

**Measuring Employment
in the 21st Century**
**New measures of underemployment and
overwork**

Richard Denniss

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Executive Summary

The system of labour market statistics in Australia is in urgent need of reform. The principal measure of labour market performance, the unemployment rate, was developed in an era when the labour market was based on full-time male bread-winners. Over the last two decades, deregulation and structural change have transformed the labour market radically. Underemployment of part-time and casual workers is now a serious problem as is the burgeoning problem of overwork. Yet proper understanding of these important trends is missing from public debate and policy-making because they are not captured in the official statistics.

The current system of labour force statistics is based around an outdated and rigid structure whose main function is to classify people into one of three categories – employed, unemployed and not in the labour force. When 90 percent of those classified as employed were full-time workers as was the case in the 1960s, such a system was appropriate. However, when someone working for only one hour a week is classified as ‘employed’ and there are over 200,000 people working less than 10 hours per week but seeking additional hours, then new measures of labour market performance are needed.

In Australia today more than 15 million people are over the age of 15. Of these, 6.7 million are employed full-time and 2.3 million are employed part-time. Of those employed part-time, over 430,000 would prefer to work additional hours. Many of the full-time workers wish to work fewer hours, although regular data are not collected on this issue.

A single summary indicator cannot capture all of the dimensions of labour market. Rather than continue to attempt to place all Australians into one of three labour force categories and describe the performance of the labour market by dividing one category by another, this paper advocates a different approach. The new approach would incorporate information on how many hours people would *prefer* to work as well as how many hours they do work. By asking respondents to the ABS’s Labour Force Survey to state both the number of hours they worked and the number of hours they desired to work it is possible to measure the nature and extent of unemployment, underemployment and overwork simultaneously, and to do so much more accurately than is currently the case.

An important feature of any system of labour force statistics is that they should be compatible with both data collected in the past and with data collected internationally. The addition to the ABS Labour Force Survey of a question concerning the number of hours desired as proposed would not prevent estimation of current measures of unemployment. But in addition to the unemployment rate, the new system would allow estimation of the extent of underemployment experienced by those working only a few hours per week, the extent of overwork by full-time workers and the overall capacity of the labour market to match the changing needs of employers to the desires of employees.

Although the data required to implement the proposed system are not currently collected systematically, enough information is available to make some approximations. Figure E1 shows the number of underemployed persons, that is, the number of part-time persons expressing a desire to work more hours plus the number of full-time workers who worked fewer than 35 hours in the reference week due to a lack of work. The number of underemployed workers has grown steadily since the late 1980s.

Figure E1 The number of unemployed and underemployed workers in Australia

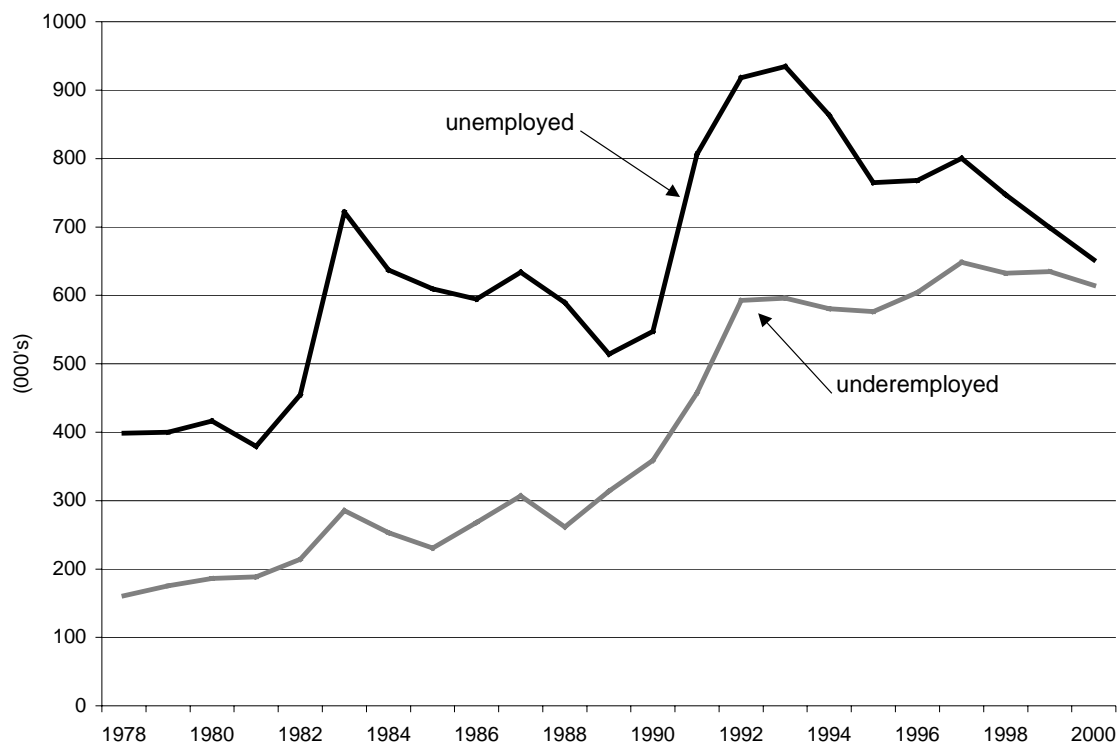
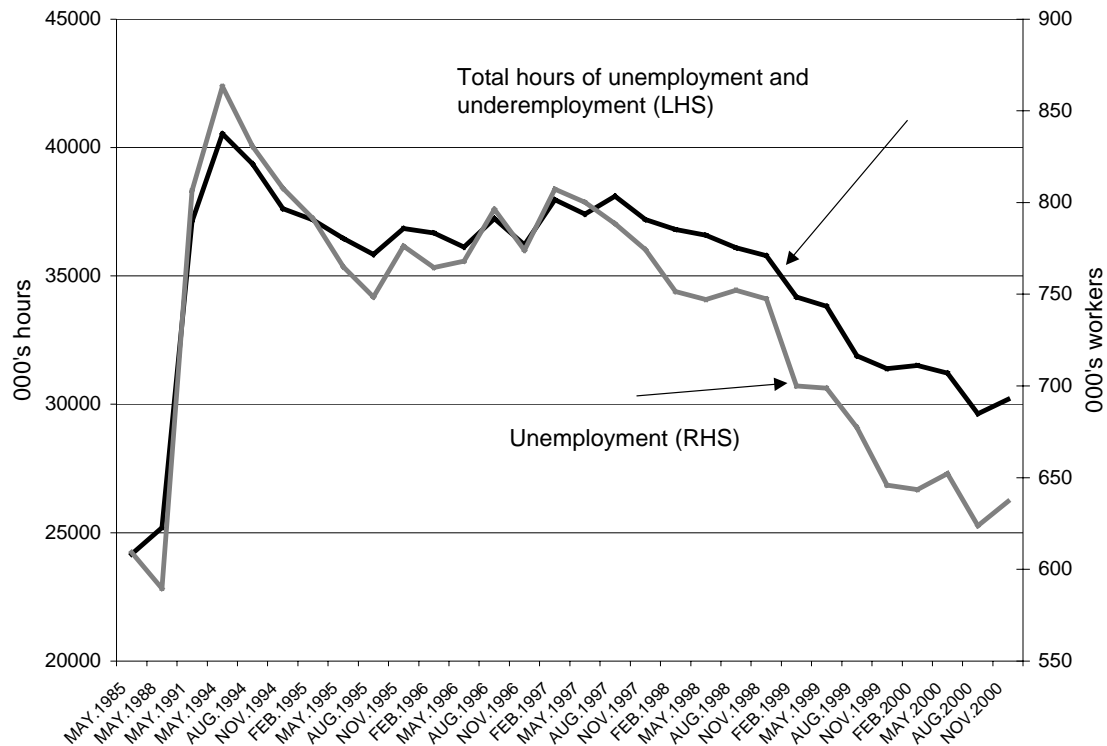


Figure E2 provides estimates of the total number of hours lost to unemployment and underemployment and is therefore a better measure than the unemployment rate of the inadequacy of employment opportunities in Australia. The estimate includes the hours lost by unemployed persons seeking full-time work, unemployed persons seeking part-time work, part-time workers seeking additional hours and full-time workers working less than 35 hours per week due to economic reasons.

It is important to note that while lost hours have decreased steadily since the recession of the early 1990s, the decline in lost hours has been slower than the reduction in unemployment. Of particular interest is the widening of the gap between hours of underemployment and the number of unemployed in 1998 and again in early 2000. While the number of people unemployed is now back to around the levels experienced in 1985, the number of hours of underemployment is around 24 percent higher than at that time. The difference between the number of unemployed persons and the number of hours lost to underemployment (which includes the unemployed) is equivalent to around 150,000 full-time jobs.

Figure E2 Unemployed persons and hours of underemployment

While unemployment, and substantial underemployment, create enormous personal and social costs, another labour market problem that is barely considered in the labour force statistics is that of overwork.

Figure E3 shows that the proportion of jobs requiring long hours has also continued to grow steadily. While the overworked are unlikely to suffer from the financial problems of the underemployed, the impact of long hours on health, family commitments and the capacity to engage fully with the broader community are substantial. The figure shows that overwork is a growing problem with no sign of it abating.

Involuntary overwork is as much a failure of the labour market as underemployment. It is therefore important to have accurate measures of the extent of overwork, and to ensure that policies are in place to enhance the capacity of the labour market to match the desires of workers to the needs of employers.

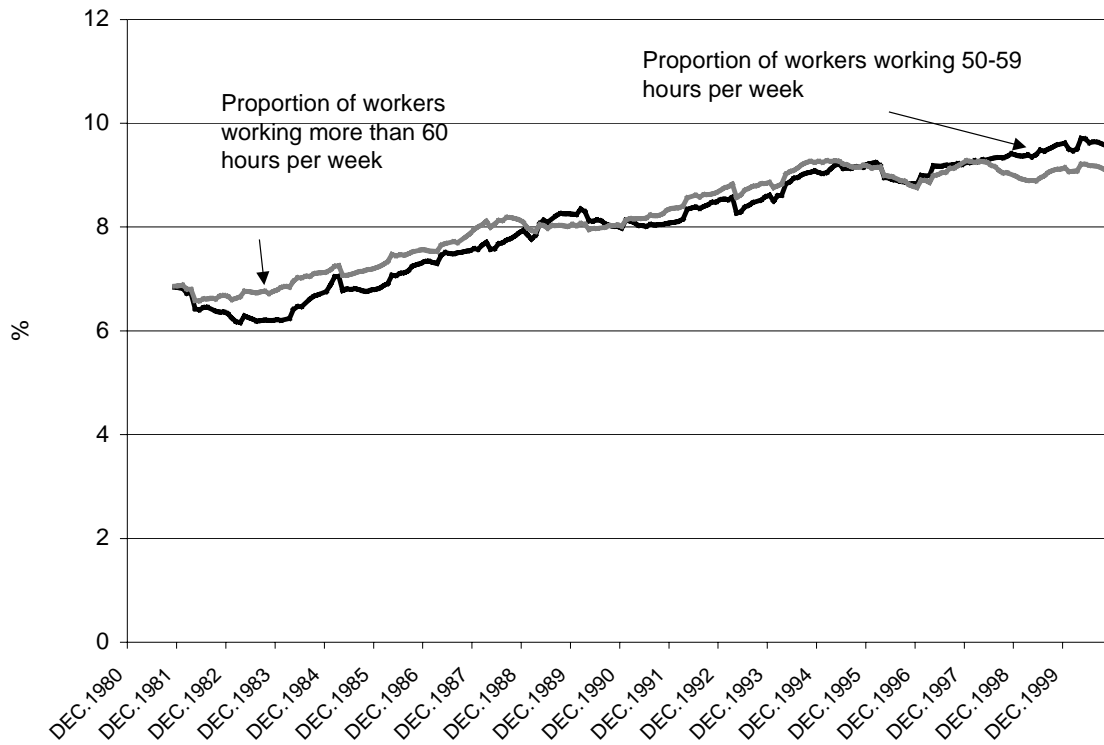
Unemployment, underemployment and overwork are important problems which are unlikely to be solved quickly or easily. However, without accurate data on the nature and extent of these problems adequate policy responses are impossible.

In addition to calling for the collection of new data on the desired amount of work for all workers, this report outlines the benefits of work sharing, and suggests mechanisms for achieving a fairer distribution of work. While it is unlikely that underemployed workers

could easily fill the jobs of the overworked, experience indicates that net employment gains from work sharing are achievable.

The only constants in the Australian labour market over the last 40 years are the statistics used to describe it. New data and new summary indicators are needed to ensure that policy makers and the general public are fully informed as to the nature and extent of labour market problems.

Figure E3 Proportion of workers working 50-59 and more than 60 hours per week



1. Introduction

The current system of labour force statistics is inadequate for providing insight to the important issues of today's labour market. Those interested in the extent of underemployment, the amount of overwork and changes in the efficiency of the labour market in matching the needs of workers and employers will find little of use in the published labour statistics. The current Labour Force Survey (LFS) was designed to measure an economy in which full-time work was the norm. In a labour market with high rates of unemployment and large numbers in non-standard employment arrangements new measures are needed.

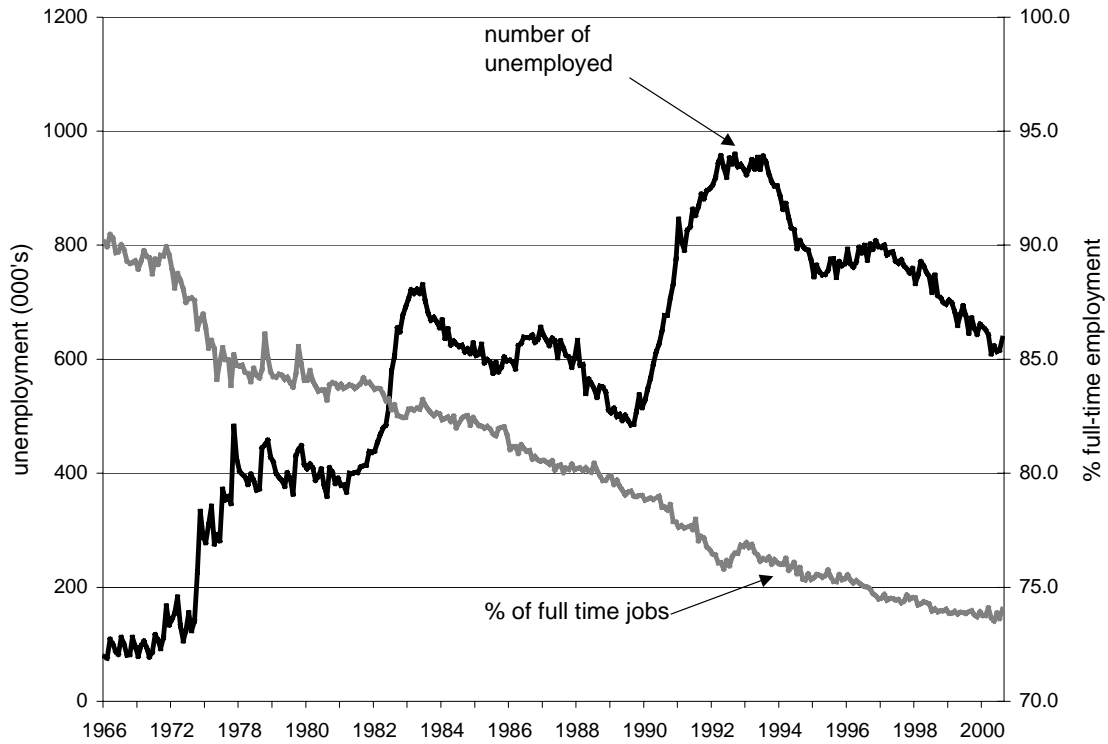
Government policy, changing demographics, new technology and increased globalisation of production have all had a substantial impact on the Australian labour market. Fifteen years of labour market 'deregulation' and the possibilities for job redesign associated with increased use of the internet are just two examples of the pressures for change.

A brief description of the labour market illustrates the extent of change. Women's participation has increased from 36.3 percent in 1966 to 54.5 percent in 2000. Over the same period the number of workers employed full-time has declined from over 90 percent of all employees to 74. Only 35 percent of those employed today work between 35 and 44 hours per week.

Despite these changes, there has been relatively little change in the approach to measuring the performance of the Australian labour market. While new supplementary surveys have been added, Australian labour market statistics are still based on a framework designed in the 1960s to describe the labour market of the time. Such an approach is no longer adequate. This paper develops a new way of describing the Australian labour force based on the extent of underemployment and overwork experienced by individuals.

Figure 1 shows the cyclical nature, and upward trend, in the number of people officially defined as unemployed in Australia. As will be discussed in detail below, to be defined as employed it is necessary to work only one hour or more per week. Figure 1 also shows the steady decline in the percentage of jobs that are full-time. In 1966 over 90 percent of jobs were full-time. In such an environment the classification of individuals into 'employed' or 'unemployed' provided a more accurate indication of the state of the labour market than in a deregulated labour market as those individuals working more than one hour per week who desire to work additional hours are not included in the measure of unemployment.

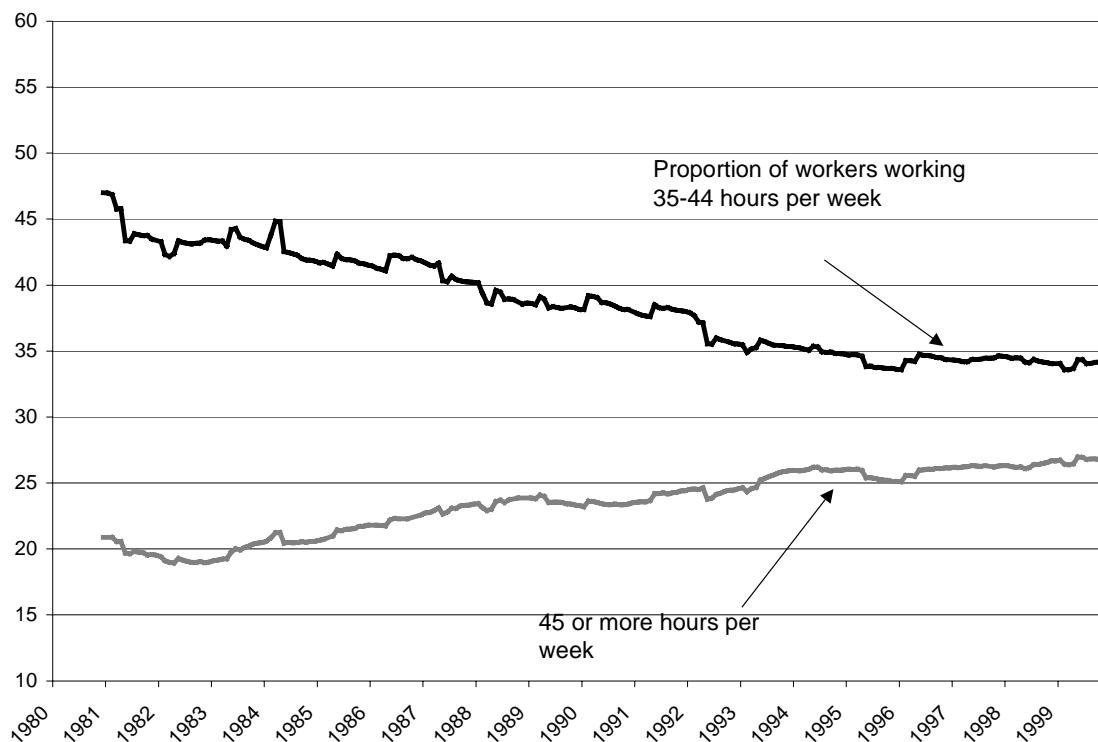
Figure 1 Unemployment and the percentage of jobs that are full-time



Source: ABS 6203.0

While the importance of full-time work is declining in percentage terms the proportion of people working long hours has increased steadily over the last 20 years. Figure 2 shows both the increase in the proportion of workers working over 45 hours per week and the decline in the proportion of the labour force working 'standard hours' of between 35 and 44 hours per week.

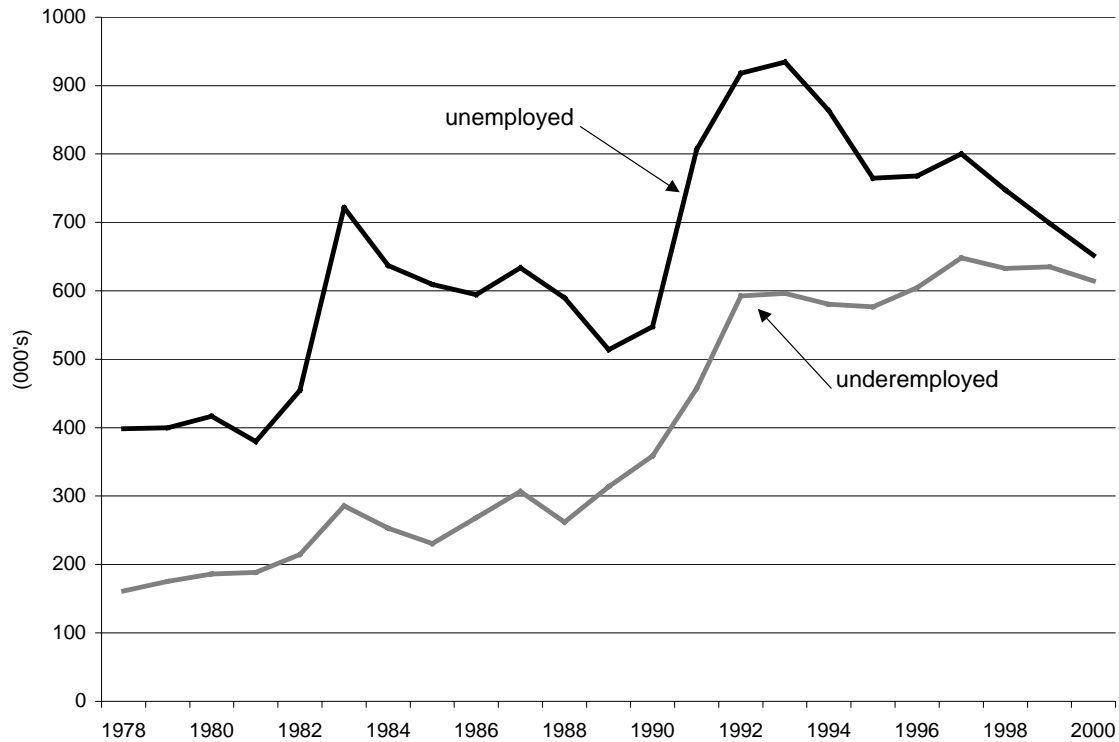
Figure 2 Proportion of workers working standard and long hours



Source: ABS 6291.0.40.00 (Monthly data have been smoothed with a 12 month moving average)

The usefulness of the definition of unemployment is placed under pressure when underemployment exists. Though not unemployed in terms of the definitions used by the ABS, many underemployed workers are likely to suffer from similar problems such as insufficient income and loss of self-esteem.

Figure 3 shows that while the number of unemployed has decreased steadily in recent years the number of underemployed persons has actually risen since the last recession. In this context underemployment refers to the number of full-time workers working less than full-time hours due to a lack of work plus the number of part-time workers expressing a preference for additional hours. As the unemployment rate ignores the situation of the underemployed it is an inadequate measure of the state of the labour market. More detailed criticisms, and the development of alternatives, are discussed in Section 3.

Figure 3 Number of unemployed and underemployed persons

Source: ABS 6203.0

As new modes of employment (e.g. contractors and consultants) and new modes of work (e.g. telecommuting and job sharing) become more important existing categories of 'employed' and 'unemployed' become increasingly irrelevant. This is not to suggest that the existing statistical structure is flawed, just that its usefulness is diminishing as the world it seeks to describe changes at a rapid rate. Statistics provide a window, however frosted, through which to view the world in which we live. The size, shape and clarity of that window is determined by the approach adopted by statistical agencies. If we are to have an accurate understanding of the impact of government policy on the labour market it is important to have accurate, relevant statistics. If governments are to accurately monitor the success, or failure, of labour market reform then it is essential that they develop tools that are appropriate for the labour market of the 21st century.

This discussion paper is concerned with the nature and extent of the problems associated with the current system of labour force statistics. While it outlines the problems associated with hidden unemployment the new measures that are developed as well as the policy solutions advocated are concerned primarily with the existence of underemployment and overwork. The paper is structured as follows. Section 2 outlines the problems associated with the existing labour force statistics. Section 3 discusses the ABS approach in detail. Section 4 provides an overview of the literature concerned with improving labour force statistics. Section 5 proposes new questions to be added to the labour force survey and describes the development of new summary indicators. Section 6

presents the results of the new measure. Section 7 discusses the implementation issues associated with the development of such a system, Section 8 considers some policy implications and Section 9 offers some concluding comments.

2. Problems with the existing labour force statistics

The changing labour market has reduced the relevance of the main concepts used by the ABS to describe the characteristics of the Australian workforce. Some of the main problems are:

- If a million workers were involuntarily switched from full-time to part-time work there would be no impact on the measured unemployment rate.
- If full-time workers seek additional hours but cannot get them they would be measured as fully employed even though they see themselves as underemployed.
- People who work 50 hours per week but would prefer to work 35 hours per week are not officially measured as being overworked. We have no official measure of overwork.
- Policies to encourage casual employment at the expense of full-time employment will have the effect of reducing the unemployment rate, as the definition of employed does not distinguish between those working ten hours per week and those working 40 hours per week. That is, if a 40 hour per week job is turned into four 10 hour per week jobs then the employment statistics would show three new jobs being created.

The main problem with the existing statistical framework, and with most of the existing alternatives, is that they are based on the notion that people can be meaningfully categorised as employed, unemployed or Not In the Labour Force (NILF). These distinctions are described in detail below. While such an approach may have been effective when 90 percent of people who identified themselves as employed were employed full-time, this is no longer the case.

Attempts to modify the ABS approach to describing the labour market typically attempt to create new categories (such as underemployed) or shift people from the fringes of one category into the fringes of another. For example, a person employed for five hours per week is defined by the ABS as employed. If that worker actually wished to work 25 hours a week then they would be more accurately described as being underemployed. One proposal is for the definition of employed to be arbitrarily shifted from those working more than one hour per week to those working more than ten (*The Age*, 2001).

A person who is without work, who would like to work, but is not actively seeking it would be described by the ABS as NILF. Some authors argue that such 'discouraged workers' should more accurately be described as unemployed. Another approach adopted

by Ross (1985), Wooden (1996) and Mitchell and Carlson (2000), is to focus on hours of work rather than number of workers. The analysis presented below is based on a similar approach. The paper also outlines the requirements of an expanded Labour Force Survey which would provide sufficient information to allow policy makers, economists and other users with sufficient information on underemployment and overwork to accurately describe the performance of the contemporary labour market. Ross (1985) made similar calls for the collection of more useful data concerning desired hours of work.

Rather than attempt to classify individuals into a finite number of categories ranging from NILF to fully employed, another approach is to rely instead on a continuum of employment outcomes. Such a continuum would emphasise the extent of underemployment (including unemployment) or overwork of individuals in the labour market expressed in terms of individual preferences for hours of work. That is, the LFS could determine both the number of hours worked in the survey period and, simultaneously, the desired number of hours. Rather than attempt to infer the extent of underemployment or overwork, analysts and policy makers would be able to directly compare the number of hours worked in the economy with the desired number of hours.

As well as the number of hours of underemployment and overwork, data on the number of people experiencing either underemployment or overwork could be easily produced if it was considered informative. Similarly the number of people working less than or more than their preferred hours could be easily determined as could the number who worked zero hours but desired employment (the unemployed). Such an expansion of the survey need not come at the expense of existing questions, or compatibility with existing concepts, it would simply enhance the range of available data.

Changing social, economic and regulatory structures are placing increasing pressure on the current system of labour force categories. If an accurate picture of the contemporary labour market is to be achieved then it is essential to redesign the statistical tools used to describe the labour market. As will be shown below, a considerable literature has existed for over 30 years expressing concern with the adequacy of existing labour market measures. In an environment in which flexibility is explicitly encouraged, labour market measures based on rigid, arbitrary and centrally determined demarcations of labour market outcomes are of rapidly diminishing relevance.

3. The ABS approach

The ABS has relied on the LFS since 1960 to provide information on employment, unemployment and labour force participation. The last major changes to the LFS were made in 1978 when collection frequency was increased from quarterly to monthly (ABS 1997). The ABS is currently planning to implement a minor revision to the questionnaire in early 2001.¹ This section provides a brief overview of the ABS measures of labour

¹ For details of the latest revisions see ABS (2000c)

force statistics. The next section provides a discussion of some alternative approaches to describing the labour market which have been suggested in the literature.

The LFS is a monthly survey of around 29,000 households comprising approximately 65,000 individuals. Participant households are selected in such a manner that the sample closely approximates the demographic characteristics of the Australian population.² Once selected, households remain in the sample for eight months. Initial interviews are conducted face to face with subsequent interviews conducted over the telephone where possible.

The main objective of the LFS is to categorise people into three main groups, employed, unemployed and not in the labour force. The full range of sub categorisations is shown in Appendix A. The ABS definitions for these categories are as follows:

Employed

Person aged 15 and over who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (comprising employees, employers and own account workers); or
- worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers); or
- were employees who had a job but were not at work and were: on paid leave; on leave without pay for less than four weeks up to the end of the reference week; stood down without pay because of bad weather or plant breakdown at their workplace for less than four weeks up to the end of the reference week; on strike or locked out; on workers compensation and expected to be returning to their job; or receiving wages or salary while undertaking full-time study; or
- were employers, own account workers or contributing family workers who had a job, business or farm, but were not at work.

Unemployed

Persons aged 15 and over who were not employed during the reference week, and;

- had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week and;
- were available for work in the reference week, or would have been available except for temporary illness (i.e. lasting for less than 4 weeks to the end of the reference week); or

² For a detailed description of the ABS sampling approach see ABS (1997)

- were waiting to start a new job within four weeks from the end of the reference week and would have started in the reference week if the job had been available to them; or
- were waiting to be called back to a full-time or part-time job from which they had been stood down without pay for less than four weeks up to the end of the reference week (including the whole of the reference week) for reasons other than bad weather or plant breakdown.

Not in the Labour Force

Persons who were not in the categories employed or unemployed, as defined. They include persons who were keeping house (unpaid) retired, voluntarily inactive, permanently unable to work, persons in institutions (hospitals, gaols, sanatoriums, etc.) trainee teachers, members of contemplative religious orders, and persons whose only activity during the reference week was jury service or unpaid voluntary work for a charitable organisation. (ABS 2000a).

These classifications are used to describe the labour market via a range of summary statistics, perhaps the most important of which is the unemployment rate. The unemployment rate is the percentage of the labour force that is defined as unemployed, that is:

$$\text{unemployment rate} = \frac{\text{number of unemployed}}{\text{number of employed} + \text{number of unemployed}} \text{ as a percentage of the labour force}$$

Another important indicator of labour market performance is the Labour Force Participation Rate (LFPR). The LFPR describes the percentage of the working age population which is actively involved in the labour market (i.e. either employed or actively searching for employment). The LFPR has trended upwards in Australia since the 1960s as participation by women in the labour market has increased. The LFPR is calculated as follows:

$$\text{LFPR} = \frac{\text{labour force (number of employed} + \text{number of unemployed)}}{\text{sum of the labour force and those not in the labour force (i.e. the working age population)}} \text{ as a percentage}$$

One final summary indicator which is less commonly referred to in public debate is the Employment Population Ratio (EPR). The EPR shows the number of people employed as a percentage of the working age population. While the EPR provides an accurate indication of the percentage of the population engaged in work, it provides no information on the percentage of the population that desires work. The EPR is calculated as follows:

$$\text{EPR} = \frac{\text{number of people employed}}{\text{working age population}} \text{ as a percentage}$$

The main issue for economists, policy makers and other users of the LFS data is whether the existing labour market categories, and the summary statistics based upon them, are

sufficient to provide a meaningful analysis of the labour market. A number of limitations with the existing categorisations arise.

- **Underemployment.** People working more than one hour per week are classified as employed. They may, however, desire to work additional hours. While some data are collected on the number of part-time workers who wish to work additional hours it is not possible to incorporate these data easily into the standard measure of unemployment. To the extent that the LFS provides information on the extent of excess labour supply in the economy it is therefore inadequate, especially the traditional summary indicators of the unemployment rate and the employment-population ratio. The ABS has recently decided to publish data on underemployed part-time workers quarterly rather than monthly.
- **Overwork.** Another important contemporary labour market issue is the nature and extent of overwork, both unpaid and paid. The efficiency of the labour market must be judged by its capacity to match the desired labour supply options of workers with the desired work arrangements of employers. To the extent that a substantial number of people are involuntarily working significantly longer hours than they desire the labour market is failing. It is perhaps ironic that the deregulation of the labour market, a process designed to increase the matching effectiveness of the market, has contributed to the increase in overwork (see for example Heiler 1998).
- **Discouraged workers.** To be unemployed a person must not only desire to work but be actively seeking it. The search for work is seen as a proxy for the desire to work. The search decision may in part be affected by the desire to find work, but other determinants must also be considered. An important determinant which has been extensively discussed in the literature is the impact of an estimated low probability of finding work on people's willingness to search. The 'discouraged workers' are those workers who feel that the probability of success, rather than the desirability of that success, does not justify expending time or money on job search.

Deficiencies in the system of categorisation, such as those outlined above, in turn lead to deficiencies in the summary statistics that are typically calculated. The major problems with the conventional summary statistics are as follows.

- **The unemployment rate.** The unemployment rate suffers from two major problems. First, discouraged workers are excluded from the ranks of the unemployed as they fail to meet the requirements of the activity test. The number of people desiring work will therefore be underestimated. Secondly, defining people as employed if they work for more than one hour ensures that people who have some employment but desire more will not be considered unemployed. The unemployment rate is therefore an accurate indicator of the number of people engaged in a particular activity, namely actively seeking employment while working less than one hour per week. It is, however, an inaccurate measure of the number of people desiring additional work and says nothing about the amount of additional work they desire.

- **The Labour Force Participation Rate.** The LFPR, like the unemployment rate, is affected by the existence of discouraged workers. If people cease actively searching for work then they will no longer be categorised as unemployed, and in turn, will not be counted in the labour force.³ Changes in the participation rate can be used as an indicator of the number of discouraged workers. A major problem that the LFPR shares with the unemployment rate is that it provides no information about employed persons satisfaction with the extent of their participation, i.e. whether they consider themselves to be underemployed or overworked.
- **Employment Population Ratio.** The employment population ratio provides an accurate indication of the proportion of the working age population who are employed. This measure has the advantage of being unaffected by changes in the search behaviour of the unemployed and therefore provides a more accurate indicator of labour market performance than the unemployment rate over the course of the business cycle. The two major problems with the EPR are firstly, that it provides no information on the desire of the population to participate in the labour market, making it difficult to interpret the desirability of the EPR at a point in time. Secondly, like the measures described above it provides no information on workers satisfaction with the amount of work they are engaged in.

There is a common element shared by the problems outlined above; none of the measures cope well with the existence of underemployment. Rather than invent a new category, or attempt to incorporate the underemployed into an existing category, this paper proposes the development of new LFS questions which go to the heart of the problem. It proposes additional questions that will allow researchers to define the amount of underemployment or overwork of an individual in terms of their own desires for employment.

The focus of this paper is on providing solutions to the first two limitations. While the proposed solutions are not incompatible with the variety of solutions proposed to overcome the problem of measuring discouraged workers, the issues raised are more contentious. The objective of this paper is develop new measures which unambiguously improve the LFS without limiting the possibilities for further refinements, such as the inclusion of ‘marginally attached’ workers in the future if they are considered desirable.

4. Existing alternatives

A large literature on the problems of labour force statistics, both domestically and internationally, has emerged over the last 30 years. Difficulties associated with the classification of individuals as unemployed or underemployed have been discussed in the literature since the release of the report of the Presidents Committee to Appraise Employment and Unemployment Statistics (1962). Stein (1967), OECD (1968), Flaim (1973), Gastwirth (1973), Mincer (1973), Shishkin and Stein (1975), Shishkin (1976), Buss and Redburn (1988), Norwood and Tanur (1994) and Castillo (1998) all considered

³ The labour force is the sum of those employed and those defined as unemployed.

the problems of measuring unemployment posed by the existence of hidden unemployment or discouraged workers.

Gregory and Sheehan (1975) and Stricker and Sheehan (1980) first illustrated the extent of the problem of hidden unemployment and discouraged workers in Australia. They found that 'if we are considering either the loss of potential employment (and hence of output) or the size of the pool of employees which can be drawn upon as the demand for labour picks up, then from a comparison of steady state effects hidden unemployment is more important than registered unemployment. Unless this point is recognized the supply capacity of the economy will be considerably underestimated in recovery phases and overstated in declines' (Gregory and Sheehan, 1975: 561).

In a subsequent study Stricker and Sheehan (1980: 5) found that in 1979 hidden unemployment in Australia was almost as great (337,000) as recorded unemployment (373,800). While the focus of their work was hidden unemployment, Stricker and Sheehan also highlight the importance of 'involuntary part-time work' and 'short-hour employment'. They conclude that '(t)he importance of reluctant part-time workers as a component of underemployment would be clearer if we had consistent information on the hours worked by these persons.' (Stricker and Sheehan, 1980: 29). The inadequacies of the unemployment rate were also discussed at length in Junankar and Kapuscinski (1990,1992).

The Presidents Committee to Appraise Employment and Unemployment Statistics (1962) found that 'the relatively simple dichotomy between those in and out of the labour force...(no longer provide) ...a satisfactory measure of labour supply' (cited in Flaim 1973:8). Similarly, OECD (1968) recognised the inadequacies of reliance on the unemployment rate and called for the development of new indices to more accurately capture the dimensions of the unemployment problem. It presented the results of a 'subemployment index' which included '...not only the unemployed as conventionally defined, but all others whose potentialities are not being fully utilised...allowance is made for the labour force dropouts and for other groups as well: men who are known to be present but could not be located by the survey, part-timers who would like to have a full-time job and workers earning sub-standard wages...' (OECD 1968:9).

Following the findings of the President Committee the U.S. Bureau of Labour Statistics (BLS) began collecting data on reasons for non-participation in the labour force (Flaim, 1973). Time series analysis of this data, and the evidence of the extent of hidden unemployment, was published in a collection of articles in the March 1973 edition of the *Monthly Labour Review*. In that edition Flaim (1973) concluded that:

...the hypothesis that changes in the number of discouraged workers are closely related to changes in the unemployment rate can now be verified at least tentatively. The same can also be said for changes in the number of workers leaving the labour force because of slack work...To the extent that this is true, it would appear that we should take into account these variables, as well as the data on unemployment and underemployment, when assessing the waste of manpower which accompanies an economic recession (Flaim, 1973: 14).

Mincer (1973: 30) concluded ‘...labor force status is not a dichotomous but a continuous variable.’

Concerns about the appropriate groups to include in both the numerator and denominator of measures of the unemployment rate led to the development of a range of different measures of unemployment reflecting the breadth of concern of different users. Shiskin (1976) for example, outlines six different unemployment measures termed U1 to U6. The notion of presenting a range of indicators which capture different notions of what it is to be employed and/or in the labour market continues to be used by the BLS and has been relied upon in the Australian context by Ross (1985), Wooden (1996) and Mitchell and Carlson (2000).

Most of the studies cited above stress the need to identify discouraged workers separately in order to shed more light on the actual performance of the labour market. Less attention has been given to the need to measure underemployment in the literature. Australian authors who have considered the impact of underemployment on the extent of labour supply include Ross (1985), Wooden (1993), Wooden (1996) and Mitchell and Carlson (2000). These authors have all developed measures of underemployment which have been seen as complementary to the unemployment data.

Two different approaches to underemployment have been adopted in the literature. A ‘head-count’ approach, such as that discussed in Ross (1985), Wooden (1993), and presented in Figure 3, simply seeks to describe the number of people experiencing underemployment. The underemployment rate can be expressed as

$$UR = Eu/E$$

where UR equals the underemployment rate, Eu is the number of people underemployed and E is the number employed.

The problem with head-count measures of underemployment is that, like the unemployment rate, they provide no information on the number of hours of underemployment. The solution to this shortcoming is to measure underemployment in hours rather than in persons. Ross (1985), for example, proposed that underemployment be measured by

$$\frac{(\text{aggregate desired hours} - \text{aggregate actual hours worked})}{\text{aggregate desired hours}}$$

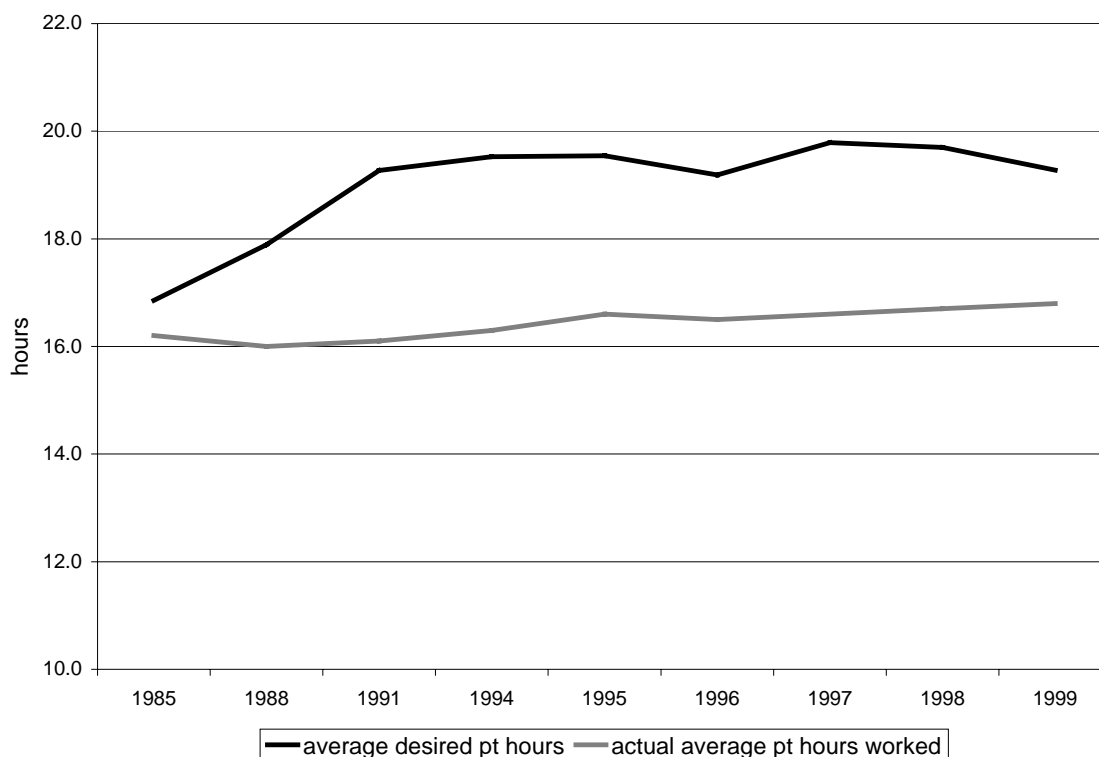
Following Ross (1985), Wooden (1993) provided estimates of an hours based measure of underemployment by dividing aggregate desired hours of work by the sum of aggregate hours worked and desired additional hours. Both Ross (1985) and Wooden (1993) were constrained by the absence of reliable data on the amount of desired hours of work.

Wooden (1996) and Mitchell and Carlson (2000) both provide further estimates of the extent of underemployment expressed in hours. Once again, the absence of reliable data on the desired hours of part-time workers restricts such work. Mitchell and Carlson (2000), for example, assume that part-time workers seeking additional part-time hours

desire to work the number of hours worked by part-time workers in the next published band of part-time hours. The absence of data on desired hours necessitates such assumptions.

Mitchell and Carlson (2000) underestimate the extent of underemployment in two ways. Firstly, they do not consider the number of hours lost by full-time workers who worked less than 35 hours due to a lack of work in their place of employment. Secondly, they calculate lost hours of those who are unemployed and seeking part-time work with reference to average part-time hours worked. The existence of the underemployment being considered ensures that the result is an underestimate. By summing actual part-time hours worked and additional desired hours of part-time workers it is possible to construct a more accurate indication of the desired hours of part-time workers. The difference between actual average hours worked by part-time workers and average desired hours of work is shown in Figure 4.

Figure 4 Average hours worked and average desired hours for part-time workers



Source: ABS 6291.0.400.001, ABS 6265.0

The main problems faced by authors such as Mitchell and Carlson (2000), Wooden (1996) and Ross (1985) could all be easily overcome if accurate data on desired hours of work, for all workers, were readily available. Mechanisms for collecting such data are discussed in the following section.

The concept of a clear distinction between a group defined as employed and a group defined as unemployed relied upon by the ABS is becoming increasingly irrelevant as a descriptor of the performance of the modern labour market. Trends away from standard hours and standard forms of work has made the traditional demarcations of 'employed', 'unemployed' and 'not in the labour force' inadequate. The problem of overwork is barely considered in the LFS.

Alternative measures such as those discussed above, while providing more useful information than the raw LFS data, also provide an inadequate description of the labour market. Continued reliance on the concept and term 'unemployment' is one of the main problems common to the alternatives discussed above. The arguments in favour of the use of the unemployment rate are based on the fact that its definition is clear and precise. To include the employed and those who are not actively searching for work in a measure of unemployment is self-contradictory. New concepts and new terms must be developed.

There is a simple solution to the increasing strain on contemporary measures of labour market performance; design new ones. While it is important to maintain consistency of certain concepts, the following section shows that it is possible to design new questions and new summary statistics that are both compatible with existing concepts and still provide increased insight into the operation of the labour market.

5. A new system of labour force measurement

The labour market in Australia comprises over 9.6 million people, working in hundreds of occupations in dozens of industries in a wide range of employment modes. Any attempt to describe the performance of the labour market with one, or even several, summary indicators is therefore likely to encounter difficulties. The issue is not whether a perfect indicator can be found, rather, the objective should be to ensure that the best available indicators are used.

In designing any information system the main criterion should be the needs of the users. Labour force statistics are widely used in developed economies but two main uses stand out. First, they are used extensively as a macroeconomic measure of the available labour supply which is in turn used to indicate the existence of inflationary pressures and the adequacy of aggregate demand.

The second use is in describing the matching efficiency of the labour market, that is, the capacity of the labour market to match the labour supply preferences of workers to the desired employment characteristics of employers. Labour market deregulation, for example, has been aimed at reducing unemployment through improving the capacity of the labour market to rapidly adjust to the changing needs and desires of both employers and employees.

The unemployment rate is a fundamentally inadequate indicator for both of these uses. As a measure of excess labour supply it is inadequate as it treats all employed people,

whether they are employed for one hour or sixty, equally. The implicit assumption is that the extent of excess labour supply is proxied by the number of people working less than one hour per week who are engaged in active job search. The underemployed and the discouraged workers can only be included in the unemployment rate at the expense of the definition for unemployment being stretched to the point of becoming an oxymoron⁴.

With regard to measuring the matching efficiency of the labour market the unemployment rate is even more inadequate. While no simple numerical indicator can measure employment characteristics such as job satisfaction and usage of human capital⁵, the unemployment rate does not even provide information on the number of people who feel that the market allocation of employment is providing excessive or insufficient hours of employment.

While new measures of the labour force, such as those discussed below, can help overcome some of the difficulties discussed above, the problem remains that the actual data being collected are insufficient to answer important questions. The following sections outline the development of a new system of labour force statistics based primarily on hours of employment rather than the number of people fitting a limited range of categories. As will be discussed below, collecting information about hours does not come at the expense of collecting information about the number of people, thus ensuring that data can still be arranged in a manner consistent with current usage if so desired.

Measuring excess labour supply

The extent of excess labour supply is an important macroeconomic variable. For many economists, excess labour supply is used as an indicator of inflationary pressures as the unemployment rate approaches the natural rate of unemployment.⁶ For others, excess labour supply is an indication of the extent of underutilisation of a factor of production or an indicator of the insufficiency of aggregate demand.

As outlined above, however, the unemployment rate is a poor measure of the extent of excess labour supply due to the existence of underemployment and hidden unemployment. The use of the unemployment rate as a proxy for the extent of excess labour supply is also problematic due to the high degree of cyclical volatility of both underemployment and hidden unemployment (see Mincer, 1973, Gregory and Sheehan 1975; Mitchell, 2000)

The main problem with the existing LFS for the determination of the extent of underemployment is the relative absence of information on the desired number of hours worked. While some data on the preferred hours of part-time workers is collected and

⁴ That is, to be unemployed as defined by the ABS is to be without work of more than one hour per week and to be actively searching for it. To include those who are working for more than one hour and those who are not actively seeking work is a self contradiction.

⁵ The term 'visible' underemployment is often used to describe underemployment in terms of hours with 'invisible' underemployment being used to describe the qualitative dimension of the problem.

⁶ Or more accurately the Non Accelerating Inflationary rate of Unemployment (NAIRU)

published quarterly, no data on the preferred hours of full-time workers is collected. The infrequent publication of existing data also reduces the usefulness of such information for use in the calculation of a summary indicator of the labour market.

Underemployment has a significant impact on the measured performance of the labour market, with over 200,000 workers who work less than 10 hours per week desiring additional hours of employment (Colebatch, 2001). If reduced aggregate demand forced employers to involuntarily reduce the hours of work of 100,000 people it would have no impact on the standard measures of labour market performance such as the unemployment rate, the employment population ratio or the labour force participation rate. Such an outcome would, however, indicate a substantial increase in the extent of excess labour supply.

Ross (1985), Wooden (1993,1996) and Mitchell and Carlson (2000) all provide estimates of the extent of underemployment over time based on what little data is available and assumptions about the distribution of desired hours. The absence of accurate data ensures that underemployment, and overwork, are excluded from the monthly analysis which accompanies the release of existing labour force data. If the problems of underemployment and overwork are to be targeted then timely, accurate data is required.

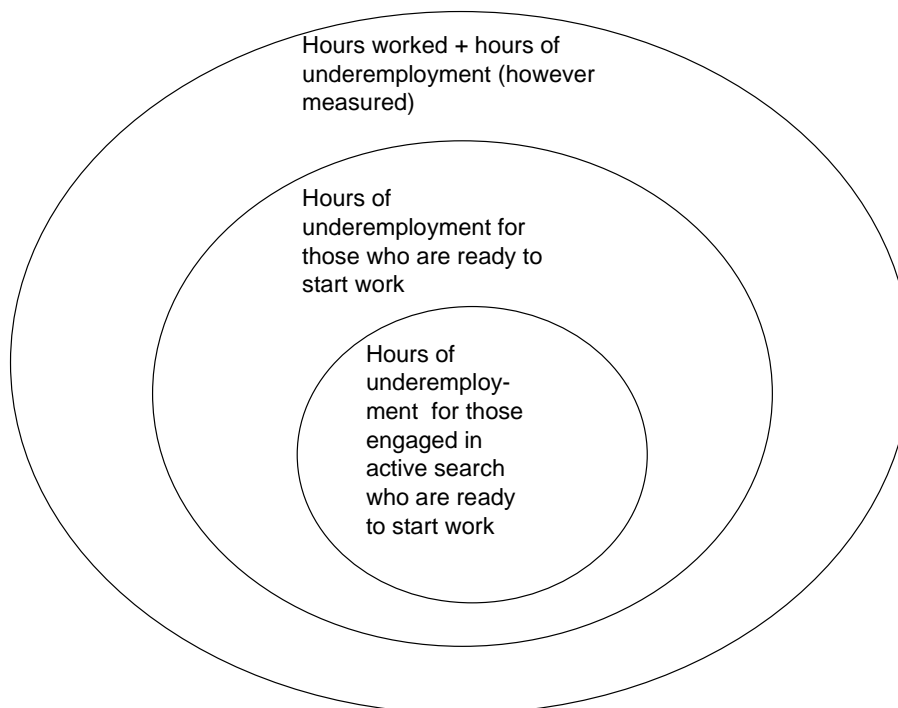
An alternative way to measure the extent of excess labour supply in the economy is to ask questions which directly relate to the issue. That is, all respondents could be asked questions which determined:

- 1) How many hours were worked in the reference week?; and
- 2) How many hours of work were desired in the reference week?

With this information, collected on a monthly basis, policy makers, researchers, and the general public could all be accurately informed as to the extent of the relationship between the amount of work done and the amount of work effort that was available. The details of additional questions that would need to be asked will be discussed in greater detail below. However, it is important to highlight that those people working less than one hour, who were ready to start and were actively seeking work can still be identified, classified as unemployed, and expressed as a percentage of the total labour force. More importantly the existence of accurate information on desired work also allows for the identification the extent to which people are underemployed or overworked.

Using this new information a new measure, such as an Hours Based Underemployment Rate (HBUR) could be developed. The HBUR would provide a more useful indication of the extent of excess labour supply than the unemployment rate or the adjusted unemployment rates described above. The HBUR expresses the number of hours of underemployment in the economy as a percentage of the amount of hours of potential labour supply (the sum of actual hours worked and desired hours of the underemployed). The basis of the HBUR is expressed diagrammatically in Figure 5.

Figure 5 Framework for an hours-based system of labour statistics



The Hours Based Underemployment Rate is given by:

- 1) $HBUR = \text{hours of underemployment as a percentage of hours of desired employment (actual hours worked + hours of underemployment)}$

If the available hours of labour supply are assumed to be most meaningfully characterised by the number of hours of labour potentially supplied by those who are either already in work and are actively seeking additional work and the number of hours of potential labour supply by the unemployed then the HBUR would be given by Equation 2

- 2) $HBUR = \text{hours of underemployment as a percentage of hours of desired work where desired hours are the sum of actual hours worked and hours of underemployment by those who were actively seeking work and ready to start work in the reference period).}$

Currently adequate data is not collected to determine the HBUR accurately. However, approximations are possible using available data and estimates are provided below. Collection of additional data by the ABS would solve this problem and the need for such additional data is a major conclusion of this paper.

6. Results

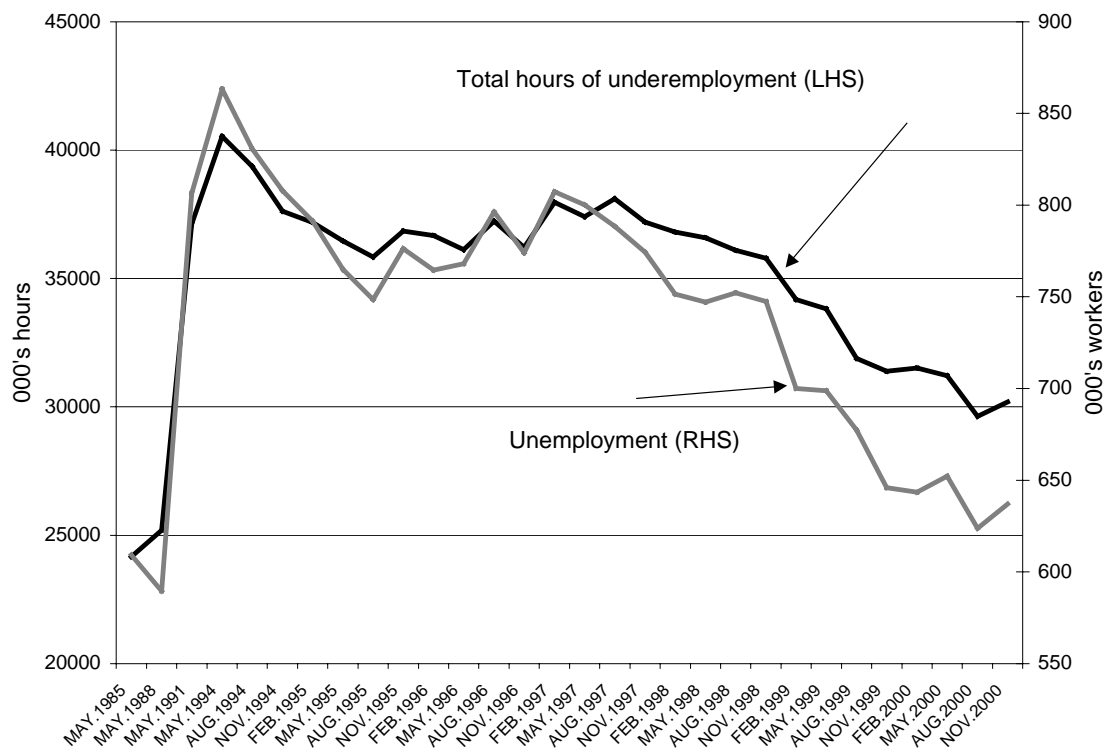
Underemployment can be estimated for four groups, unemployed persons seeking full-time work, unemployed persons seeking part-time work, part-time workers seeking additional hours and full-time workers working less than full-time hours for economic reasons. The estimation process for each of these categories is discussed below.

- Unemployed persons seeking full-time work. The product of average full-time hours and number of unemployed persons seeking full-time work provides an estimate of the hours lost by this group. Data on the actual desired hours, rather than the assumption that average hours are preferred, would improve the accuracy of this estimate.
- Unemployed people seeking part-time work. Wooden (1996) and Mitchell and Carlson (2000) use average part-time hours as a proxy for the desired hours of unemployed persons seeking part-time work. Such an approach is likely to understate the average desired hours as underemployment of part-time workers exists. The estimate used here is based on multiplying the number of unemployed persons seeking part-time work by the average desired hours of work by part-time workers where average desired hours is calculated by summing total hours worked by part-time workers and desired additional hours by part-time workers then dividing by the number of part-time workers. The importance of this adjustment was illustrated in Figure 4.
- Part-time workers seeking additional hours. Total desired additional hours for part-time workers seeking additional hours who were ready to start in the reference week or who actively sought additional hours is published in ABS (1999). This publication was produced triennially from 1985 and has been published annually since 1995. Results are provided triennially from 1985 and quarterly from 1995 due to these data limitations. Results for 2000 were based on projections of additional desired hours. The projections were produced by multiplying the actual number of part-time workers seeking additional hours (available quarterly) by the average number of preferred hours of part-time workers seeking additional hours since annual data was collected in 1995.
- Full-time workers working less than 35 hours per week for economic reasons. While data for this category is published monthly, no data on the number of hours actually worked is produced. It has been assumed that workers lost an average of 8 hours (1 day) work in the reference week. This number is likely to be an underestimate and the collection of data in the form described above would overcome this difficulty.

The number of unemployed persons and the number of hours of underemployment (as defined above) are shown in Figure 6. While both unemployment and hours of underemployment rose rapidly during the recession of the early 1990s the number of

hours lost to underemployment has fallen less rapidly than the number of unemployed. While the number of unemployed persons has returned to around the levels experienced in 1985 the number of hours lost to underemployment has actually risen by 24 percent. During 1998 and early 2000 the divergence between the two series is most apparent. It is important to note that the rapid rise in indicated unemployment and underemployment is due in part to the fact that, due to the availability of data, results are shown for three yearly intervals from 1985 to 1994.

Figure 6 Unemployed persons and hours of underemployment



Measuring the matching efficiency of the labour market

In addition to measuring the extent of underutilisation of labour, the other major use of labour market statistics is to provide information on the matching efficiency of the labour market. That is, the purpose of any market is to bring buyers and sellers together to engage in mutually beneficial trade. A dimension of the performance of the labour market is, therefore, the extent to which the opportunities created in the labour market correspond to the desired characteristics of workers.

It has been argued that some countries' labour markets are more 'efficient' to the extent that the institutional structures that control the operation of the labour market allow for closer matches between the needs of both buyers and sellers of labour. It is towards this end that much of the 'deregulation' of the labour market that has taken place in Australia (see for example Commonwealth of Australia 2000).

The unemployment rate is, at best, a crude indicator of the matching efficiency of the labour market. While it provides an accurate indication of the number of people working less than one hour per week who are actively searching for work and are able to start it provides no information about the satisfaction of those who are in work with the amount of labour they are supplying.

While this section outlines what is considered to be a superior measure of labour market matching efficiency it should be noted that no simple quantitative measure can capture all of the characteristics which comprise labour market efficiency. The utilisation of skills and experience, for example, is an important feature of an efficient labour market that will not be captured by a move from measuring the number of people who fit into various categories and towards a measure based on the number of people who express contentment with the number of hours that they are supplying, however large or small that number may be.

One of the objectives of a deregulated labour market is to reduce the number of impediments to employers and employees negotiating pay and conditions in a manner which is mutually beneficial. The ability to trade off penalty rates for higher standard rates of pay, for example, has the potential to have a major impact on the time use preferences of employers, with the marginal cost of longer hours of opening/operation being reduced. An indication of one aspect of the efficiency of the labour market is therefore the proximity of the market allocation of work hours to the desired allocation of work hours, with more efficient labour markets more closely approximating the desired outcomes.

Figure 7 provides an illustration of the distribution of hours of overwork and underemployment. The shape of the curve in Figure 7 is only illustrative as, at present, data on the extent of underemployment and overwork are not available for the entire workforce, with only part-time workers currently asked about their desired hours.

Figure 7 Representative distribution of hours of underemployment and overwork

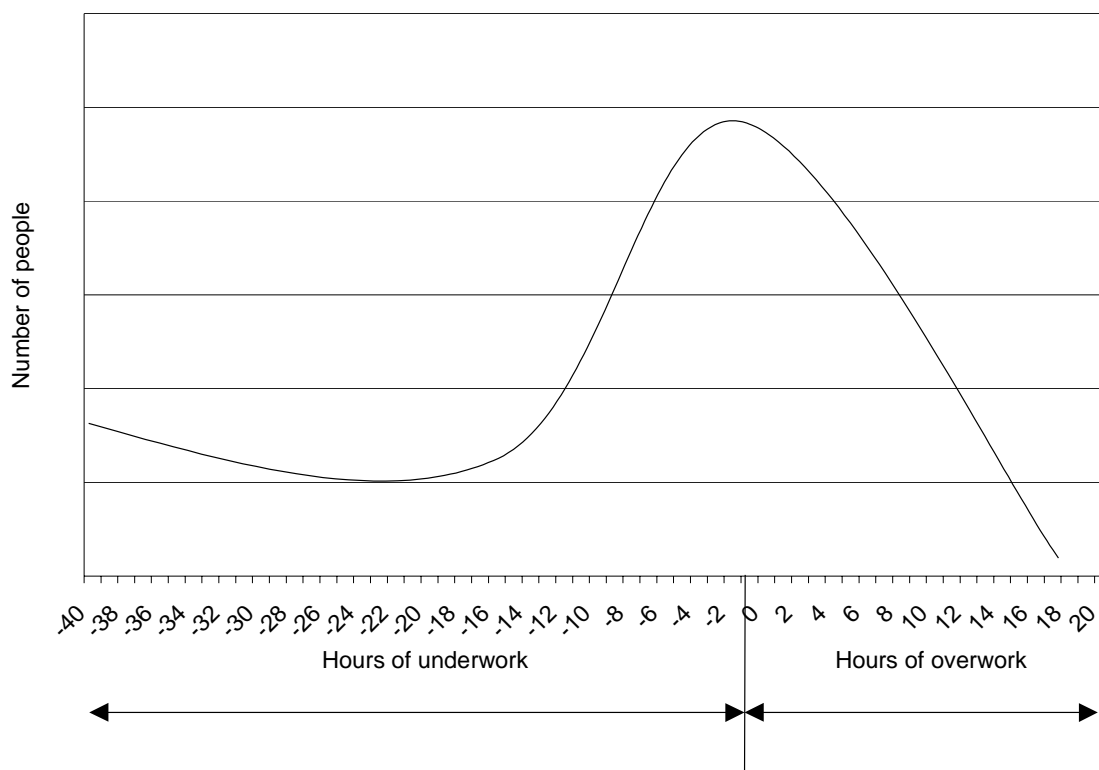
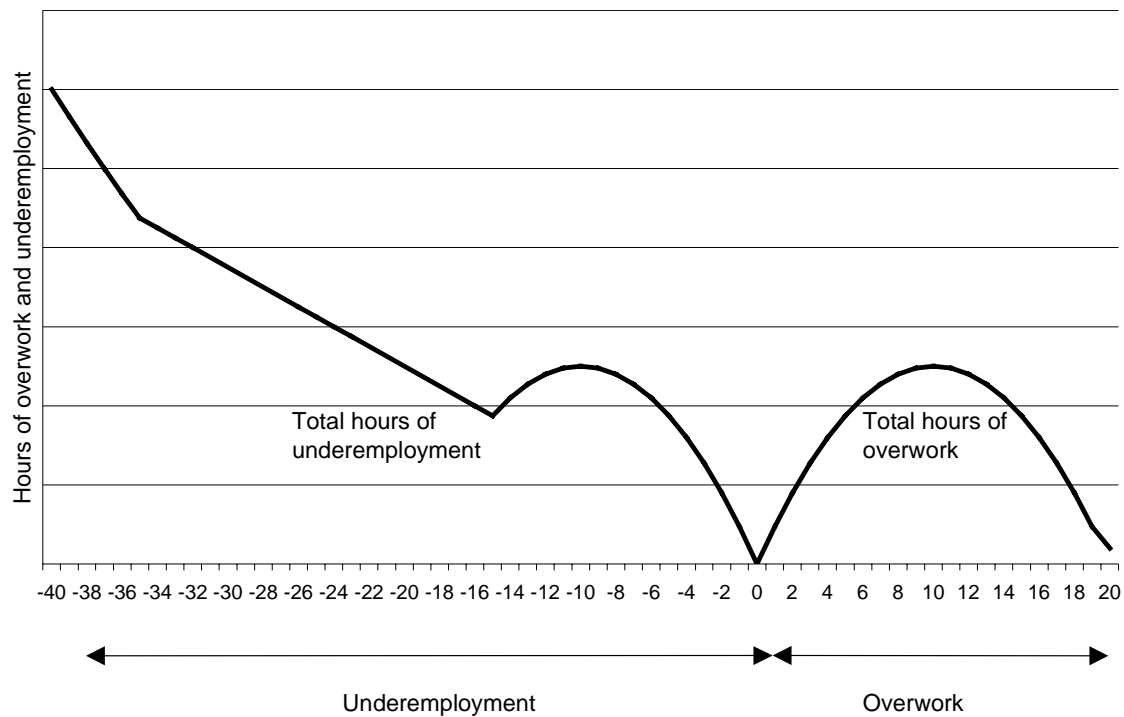


Figure 8 shows how a distribution such as that depicted in Figure 7 translates into gross hours of underemployment and overwork. The area under the curve describes the extent of mismatch between the actual hours of work that was undertaken and the desired number of hours. More efficient labour markets would more accurately match the quantitative dimension of the labour supplied and demanded than less efficient markets.

In Figure 8, if all workers worked the number of hours they desired to work then the curve would coincide with the horizontal axis. The greater the gaps that open up in practice, the greater the mismatch between the amount of work demanded and the amount supplied.

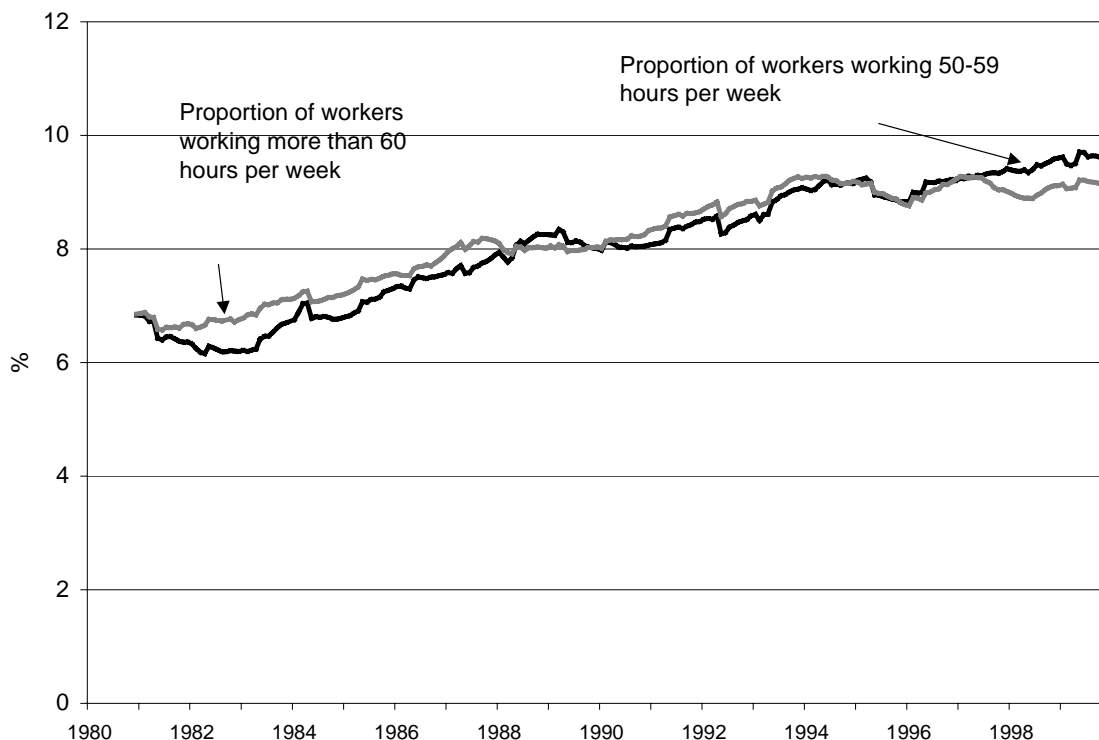
It is possible to summarise the extent of dissatisfaction of labour market outcomes by dividing the sum of the hours of underemployment and overwork by the total amount of hours worked. A Labour Market Mismatch Rate (LMMR) would be a much more accurate description of the extent of matching efficiency in the labour market than the unemployment rate. No estimates of this indicator are presented because of the lack of data on desired hours, particularly for those classified as working full-time.

Figure 8 Representative distribution of total hours of underemployment and overwork



While the absence of data on desired hours of work for full-time workers ensures that little data on overwork exists, as can be seen from Figure 9 the proportion of workers working very long hours has risen steadily in recent decades. Recent surveys of Australian workers have shown that overwork is increasing (Morgan and Banks 2001a, Morgan and Banks 2001b, see also Lumby 2001).

Figure 9 Proportion of workers working 50-59 and more than 60 hours per week



Source: ABS 6291.0

The LMMR has several advantages over the unemployment rate as an indicator of the matching efficiency of the labour market. First, the unemployment rate provides no information about the extent of individuals underemployment. All unemployed people are assumed to be equally underemployed, while all part-time workers seeking additional hours are excluded. By focussing on individuals' desired hours of work the proposed measure overcomes these deficiencies.

The second advantage is associated with the problem of overwork. While some data exist on overwork they are not systematically reported. Nor is their existence directly linked to the capacity of labour market institutions to match the desires of workers to the needs of employers. To the extent that overwork is involuntary and exists only because of the lack of availability of more suitable employment, overwork, like unemployment, represents a failure of the labour market. Another useful indicator of overwork would be a headcount measure, that is, the number of people working more than their desired number of hours divided by either the labour force or the number of people employed.

By combining the extent of overwork and underemployment, and measuring both in terms of total hours rather than number of people effected, the measure outlined above overcomes the main disadvantages of current labour market measures for use as an indication of the efficiency of the labour market. Policies which are effective in improving the capacity of the labour market to match the desires of employees and employers will have a noticeable impact on the measure, whereas the unemployment rate,

for example, would provide no feedback if significant numbers of people simultaneously experienced a reduction in their hours of work while another group were forced to work longer hours.

7. Implementation issues

The measures described above are based on one essential, but currently unknown, piece of information; the desired hours of work of individuals in the labour market. While designing a question accurately to determine this should not be either difficult or controversial, it does raise a number of other issues.

First, if someone is currently working 40 hours per week, and expresses a desire to be working longer hours, should they be asked if they actively sought a job which offered such hours? The notion of active search, which plays an important role in distinguishing between the unemployed and those not considered to be in the labour force, is used to provide an indication of the strength of an individual's desire for altered circumstances. Should the same test be applied when considering underemployment and overwork?

One option would be to exclude such a test on the basis that people are capable of providing an accurate description of the differential between their actual and preferred work arrangements. It is unlikely that at any point in time that all workers will be in work which they find perfectly suitable. The issue, therefore, can be described in terms of changes in the matching efficiency of the labour market rather than its absolute level (which would be effected by the strength of test used) at the time that data collection begins.

Another option would be to use a weaker test, such as asking respondents whether they expressed their desire for shorter or longer hours to their employer. Given that the costs, and risks, associated with job change can be quite high, such a test may provide a better indication of the extent of desire for changed circumstances without ruling out those who, for a range of reasons, may be unwilling to change jobs. For those working less than one hour per week the question of active search could be maintained if users wished to achieve a consistent data series for comparisons of the unemployment rate as it is currently measured.

The choice of the denominator in the determination of the labour utilisation rate is also important. The question raises the same issues as those considered by authors seeking to reform the current unemployment measures. As shown in Appendix A there are a number of categories which are often described as containing those who are marginally attached to the labour market. The decision to take a discrete group of workers, such as the discouraged workers, and shift them from 'not in the labour force' to 'unemployed' has a major impact on the measured performance of the labour market. Similarly, shifting the definition of employed from 1 hour to 10 would lead to a large change in the measured performance of the labour market, as it is currently conducted, as over 200,000 people would change categories. As discussed above, if labour market data are collected that

allow people to state for themselves their (lack of) contentment then no arbitrary reclassification of those working less than 10 hours per week need occur.

Another important issue is the treatment of hours of overwork. Involuntary overwork, like involuntary underemployment, reflects the incapacity of the labour market to match perfectly the needs of employers and employees. It is important for policy makers to have access to timely and accurate information if they are to implement, and monitor the performance of, policies to improve the efficiency of the labour market.

When calculating the HBUR the objective is to compare the amount of work desired with the amount of work actually undertaken. A component of the hours actually worked will, however, be the amount of involuntary overwork conducted. Should these hours be included? Inclusion can be justified on the grounds that the objective of the HBUR (as opposed to the measure of labour market matching efficiency) is to provide a macro indicator of work done as a percentage of work required. The distribution of that work, though an important issue, is not the issue that the HBUR seeks to describe.

The choice of denominator is important, whether the discussion is concerned with the existing or proposed measures of the labour market. While different users will continue to have different preferences, a movement away from the unemployment rate as it is now measured, and towards an indicator based on the extent of underemployment of all workers, will result in more useful summary statistics with which to describe the labour market.

One final issue is associated with the reliability of relying on people's stated preference for desired hours of work. While it is true that some people may express a desire to work more or less hours than they would actually be willing to accept, it is also true that at present virtually no information about those preferences exist, particularly with regard to overwork. While the reliability of desired hours data would be the subject of much debate were it to be collected, there is little doubt that such data would provide policy makers with a far more accurate basis for policy than the existing absence of data allows.

If the data requirements outlined above are met then researchers and policy makers would have access to a much wider range of data that is much better suited to answering the questions of relevance to the labour market in the 21st century.

8. Policy Implications

The existence of unemployment and underemployment both point to an ongoing problem in the Australian economy, the shortage of paid work. The policy shift in recent years away from macroeconomic policy aimed at creating jobs and towards microeconomic policy aimed at providing 'incentive' for the unemployed to find work has not succeeded in solving the unemployment problem in Australia, nor is it likely to. While there is little doubt that individuals may benefit from the provision of training, motivation and interview skills any individual success in finding employment will come at the expense of

another applicant. The Australian labour market continues to be characterised by an excess of job seekers over job vacancies.

The new measures of the labour market, and the calls for new information, outlined in this paper have important implications for the formation of policy in Australia. First, it is necessary to accurately document the extent of excess labour supply in the economy. There is little doubt that the unemployment rate is an inadequate tool for making such a determination. The new measure proposed in this paper will help overcome one of the major problems with the existing measure, that of underemployment. Further, if new data, such as that described for determining desired hours of employment, is collected then policy makers would have access to a much broader, and more accurate picture of the labour market, including the extent of overwork. Importantly, this new picture would not come at the expense of compatibility with existing data.

As well as providing more information about the extent of underemployment (which includes unemployment) in the economy, the measures proposed above would also provide much more information on the effectiveness of the labour market in matching the labour supply decisions of individuals with jobs that meet their requirements. One of the main arguments in favour of deregulation of the labour market has been that it reduces institutional impediments to the capacity of workers and employers to negotiate mutually beneficial changes to workplace practices, including work hours. Without accurate information on the extent of any disparity between desired and actual hours of work (reflecting either underemployment or overwork) it is not possible for policy makers to determine the success, or failure, of the deregulation project.

Accurate information on the extent of the simultaneous existence of underemployment and overwork may also provide an impetus to policy makers to consider a role for the redistribution of work as a solution to both problems. While it is unlikely that the underemployed are perfect substitutes for the overworked in their entirety, it is likely that some gains from redistribution are possible. The new measures outlined above do not deal with the issue of skill utilisation, and as such, reflect the needs of the supply side of the market.

A range of policy options exist to facilitate redistribution of work. In France, the approach has been a regulatory one, with standard hours being reduced to 35 hours per week with the government pursuing a policy of strict enforcement. While it is unlikely that policy makers in Australia are willing to pursue this path in the short term it should be noted that the concerns raised by opponents of the scheme before it was implemented, namely that it would increase unemployment, reduce productivity and cause foreign companies to locate elsewhere have proved unfounded.

A more moderate approach to the problem would involve governments participating directly in the provision of information, to both employers and employees, about the possibilities for, and benefits from, redistributing work hours. While job sharing can involve the conversion of one full-time job into two part-time jobs, many other options exist. The Australia Institute (1996) for example, advocates the use of 48/52 schemes

which allow workers to ‘purchase’ an additional months annual leave by foregoing around seven percent of their salary. Other options include:

- working a four day week;
- taking a 20 percent cut in pay in return for one year off in five;
- converting one full-time job into two, six monthly, rotating positions;
- converting two full-time jobs into three, where the three workers work for eight months per year each. Such schemes allow firms to have more staff on hand at the busiest time of year while simultaneously increasing the leisure time of workers over the course of the year.

Governments can play an important role in not only informing workers and employers about such possibilities, but facilitating them. One of the main problems with the implementation of work sharing schemes is matching the needs of employers and a number of employees simultaneously. While such outcomes can be negotiated with relative ease from within an organisation, where it is relatively costless for all parties to communicate their needs, the difficulties are much greater for people who are not known to each other. In order to help overcome these difficulties the notion of ‘job matching’ currently performed by the Job Network could be extended, to providing both infrastructure and direct assistance to both employers and employees seeking to negotiate job sharing arrangements.

The simultaneous existence of the overworked and underemployed creates the possibility of gains from trade. If transaction costs were zero, and there were no legislative restrictions on such trades, it would be assumed that the market allocation of hours was the optimal allocation. However, if information is not costlessly available then the difficulties of negotiating transactions may exceed the private benefits of undertaking the transaction. It is here that there is a role for government.

Government agencies, or private agencies receiving government subsidies, can play an important role in improving the welfare of society by increasing the number of viable transactions. Not only would a central agency have reduced information search costs, the public benefit of increasing the amount of hours of work that are redistributed are greater than the private benefits. That is, while individuals will consider the private costs and benefits of renegotiating their employment conditions (such as their perception of value for increased leisure time) they will ignore the public benefits associated with reduced unemployment, stress, and stress induced illness. Given the existence of market failure in the ‘job sharing market’, and the likely existence of substantial economies of scale in the provision of job matching services, government intervention is likely to have a positive effect on community wellbeing. Government intervention could take the form of rewarding agencies that succeed in facilitating job sharing arrangements.

Given the large number of unemployed and underemployed persons it is unlikely that job sharing will be sufficient to solve the underemployment problem. The issue is whether such an approach leads to an increase in wellbeing.

9. Conclusions

Without accurate information it is not possible to determine the extent of the problems in the labour market, nor is it possible to determine the effectiveness of policies designed to overcome labour market problems. The current system of labour market statistics has been left behind by the changes that have occurred in the Australian community and economy. New measures are needed.

The extent of underemployment, unemployment and overwork are all poorly described by data available from the existing LFS. Many authors have suggested moves towards broader definitions of what is meant by 'unemployed' while others have suggested that the definition of 'employed' needs to be narrowed. Similarly, the summary statistics used to describe the existing data have also been widely discussed, with organisations such as the U.S. BLS advocating a range of alternative measures.

All such responses suffer from the same weakness: the preservation of a system of labour market statistics based on the placement of millions of workers, with thousands of different labour market experiences, into a small number of categories. Arguments about the appropriate demarcation points between categories will never succeed in producing a system that can accurately describe the labour market outcomes of people working in a labour market which, by its very design, is becoming increasingly flexible.

This paper advocates a new approach to the collection of labour market data and its presentation. Rather than attempt to discern the extent of underemployment and overwork with reference to societal norms of what is 'full-time' and what is 'part-time', statisticians should instead ask directly what it is that people want from the labour market and whether or not they are getting it.

The stated objective of labour market flexibility is to ensure that people, not institutions, determine labour market outcomes. It is therefore inconsistent to continue to collect statistical information on the performance of the labour market based on the same rigid notions of labour market classification which have been maligned by policy makers for so long.

This paper proposes a relatively simple, yet effective, solution to the problem of how to measure labour market outcomes. By asking individuals both how many hours they worked and how many hours they wished to work it will be possible to accurately determine the extent to which the labour market is succeeding in both the provision of adequate employment as well as measure the capacity of the labour market to match the preferences of workers to the requirements of employers.

While such an approach is quite different to the existing LFS in its conception, placing the emphasis on the individual rather than the category, in terms of data collection the necessary changes are relatively minor. It is important to note that data collected in the way advocated in this paper would not be inconsistent with the continued publication of conventional measures such as the unemployment rate and the labour force participation rate. On the contrary, these measures could still play an important role in assessing the behaviour of the labour market for some users.

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