor the wealth index for the individual's own family were significant in determining actual hourly wages. As regards the direct effects of one's own parents' characteristics, these were tested separately. We find only one significant relationship - those with parents with higher levels of education were more content with their current pay.

From the results regarding the methods of job attainment, having approached an employer stands out as leading to general dissatisfaction on each factor other than pay. Attaining employment through friends or relatives was also associated with dissatisfaction with the type of work done and the opportunities for training but with a high degree of satisfaction with pay. This is consistent with the positive premium identified in the wage model for persons who found work through this avenue.[16] If any general pattern can be gleaned from the results, it is that the informal methods of job attainment are associated with low levels of satisfaction with regard to the non-pecuniary aspects of jobs gained, relative to the formal channels of the CES/Centrelink and advertised vacancies.

When a variable is included to indicate that the job is part-time (less than 30 hours per week – not reported), it is clear that part-time workers are strongly dissatisfied with the type of work they do and their opportunities for training and promotion but more satisfied with the pay they receive. Again, this is consistent with the findings from the estimation of the wage equation which demonstrated a significant wage premium for part-time workers. The inclusion of this variable does affect some of the other findings. The lower degree of satisfaction with promotion opportunities for those who approached an employer is no longer significant, and the extent of dissatisfaction with training opportunities is reduced for those gaining jobs by approaching an employer or asking friends and relatives. Thus the adverse association between the informal methods of job attainment and satisfaction with training and promotional opportunities can be attributed in part to the greater likelihood for these methods of job attainment to lead to part-time employment.

Finally, we included variables for the time taken by the individual to find their first full-time job after they left school (not reported). As noted, there are problems with the interpretation of these variables as they do not necessarily relate to the current job and the number and composition of the group for which no value is recorded. Also, by definition there is correlation between these variables, duration in current job and level of schooling completed. There is some indication of higher levels of satisfaction for those who gained full-time work quickly. The most intuitive and appealing interpretation of this is that a longer time out of full-time employment after leaving school leads an individual to accept lower quality jobs. The important point is that the addition of these variables does not alter the above findings with respect to the methods of job attainment. In addition, as with the previous models, re-estimation using robust standard errors to reflect the stratification of the sample by school has very minor and inconsequential impacts upon the statistical inferences presented.

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[16] So many of the coefficients on the variables for methods of job attainment are negative that it leads us to wonder what the comparison or "base case" should be. Clearly there is a group of people who gained jobs through "other" methods that generally feel more satisfied with their jobs. Investigating the raw frequencies reveals that two other options of job attainment given in the questionnaire — "employer approached me" and "through school/college/university" — are associated with quite high degrees of satisfaction, although their incidence is quite low. This is also the case for the "other" category for job attainment.

7. CONCLUSION

Human capital theory stresses the importance of educational level, skills, labour force experience and health in determining income and other labour market outcomes. However, there is also a considerable body of research to show that access to social networks plays an important role in securing employment. In turn, access to social networks is often influenced by factors such as an individual's gender, level of schooling, SES status and the characteristics of their geographical or social neighbourhood. In addition, the level of access to social networks is likely to play an important part in shaping job search strategies. While we know much about the use of social networks to find employment, we know comparatively little about the effectiveness of these job search strategies in terms of the quality of employment they yield.

The study focuses on a cohort of young Australians, who we have referred to throughout the report as "school-leavers" but who might be better described as "early labour market entrants". They are people who went directly from secondary school into the labour force, either into work or in search of work, and who did not go directly to further studies. In part this is simple pragmatism — the cohort has not yet been followed long enough for us to be able to say anything about the labour force experience of those who progressed to further education. However, it leaves us with a sample of considerable interest. There can be no doubting the benefits that accrue to those who complete vocational diplomas or university degrees. The advantages of having higher levels of education, skills, labour force experience and health will largely overshadow the impacts of social network capital.[17] The matching of individuals to jobs in these skilled or professional labour markets follows more formal channels, such as advertised vacancies and recruitment agencies. However, the access, or lack thereof, to social capital may be far more important for those who do not go on to further education. The issues explored here are thus of some significance for a group of school-leavers already at a considerable disadvantage relative to those in continuing education.

To explore these issues, the analysis can be seen as progressing through three main stages. The first stage investigated the job search strategies employed by school-leavers. It presents frequencies of the methods of job search used by those looking for work and a multivariate model of the factors that influence the choice between different methods. In the second stage this is repeated with respect to the methods of job attainment for those observed to be in work at various waves of the survey. The third stage explored the relationship between methods used to obtain employment and labour market outcomes. We model the impact of utilisation of job search methods on the probability of gaining employment and the relationship between how a job was attained and the quality of employment obtained on six measures of job quality.

The most common job-search methods used by the young people were:
1. checking for employment advertisements in newspapers;
2. contacting an employer directly;
3. asking friends or relatives; and
4. registering with the CES/Centrelink.

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17   Though such capital may have been important in determining whether or not the subjects went on to further education and the kinds of qualifications they obtained in the first place!

Throughout the report we concentrate on the four main methods of job search enumerated above and their corresponding job attainment category. Although referral by the CES/Centrelink was reported as a relatively minor method of job attainment, it is clearly one of considerable interest from a public policy perspective. Applying a definition that appears regularly in the literature, contacting employers directly and asking friends or relatives are "informal" methods of job search or attainment, while advertisements in the media and public and private employment agencies constitute "formal" channels.

In terms of methods of job attainment, the most common methods reported are through friends and relatives, advertised vacancies and by directly approaching an employer. These results confirm the findings of previous Australian and overseas research into the methods used to obtain employment. In the current study, in the year 2000, just over 20 per cent of jobs were obtained in the formally open labour market, a figure that compares remarkably well to that noted by Granovetter's (1995) review of the literature. Most employment was obtained through informal methods, with through friends and relatives accounting for 32.4 per cent and approaching an employer 20.0 per cent. It also appears that advertised vacancies increase in importance as a means of finding jobs for the cohort over time. One explanation for this is that familial and neighbourhood networks are important for early school-leavers but advertised channels increase in importance for those with more schooling and experience.

To explore the possibility that the students' backgrounds influenced their choice of job-search strategy, several models of job-seeking behaviour were developed. The effects of the occupational status and the level of education of the individual's parents are tested although the proportion of missing values for these variables leads us to estimate models both with and without these variables. The data do not provide direct measures of the strength of social networks or the socio-economic characteristics of respondents' geographical area. The approach we have taken here is to calculate school averages to use as proxies for social network capital and/or neighbourhood effects. These include school averages for the socio-economic status of parents, as inferred from their occupations, parents' level of education, the proportion of mothers and fathers in work, and a "wealth" measure based upon the presence of a range of possessions in the respondents' homes. This approach is novel, to the best of our knowledge, and the measures are clearly less than ideal.

We identify few distinctive patterns to suggest why different school-leavers use different job search methods. For factors that affect the likelihood of one particular method, the direction of such an effect is most often the same for the other methods. For example, being in receipt of unemployment benefits and having left home are positively associated with the use of all methods although the effect is not statistically significant in every case, and those seeking only part-time work are markedly less likely to use all methods. What this is telling us, and is probably not particularly surprising, is that by and large methods of job search are complementary rather than substitutes for one another. However, there are some differences. Males seem less likely to canvass newspaper advertisements than females and those with higher academic achievement scores were more likely to directly approach an employer or check newspaper advertisements and less likely to register with the public employment agency. One consistent pattern that does emerge is that several characteristics, such as failing to complete Year 10, are associated with a greater tendency to register with the CES/Centrelink and this is consistent with the charge of public employment agencies to make assistance available to disadvantaged jobseekers.

While the differences may not be so great between school-leavers using the different job search methods, they come more sharply into focus when we look at how jobs are attained. Males are significantly more likely to gain their job through friends and relatives. Given that females seem no less likely to use this method of job search, this is consistent with Ensel's (1979) research in finding that such contacts work more effectively for males. The informal methods are more important avenues for part-time jobs and, conversely, the formal channels of advertisements and the public employment agency are more important for the full-time labour market. Males, those who stayed on at school longer, and those who gained their jobs immediately or soon after leaving school were less likely to have gained their jobs through the CES/Centrelink. Young people who had left home, relative to those at home with at least one parent working, were more likely to use the CES/Centrelink. Asking friends and relatives is the only method for which attainment declines with the time taken to find a full-time job after leaving school. Thus the potential benefits of social networks may become realised and/or exhausted more quickly when compared with other methods, such as checking advertisements and approaching employers, through which new opportunities continually arise.

Do the methods of job search chosen and the eventual means by which one finds a job really matter for employment outcomes? On the face of it, the answer is yes. The use of informal job search methods appears particularly effective in generating employment opportunities. Jobseekers who had approached friends and relatives or employers directly were more likely to be in work one year later compared to those who did not. The estimated impact for the first of these is large. Our estimates imply that having asked friends or relatives increased the chance of being in work by 20 percentage points, from around 50 to 70 per cent. It is the most dominant effect identified in the models and, to place it in another context, is a larger impact on employment outcomes than has been estimated for the vast bulk of Australian active labour market programs for the unemployed over the years (see Stromback and Dockery, 2000).

Furthermore, we find that jobs gained through informal methods offer higher hourly wages. An hourly wage premium of around 7 per cent is estimated for those who found jobs through friends or relatives and of around 5 per cent for those who successfully approached an employer. In part, this is because these methods are more likely to lead to part-time jobs, which also carry a positive hourly premium. A wage premium of 6.5 per cent for having found a job through friends and relatives is also estimated to exist within the full-time sector. However, the advantages of jobs gained through informal methods do not seem to extend beyond the higher hourly wage rates. Jobs gained through friends and relatives were less likely to be seen as the type of job one would want as a career. More generally, informal methods of job attainment were associated with lower levels of satisfaction with the type of work done and training and promotional opportunities.

A literal interpretation of the models of employment outcomes is that using the CES/Centrelink actually reduces a person's chance of gaining employment. Further, jobs attained via referral from these agencies offer, on average, lower hourly wages relative to the three other methods of job attainment. That is, given an individual's personal characteristics and the other steps they have taken to find work, registering with the CES/Centrelink will, on average, mean that an individual is less likely to be in work one year on than if they did not register with the CES/Centrelink.

Such observations have previously been noted for public employment agencies in other countries but, in some instances at least, this can be attributed to the researchers failing to

take adequate controls for previous time in unemployment and other barriers faced by the agencies' clients. In this case we have controlled for a reasonable range of individual and background characteristics. However, it remains probable that at least some of the negative effects we observe for the CES/Centrelink are actually due to unobserved characteristics associated with both a greater likelihood of using the public agency and with poorer labour market outcomes. In interpreting the significance of this finding with regards to job search strategies, it must also be remembered that registration with the CES or Centrelink is necessary in order to claim unemployment benefits. Thus, the decision to register clearly may not be directly related to one's strategy for finding employment.

Equally, the fact that a job search strategy has proven successful for those who have used it does not imply that it will do so for others. Those who contacted friends and relatives achieved better employment outcomes but these people may have chosen to follow this strategy in the knowledge that they have good quality contacts, who are likely to be able gain them a foot in the door at one or other workplace. Thus the effect observed may be just as much a result of those individuals already having had access to a better social capital network.

The CES and Centrelink fare better when compared to the informal methods on the measures relating to the perception about jobs attained as being a career job and the level of satisfaction with training and promotional opportunities. Of the four methods of job attainment analysed, advertised vacancies provided the best outcomes on these measures. As to which method of job search and attainment offers higher "quality" jobs must then be a value judgement. We believe a feasible interpretation of the set of results pertaining to informal methods of job search and attainment is that they offer good short-term outcomes but possibly at the expense of longer-term prospects. Informal methods appear to provide young people with employment opportunities more readily and at good hourly wage rates but the young people surveyed perceive these jobs as lacking the career path, training and promotional opportunities necessary for the ongoing accumulation of human capital.

One important contribution of this analysis has been to provide a reassessment of the findings from Heath's 1999 study based on the *Australian Youth Survey*. The analysis in that study concentrates on the data relating to the "main" method of job search used. The results lead Heath to proffer the puzzle of why young Australians seemingly follow sub-optimal job search strategies by making little use of friends or direct approaches to employers: "Over 60 per cent of Australian teenagers obtain their jobs using these [direct] methods, whereas only 30 per cent of unemployed Australian teenagers report these direct methods as their main method of job search" (1999: 19). By including data on all methods of job search used, rather than just the main method used, it is clear that informal methods are in fact extensively used by young jobseekers, even if they are unlikely to be nominated as the "main" method they are using. Heath also finds that receiving unemployment benefits significantly reduces the probability of young jobseekers approaching employers, asking friends or relatives or looking in newspapers. Again we believe this to be a fallacy arising from the data selected. It is not overtly acknowledged that claiming a benefit requires registration with the CES/Centrelink, which in turn may prompt jobseekers to nominate this as the main method used. The results in this report show a significant and positive relationship between claiming

benefits and the likelihood of approaching an employer and asking friends and relatives, as well as with registering with the CES/Centrelink.

Throughout the analysis, two groups stand out as being different - those looking only for part-time work and those who had left home. People seeking only part-time work are markedly less likely to use all four of the job search methods investigated and less likely to have found employment a year later. The models compare those living at home with no parent/caregiver working and those who have left home to the base category of young people who are living at home with at least one parent/caregiver in work. Young jobseekers no longer living at home were significantly more likely to register with the CES/Centrelink, most probably due to a greater need to claim benefits, and to canvass friends and relatives in search of work. Despite this latter strategy, they are significantly *less* likely to have gained jobs through friends and relatives, suggesting that leaving home weakens or severs important social networks that generate employment opportunities. Those jobseekers who had left home were around 15 per cent less likely to be in employment a year later compared to those living at home with a working parent. They would seem to represent a legitimate target group for early intervention and tailored job search assistance that compensates for decreased access to effective social networks.

Social network capital and neighbourhood effects

The use of friends and relatives to help attain work has been taken to evidence social network capital. We have also used two other broad measures of social network capital. One relates to the attributes of the individual's family – parents' occupational status, level of education, and wealth as measured by a "wealth index". The second attempts to capture neighbourhood effects, relating to the local area or the young person's peer group, by deriving averages at the school level for these variables. It must be said that we have not identified strong effects relating to social network capital through these variables. This may be because our variables are poor measures of social network capital and neighbourhood effects or because the effect is indeed only minor. Given that it has been difficult to distinguish patterns in the results that match our *a priori* expectations of how social network capital impacts upon job finding and employment outcomes, and other research on the LSAY which suggests the presence of neighbourhood effects (Andrews, Green & Mangan, 2002), it seems most likely that the problem lies with our measures.

Youth from schools with higher than average socio-economic status of fathers are found to be more likely to seek work through friends or relatives. However, they are also more likely to have gained work through the CES or Centrelink. More in accord with expectations, we find a positive wage premium associated with having attended a school with this kind of attribute. Generally, higher than average paternal socio-economic status in a school community is associated with lower levels of satisfaction with the various aspects of job quality, a result we suggest is due to students from these schools having higher expectations. The effects of school averages for parents' educational levels and the wealth index were surprisingly limited. This also holds for the occupational and educational status of youths' own parents. Another unexpected result, that may be worthy of future investigation, is that, in a number of cases, mothers' characteristics were found to be more significant than fathers'.

8. POLICY IMPLICATIONS

Aggregate level data show that those who stay to complete Year 12 enjoy better labour market outcomes than those who do not. However, the addition of more years of schooling may not be matched by an increase in the quality of the learning obtained. In instances where a young person is unlikely to benefit from staying on, they should be able to leave school and take up employment opportunities where 'good jobs', such as those which provide quality training, are offered. The results of this report have shown that informal job-gaining strategies are associated with higher earnings and with greater employment opportunity. Consequently, work-bound school-leavers should be encouraged to use informal job-gaining strategies to find employment.

It is important to note, however, that simply strengthening the role played by social networks in the recruitment process is unlikely in itself to improve the position of young people and that other measures are required. Of central importance is the exposure of young people to a wide range of employers, particularly those in expanding areas of the economy, those who hold out the possibility of social mobility, those who offer full-time employment, and to those who offer quality training. It makes little sense to link school-leavers to employers in declining sectors of the labour market or to employers who do not offer training that may help young people find employment in the future. In this respect, policies designed to increase the links between employers and jobseekers should focus on producing sustainable employment outcomes.

At the same time, policies that increase the signalling effect of school qualifications should also be encouraged. It is important that this be achieved because it may provide a way for those who do not participate in employment-rich social networks to increase their employment prospects. In recent years much effort has been put into improving school-leaver qualifications through the development of the Australian Qualifications Framework and the introduction of outcomes-based assessment. It is too soon to assess the ability of the new qualifications systems to replace the role played by social networks in the recruitment process and research is required to explore this issue. However, the continued importance of the service sector as an area of employment for work-bound school-leavers raises the possibility that qualifications systems will continue to struggle to fully report on the range of skills employers look for when recruiting school-leavers. The main reason for this is that it seems unlikely that qualifications will be able to adequately reflect the extent to which young people hold the 'soft skills' (such as 'inter-personal' skills) demanded in many service sector occupations. One the other hand, where it is clear that employers demand qualifications, it makes sense to encourage young people to obtain these.

The data presented suggest that the CES/Centrelink performs poorly in terms of helping young people who do not go on to post-secondary education and training to find employment. It is possible this situation may have improved under the Job Network but the role of Centrelink and Job Network members in providing assistance to this group of jobseekers needs to be examined, and possibly overhauled, with an aim to fostering approaches which are more closely targeted to the needs of young jobseekers. This may include specialist providers working in closer liaison with schools and local employers to identify those youth at risk and to provide opportunities for work experience and access to social networks. Simply keeping those young people, who do not obtain school qualifications, in school longer does not appear to improve their employment prospects.

Finally, although this study was unable to assess the extent of spatial disadvantage experienced by young people living in employment-poor localities, given the importance of social networks for the recruitment process, spatial disadvantage is likely to present policy makers with special challenges. For example, the Mandurah Region, south of Perth, presents poor employment prospects for youth (4 out of 10 young people are unemployed), the school retention rate is below the national average, and comparatively few young people access further education. The availability of relatively inexpensive housing in the area has attracted many new people, a proportion of whom are retirees, unemployed people, or single parents, to the area and the city of Mandurah has been calculated to be one of the fastest growing cities in Australia. In settings such as Mandurah, it is difficult for young people to cultivate employment rich social networks within the district and it seems that, unless new industry can be attracted to the area, it is likely the problem of youth unemployment will remain. Policies that encourage the development of 'bridging networks', which might link Mandurah's youth with employers in Perth, are likely to improve the position of those young people who are employable and who are prepared to shift location in order to obtain employment.

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