1. Introduction
During the 1990s, Federal Government policy to reduce unemployment has focussed largely on the need to reform labour market institutions, rather than on the development of an explicit employment policy.\(^1\) Demand management has had little or no role to play, with real interest rates kept high and fiscal policy being geared to the achievement of budget surpluses. Furthermore, despite higher unemployment, and lower participation and job growth in rural and regional areas as compared to metropolitan areas (Howard and Buultjens, 1999, 115), Federal Government economic policy has paid little attention to the spatial dimension.

The main impediments to the reduction of the national unemployment rate are alleged to be labour market rigidities (requiring institutional reform), high replacement ratios (requiring less generous welfare payments) and skills mismatch caused by rapid structural change (requiring re-training programs) (Treasury, 1999). The implicit supply side model relied upon by policy makers appears to be that labour should be prepared to relocate from high unemployment areas to areas where there are employment opportunities. It is suggested that labour mobility will improve skill matching and, by raising labour market efficiency, should lower the Non-Accelerating Inflation Rate of Unemployment (NAIRU), the minimum sustainable rate of unemployment. The NAIRU defines an equilibrium unemployment rate at which the competing claims of income earners are consistent (Carlin and Soskice, 1990, 136). Its level is a manifestation of supply side imperfections. If regional unemployment rates exhibit significant dispersion, then inflationary pressure will tend to intensify in the low unemployment regions, when other regions are
still exhibiting high rates of unemployment and the overall rate of unemployment is relatively high.²

We argue that the Government's model of the labour market is flawed. If through their impact on the NAIRU, institutional and behavioural factors are the major cause of unemployment in Australia, why do unemployment rates differ significantly across regions with identical institutional and legal structures? For example in September 2000, the Inner Sydney Region, had an unemployment rate of 4.2 percent, whereas the Hunter and North Coast had a rate of 9.0 percent (DEWRSB, 2000). Are workers heterogeneous in their patterns of labour mobility, in response to a given set of market signals, with some workers (particularly those in regional areas) being reluctant to work and/or adapting less rapidly to change than their city counterparts? If so, does the structure of incentives need to be altered to change the patterns of labour mobility to redress the spatial inequality of unemployment?

While the dynamics of inter-state labour mobility are different from those in the USA, the rate of mobility is similar (Debelle and Vickery, 1998). The role of wage adjustment in influencing labour mobility appears to be small. Also downward pressure on wage rates in declining areas is likely to promote demand spillovers (Diamond, 1982)³ that undermine the long-term economic viability of regional areas, and cause dynamic inefficiency (Stegman, 1997; Watts, 1999). There is evidence of limited firm relocation to areas of high unemployment and low wages. Thus there appears to be little justification for pursuing increased wage flexibility through further labour market reform.

In this paper we demonstrate that a 'modified' wage curve operates across Statistical Regions, signifying an inverse relationship between the average money wage rate and the local unemployment rate (see also Kennedy and Borland, 2000). This confirms that positive feedback dominates negative feedback in the economic adjustment of regions to shocks, which contributes to a polarisation of economic outcomes across regional areas. Using annual data for 1990-96, we also show that unemployment rates across Statistical Local Areas (SLAs) have been slow to converge.

An alternative explanation of the persistent dispersion of unemployment rates is that non-institutional factors, notably demand conditions, play an important role in determining the distribution of regional (un)employment. In particular physical capital investment, in the form of both public infrastructure and private, along with human capital is not evenly distributed across the continent, reflecting the spatial distribution of transport costs, past policies, as well as natural advantages. For example, the NSW government spent billions of dollars on construction for
the Olympics in Sydney in 2000. Simultaneously, thousands of jobs were being shed in regional areas by Government Business Enterprises (GBEs) involved in the provision of rail, electricity, water and telecommunication services (Productivity Commission, 1999).

The paper argues that targeted demand stimuli to areas of high unemployment and underutilised infrastructure would be a more effective way to reduce both regional unemployment and the NAIRU, rather than increasing the incentives for labour to relocate to low unemployment urban areas where infrastructure is already overutilised. Regional employment generation administered by Councils within a Job Guarantee program to meet local needs would be an appropriate approach.

The paper is organised as follows. Section 2 reviews the extant empirical literature on inter-state labour mobility. A modified wage curve is developed for Statistical Regions in Section 3, in which an analysis of the convergence of unemployment rates across Statistical Local Areas is also cited. Section 4 provides an overview of contemporary policy approaches to unemployment in regional areas. In the final section, some policy initiatives and concluding comments are presented.

2. Empirical Evidence

In a study of inter-state migration in Australia, Debelle and Vickery (1998, 3) outline four avenues of adjustment that can reduce a relative unemployment differential, following an adverse state-specific shock:

- The state wage falls relative to the wage rate in the rest of the country.
- Firms relocate to the state to take advantage of the relatively larger pool of unemployed workers and lower wages, but the existence of demand spillovers (Diamond, 1982) means that a region hit by a demand shock is less likely to attract say service sector employment and may also suffer discontinuous declines in employment in services such as high schools, hospitals and public transport.
- Workers migrate to a state where the unemployment rate is lower. Again, a fall in the relative wage would further encourage out-migration; and
- Workers remain in the state but exit from the labour force.

In principle, under perfect information, if intra-state labour markets convey the correct market signals, then sustained inter-state unemployment rate differentials would reflect the magnitude of relocation costs.

This section examines whether the longstanding variance of regional unemployment rates can be attributed to inadequate rates of mobility,
differences in mobility patterns or the intrinsic economic and social characteristics of regions.

Citing the Industry Commission study (1993), Cashin and Strappazon (1998, 6-7) argue that there is a regional adjustment problem, because in response to a regional employment shock, there is a small decline in wages relative to other regions, a slight, near permanent fall in participation rates and a weak temporary increase in out-migration. Regional wages and labour mobility are alleged to be much less responsive to adverse idiosyncratic shocks in Australia as compared to states of the USA. They claim that there is little variation of regional unemployment rates in the USA, whereas in Australia some regional unemployment rates remain permanently above the national average.

Debelle and Vickery (1998) disagree, claiming that relative unemployment rates provide the main incentive both for inter-state mobility or departure from the labour market. Drawing on structural VAR models, they conclude (1998, 27) that relative weekly earnings have little impact on employment and migration dynamics in either Australia or the USA, although they note that the federal award system may have played a role in Australia. This result is consistent with the Harris-Todaro model in that risk averse workers would be more concerned with their relative employment opportunities than the prevailing wage in assessing their decision to migrate (Debelle and Vickery, 1998, 28).

Debelle and Vickery conclude that most of the variation in state unemployment rates is the outcome of changes in the national unemployment rate, but they do identify state fixed effects. These permanent differences in unemployment rates between states could reflect lifestyle differences, a sequence of adverse shocks or the inability of internal migration to equalise labour market opportunities (Debelle and Vickery, 1998, 30). They note two important potential barriers to mobility, namely adjustment costs associated with housing and imperfect information about inter-state job opportunities. Their results imply that supply side policies that are designed to increase the incentives underpinning labour market mobility may speed up the adjustment process but would be unlikely to reduce the long-standing unemployment disparities between states.

The Wage Curve

In an influential work, Blanchflower and Oswald (1994) document a negative relationship between local unemployment rates and wages across a number of countries using microeconomic data. Thus local labour markets do not appear to operate in the classic textbook manner.
Kennedy and Borland (2000) confirm that there exists an inter-state wage curve in Australia. The standard formulation entails the regression of the log weekly earnings of individual $i$ on her/his measured characteristics and the unemployment rate by gender/state group $j$. The authors claim that their results are robust, with a coefficient on the unemployment rate of about minus unity, which is a similar magnitude to that of other countries, including the USA. Kennedy and Borland (2000, 796) conclude that the similarity of wage curves implies that differences in wage fixing institutions have not been influential in differences in regional level wage dynamics. They emphasise that state-level fixed effects must be included to avoid the problem of omitted variable bias.

The existence of the wage curve for Australian states suggests that investment and demand in general is not evenly distributed spatially. This could reflect the spatial distribution of transport costs, human capital, private physical capital and public infrastructure investment, which in part reflect past policies, as well as natural advantages. These different underlying conditions between states generate different wage and employment outcomes that persist. Some states are characterised by high wages and low unemployment and vice versa. Higher rates of mobility may not depress wage differentials due to labour market segmentation, the heterogeneity of labour and the difficulty of communicating excess supply.

3. Intra-State Employment and Earnings

Income Inequality

The above analysis of inter-state mobility assumes that intra-state mobility functions relatively well, but Debelle and Vickery acknowledge the work of Gregory and Hunter (1995) who explore urban poverty. Using Census data, Gregory and Hunter demonstrate that there has been a significant increase in income inequality across smaller geographical areas (Collectors Districts) within urban centres over the period 1976-91, which reflects the collapse of employment opportunities in neighbourhoods of low socio-economic status (SES), along with declining incomes, as compared to rising employment to population ratios and rising incomes in high SES neighbourhoods. These outcomes are giving rise to a higher incidence of poverty in the low SES neighbourhoods and more inequality, due to ‘bad neighbourhood’ pathologies (see also Sheehan and Gregory, 1998).

Labour mobility within local (urban) labour markets should be distinguished from mobility that entails relocation of the worker and her/his family. Intra-urban areas in which average house prices are high are
typically associated with low unemployment rates for local residents, given the need for a consistent flow of income to repay high mortgages or rents.  

*Modified Wage Curve*

Annual unpublished data on employment, part-time and full-time status, participation and average weekly earnings and hours in the main job and all jobs across 58 Statistical Regions by gender are available (ABS 6310.0). There are no corresponding data for individual characteristics. The scatter diagram of average weekly earnings of persons in their main job and the unemployment rate for these Statistical Regions suggests an inverse relationship (Figure 1).

![Figure 1: Scatter of Average Weekly Earnings in Main Job against the Unemployment Rate for Statistical Regions, August 1998](image)

A log specification was adopted with average weekly earnings by Statistical Region as the dependent variable and the corresponding unemployment rate as the independent variable. This specification has good diagnostic properties and an adjusted $R^2$ of 43 percent (equation 1, Table 1). The unemployment rate elasticity of weekly earnings at 28 percent is relatively high and reflects the absence of individual characteristics in the equation.

In their examination of an inter-state wage curve, Kennedy and Bolland (2000, 779) test whether the relationship is a disguised labour supply curve by including the rate of labour force participation, LFP, as an independent variable. In this study the participation rate is insignificant
when added to the specification (equation 2), with little change in the coefficient on the unemployment variable. The diagnostic performance of the specification remains good.

Australian research (e.g. Gregory, 1991) reveals that labour force participation is subject to the discouraged worker effect, so that the unemployment rate is an inadequate measure of the volume of unemployed labour resources. Using the employment to working age population ratio as a proxy for employed labour resources yields a significant positive relationship but with less explanatory power and severe problems of autocorrelation (equation 3). This suggests mis-specification, although this is not indicated by the Ramsey Reset test. The inclusion of the participation rate variable in equation (4) yields good diagnostic properties, but the coefficients on the employment to population ratio and the participation rate are almost equal and opposite. A Wald test of this restriction on the coefficient magnitudes supports this hypothesis. This reinforces the conclusion that the unemployment rate is the appropriate explanatory variable because, with the restriction, the explanatory variable in equation (4) can be written as log(1-u) where u is the unemployment rate.

The use of average weekly earnings introduces some spurious correlation into the regressions because average weekly hours worked and the unemployment rate are likely to be inversely related. The use of average hourly earnings does not entirely overcome this problem, because, if falling unemployment is associated with increasing overtime, hourly earnings would increase, given the presence of an overtime premium (Black and Fitzroy, 2000, 472-73).

A similar pattern of results was generated using average hourly earnings as the dependent variable and the unemployment rate or the employment to population ratio and the participation rate as explanatory variables (equations 5 to 8). The equations exhibited less explanatory power but the diagnostic tests were satisfied. The unemployment rate elasticity of hourly earnings was lower, reflecting the direct impact of hours worked on average weekly earnings. The use of the employment to population ratio as the sole dependent variable reveals the presence of both autocorrelation and heteroskedasticity (equation 7). Again the hypothesis of the participation rate and employment to population ratio having equal and opposite signs is supported by the Wald Test (equation 8). State dummies were included in all the equations. They were always insignificant and were not used.
### Table 1. Modified Wage Curves for Australian Statistical Regions, August 1998

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variables</th>
<th>Average Weekly Earnings</th>
<th>Average Hourly Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Logs (1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>Constant</td>
<td>6.932 (77.72)**</td>
<td>6.299 (6.40)**</td>
<td>3.331 (5.09)**</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>-0.281 (6.49)**</td>
<td>-0.261 (4.85)**</td>
<td>-0.210 (5.36)**</td>
</tr>
<tr>
<td>Employment/Population</td>
<td>0.143 (0.65)</td>
<td>0.748 (4.64)**</td>
<td>2.864 (4.30)**</td>
</tr>
<tr>
<td>Labour Force Participation</td>
<td>0.143 (0.65)</td>
<td>-2.706 (3.26)**</td>
<td>0.120 (0.60)</td>
</tr>
<tr>
<td>R Squared</td>
<td>0.43</td>
<td>0.28</td>
<td>0.39</td>
</tr>
<tr>
<td>Autocorrelation (F test)</td>
<td>0.641 (0.53)</td>
<td>1.10 (0.34)</td>
<td>7.032 (0.00)</td>
</tr>
<tr>
<td>ARCH 1 (F test)</td>
<td>0.476 (0.49)</td>
<td>0.436 (0.51)</td>
<td>3.165 (0.08)</td>
</tr>
<tr>
<td>Normality (Chi)</td>
<td>4.273 (0.12)</td>
<td>3.416 (0.18)</td>
<td>5.040 (0.08)</td>
</tr>
<tr>
<td>RESET (F test)</td>
<td>1.445 (0.23)</td>
<td>1.232 (0.27)</td>
<td>0.605 (0.44)</td>
</tr>
</tbody>
</table>

|                       | (4)                 | (5)                     | (6)                     | (7)                     | (8)                     |
|                       | (5.92)**            | 5.950 (40.79)**         | 3.296 (3.10)**          | 2.767 (1.03)            | 0.587 (2.72)**          |
|                       | (4.59)**            | -0.210 (5.36)**         | -0.194                  |                        |                        |
|                       | (4.30)**            | 0.563 (3.99)**          | 2.081 (3.47)**          |                        |                        |
|                       | (4.36)**            | 2.706 (3.26)**          | 0.120 (0.60)            | -1.941 (2.60)**         |                        |
|                       | (4.64)**            |                        |                        |                        |                        |
|                       | 0.748               |                        |                        |                        |                        |
|                       | 2.864               |                        |                        |                        |                        |
|                       | (4.30)**            |                        |                        |                        |                        |
|                       | 0.563               |                        |                        |                        |                        |
|                       | (3.99)**            |                        |                        |                        |                        |
|                       | 2.081               |                        |                        |                        |                        |
|                       | (3.47)**            |                        |                        |                        |                        |
|                       | 0.563               |                        |                        |                        |                        |
|                       | (2.60)**            |                        |                        |                        |                        |
|                       | 2.706               |                        |                        |                        |                        |
|                       | (3.26)**            |                        |                        |                        |                        |
|                       | 0.120               |                        |                        |                        |                        |
|                       | (0.60)              |                        |                        |                        |                        |
|                       | -1.941              |                        |                        |                        |                        |
|                       | (2.60)**            |                        |                        |                        |                        |
|                       | 0.120               |                        |                        |                        |                        |
|                       | (0.60)              |                        |                        |                        |                        |
|                       | -1.941              |                        |                        |                        |                        |
|                       | (2.60)**            |                        |                        |                        |                        |
|                       | 0.120               |                        |                        |                        |                        |
|                       | (0.60)              |                        |                        |                        |                        |
|                       | -1.941              |                        |                        |                        |                        |
|                       | (2.60)**            |                        |                        |                        |                        |
|                       | 0.120               |                        |                        |                        |                        |
|                       | (0.60)              |                        |                        |                        |                        |
|                       | -1.941              |                        |                        |                        |                        |
|                       | (2.60)**            |                        |                        |                        |                        |

Note: **, *** denotes significance at the 5% and 1% level, respectively. Econometric estimation through use of Pc-GIVE. For test statistics, p-values are in parentheses.

Source: Unpublished ABS data.
According to the Harris-Todaro model (Harris and Todaro, 1970), wages should be high in high unemployment areas to compensate migrants for the reduced probability of employment. The results demonstrate, however, that weekly and hourly earnings and the unemployment rate are inversely related across Statistical Regions. This relationship reveals a strong set of signals for the unemployed in high unemployment areas to migrate. On the other hand, if the availability of cheap labour were the main factor driving firms’ location decisions, then they would have the incentive to relocate to the high unemployment areas. The modified wage curve can also be interpreted as signifying the presence of positive feedback with declining regions suffering both wage and employment cuts that would threaten their long-term economic viability through spillover effects. Further analysis of the wage curve relationship is required.

The modified wage curve is inconsistent with a common production function, because there should be an inverse relationship between real wages and employment with a given capital stock under perfect competition. High wage regions are likely to have experienced high rates of capital accumulation in the past. The existence of different underlying economic conditions across regions is consistent with the presence of fixed effects that were found in the models of inter-state mobility. These fixed effects would ensure that unemployment rates do not converge and could reflect natural economic advantages in regions, such as superior infrastructure (e.g. transportation), past government policy and a highly educated workforce, as well as other factors such as housing prices or lifestyle. Once again the implication is that an increase in labour market flexibility will not, in itself, achieve regional convergence.

**Statistical Local Areas**

The regional wage and unemployment data represent a snapshot and provide no clear guidance as to the dynamics of labour mobility and firm relocation over time, although they suggest a persistent polarisation of economic outcomes. The Department of Employment, Workplace Relations and Small Business publishes the Small Area Labour Market quarterly which contains data on regional labour forces, unemployment levels and rates at different levels of disaggregation. SLAs are normally equivalent to Local Government areas.

The speed of convergence of the unemployment rates of these SLAs was estimated by regressing the deviation of the SLA unemployment rate from the overall rate against lagged values of the deviations for 1270 SLAs for annual observations between June 1990 and June 1996.
The coefficient on the lagged deviation was always in excess of 0.90, or if a second lag was employed the sum of the coefficients exceeded 0.90. This implies very slow convergence with 7 years elapsing before half an unemployment deviation disappears through mobility. The constant term is significant for some equations, which signifies misspecification, because there is a constant steady state unemployment rate deviation for all SLAs. The inclusion of state specific effects in the form of dummy variables to overcome the problem of misspecification did not improve the diagnostic tests. The Queensland and Tasmania dummy variables were consistently significant and positive.

In an earlier study by the Department of Health, Housing, Local Government and Community Services (1993) for the period 1985-91 a similar equation was estimated and again the estimated coefficient on the lagged unemployment rate deviation was found to be high, indicating slow convergence but no diagnostic tests were reported.

5. An Assessment of Government Policy
The Federal Coalition Government has not successfully addressed the persistent dispersion of inter-state and intra-state unemployment rates through the implementation of policies targeted at regions. Instead, national economic growth, and a decline in the unemployment rate have been considered as offering the best solution for regional imbalances, although several recent Government reports have challenged this rising tide theory of economic growth (Productivity Commission, 1999, Treasury 1998). Treasury (1999) is quite clear:

Reducing unemployment in a sustained way will require a continuing focus on integrating sound macroeconomic policies and workplace relations reform with policies to ensure that the welfare system, and its interaction with the tax system, does not discourage people from seeking jobs.

But the Federal Government has eschewed active demand management policies to stimulate national employment growth, instead supporting the ongoing implementation of industrial relations reform, welfare reform and National Competition Policy (NCP) with only a minor role for regional policy.

**Industrial Relations Reform**
The reform of the industrial relations system, through the Workplace Relations Act 1996, was ostensibly to increase ‘flexibility’ in the deployment of labour and to redefine the role of unions in the bargaining
process. Amendments to the current unfair dismissal laws and the preservation and extension of age-based junior wage rates were designed to overcome the perceived restrictions on employment growth. Other initiatives being pursued to enhance productivity and to streamline enterprise bargaining include the further simplification of awards, the reduction in the role of third parties in making agreements and voluntary union membership (Treasury, 1999). Further reforms are designed to consolidate those that have already been implemented (DEWRSB, 1999). The Government is less than forthcoming on how these reforms of the labour market will achieve employment growth in areas of high unemployment.

The wage curve estimates do not support the view that further downward pressure on the level of wages will necessarily enhance the generation of employment opportunities. Further, an industrial relations system that sanctions the payment of low wages is likely to promote dynamic inefficiency (Stegman, 1997; Watts, 1999). Firms will tend to compete through cost cutting, via wage cuts relative to labour productivity, rather than by enhancing productivity through new investment. With stagnant investment and labour productivity, real wages and aggregate demand necessarily remain low. Such an economy fails to achieve the virtuous cycle of growing accumulation, real wages, demand and productivity.  

Welfare Reform
Through the principle of mutual obligation, the Government's reform of the welfare system in July 1998 was designed to provide job seekers with incentives to find work and disincentives to remain dependent on welfare payments. Young workers who are unemployed for more than 6 months can satisfy their mutual obligation in various ways, including participation in a training program and Work for the Dole (Burgess et al, 2000).

However, unless firms agree to relocate, training programs in areas of high unemployment are likely to be inefficient. The current Federal government has not brokered such arrangements under its regional policies (see below). The implicit assumption appears to be that labour is highly mobile and/or firms will relocate to areas of high unemployment.

National Competition Policy
NCP is designed to boost productivity, but its advocates have ignored the spatial distribution of costs and benefits (Denniss, 1999; Denniss and Toner 1999). NCP has had a large adverse effect on many non-metropolitan regions (Industry Commission 1993; Treasury, 1998; Pro-
ductivity Commission, 1999). This is despite legislation, such as the NSW State Owned Corporations Act, 1999 that specifies broad objectives for State Owned Corporations, including the requirement that they take account of regional development and decentralisation. In practice, however, the maximisation of dividends to the State Government and hence narrowly defined economic efficiency appears to take precedence (Denniss and Toner, 1999). The inter-temporal tradeoff between costs and benefits was considered, but no equivalent spatial calculations were undertaken.

Following an adverse shock, such as large-scale redundancies in a GBE, labour is assumed to relocate and secure new jobs elsewhere in the economy at lower wages (Productivity Commission, 1999; Treasury, 1996). However, the evidence cited above points to modest rates of migration and the presence of fixed effects, which preclude the rapid convergence of unemployment rates.

The presence of a modified wage curve across Statistical Regions confirms that firms are disinclined to relocate to high unemployment regions despite their low wages. Thus the uneven distribution of employment and investment opportunities that has directly resulted from the implementation of the NCP is likely to have an impact on the long run regional distribution of unemployment. Cost benefit analysis may show a net gain to society of such an approach, but it conceals a substantial spatial redistribution of employment opportunities. A comprehensive set of targeted regional policies would need to be implemented to redress the maldistribution of employment opportunities in regional areas.

**Regional Policy**

The main plank of the government’s regional policy has been the Regional Assistance Programme (RAP) and the development of Area Consultative Committees (ACCs). In the 1999-2000 Budget, $40.8 million was provided for the development of ACC operations and the RAP for projects including the expansion of job and training opportunities for local people and the development of regional surveys and industry profiles to improve the skills base and meet emerging skills needs (Anderson, 1999). These funds, however, were also to be used for national emergencies affecting regional Australia. In addition, policies to encourage the employment of apprentices in rural areas ($51.3 million over 4 years) and tourism in regional areas ($8.1 million) were also announced. While beneficial to regional economies, these projects cost about $60 million per annum and have been accompanied by expenditure cuts in some regional areas. For 2000-2001, total expenditure on Rural and
Regional Measures (including expenditures on social and economic programs) was $280 million out of a budget of over $150 billion (Commonwealth of Australia, 2000). In September 2000 nearly 200,000 unemployed persons, representing nearly 33 percent of total unemployment, were living outside capital cities, the Northern Territory and the ACT. The Government’s ‘regional policy’ is at best, tokenistic.

4. Policy Prescription and Concluding Comments
This paper has demonstrated the presence of a well-specified ‘modified’ wage curve across Statistical Regions. This snapshot of the regional economy points to the likelihood of an economic polarisation of regions, which suggests the presence of specific effects. Thus policies to increase labour mobility through the intensification of the structure of incentives are unlikely to be successful (Debelle and Vickery, 1998).

These fixed effects could reflect workers being unwilling to search for and accept reasonable offers of work. However mobility for workers in regional areas typically requires relocation, whereas for workers in metropolitan areas, a different pattern of commuting is typically required. Also, if increased labour market ‘flexibility’ has reduced job security through the growth of non-standard employment and the dilution of unfair dismissal legislation, then the expected benefits of relocation would be reduced. Further research is required to identify the determinants of the (state) fixed effects, thereby assisting in the development of policy.

The uneven distribution of employment opportunities, reflecting the intrinsic economic and social characteristics of different areas, provides a more consistent explanation of regional unemployment disparities than a NAIRU framework, coupled with the claims that labour mobility is too low and that economic adjustment processes are characterised by negative feedback.15

Sydney and non-metropolitan NSW have identical institutional frameworks, but it is unlikely that labour market reforms will be effective in reducing the dispersion of unemployment rates. NCP has stripped jobs out of regional areas and passed on the savings to metropolitan areas. The benefits of NCP have not been returned to the regions that generated them. The most likely outcome of the current policy of deregulation is the perpetuation of regional employment and income disparities.

Population and employment increases in large urban centres through the continued relocation of workers and their families will impose a large external cost in the form of increased congestion and the duplication of housing, transport, social and utility infrastructure (Denniss and
Regional Labour Markets: Naturally Less Efficient?

The better use of existing, underutilised infrastructure in regional areas will help to prevent the formation of production bottlenecks and in turn increase the rate of growth and reduce the 'sustainable' rate of unemployment that can be achieved without accelerating inflation. Also unemployment in regional areas imposes substantial economic and social costs.

Government schemes to redirect investment and job creation towards areas with excess supplies of labour and underutilised infrastructure are therefore worthy of consideration. Local councils have the knowledge to identify pressing social needs and employment agencies can readily establish the extent of idle labour. The creation of opportunities for training and employment should follow the principles of the Job Guarantee program in which the Government acts as a job guarantor (for example, Mitchell, this volume). Such a program will generate a high rate of social return on public expenditure.

Notes

1 Even the Labor Government's Working Nation strategy was premised on the need for unemployed workers to be job ready, thereby reducing the NAIRU.
2 We are assuming here that modern economies exhibit an inflationary bias (Cornwall, 1983).
3 In this context the OECD's suggestion (OECD 1994, 46) that minimum wages be indexed to prices and differentiated by age and region to minimise the adverse impact on employment is misguided.
4 In a study of Germany, France and Italy, Puhani (1999) finds that labour mobility is most unlikely to act as a sufficient adjustment mechanism to counter asymmetric shocks.
5 Residents in the Woollahra SLA in Sydney, for example, had 1.8 percent unemployment in September 2000, whereas Australia's unemployment rate was 6.2 percent and the unemployment rate in Fairfield, also in Sydney was 10.2 percent (DEWRSB, 2000). The labour market conditions facing Woollahra workers are largely unaffected by the high rates of unemployment and low incomes of Fairfield residents.
6 Tasmania was treated as a single observation in the absence of wage and hours data for the Balance of Tasmania. Northern Territory and ACT were also treated as single observations with the South Eastern SR, that is not reported separately, being combined with the Illawarra, rather than the ACT.
7 Black and Fitzroy (2000) use panel data (1979-95) to estimate a wage curve for male full-time manual workers across 56 counties in Britain. Personal characteristics such as race and qualifications are not included.
8 A similar pattern of results was found when the equations were estimated for full-time persons. Wages, the unemployment rate, participation rate and the employment to population ratio were all defined with respect to full-time employment.
9 In this study no measure of the actual or expected price level is utilised.
Consequently the relationship between labour demand, proxied by the unemployment rate, and real wages is not being directly tested. It is assumed that there is little variation in the price level across Statistical Regions, so that money wages can be used. CPI measures, that are available for state capital cities, were not employed in the inter-state study by Kennedy and Borland (2000).

10 The estimated equation takes the form $U_{dev} = a + cU_{dev-1}$, where $U_{dev}$ denotes the deviation of the SLA rate of unemployment from the national rate, and $c<1$.

11 The steady state unemployment deviation is $a/(1-c)$ which is an increasing function of $c$, for a given value of $a$. The constant term, $a$, should be zero if unemployment rates are to converge.

12 For example, a 'fiscal consolidation' program was implemented in 1996 when the unemployment rate exceeded 9 percent (see Stillwell, 2000).

13 Mitchell (1996) demonstrates the key role of investment in the achievement of a low rate of unemployment.

14 For example, annual public funding of Newcastle University the second biggest employer in the Hunter Region fell $22.4m over the period 1997-2000 with a reduction of 293 positions.

15 The Department of Health, Housing, Local Government and Community Services (1993, 8) emphasises the importance of population and locality characteristics in influencing regional unemployment rates and hence the need for general employment, education and training programs targeted at individual disadvantage. It is difficult to ensure that employment is taken up by those people residing in high unemployment areas, rather than better qualified workers from adjacent areas.

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Regional Labour Markets: Naturally Less Efficient?

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