

*Response to questions taken
on notice by The Australia
Institute on 28 August 2012,
received 28 August 2012.*

The Secretariat

Today at the Senate hearing Richard Denniss and I undertook to supply the Committee with some additional information. This email responds to that:

1. Geographic evidence on the dispersion of unemployment among the regions in Australia. The link to the ABS figures is <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6291.0.55.001Jul%202012?OpenDocument> however, this is very unwieldy. I have summarised some of the highest and lowest unemployment figures in an attached paper 'Regional unemployment rates'. Richard Denniss and Martin Watts wrote the attached article on regional labour markets which was used as a submission to a House Committee in 2001.
2. OECD data on replacement rates (the extent to which unemployment benefits replace wages in OECD countries). See <http://www.oecd.org/els/benefitsandwagesstatistics.htm> The graph summarises the replacement rates over time. The first link gives initial replacement rates and the second the longer term replacement rates.
3. The Institute's superannuation paper referred to in evidence. See attached. Ross Gittins referred to it in the Sydney Morning Herald, see <http://www.smh.com.au/opinion/politics/fat-cats-that-got-cream-in-super-tax-deal-are-breaking-the-bank-20120814-246sp.html>

Please let us know if there is anything else you need.

David Richardson

Can the taxpayer afford ‘self-funded retirement’?

Policy Brief No. 42

August 2012

ISSN 1836-9012

Dr Richard Denniss and David Richardson

About TAI

The Australia Institute is an independent public policy think tank based in Canberra. It is funded by donations from philanthropic trusts and individuals, memberships and commissioned research. Since its launch in 1994, the Institute has carried out highly influential research on a broad range of economic, social and environmental issues.

Our philosophy

As we begin the 21st century, new dilemmas confront our society and our planet. Unprecedented levels of consumption co-exist with extreme poverty. Through new technology we are more connected than we have ever been, yet civic engagement is declining. Environmental neglect continues despite heightened ecological awareness. A better balance is urgently needed.

The Australia Institute's directors, staff and supporters represent a broad range of views and priorities. What unites us is a belief that through a combination of research and creativity we can promote new solutions and ways of thinking.

Our purpose—'Research that matters'

The Institute aims to foster informed debate about our culture, our economy and our environment and bring greater accountability to the democratic process. Our goal is to gather, interpret and communicate evidence in order to both diagnose the problems we face and propose new solutions to tackle them.

The Institute is wholly independent and not affiliated with any other organisation. As an Approved Research Institute, donations to its Research Fund are tax deductible for the donor. Anyone wishing to donate can do so via the website at <https://www.tai.org.au> or by calling the Institute on 02 6206 8700. Our secure and user-friendly website allows donors to make either one-off or regular monthly donations and we encourage everyone who can to donate in this way as it assists our research in the most significant manner.

LPO Box 5096
University of Canberra, Bruce ACT 2617
Tel: (02) 6206 8700 Fax: (02) 6206 8708
Email: mail@tai.org.au
Website: www.tai.org.au

Summary

Australian taxpayers contributed \$30.2 billion to the private accounts of that portion of the population with superannuation 2011-12. By 2015-16 this sum is projected by Treasury to rise to more than \$45 billion by which time it will be, by far, the single largest area of government expenditure. By 2015-16 the taxpayer contribution of \$45 billion to private superannuation balances will account for almost twice the \$24 billion projected to be spent on defence in that year. Indeed, the \$45 billion subsidy is almost as much as the \$51 billion provided by the Commonwealth to the states in 2012-13 and territories to provide health, education and other essential services.

By 2015-16 the annual cost of taxpayer contributions for private superannuation will again exceed the annual cost of the age pension. That said, from that point on, taxpayer subsidies for superannuation are likely to grow significantly faster than the annual cost of providing the age pension.

According to Treasury the top five per cent of income earners receive 37 per cent of all superannuation tax concessions. While comprehensive data matching individual's wealth and income is not available we do know that the net worth of the highest income quintile (that is, wealthiest 20 per cent of the population) was \$2.2 million per household in 2009-10. The non-housing assets of that top 20 per cent averaged \$1.4 million. Given that the assets test for the age pension currently means that no pension is payable to a single person with assets of more than \$696,250 (excluding the family home) it would appear that a significant proportion of tax concessions for superannuation are going to individuals who will almost certainly be ineligible for the age pension.

While we know from Treasury that a disproportionate share of the benefits of tax concessions for superannuation accrue to the highest income earners we also know from the ABS that none of the benefits go to Australia's lowest income earners. Despite Australia's superannuation system often being described as 'universal' in fact a substantial portion of the working age population does not make contributions to superannuation and, in turn, receive none of the \$30 billion available to 'boost retirement incomes'.

Superannuation tax concessions can only 'boost' the retirement incomes of those who contribute, and it 'boosts' those income proportionate to the level of contribution. Put simply, superannuation tax concessions are designed in such a way that the more income a person earns the more taxpayer support they will receive. Those Australian who cannot work receive nothing. While it is possible that such an inequitable system design maximises the capacity of the superannuation tax concessions to 'take pressure' off the age pension such an outcome is highly unlikely, especially as it is low income earners who are the most likely to rely on the age pension and very high income earners who do not.

The belief that the tens of billions per year spent on taxpayer contributions to private retirement accounts 'takes pressure off' the commonwealth budget may be widespread but the source of this belief is not well documented.

The sheer size, and rate of escalation, of the cost of tax concessions for superannuation combined with the small reduction in the expected number of retirees who do not receive the age pension make clear that it is unlikely that the current subsidies will deliver long run savings for the overall budget. That said, a closer look at the detailed design features of the current superannuation arrangements make clear that the architects of the system had goals that are quite divergent from minimising the future cost of the age pension. Consider the following:

- If the Howard and Costello Government were worried about the impact of baby boomers on the cost of providing the age pension why did they substantially loosen the age pension means and assets tests in 2007?
- If the objective of the subsidies for superannuation is to reduce the cost of the age pension why can people access their super at 55 when they cannot access the age pension until they are 65?
- If the objective of the subsidies for superannuation is to reduce the cost of the age pension why can people take their super in the form of a lump sum, spend it all, and still be eligible for the age pension?
- If the objective of the subsidies for superannuation is to reduce the cost of the age pension why can people who already hold more assets than the amount prescribed in the assets test continue to make concessional contributions?
- If the objective of the subsidies for superannuation is to reduce the cost of the age pension why don't the poorest third of the population, the third of the population most likely to rely solely on the age pension, receive any of the \$45 billion contributions?
- If the cost of providing tax concessions for superannuation are greater than the cost of providing the cost of providing the age pension how could substituting the former for the latter save the government money?

Whatever the rationales for the creation of the current system of tax concessions for superannuation, minimising the future cost of the age pension does not appear to be among them.

Introduction

Australian taxpayers contributed \$30.2 billion to the private accounts of that portion of the population with superannuation 2011-12. By 2015-16 this sum is projected by Treasury to rise to more than \$45 billion by which time it will be, by far, the single largest area of government expenditure. By 2015-16 the taxpayer contribution of \$45 billion to private superannuation balances will account for almost twice the \$24 billion projected to be spent on defence in that year. Indeed, the \$45 billion subsidy is almost as much as the \$51 billion provided by the Commonwealth to the states in 2012-13 and territories to provide health, education and other essential services.¹

Politicians and industry groups regularly claim that the enormous expenditure on tax concessions for superannuation is justified, in part at least, on the basis that such outlays today will yield future dividends for taxpayers in the form of lower age pension payments. For example:

“Investing in superannuation now means there will be less reliance on the age pension as baby boomers retire.” Assistant Treasurer, David Bradbury²

“It eases the long-term pressure on the budget.” Minister for Superannuation, Bill Shorten³

“These measures will take the pressure off the Age Pension” Super Guru⁴

“Superannuation will take the pressure off Government budgets (and taxpayers) of the future by reducing the reliance on the Age Pension” ASFA⁵

“Superannuation is not about short-term collections of tax, it's about addressing a long-term, demographic time-bomb” ASFA⁶

As discussed below, claims such as those made above are typically made with no reference to quantitative analysis. Furthermore, it is largely irrelevant whether tax concessions for superannuation reduce the ‘age pension budget’ as no such ‘budget’ exists. The question that should be of interest to those interested in the long run public finances of the Commonwealth Government is ‘what is the relative size of the costs of providing tax concessions for superannuation and the benefits associated with any reduction in the cost of providing the age pension?’

Indeed, given the enormous size of the taxpayer contribution to private retirement incomes a number of other questions also deserve serious attention, questions such as:

Of all the ways to boost retirement incomes, are tax concessions the most effective?

Would policies such as subsidised child care or subsidised elder care which encourage more women to remain in work for a larger proportion of their working life have a bigger impact on retirement incomes than tax concessions for superannuation?

This paper argues that the net impact of tax concessions on the Commonwealth budget is negative both in the short and long run. It provides a range of evidence to support this

¹ Australian Government (2012).

² Bradbury, D (2012).

³ Shorten, B (2012).

⁴ Association of Superannuation Funds of Australia (2011).

⁵ Association of Superannuation Funds of Australia (2012).

⁶ Association of Superannuation Funds of Australia (2012).

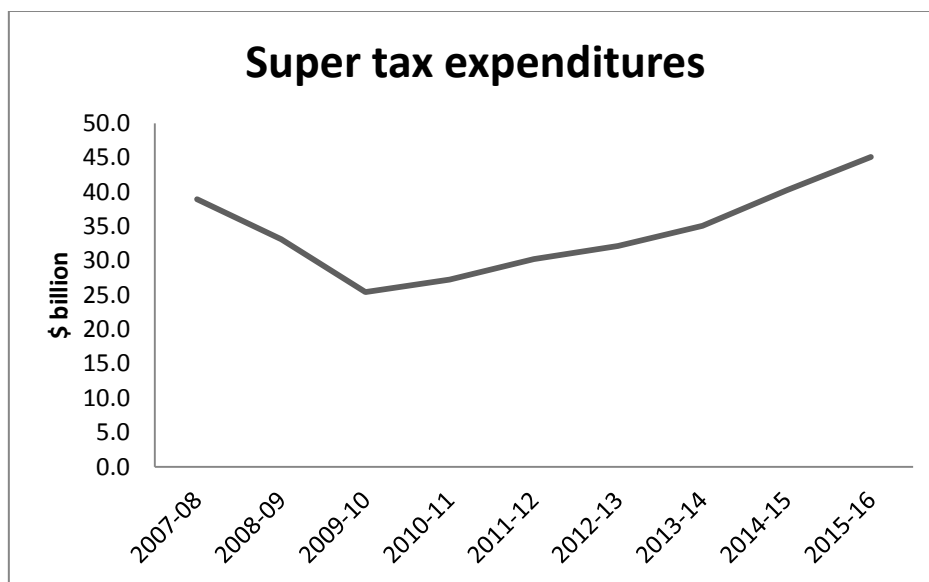
conclusion including estimates by Treasury of the very small impact of increases in superannuation assets on the proportion of the population who do not receive the age pension, evidence from Treasury on the concentration of superannuation tax concessions among households with too much wealth to be eligible for the age pension, and estimates by the author that suggest that up to 61 per cent of a person's 'self-funded retirement' is actually attributable to the tax concessions provided by other taxpayers.

How big are the tax concessions for superannuation?

By 2015-16 the annual cost of taxpayer contributions for private superannuation will again exceed the annual cost of the age pension⁷. That said, from that point on, taxpayer subsidies for superannuation are likely to grow significantly faster than the annual cost of providing the age pension.

Figure 1 shows the projected increase in the annual cost of providing tax concessions to the segment of the population with superannuation accounts. It is interesting to note that in what are allegedly 'tough times' for the budget the question of where the \$15 billion growth in expenditure on superannuation concessions has not attracted significant political, media or academic attention. A similar 'blow out' in the cost of providing health, education or other services would be unlikely to attract such little public scrutiny. Indeed, the recent \$1.5 billion 'blow out' in the cost of providing the National Broadband Network (NBN) attracted significant media attention.⁸

Figure 1 – growth in cost of tax expenditure 2007-2015



Source: 2012-13 Budget Paper No 1.

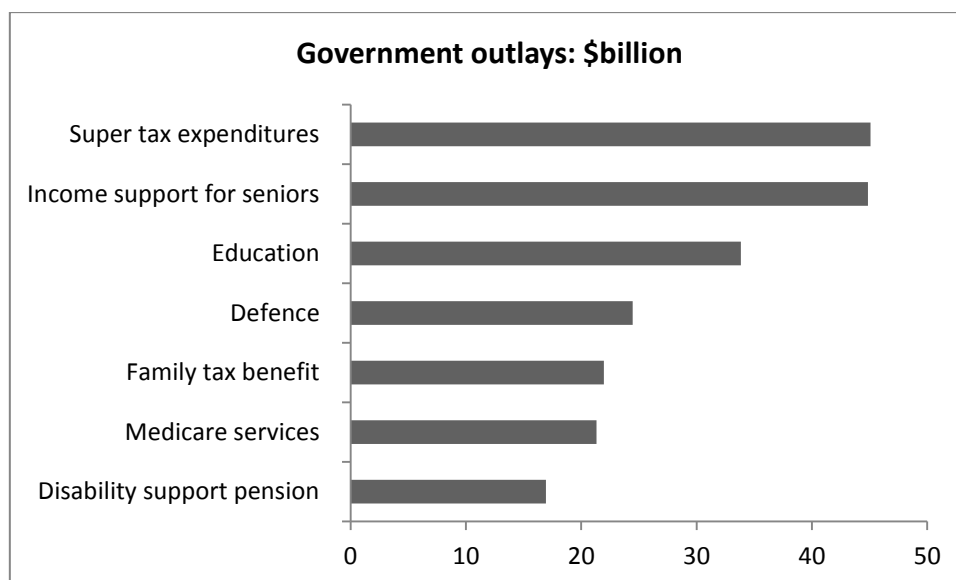
Figure 2 places the projected size of tax concessions into a broader budgetary context. Not only will the cost of taxpayer contributions to private superannuation accounts be nearly

⁷ The cost of tax concessions for superannuation exceeded the cost of providing the age pension before the GFC. The post GFC decline in the value of these tax concessions was due to the lower (often negative) returns earned on accumulated fund balances, the earnings on which are taxed concessionally at 15 per cent.

⁸ Battersby, L and Grubb, B (2012).

twice the size of the defence budget by 2015-16, it will in fact be twice the size of annual expenditure on Medicare services.

Figure 2 – 2015-16 super tax concessions compared to other areas of expenditure



Source: 2012-13 Budget Paper No 1.

Who receives the tax concessions for superannuation?

According to Treasury the top five per cent of income earners receive 37 per cent of all superannuation tax concessions⁹. While comprehensive data matching individual's wealth and income is not available we do know that the net worth of the highest income quintile (that is, wealthiest 20 per cent of the population) was \$2.2 million per household in 2009-10.¹⁰ The non-housing assets of that top 20 per cent averaged \$1.4 million. Given that the assets test for the age pension currently means that no pension is payable to a single person with assets of more than \$696,250 (excluding the family home) it would appear that a significant proportion of tax concessions for superannuation are going to individuals who will almost certainly be ineligible for the age pension.

While we know from Treasury that a disproportionate share of the benefits of tax concessions for superannuation accrue to the highest income earners we also know from the ABS that none of the benefits go to Australia's lowest income earners. Despite Australia's superannuation system often being described as 'universal' in fact a substantial portion of the working age population does not make contributions to superannuation and, in turn, receive none of the \$30 billion available to 'boost retirement incomes'.

Superannuation tax concessions can only 'boost' the retirement incomes of those who contribute, and it 'boosts' those incomes proportionate to the level of contribution. Put simply, superannuation tax concessions are designed in such a way that the more income a person earns the more taxpayer support they will receive. Those Australian who cannot work receive nothing. While it is possible that such an inequitable system design maximises the capacity of the superannuation tax concessions to 'take pressure' off the age pension such an

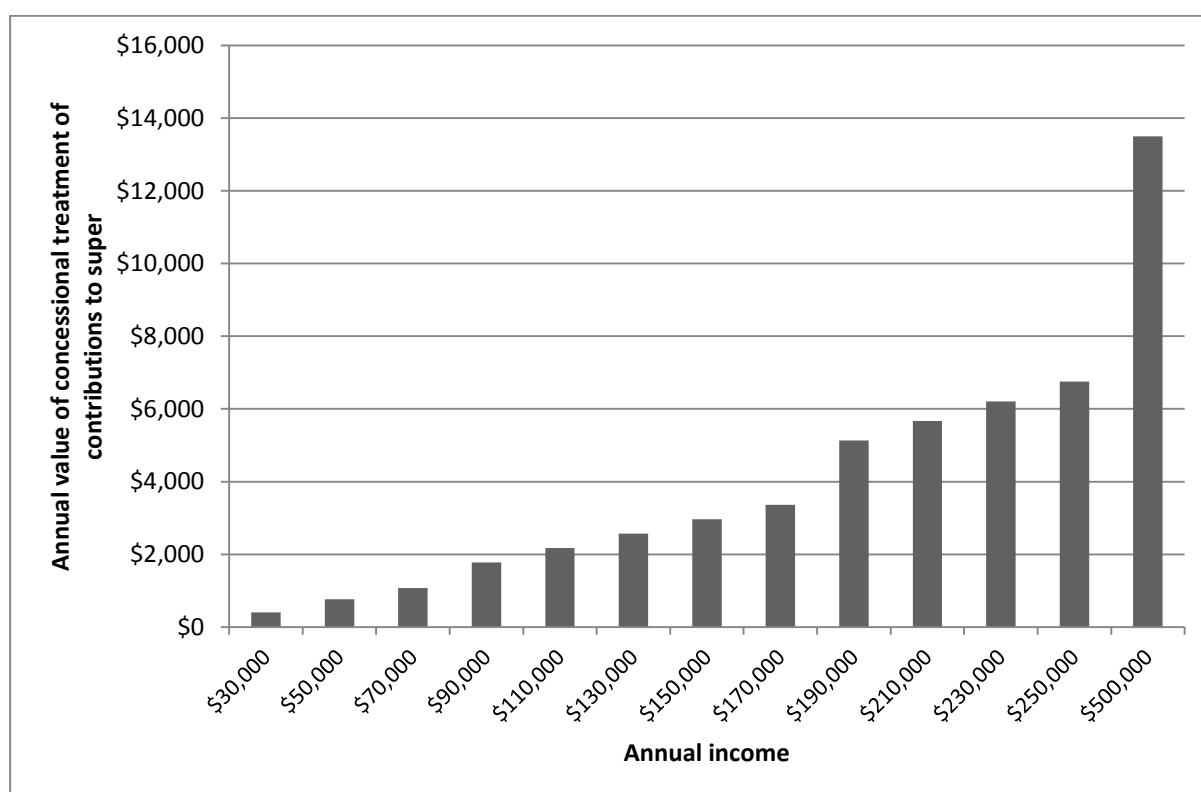
⁹ Treasury (2008). Pp. 22.

¹⁰ These and similar figures are taken from, or based on ABS (2011b).

outcome is highly unlikely, especially as it is low income earners who are the most likely to rely on the age pension and very high income earners who do not.

Figure 3 shows just how inequitable the 15 per cent tax on superannuation contributions is. Because contributions to superannuation are taxed at a flat rate of 15 per cent and ordinary income is taxed progressively, high income earners receive a far larger contribution to their private retirement savings than low income earners do. For example, person who earns \$190,000 and faces the 45 per cent marginal tax rate receives far more taxpayer support than a lower income earner both because the absolute value of their contributions is so much larger and the difference between their marginal tax rate and the 15 per cent contributions tax is also so much larger).

Figure 3 – Individual benefit of the tax concessions on superannuation contributions – by income¹¹



Source: Authors' calculations

While the highest income earners receive significant taxpayer support to accumulate their 'self-funded' superannuation assets Australians with significant care responsibilities, those who are studying, those who cannot work due to sickness or disability or those who cannot find work all miss out on the generous taxpayer support for other people's retirement. In addition to those who are not working a large number of those who do work also miss out on taxpayer contributions to so called 'universal superannuation'.

According to the ABS only 90 per cent of workers had employer contributions paid into a superannuation scheme: 95 per cent of full-time workers and 80 per cent for part time workers. The numbers fell more dramatically down to only 51 per cent for those earning

¹¹ Estimates based on the assumption that individuals only make the 9 per cent compulsory contribution to superannuation. Higher income earners are in fact more likely to make additional voluntary contributions and, in turn, receive even higher benefits from tax concessions.

under \$200 per week. Women are overrepresented in the groups missing out on superannuation.¹²¹³

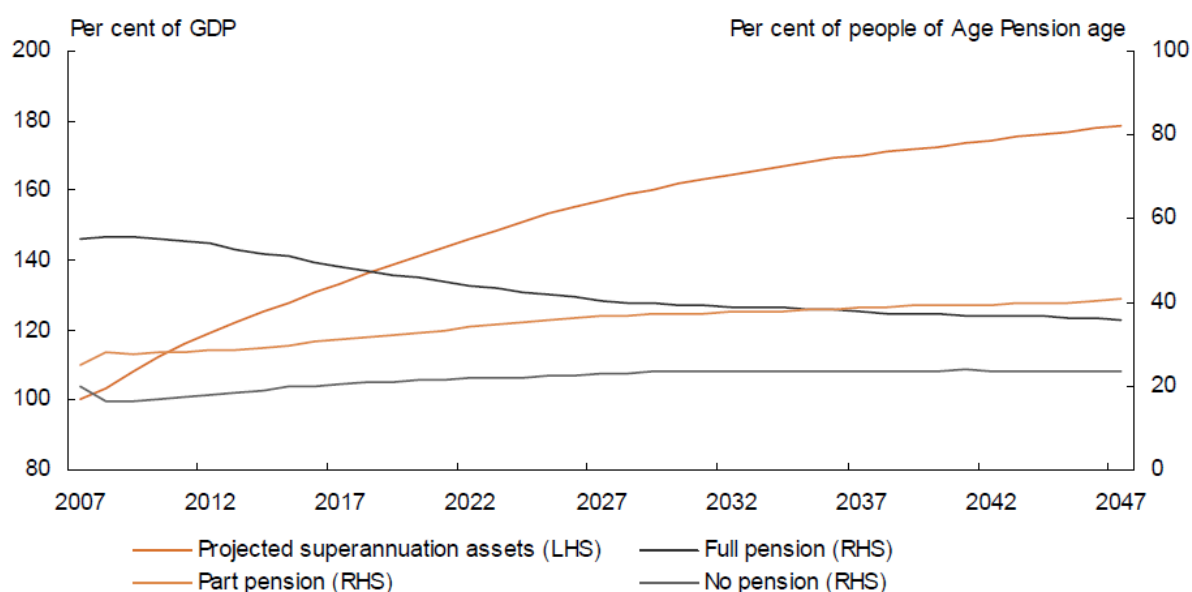
While the highest income earners who receive the largest share of tax concessions from superannuation are highly unlikely to pass the means and assets tests to qualify for the age pension, the lowest income earners, those who do not receive any benefit from tax concessions on superannuation, almost certainly will be eligible for the age pension. As discussed below, it is difficult to reconcile these observations with the assertion that the vast cost of tax concessions for superannuation leads to a significant reduction in age pension payments or, more importantly, delivers a net saving to the budget.

Do Superannuation tax concessions save the government money in the long run?

The belief that the tens of billions per year spent on taxpayer contributions to private retirement accounts ‘takes pressure off’ the commonwealth budget may be widespread but the source of this belief is not well documented.

The most comprehensive assessments of the Australian tax and transfer system in recent years was the 2009 Future Tax System Review conducted by the then Secretary of the Treasury, Dr Ken Henry. Figure 4, which is taken from Retirement Income Consultation Paper prepared for that review, shows that despite the incredible growth in the amount of assets expected to be invested in superannuation over the coming decades there is virtually no change expected in the number of ‘self-funded retirees’.

Figure 4 – Superannuation Assets and Age Pension recipients



Source: Treasury (2008) p. 33

A close examination of the trends in Figure 4 highlights how few people are expected to retire without further assistance from the Commonwealth government. Of most interest, however, is the sharp drop in the number of people receiving no age pension after 2007. This sudden drop was caused by the Howard Government’s decision to make the means and assets tests for the age pension significantly more generous. As discussed below, such a

¹² ABS (2011a).

¹³ See also Australian Centre for Financial Studies (2012).

decision is hard to reconcile with the stated concern with the impact of the baby boomer generation reaching retirement age and placing pressure on the age pension system. Consider the following:

Treasury's forecast suggests that there will be a slow but steady rise in the number of people receiving a part pension and a very small (around 3 per cent) increase in the number of people receiving no pension. As the following calculations show, it follows that a very small increase in the number of people who do not receive the age pension and a small increase in the proportion of the population who receive a part pension can only save the Commonwealth a relatively small amount of money.

If we assume that the population in 2047 is 32 million and that 24 per cent of that population is aged over 65 ¹⁴ then the population of retirees will be 7.6 million. Taking the Treasury estimate of a three per cent increase in the proportion of retirees receiving no age pension (230,000 people) and a 15 per cent increase in the proportion of retirees receiving a part pension (1,152,000 people) it can be estimated that the reduction in the age pension bill, compared to today, would be equivalent to 10.5 per cent of the retiree population ($15/2 + 3$) multiplied by the age pension ¹⁵.

That is, the projected reduction in the age pension bill in 2047 can be estimated as 806,000 people multiplied by the current single age pension rate of \$695.30 per fortnight equates to a saving of around \$14 billion per year in 35 years' time. Given that this year's tax concessions cost more than twice that amount, and that the future benefits need to be discounted to today's dollars, the Treasury projections included in the figure above make clear that the impact of the large, and rapidly growing, cost of tax concessions for superannuation do not provide a net benefit to the Commonwealth budget.

Another way of determining the impact of tax concessions for superannuation is to consider a specific example. Consider the following:

Assume someone on the 45 per cent marginal tax rate puts away \$10,000 in real terms every year for 40 years into a fund earning 7.5 per cent nominal or 5.0 per cent after inflation of 2.5 per cent. With the tax of 15 per cent on contributions and earnings that person would have a sum of \$784,310 at the end of 40 years. However, if the contributor had to pay the actual applicable marginal tax rate of 45 per cent then the balance at the end of 40 years would fall to \$306,496.8. The difference, \$477,813.20 is due to the tax concessions on both the contributions and the income in the fund. Hence the taxpayer contribution accounts for 61 per cent of the 'self-funded retirement' in this example.

Unfortunately there is no clear statement from the Treasury in any of the three intergenerational reports concerning the rate of return to the taxpayers of our 'investment' in superannuation tax concessions. As shown above, however, a wide range of vague statements implying that the thirty billion spent this year will return even greater savings in the future are, however, easily found.

¹⁴ ABS (2008).

¹⁵ Assuming that the average part pensioner receives a payment equivalent to half of the age pension.

None of the claims by supporters of the existing suite of tax concessions in the Introduction are based on a comprehensive assessment of the 'net' impact of tax concessions for superannuation on the Commonwealth Budget. Rather, to the extent that they are quantified at all they relate to the capacity of the tens of billions of dollars spent on tax subsidies for superannuation to lead to some reduction in the age pension as opposed to improve the net budgetary position. That is, while it is certainly the case that there is some 'gross' reduction in the cost of providing the age pension as a result of tax concessions for superannuation, none of the claims above are based on an assessment of the amount of any reductions in the age pension compared to the money spent on tax concessions to generate those savings.

The sheer size, and rate of escalation, of the cost of tax concessions for superannuation combined with the small reduction in the expected number of retirees who do not receive the age pension make clear that it is unlikely that the current subsidies will deliver long run savings for the overall budget. That said, a closer look at the detailed design features of the current superannuation arrangements make clear that the architects of the system had goals that are quite divergent from minimising the future cost of the age pension. Consider the following:

- If the Howard and Costello Government were worried about the impact of baby boomers on the cost of providing the age pension why did they substantially loosen the age pension means and assets tests in 2007?
- If the objective of the subsidies for superannuation is to reduce the cost of the age pension why can people access their super at 55 when they cannot access the age pension until they are 65?
- If the objective of the subsidies for superannuation is to reduce the cost of the age pension why can people take their super in the form of a lump sum, spend it all, and still be eligible for the age pension?
- If the objective of the subsidies for superannuation is to reduce the cost of the age pension why can people who already hold more assets than the amount prescribed in the assets test continue to make concessional contributions?
- If the objective of the subsidies for superannuation is to reduce the cost of the age pension why don't the poorest third of the population, the third of the population most likely to rely solely on the age pension, receive any of the \$45 billion contributions?
- If the cost of providing tax concessions for superannuation are greater than the cost of providing the cost of providing the age pension how could substituting the former for the latter save the government money?

Whatever the rationales for the creation of the current system of tax concessions for superannuation, minimising the future cost of the age pension does not appear to be among them.

The rising cost of dignity in Australia

While the design of superannuation tax concessions does not appear targeted at reducing the future cost of providing the age pension it does do an effective job of making the income tax system less progressive. While this outcome may or may not be an objective of the Government it does seem clear that this government, and the previous government, have been pursuing the objective of increasing the standard of living for retirees, particularly for retirees with private savings. Indeed, Minister Shorten has made clear that it is not 'realistic'

for the majority of the next generation of retirees to endure the standard of living deemed acceptable for the current generation of refugees. As Minister Shorten said:

“The Great Depression and Second World War generations of Australians did it tough. They were frugal in an era of bitter hardship and war, and widowhood and suburban sacrifice. But our current generations of Baby Boomers have learned to expect more and get more. Like Oliver they want more, and we are here to supply it.”

The amount of money required to live reasonably is much higher than previous generations required. Or put another way, we are no longer as good at living frugally. We are healthier than our great grandparents. We are more active and energetic. We don't just play bowls and chess and Scrabble, we hike, we bicycle, we travel overseas. We are keen to change our lifestyles in the years of 55 to 75. This means we need more money.”

Just why a demographic group that feels they deserve more money should receive such a ‘boost’ is left unstated by the Minister, but there seems to be little doubt that he is proud of his determination to deliver it. Similarly, it is not clear why such a group should take precedence over, for example, the need to improve the provision of primary health services to indigenous populations or the need to fund a National Disability Insurance Scheme (NDIS). Perhaps they to, like Oliver, just need to ask for more?

It is often said in Australian debates about retirement that to retire with ‘dignity’ a couple would need a retirement income of around \$50,000 per year. In order to help Australians achieve such levels of retirement incomes Australian taxpayers now contribute around \$30 billion per year in tax concessions to help boost the retirement savings of so called ‘self-funded’ retirees. The desire to deliver on the expectations of the wealthiest Baby Boomers is not confined to Minister Shorten with the Coalition Government’s Minister for Ageing, Julie Bishop stating:

“We are moving towards a future where older Australians will have different needs and expectations. With the advent of the Baby Boomers as the next generation of older people, old age will be characterised by different values and aspirations, needs, services, cultures and recreational activity.”

Similarly, according to the Association of Superannuation Funds of Australia (ASFA), the peak industry body for the superannuation sector:

“The Age Pension is the yardstick for the basic amount people can survive on in retirement, but most of us want and need more when we finish working.”

One of ASFA’s members, Maritime Super, states that its goal is:

“...helping members and their families and friends achieve financial security and dignity in retirement.”

The ABC’s economics correspondent, Stephen Long recently summarised the superannuation systems as follows:

“When Paul Keating set up the superannuation system the promise was it would give workers security and dignity in retirement.”

Even the Commonwealth Government helps to propagate the view that a comfortable retirement requires an above average income, stating on its ‘Moneysmart’ website:

“According to the Westpac – Association of Superannuation Funds of Australia (AFSA) Retirement Standard benchmarks, a comfortable lifestyle for a couple,

including entertainment, a car, clothes, private health insurance and holidays, can cost about \$55,000 a year. A modest lifestyle will still require about \$31,000 a year per couple.”

The widespread acceptance of the idea that to retire with ‘dignity’ costs \$50,000 raises some significant questions for the ability of the non-retiree population, especially in the context that the minimum wage is around \$37,000, an amount from which some people manage to pay tax, pay for their housing and raise children while the \$50,000 required for a ‘dignified’ retirement is based on a couple that has paid off their own home.

This is not to say that individuals on low incomes do not receive any support from the Commonwealth. Those on the minimum wage with children, for example, are eligible for Family Tax Benefits. The point being made is that even after such support is received low income individuals raising a child and paying rent or a mortgage are still expected to live on an income well below that which is considered necessary to sustain a retired couple who own their own home with no dependent children, and to carry a higher tax obligation.

It is interesting to note that in compiling the estimated cost of a ‘comfortable’ retirement ASFA has included, among a wide range of other expenses, the following costs of retirement:

- Weekly expenditure on restaurant meals and coffee \$100
- Annual expenditure on domestic holidays \$3,000
- Five yearly cost of overseas holidays \$11,000
- Weekly cost of wine with dinner \$40

While there is no doubt that some Australians spend such amounts on prepared food and holiday travel, and no doubt that even more people aspire to such levels of expenditure, the policy question addressed in this paper is simply whether or not such expectations constitute a policy problem that large amounts of taxpayers’ money should be used to address a personal preference which individuals should be free to save their own money for if they so desire.

Conclusion

The retirement income system in Australia is now based on the provision of a minimum floor of the aged pension which is effectively topped up with tax free superannuation income. Those who earned the least during their working lives, particularly women who spent a lot of time caring for others rather than in the paid workforce, will receive the smallest ‘top up’ while those who earned the most over the course of their working life will receive the most generous top up. While the very wealthiest will not receive an age pension nor will they pay tax in their retirement, even if their income is in the millions of dollars per year. When it comes to age, it seems, the concepts of horizontal and vertical tax equity have been abandoned.

Thanks to the generous increase in the thresholds at which the aged pension begins to taper out all but the wealthiest of Australian’s will receive a full or part aged pension. Indeed, a couple who lived in a home worth \$2 million who had \$700,000 in superannuation could comfortably draw a tax free income of \$70,000 per year and still receive a part pension.

Superannuation has become a popular vehicle for tax planning and avoidance, especially for those over 55 who are able to contribute concessional tax income to ‘fund their retirement’ while simultaneously withdrawing the same money.

For policy purposes it would be preferable if super were directed into products that provide a continuing income rather than products that can be accessed all at once. That would better

meet the policy objective of providing for retirement incomes while reducing the use of super concessions as a tax avoidance device.

Similarly, if governments were interested in equitably providing taxpayers funds to help individuals accumulate funds for their retirement then it is hard to imagine why they would not make equal cash grants to individuals retirement savings accounts (or means tested payments) rather than rely on tax concessions which, inevitably, provide the most support to those with the most income.

As Treasury has noted:

For many individuals with broken work patterns, or no work history, changes to superannuation policy may have minimal effect on their retirement income.

Policies which support an efficient, robust economy and remove disincentives to work may have a greater effect on these individuals' retirement income than superannuation policies. For example, policies which support child care may encourage more women to return to the workforce. This may have a greater influence on their retirement income than increasing superannuation concessions.

The Age Pension is likely to provide the majority of retirement income for individuals with broken work patterns. Therefore, consideration of the adequacy of the Age Pension is likely to have the most immediate impact on their retirement income. (Treasury 2009 p. 16)

Put another way, women who spend their lives caring for others are at the highest risk of spending their retirement having to care for themselves. Not only do they benefit the least from the current tax concessions for superannuation but they would benefit the most from 'unaffordable' policies such as paid parental leave, subsidised child care, government after school hours care and the NDIS. Ironically, unlike the additional \$15 billion soon to be spent on tax concessions for superannuation, such policies are typically deemed 'unaffordable'.

References

Association of Superannuation Funds of Australia (2011). *Compulsory super contributions set to rise*. Available at: <http://www.superguru.com.au/ht-07>

Association of Superannuation Funds of Australia (2012). *Parliamentary inquiry needed into tax efficient investments: ASFA*, media release, 8 May 2012, Available at: <http://www.superannuation.asn.au/media-release-8-may-2012>

Australian Bureau of Statistics (2008). *One in four Australians aged 65 years and over by 2056: ABS*, media release, 4 September 2008. Available at: <http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/3222.0Media%20Release12006%20to%202101?opendocument&tabname=Summary&prodno=3222.0&issue=2006%20to%202101&num=&view=>

Australian Bureau of Statistics (2011a). *Employee earnings, benefits and trade union membership, Australia, Aug 2010*, Cat.No. 6310.0, 6 May.

Australian Bureau of Statistics (2011b). *Household wealth and wealth distribution, Australia, 2009-10*, Cat no 6554.0, 14 October.

Australian Centre for Financial Studies (2012). *A decade on, career break still as damaging as ever to women's super: study*, media release, 4 April 2012. Available at: http://www.aist.asn.au/media/132441/2012.04.04_media_a%20decade%20on%20career%20break%20still%20as%20damaging%20as%20ever%20to%20women's%20super.pdf

Australian Government (2012). Commonwealth Grants Commission Report. *GST Revenue Sharing Relativities 2012 Update*. Available at: http://www.cgc.gov.au/__data/assets/pdf_file/0012/23331/2012_Update_report.pdf

Battersby, L and Grubb, B (2012). 'NBN costs blow out by billions', *Sydney Morning Herald*. Available at: <http://m.smh.com.au/it-pro/government-it/nbn-costs-blow-out-by-billions-20120808-23u0f.html>

Bradbury, D (2012). Assistant Treasurer Minister Assisting for Deregulation, *Speech to 2012 Citi Pension Executive Summit*, Citigroup Centre, Sydney, 11 JULY. Available at: <http://assistant.treasurer.gov.au/DisplayDocs.aspx?doc=speeches/2012/004.htm&pageID=005&min=djba&Year=&DocType>

Shorten, B (2012). 'A super reform our grandchildren will respect'. *The Australian*. Available at: <http://www.theaustralian.com.au/national-affairs/opinion/a-super-reform-our-grandchildren-will-respect/story-e6frgd0x-1226349245203>

Treasury (2008) *Australia's future tax system: Retirement income consultation paper*, December 2008.

Regional labour markets: naturally less efficient?

Richard Denniss & Martin Watts
Centre of Full Employment and Equity (CofFEE)
Department of Economics
University of Newcastle
New South Wales 2308

Contact: Richard Denniss (02) 4921-5070
ecrd@cc.newcastle.edu.au

ABSTRACT

The concepts of the natural rate of unemployment, and subsequently the more agnostic NAIRU, have had a profound effect on economic policy in Australia over the last 25 years. The high rate of unemployment in recent years has been attributed to a high NAIRU that is a consequence of deficiencies on the supply side, including labour market rigidities (requiring institutional reform), high replacement ratios (necessitating less generous welfare payments) and skills mismatch caused by rapid structural change (requiring re-training programs). Other economists argue that these apparent structural rigidities are the outcome of insufficient aggregate demand and hence that high unemployment results from government demand management policy having low inflation, rather than low unemployment, as its primary objective.

This paper considers a feature of the Australian labour market that is not typically considered in the NAIRU/NATURAL rate literature, namely the substantial differences in both unemployment rates and employment growth rates across regions. Can the dominant paradigm explain these disparities when the institutional framework is uniform across urban and country areas within states?

The importance of this issue for regional development lies in the policy prescriptions that flow from the 'natural rate' theory. This paper argues that a focus on institutional reform, such as unfair dismissal legislation and increased labour market flexibility, will be of little assistance to regional economies with high unemployment rates. It is argued that policies which attempt to directly create employment in areas of high unemployment, potentially through a Buffer Stock Employment framework, would yield better employment creation results.

Furthermore, such targeted employment growth would contribute to the ongoing economic viability of rural centres and reduce the demands on infrastructure, resulting from rural populations continuing to relocate to urban centres.

Paper to be presented at the Centre of Full Employment and Equity (CofFEE) Conference in Newcastle, NSW December 2nd and 3rd 1999.

Regional labour markets: naturally less efficient?

Richard Denniss and Martin Watts
Centre of Full Employment and Equity (CofFEE)
Department of Economics
University of Newcastle

I hate to say it, but I think too many Australians have been too fussy for too long about the sorts of jobs they'll do. My own view is that provided that it's not illegal or it's not immoral, almost any job is better than no job.

Tony Abbott, Minister for Employment Services (May, 1999)

1 INTRODUCTION

During the 1990s, Federal Government policy to reduce unemployment has focussed almost entirely 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 unemployment, participation and job growth being inferior in rural and regional areas as compared to metropolitan areas (Howard and Buultjens, 1999, p.115), Federal Government economic policy has paid little attention to the spatial dimension. This paper will outline the implications of such an oversight for reducing national unemployment.

According to Treasury (1999) the main factors that have impeded the reduction of the unemployment rate have been 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). However, if the underlying institutional structure is the major constraint to achieving lower levels of unemployment, why is unemployment so much higher in non-metropolitan areas when all regions within states share identical institutional frameworks? For example in June 1999, the Inner Sydney Region had an unemployment rate of 4.0%, whereas the Hunter & North Coast had a rate of 11% (DEWRSB, 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.² This mobility of labour will improve skill matching and, by improving the efficiency of the labour market, should lower the NAIRU. The failure of regional unemployment rates to converge would seem to suggest that workers have insufficient rates of mobility reflecting the greater pecuniary costs of relocation, including capital loss from property sale, as compared to city workers changing intra-urban commuting patterns in response to job loss. Thus the incentive structure facing workers

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.

may be sub-optimal, even though tax/welfare provisions are largely the same for all workers across Australia (with the exception of rental assistance payments).³

However, another explanation could be that people differ in their responsiveness to labour market conditions, with some workers (particular those in regional areas) being work shy and/or adapting less rapidly to change than their city counterparts. This is suggested by Tony Abbot's quotation.

Finally, long run spatial differentials in unemployment could be caused by differences in local demand conditions when investment, both public and private, is not evenly distributed across the continent. At present the NSW government is spending billions of dollars on construction in preparation for the Olympics in Sydney. Simultaneously, tens of thousands of jobs are being shed in regional areas by GTE's involved in the provision of rail, electricity, water and telecommunication services (see Productivity Commission 1999).

This paper does not attempt to engage directly in the macroeconomic debate over the use of supply side versus demand management policies. Rather, we consider a feature of the Australian labour market that is not typically considered in the 'natural rate' literature: If institutional and behavioural factors are the major cause of unemployment, why do unemployment rates differ so substantially across intra-state regions with identical institutional and legal structures? Does this imply that workers are heterogeneous in their patterns of labour mobility, in response to a given set of market signals? If so, does the structure of incentives need to be altered to bring about more responsive patterns of labour mobility to redress the spatial unemployment inequality? Alternatively, do non-institutional factors play an important role in determining the distribution of regional employment?

We argue that the Government's underlying model of the labour market is flawed due to its failure to consider the spatial dimension of employment creation. The empirical evidence demonstrates that, while the dynamics of inter-state labour mobility are different from those in the USA, the rate of mobility is similar. Also, the role of wage adjustment in influencing mobility is small, so that there is no justification for pursuing increased wage flexibility through further labour market reform. Indeed the existence of a wage curve across states (Kennedy and Borland, 1998) and the demonstration in this paper that a modified wage curve operates across Statistical Regions points to the possibility of the cumulative decline of some areas, following an employment shock. Downward pressure on wage rates in declining areas through further labour market reform is likely to promote dynamic inefficiency. The disparity between unemployment rates in metropolitan and non-metropolitan areas is likely to increase.

² In addition, firms should relocate to areas where unemployment is high and wages are declining.

³ Cashin and Strappazon (1998) are critical of Government transfers to maintain activity in declining areas.

Furthermore, the paper questions whether an increased rate of inter-state and regional urban mobility is actually desirable. The limited extent of firm relocation to areas of high unemployment and low wages suggests that positive feedback is likely to occur, mainly through demand spillovers of the type observed in the USA. Such feedback is likely to undermine the long-term economic viability of regional areas, leading to the creation of obsolete infrastructure and the need for its duplication in the cities. It is argued that targeted macro stimuli to areas of high unemployment with unused infrastructure would be a more effective way to reduce both regional unemployment and the NAIRU than simply focussing on 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 buffer stock employment framework to meet local needs would be an appropriate approach. The paper concludes that the key to reduced economy wide unemployment is the number and spatial distribution of jobs and not the sharpening of incentives for labour to relocate from declining areas. The theoretical underpinnings of current government policy are explored in Section 2. The extant empirical literature on inter-state labour mobility is then explored and a modified wage curve is developed for Statistical Regions. An analysis of variance of unemployment rates for Statistical Local Areas is also undertaken. Contemporary Coalition government policy is assessed in Section 4 with particular reference to regional initiatives. In the final section, some policy initiatives are outlined and concluding comments are presented.

2 Labour Market Theory and Regional Unemployment

The NAIRU

The Coalition Government's approach to unemployment reduction is based on the theoretical model of the Non Accelerating Inflationary Rate of Unemployment (NAIRU), with monetary policy being used solely to control inflation and product and factor market reforms used to stimulate employment growth. Fiscal policy is designed to reduce the public sector's call on national savings (see Treasury 1999).

The NAIRU defines a rate of (equilibrium) unemployment at which the competing claims of income earners are consistent (Carlin and Soskice, 1990, p.136). It represents the minimum sustainable rate of unemployment. The size of the NAIRU is a manifestation of supply side imperfections, so that an unacceptably high equilibrium unemployment rate signals the need for supply side reform. In broad terms, Government has eschewed active demand management and pursued labour market reform, changes to the design of the welfare system and National Competition Policy (NCP) to achieve employment growth. These policies are outlined in Section 4.

Labour Mobility

Policy makers, who pursue further supply side reform in response to the high overall rate of unemployment in Australia, fail to explain why unemployment rates differ substantially between regions in a state, such as NSW, within which the institutional arrangements are identical.

Spatial issues tend to be ignored in the analysis of the NAIRU, although labour mobility between regions in response to market signals is considered to be a key element of the functioning of the labour market. If local labour market shortages are not rapidly filled through labour mobility, then inflationary pressures could build regardless of the 'national' unemployment rate.⁴

In a study of inter-state migration, Debelle and Vickery (1998, p.3) note that there are four avenues of adjustment that can eliminate a relative unemployment differential, following an adverse state-specific shock that generates a rise in unemployment relative to the national average:

- Wage adjustment. The wage in the state falls relative to the wage rate in the rest of the country. This adjustment can be classified as a purely internal labour market adjustment.
- Firm (or capital) mobility. Firms relocate to the state to take advantage of the relatively larger pool of unemployed workers, 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. This would be further enhanced by the negative income effect of lower employment and wages. This form of adjustment would be further enhanced by a fall in the relative wage.
- Labour mobility. Workers in the state 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.

A lower real wage has an ambiguous impact of labour mobility, because, while it encourages out-migration, it will also tend to increase labour demand and firm in-migration, thereby reducing unemployment and the inducement of unemployed labour to relocate. 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.

On the other hand, Cashin and Strappazon (1998) examine theories of movements in regional per capita incomes. They emphasise the importance of inter-regional wage differentials in promoting labour mobility and the relocation of firms, with the latter enhanced by financial markets that enable cross-region borrowing and lending. However, constraints to labour mobility, unfavourable business

conditions and transportation barriers might lead to a spatial mismatch of labour and capital, thereby preventing the creation of *equal* labour market opportunities across regions (Ellwood, 1986).

A distinction needs to be made between labour mobility within local (urban) labour markets and mobility that entails relocation of the worker and her/his family. Most studies of labour mobility centre on inter-state mobility, yet intra-urban labour markets are characterised by considerable variation in unemployment rates, despite the relative ease of changing commuting patterns in response to a change in the spatial distribution of job opportunities. This issue is further addressed below.

The assumption that a high degree of labour mobility causes the convergence of regional unemployment rates underpins the government's approach to unemployment. However, a review of the recent empirical literature in the next section suggests that the explanation for persistent inter-state unemployment differentials is the presence of state fixed effects. These effects include the existence of asymmetric mobility costs (such as a positive differential between the price of metropolitan housing and non-metropolitan housing, see Kennedy and Borland, 1998). Further labour market reform and reductions in regional labour market programs, along with tight fiscal policy and low interest rates will not counter these underlying structural factors and could even be counterproductive.

3 EMPIRICAL EVIDENCE

In this section we explore the contemporary Australian literature about the mobility patterns of workers and the impact on levels of unemployment. In particular, we examine whether the longstanding variance of unemployment rates across regions can be attributed to intrinsic economic characteristics of the different regions, differences in mobility patterns or inadequate rates of mobility.

Cashin and Strappazon (1998, p. 6) assert that there are two robust conclusions from the empirical work on economic growth and the convergence of per capita income. First, interventionist regional policies are ineffective in speeding up convergence, because similar rates of convergence are observed across countries that adopt different policies. This assertion is premised on the explicit assumption that rates of convergence would be equal across countries in the absence of differences in policy.

Second, while the migration of persons from low-income to high income areas should assist in raising the speed of convergence of per capita income between poor and rich regions, tests across a range of countries fail to find such a result. Even in the USA a 10% per capita income differential is only sufficient to raise net migration to the high income area by an amount that raises population growth by about one quarter of 1% per year.

⁴ This suggests that the national NAIRU depends on the spatial distribution of unemployment.

Citing the Industry Commission study (1993), Cashin and Strappazon (1998, p. 6) argue that, in response to a regional employment shock⁵, 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. Cashin and Strappazon claim that there is little variation of regional unemployment rates in the USA, whereas in Australia regional unemployment rates remain permanently above the national average rate.

In short, under a system of centralised wage fixation, regional wages are not allowed to reflect regional productivity differentials, so that regional unemployment rates remain above average in below average productivity regions. The slow adjustment of participation and wage rates in response to adverse employment shocks in regional areas is alleged to signify the presence of a regional adjustment problem (Cashin and Strappazon, 1998, p.7). The authors imply that under a deregulated system of wage determination, wage adjustments would generate a greater incentive for relocation following an adverse employment shock.

The fallacy of this argument is that, through the emphasis on per capita income differentials, wage adjustment in a region subject to a shock is viewed as the pre-eminent influence on mobility, as opposed to inter-state differences in rates of unemployment. In their study of inter-state mobility, Debelle and Vickery (1998) demonstrate that wage adjustment appears to be a relatively minor factor in influencing mobility. Relative unemployment rates provide the main incentive both for inter-state mobility or departure from the labour market.

Debelle and Vickery (1998, p.5) quote Blanchard and Katz (1992) who argue that a state specific increase in US unemployment leads to labour migration that plays a role in reducing the unemployment differential. The trend rate of employment growth is restored but employment is at a lower level due to out-migration. Demand spillovers occur so that the permanent loss of employment is greater than the initial shock. Blanchard and Katz (1992) also argue that during the adjustment phase the regional nominal wage falls, but it makes little contribution to the adjustment process. Thus the state of the labour market influences the decision to migrate, rather than the fall in the nominal wage.

Debelle and Vickery (1998, p.8) note that in Australia people are more prepared to migrate from small states and those with poor labour markets, but the key problem is limited information and inadequate access to local job networks. They explore interstate migration using cointegration tests of the relationship between a state unemployment rate and the national unemployment rate. They conclude

⁵ Cashin and Strappazon (1998) argue that studies of per capita income differences show that state specific shocks are important, rather than fluctuations in national economy.

that labour market adjustment does operate to reduce inter-state unemployment differentials over time. The standard deviation of state unemployment rates has gone up in both Australia and the USA which suggests that labour mobility is similar in both countries. The distribution of state specific shocks could be greater in USA, thereby contributing to a higher standard deviation, but capital cities in Australia are further apart.⁶

After examining the relationship between net migration as a share of population and the relative state unemployment rate, they conclude (p.18) that

'Since state unemployment rates are highly correlated with aggregate unemployment; and given that labour migration works reasonably well in moderating state labour market differentials, it is questionable whether higher mobility would greatly reduce the national unemployment rate'.

This is an important claim, because Cashin and Strappazon (1998) and the Industry Commission (1993) appear to argue that the structure of incentives corresponding to a centralised wage system (and generous unemployment benefits) inhibits labour mobility in response to state specific shocks.

Debelle and Vickery develop structural VAR models with and without the inclusion of the ratio of the state to national average weekly earnings. The inclusion of the wage variable entails a longer period of adjustment and a permanently lower real wage, but yields broadly similar results to the model without the wage variable. Debelle and Vickery argue that a slow initial migration response and a long period of migration makes sense, given the inertia associated with the decision to move interstate and high costs of adjustment (p.26).

The authors find that the speed of adjustment is similar to that found by Blanchard and Katz (1992) in their US study (p.26). As noted, in the USA, the dynamics of adjustment appear to be different, with an overshooting of employment loss to double its initial magnitude and a long run loss of 1.3 times the initial magnitude. On the other hand, the initial loss of employment in Australia appears to be countered by internal adjustment. Wage adjustment in Australia is unlikely to make much of a contribution, as compared to the USA, because there is less wage flexibility in Australia. Debelle and Vickery view these comparative results as a puzzle.

Thus introduction of the wage variable appears to have little impact on employment and migration dynamics in either Australia or the USA, although Debelle and Vickery note that the federal award system may have played a role in Australia. They note that 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 (p.28).

⁶ 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.

In their dynamic state models Debelle and Vickery allow for permanent unemployment differences between the states through state fixed effects. This means that dynamic labour market adjustments between states in response to adverse shocks do not lead to a convergence of state unemployment rates. These effects reflect different underlying economic and social conditions across the states, such as participation rates, employment growth rates or growth rates in relative wages and lifestyle differences (Debelle and Vickery, 1998, p.28). The state models are dynamically unstable in the absence of these effects. The effects are assumed to be independent of shocks to employment. Otherwise specific shocks would permanently influence state unemployment rates.

In their conclusion Debelle and Vickery claim that most of the variation in state unemployment rates is the outcome of variations in the national unemployment rate, rather than state specific factors. The permanent differences 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 p.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 piece of research, Blanchflower and Oswald (1994) document the existence of a negative relationship between local unemployment and wages across a number of countries including Australia using microeconomic data. Thus local labour markets do not appear to operate in the classic textbook manner. A number of explanations are explored, including contract theory, efficiency wage models and bargaining models.

Kennedy and Borland (1998) confirm Blanchflower and Oswald's claim 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 adopt a number of specifications in an analysis of Australian pooled time series data and claim that their results are robust and confirm the presence of a wage curve with a coefficient on the unemployment rate that is not significantly different from minus unity. This order of magnitude coincides with that of other countries, including the USA. Kennedy and Borland (1998, p.25) 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 appear in the specification to avoid the problem of omitted variable bias. Inclusion of these fixed effects reduced the absolute size of the coefficient on the unemployment rate (Kennedy and Borland, 1998, p.22).

The existence of the wage curve for Australian states suggests that investment and demand in general are not evenly distributed spatially. This could reflect the spatial distribution of transport costs, human capital and 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 with some states 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.

The authors note that the macro-level evidence (Blanchard and Katz, 1992) suggests that the regional level adjustment of wages to demand shocks is greater in the USA than either Britain or Australia. This result appears inconsistent with the wage curve analysis. Kennedy and Borland (1998) also note that regional levels of unemployment appear to exhibit a greater degree of persistence in the latter countries. These results appear to demonstrate that less wage flexibility in Britain and Australia contributes to unemployment persistence in those countries as compared to the USA. However the Industry Commission (1993) shows that the extent of inter-regional migration is the critical factor and not differences in the extent of inter-regional wage adjustment. Kennedy and Borland (1998) speculate that the large distances between capital cities, regulations on the portability of unemployment benefits, entitlements to public housing and high levels of home ownership are possible factors as to why rates of out-migration are lower in response to shocks in Australia than in the USA.

Conclusion

A number of conclusions can be drawn about the empirical work on inter-state mobility and unemployment rate differentials. First, inter-state labour mobility in Australia is not significantly less responsive to unemployment rate differentials than workers in the USA. Second, flexible wages appear to play a small role in the process of adjustment in both countries. Finally, even if incentives are sharpened, unemployment differentials will persist across states, due to the presence of state fixed effects. These effects indicate the presence of state specific factors, that could include unequal stocks of skills and infrastructure, as well as lifestyle differences that predispose states to experience unequal unemployment rates, even in the long term. Further econometric work is required to identify these effects more precisely.

3 Intra-State Employment and Earnings

Income Inequality

The papers that analyse inter-state mobility are based on the assumption 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 examine the significant increase in income inequality across smaller geographical areas (Collectors Districts) within urban centres over the period 1976-91. Gregory (1994) shows that in 1976 employment/population ratios lay between 0.65 and 0.69 across areas of different socio-economic status. The collapse of employment opportunities over this period in neighbourhoods of low socio-economic status, along with declining incomes, has been accompanied by increasing employment to population ratios and rising incomes in the high SES neighbourhoods. Now the relationship between socioeconomic status and employment /population ratio is strongly positive with the latter lying between just under 0.50 and 0.70. 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). Gregory (1994, p.111), quoted in Latham (1998, pp.102-104), concludes that:

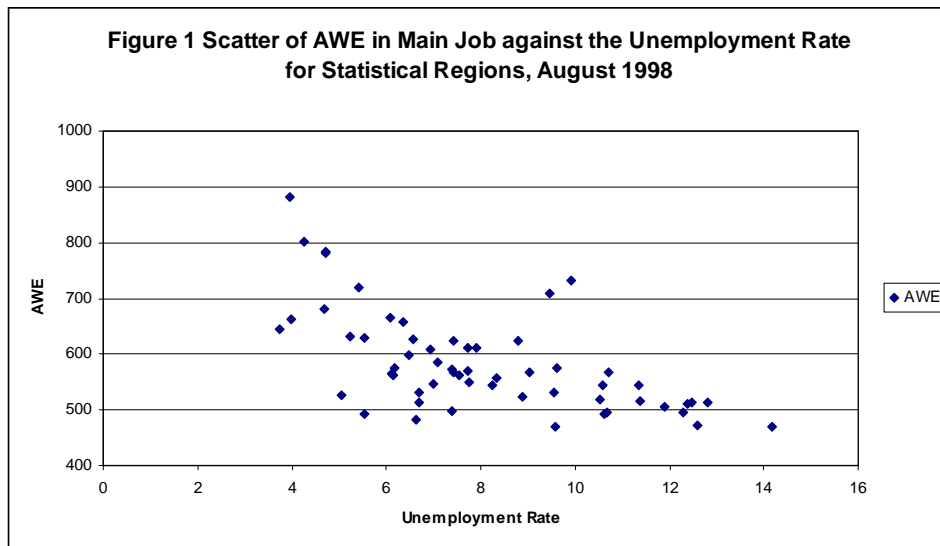
'In 1976, if you walked across Australia crossing from high socio-economic status areas to low socio-economic status you would notice that access to employment did not change very much. The income differences produced across areas were derived from different wages not from different levels of employment. If you walked across Australia along the same path in 1991 you would notice that the income differences among some areas have become exaggerated. The principal reason is the change in employment opportunities. The income of the poor areas is falling because of lack of jobs'

Wage Curve

The ABS produces 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.⁷ We develop a modified wage curve for these Statistical Regions. The scatter diagram of average weekly earnings of persons in their main job and the unemployment rate suggest an inverse relationship (see Figure 1), but such a simple specification is beset with problems of heteroskedasticity and functional form.

In their examination of an inter-state wage curve, Kennedy and Borland (1998, pp.7-8) test whether the relationship is a disguised labour supply curve by the inclusion of the rate of labour force participation rate, LFP, as an independent variable. As the sole regressor, the participation rate is significant in the weekly earnings regression equation (not shown in Table 1), but it has poor explanatory power and the specification has diagnostic problems. With the inclusion of the

unemployment rate, the participation rate becomes insignificant with little change in the coefficient on the unemployment. In addition, the diagnostic performance of the specification significantly improves with only the first F test for heteroskedasticity being significant.



The Australian evidence (eg Gregory 1991) reveals that labour force participation is subject to the discouraged worker effect. Thus 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.⁸ The inclusion of the participation rate variable appears to cause misspecification in both earnings equations with the coefficient on the employment to population ratio exhibiting more than a three-fold increase and the participation variable appearing with a negative coefficient.

The use of average weekly earnings introduces some spurious correlation because it can be expected that average weekly hours worked and the unemployment rate are inversely related. A similar pattern of results was generated using average hourly earnings as the dependent variable with the rate of labour force participation and the unemployment rate or the employment to population ratio as the independent variables. The equations exhibited less explanatory power but the diagnostic tests are

⁷ Tasmania was treated as a single observation in the absence of wage and hours data for the Balance of Tasmania. Northern Territory and ACT are also treated as single observations with the South Eastern SR, that is not reported separately, being combined with the Illawarra, rather than the ACT.

⁸ Using these data, the regional cross sectional regression of the participation rate against the employment to population ratio also suggests the presence of the discouraged worker effect.

satisfied, except for heteroskedasticity. Again the inclusion of the participation rate with the employment to population ratio leads to significant change in the coefficient on the latter.⁹

These specifications cannot be construed to represent different versions of a wage curve because the data consist of regional aggregates, rather than individuals' wages, labour market status and personal characteristics. However the results do cast some light on the signals facing job seekers who are considering migration to another Statistical Region. According to the Harris-Todaro model, wages should be high in high unemployment areas to compensate migrants for the reduced probability of employment, yet the results demonstrate that weekly earnings and the unemployment rate are inversely related.¹⁰ It can be also argued that a snapshot at a point in time provides no guidance as to dynamics of labour mobility and firm relocation over time. Yet the failure of wages and unemployment outcomes to converge after a period of sustained, albeit modest, recovery since the recession of the late 1980s and early 1990s raises the question as to whether these mechanisms are sufficient. Further analysis of the wage curve relationship is required.

If the analysis is underpinned by the idealised state of equalised employment opportunities across regions, then the estimated relationship is inconsistent with a common production function and a misallocation of labour under perfect competition, because there should be an inverse relationship between wages and employment. High wage regions may have experienced high rates of capital accumulation in the past. The claim that underlying economic conditions differ 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 (eg. transportation), past government policy and a highly educated workforce, as well as other factors such as housing prices, lifestyle etc. The inverse relationship between average earnings and the unemployment rate reveals a strong set of signals for the unemployed in high unemployment areas to migrate. Further, if the availability of cheap labour was the main factor driving firms' location decisions, then they would have the incentive to relocate to the high unemployment areas. The results based on this 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 capacity to achieve high employment levels.

⁹ The possible existence of multicollinearity between labour force participation and the labour market has not been investigated.

¹⁰ Stone (1997) notes that the apparent inconsistency of the wage curve with the Harris-Todaro model can be overcome, because in the presence of state specific effects movements of wages and unemployment around the mean can be negatively related while the permanent relationship between these variables is positive. Region specific effects have not been incorporated so this argument does not hold.

Table 1 Modified Wage Curves for Australian Statistical Regions, August 1998								
Dependent Variable	Average Weekly Earnings				Average Hourly Earnings			
	Independent Variables							
Constant	753.120 (24.60**)	635.730 (3.64**)	115.890 (1.11)	475.00 (3.22**)	21.56 (26.39**)	18.48 (3.97**)	6.94 (2.56*)	14.95 (3.79**)
Unemployment Rate	-20.949 (5.78**)	-19.064 (4.17**)			-0.48 (4.91**)	-0.43 (3.49**)		
Employment/Population			8.116 (4.52**)	31.12 (4.23**)			0.19 (4.00**)	0.70 (3.57**)
Labour Force Participation		1.630 (0.68)		-26.91 (3.21**)		0.04 (0.67)		-0.60 (2.69**)
R Squared	0.37	0.38	0.27	0.38	0.30	0.31	0.22	0.31
AR Autocorrelation F test	1.186 [0.31]	2.072 [0.14]	7.224** [0.00]	2.084 [0.13]	1.257 [0.29]	1.987 [0.15]	5.805** [0.01]	1.908 [0.16]
ARCH 1 heteroskedasticity F test	0.274 [0.60]	0.482 [0.49]	5.890* [0.02]	0.265 [0.61]	1.889 [0.18]	2.798 [0.10]	12.932** [0.00]	2.061 [0.16]
Normality of residuals Chi test	6.154* [0.05]	5.457 [0.07]	10.365** [0.01]	5.303 [0.07]	3.878 [0.14]	3.553 [0.17]	6.348* [0.04]	3.527 [0.17]
Heteroskedasticity Xi^2 F test	3.917* [0.03]	2.585* [0.05]	2.788 [0.07]	2.142 [0.09]	5.207** [0.01]	2.951* [0.03]	3.043 [0.06]	2.400 [0.06]
Heteroskedasticity Xi*Xj F test	3.917* [0.03]	2.239 [0.07]	2.788 [0.07]	2.676* [0.03]	5.207** [0.01]	2.386 [0.05]	3.043 [0.06]	2.582* [0.04]
Functional form RESET F test	4.160* [0.05]	3.373 [0.07]	0.333 [0.57]	2.434 [0.12]	3.433 [0.07]	2.849 [0.10]	0.281 [0.60]	2.028 [0.16]
*,** denotes significance at the 5% and 1% level, respectively.								
Econometric estimation through use of PCGIVE.								

The OECD suggests that the adverse employment effects of a legal minimum wage can be minimised by indexing minimum wages to prices and differentiating them by age and region to prevent the minimum wage from harming employment prospects for young people or low-productivity regions (OECD 1994, p.46). Region specific minimum wages and any other labour market reforms that further shift the balance of power with respect to wage bargaining from workers to employees could reinforce the positive feedback. Like the inter-state analysis above this analysis is predicated on the labour market functioning well within statistical regions. Accordingly we now turn to a brief examination of statistical local areas.

Statistical Local Areas

The Department of Employment, Workplace Relations and Small Business publishes the *Small Area Labour Market* quarterly.¹¹ It contains data on regional labour forces, unemployment levels and rates at varying degrees of disaggregation. There is a consistent annual dataset consisting of 1270 Statistical Local Areas (SLAs) for 1990-96 (June). SLAs in Australia are normally equivalent to Local Government areas.

The speed of convergence 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.¹² In addition, some of the specifications revealed problems of functional form that could signify the presence of SLA specific effects that prevent the convergence of unemployment rates. The inclusion of state specific effects in the form of dummy variables for NSW (including the ACT), Queensland, Victoria, South Australia, Western Australia and Tasmania, with the Northern Territory as the default, did not improve the results of the diagnostic tests. The Queensland and Tasmania dummy variables were consistently significant and positive. Thus for Queensland and Tasmania, the steady state unemployment rates appear to be higher than for the other states.¹³

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. No diagnostic tests are reported, so it is possible that the equation is misspecified and should include state or region fixed effects.

Finally an analysis of variance was undertaken across the 1270 SLAs based on their classification by state for the years 1990-96. The results demonstrate that the classification of SLAs by state is statistically significant at the 0.01 level, so that there is some convergence of unemployment rates within states.

¹¹ It was originally published by the Department of Employment, Education and Training.

¹² This implies that it takes 7 years for half an unemployment deviation to disappear through mobility.

¹³ The estimated equation takes the form $Udev = a + cUdev_{-1}$, where $Udev$ denotes the deviation of the SLA rate of unemployment from the national rate, and $c < 1$. The steady state unemployment deviation can be written as $a/(1-c)$ which is an increasing function of a , for a given value of c .

4 AN ASSESSMENT OF GOVERNMENT POLICY

Introduction

The Federal Government has not addressed the persistent dispersion of inter-state and intra-state unemployment rates through the development of an array of policies targeted at regions. Instead, national economic growth, and, in turn, national declines in the rate of unemployment are considered to offer the best possible solution for regional imbalances. The Coalition has eschewed the use of active demand management policies to stimulate employment growth, however,¹⁴ although several recent Government reports have challenged this rising tide theory of economic growth (see Productivity Commission 1999 and Treasury 1998).

The Minister for Transport and Regional Development, now Deputy Prime Minister is quite clear

'the Federal Government's primary focus in assisting Australia's regions to realise their enormous potential has been to deliver sound macro and micro-economic management' (Anderson 1999).

It is noted in the budget papers, however, that sound economic management must be accompanied by industrial relations, welfare and tax reform:

'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' (Treasury, 1999).

The Coalition Government has also supported the ongoing implementation of National Competition Policy and a minor role for regional policy.

Industrial Relations Reform

The reform of the industrial relations system, as represented by the Workplace Relations Act 1996, is ostensibly to increase 'flexibility' in the deployment of labour and to redefine the role of unions in the bargaining process. The Department of Industrial Relations (1996) supported the WRA because it was alleged to lead to a more direct and balanced relationship between employers and employees, with a reduced role for third party intervention.

Further reforms to the industrial relations system are designed to consolidate those that have already been implemented (see DEWRSB, 1999). Amendments to the current unfair dismissal laws and the preservation and extension of age-based junior wage rates are designed to overcome 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).

¹⁴ For example, a 'fiscal consolidation' program was implemented in 1996 when unemployment was still over 9%.

Even if these policies are successful in reducing the national rate of unemployment and the variance of regional unemployment rates, since unemployment rates are bounded, it is unlikely to reduce the coefficient of variation of unemployment rates. The wage curve estimates do not support the view that further downward pressure on the level of wages will 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 on the basis of cost cutting, via wage cuts relative to labour productivity, rather than by enhancing productivity through new investment.¹⁵

Welfare Reform

Through the introduction of the principle of mutual obligation, the Coalition Government's reform of the welfare system in July 1998 is 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 (see Burgess et al, 1999).

Training programs in areas of high unemployment are likely to be inefficient, unless firms agree to relocate to such areas. The current Federal government has shown no inclination to broker such arrangements under its regional policies (see below). The assumptions underlying the reforms of the labour market are that labour is highly mobile and/or firms will relocate to areas of high unemployment.

National Competition Policy

The adoption of National Competition Policy is designed to boost employment through improved productivity, but the Coalition Government has ignored the spatial distribution of costs and benefits (Denniss, 1999, Denniss and Toner 1999). The NCP has had a large adverse effect on many non-metropolitan regions (Treasury, 1998 and Productivity Commission, 1999). This is despite legislation, such as the NSW State Owned Corporations Act, 1999, that specifies the 'principal objectives' of SOCs as operating 'as efficiently as any comparable business; and to maximise the net worth of the State's investment'. The principal objectives are however broader than this, and require an SOC 'to exhibit a sense of social responsibility to the interests of the community in which it operates', and have regard to 'ecologically sustainable development' and 'regional development and decentralisation'. All objectives are deemed by the Act to be 'of equal importance' (Cl..20E.(1)). In practice, however, the objective of

¹⁵ Mitchell (1996) has pointed to the key role of investment in the achievement of a low rate of unemployment.

economic efficiency, narrowly defined, and the maximisation of dividends to the State Government appear to take precedence (see Denniss and Toner, 1999).

The design of NCP is predicated on the belief that increases in microeconomic efficiency will lead to an improvement in macroeconomic performance through productivity increases and increased international competitiveness. It has always been conceded that there will be winners and losers from such a process (see Industry Commission, 1995, Productivity Commission, 1999 and Treasury, 1998). As long as the long-term gains in output and employment were considered to be much greater than the short-term losses in employment, then the adoption of NCP was considered desirable.

In the design of competition policy, 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 implicitly assumed to leave the region and be employed in new jobs that are created elsewhere in the economy as a result of the lower input prices resulting from their redundancy. Also firms relocate to the region in the light of low wages and high unemployment. However, the evidence outlined above points to modest rates of migration and the presence of fixed effects. It is therefore unlikely that, following a regional shock, unemployment rates will converge.

Furthermore, if, following a further restructuring of incentives, workers exhibit greater regional mobility then their departure with their families and their welfare payments would create further reductions in regional demand and employment. When populations fell below 'hurdle' levels for services, such as high schools or public transport, discontinuous declines in employment would occur. Thus the removal of large numbers of jobs from a region in the short term may create a demand spillover or 'spiral of decline', signifying the presence of positive rather than negative feedback effects. The presence of a wage curve across Statistical Regions points to the disinclination of firms to relocate to regions with low wages.

Even in the presence of perfect information about the availability of, and returns from, employment opportunities elsewhere, relocation costs impose a wedge between long run unemployment rates across regions, in the absence of a pattern of employment growth across regions that matches regional labour force growth. Uncertainty about the nature of the non-economic costs and benefits of relocation is also likely to reduce mobility.

Whilst the government, through the contracting out of labour market services, has sought to improve the flow of information concerning jobs and job applicants, the break up of the centralised CES into smaller, competing, organisations, has led to less information being shared. Also, profit seeking employment agencies will not set up in areas that are not viable due to the small likelihood of matching

applicants to jobs. An agency that is not driven by the profit motive would facilitate the more efficient dissemination of labour market information.

In conclusion, the uneven distribution of employment and investment opportunities that have resulted from the implementation of the NCP is likely to raise the NAIRU. Whilst there could be long term growth in employment, there is little chance that it will compensate for earlier losses of regional employment.¹⁶ Cost benefit analysis may show a net gain to society of such an approach, but it will conceal a substantial redistribution of employment opportunities. If this redistribution is to be avoided then a comprehensive set of regional policies must be implemented.

Regional Policy

The Federal Government's regional strategy that was launched in 1998 identified its key priorities as:

- improving regional services;
- fostering employment and business initiatives;
- enhancing regional infrastructure, particularly telecommunications infrastructure;
- improving family and community lifestyles; and
- achieving environmental sustainability (Anderson 1999).

Whilst the provision of services, such as Health and Education, to people in regional communities helps to create employment in those areas, this is true for the provision of these services everywhere and so does not contribute directly to inter-regional unemployment differentials. Given the longstanding unemployment and per capita income differences across regions, the analysis will focus on policies that are designed either to shift government resources towards regional areas or to provide incentives for the private sector to direct their resources to regional areas.

The main plank of the government's regional policy is 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 RAP. These funds, however, are also to be used for funding national emergencies affecting regional Australia.

The projects to be funded under RAP also include those to:

- expand job and training opportunities for local people;
- improve the community's understanding of the regional economy, workplace relations and labour market structural change;
- enable communities to access Government initiatives such as small business development;

¹⁶ Macro models of the economy such as TRYM, implicitly assume that labour will flow smoothly from regions of high unemployment towards regions of high employment growth (see Treasury 1996). The same assumption is implicit in claims about the benefits of the NCP.

- develop regional skills surveys and industry profiles to assist in improving the skills base to better meet emerging skills needs; and
- respond to structural adjustments, economic or business downturns and natural disasters (Anderson 1999).

In addition, policies to encourage the employment of apprentices in rural areas (\$51.3 million over 4 years) and to encourage tourism in regional areas (\$8.1 million) were also announced. Despite the lack of direct job creation, these projects are likely to have positive results for regional economies, but the projects amount to an expenditure of less than \$60 million per annum. In March 1999 there were 306.1 thousand unemployed persons living in regional areas outside capital cities and the ACT that represents 40.4% of total unemployment. Total government expenditure is \$45 billion. Thus the government's regional policies are tokenistic, particularly when these initiatives have been accompanied by expenditure cuts in some regional areas.¹⁷

5 POLICY PRESCRIPTION & CONCLUDING COMMENTS

Drawing on recent empirical studies and some preliminary work on intra-state mobility, the paper has shown that regional unemployment rates do not converge to a uniform level in Australia, despite rates of labour mobility in response to unemployment differentials that are similar to those in the USA. Further, due to the presence of these (state) specific effects, policies directed towards increasing labour mobility through intensifying the structure of incentives is unlikely to be successful (Debelle and Vickery, 1998). The orthodox model of mobility is founded on the dominance of negative feedback, but there is good reason to believe that, following negative region specific shocks, demand spillovers may occur that may threaten the long-term viability of these local economies.

Kennedy and Borland (1998) show that state specific effects are related to housing costs that are correlated with inter-state rates of unemployment. These fixed effects could also reflect a lack of willingness to search for and accept reasonable offers of work that could reflect lifestyle considerations. In the terminology of the Employment Minister Tony Abbot, it could be argued that country people are more 'work-shy' and are more likely to be 'job-snob'. However mobility for workers in regional areas typically requires relocation, whereas for workers in metropolitan areas, a different pattern of commuting is often required. Yet, despite the relative ease of intra-urban mobility, the dispersion of intra-urban unemployment rates remains high (see below).¹⁸ Also, if increased labour market 'flexibility' has reduced job security through the growth of non-standard employment and the dilution of unfair

¹⁷ For example, annual public funding of Newcastle University the second biggest employer in the Hunter Region has fallen \$22.4m over the period 1997-2000 with 293 positions being lost so far.

¹⁸ It is unclear how the model of labour mobility is supposed to operate within metropolitan areas. How is excess supply emanating from a high unemployment area conveyed to an adjacent area enjoying high wages and low unemployment?

dismissal legislation, then the expected benefits of relocation will be reduced, and mobility will be reduced. The reduction in the flow of information between regions resulting from changes in the operation of the employment services 'market', will also tend to reduce inter-region labour flows. Certainly further research is required to identify the determinants of the (state) fixed effects, because their identification will assist with the development of policy.

The uneven distribution of employment opportunities, plus the intrinsic economic and social characteristics of different areas, provide a more consistent explanation of regional unemployment disparities than the simple NAIRU framework, along with the claim that labour mobility is too low.¹⁹

Sydney and non-metropolitan NSW have identical institutional frameworks, but it is difficult to see how further labour market reforms, such as removing unfair dismissals legislation or reducing payroll tax, will be effective in reducing the *differentials* in unemployment rates, even if there is an improvement in overall unemployment. National competition policy has stripped jobs out of regional areas and passed on savings to metropolitan areas. There is no attempt to redirect the benefits of NCP back to the regions that generated them.

Population and employment increases in large cities tend to generate negative externalities, such as congestion and the need to duplicate infrastructure that is underutilised in non-metropolitan areas. Woollahra SLA, for example, had low inflation and rate of unemployment of 2.3% in June 1999 (DEWRSB, 1999). Further job creation is currently unnecessary in Woollahra, but Australia's unemployment rate was 7.2% and Fairfield in suburban Sydney had an unemployment rate of 13.3%. Thus the current spatial distribution of employment opportunities is sub-optimal and leads to a higher NAIRU, the 'sustainable' rate of unemployment. The most likely outcome of current government policy, that focuses on spatially irrelevant deregulation policies, is the perpetuation of and possible increase in, regional employment and income disparities.

Consequently, by targeting economic growth in regions with excess labour and infrastructure, such as non-metropolitan Australia, output and employment could increase more rapidly without increasing inflationary pressures. Local councils have the knowledge and expertise to identify pressing social needs and employment agencies can readily establish the extent of idle labour. The creation of employment opportunities should follow the principles of the Buffer Stock Employment model in which the Government acts as an employer of last resort (see, for example, Mitchell 1998). Such a program will generate a high rate of social return on public expenditure.

¹⁹ The Department of Health, Housing, Local Government and Community Services (1993, p.8) emphasise 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.

The physical infrastructure is underutilised in regional areas suffering population decline. The continued relocation of workers and their families to large urban centres will impose a large external cost in the form of duplicate housing, transport, social and utility infrastructure (see Denniss and Toner 1999). The better use of existing infrastructure will help to prevent the formation of production bottlenecks and in turn increase the rate of growth that can be achieved without accelerating inflation.

Finally, policy analysts need to develop a much more sophisticated view of the operation of the Australian labour market. The underlying social and economic conditions in regional areas will influence the location of job opportunities. The heavy reliance on NCP as the engine of employment creation is likely to have dire consequences for regional Australia, because dependence on negative feedback via wage adjustment to redress the repercussions of the sub-optimal spatial distribution of jobs is misguided. Australia's unemployment problem is predominantly a regional unemployment problem. Whilst national economic growth is needed to create more jobs, the spatial distribution of those jobs must not be ignored. Consequently the failure of the private sector to provide sufficient jobs to solve the national unemployment problem signifies the need for an increased role in employment creation by all levels of Government.

Bibliography

Anderson, J. (1999) Regional Australia: Meeting The Challenges. Statement by the Honourable John Anderson M.P., Minister for Transport and Regional Services, 11 May.

Blanchard, O. and Katz, L. (1992) 'Regional Evolutions', *Brookings Papers on Economic Activity*, 1, 1-62.

Blanchflower, D. and Oswald, A. (1994) *The Wage Curve*, MIT Press, Cambridge, Massachusetts.

Carlin, W. and Soskice, D. (1990) *Macroeconomics and the Wage Bargain*, Oxford: Oxford University Press.

Burgess, J., Mitchell, W.F., O'Brien, D. and Watts, M.J. 'Workfare in Australia and New Zealand: A Critical Assessment'. Paper presented at the *5th National Conference on Unemployment*, RMIT, Melbourne, October, 1998.

Cashin, P. and Strappazzon, L. (1998) 'Disparities in Australian Regional Incomes: Are They Widening or Narrowing?', *The Australian Economic Review*, 31(1), 3-26.

Debelle, G. and Vickery, J. (1998) 'Labour Market Adjustment: Evidence on Interstate Labour Mobility', *Research Discussion Paper 9801*, Reserve Bank of Australia.

Denniss, R. (1999) 'Contracting Out Employment Growth? An Analysis of the Role and effectiveness of National Competition Policy in Stimulating Employment Growth in Australia'. Paper presented at 6th National Conference on Unemployment: Newcastle, September 23-24.

Denniss, R. and Toner, P. (1999) 'On the Wrong Track? An Analysis of the Suitability of Contracting Out in the Rail Industry' *Economic Analysis and Policy*, September.

Department of Health, Housing, Local Government and Community Services (1993) *Regional Labour Market Disadvantage*, Report 16, Social Justice Research Program into Locational Disadvantage, AGPS, Canberra.

Department of Industrial Relations (DIR) (1996) *Enterprise Bargaining in Australia: 1995 Annual Report*. AGPS, Canberra.

DEWRSB *Small Area Labour Markets, Australia*, Economic and Labour Market Analysis Branch, Labour Market Policy group, Commonwealth of Australia, Canberra (various issues).

DEWRSB (1999) *Better Pay for Better Work*, http://www.dewrsb.gov.au/group_wra/other/btrpay.htm

Diamond, P. (1982) 'Aggregate Demand Management in Search Equilibrium', *Journal of Political Economy*, 90(5), 881-894.

Elwood, D.T. (1986) 'The Spatial Mismatch Hypothesis: Are Teen Jobs Missing in the Ghetto', in *The Black Youth Employment Crisis*, in R.B. Freeman and H.J. Holzer, University of Chicago Press, Chicago.

Gregory, R.G. (1991) 'Jobs and Gender: A Lego Approach to the Australian Labour Market', in Clements K., Gregory R.G. and Takayama, T. (eds.) *International Economics Research Volume, Economic Record Supplement*.

Gregory, R.G. (1994) 'Unemployment: What to Do', *The Sydney Papers*, The Sydney Institute, Spring.

Gregory, R. and Hunter, B. (1995) 'The Macro Economy and the Growth of Ghettos and Urban Poverty in Australia', Australian National University Centre for Economic Policy Research, DP325

Harris, J. and Todaro, M. (1970) 'Migration, Unemployment and Development: A two Sector Analysis', *American Economic Review*, 60, 126-42.

Howard, D. and Buultjens, J. (1999) 'Labour Market performance of Australia's Non-Metropolitan Regions', *Australian Bulletin of Labour*, 25(2), 105-116.

Industry Commission (1993) 'An Empirical Assessment of Interstate Mobility and Wage Flexibility', Appendix D in *Impediments to Regional Adjustment*, AGPS, Canberra.

Kennedy, S. and Borland, J. (1997) 'A Wage Curve for Australia?', Australian National University, *mimeo*, forthcoming in the *Oxford Economic Papers*.

- Latham, M. (1998) *Civilising Global Capital: New Thinking for Australian Labor*, Allen and Unwin, St Leonards, N.S.W.
- Mitchell, W.F. (1996) 'Unemployment and Inflation: A Demand Story', Paper presented to the *European Unemployment Conference*, European University Institute, Florence, Italy, November.
- Mitchell, W.F. (1998) 'The Buffer Stock Employment Model and the NAIRU - The Path to Full Employment', *Journal of Economic Issues* 32(2), 547-55.
- OECD (1994), *The Jobs Study*. OECD Publications: Paris.
- Productivity Commission (1999) Inquiry into the Impact of Competition Policy Reforms on Rural and Regional Australia - Draft Report AGPS Canberra.
- Puhani, P.A. (1999) 'Labour Mobility – An Adjustment Mechanism in Euroland?', IZA Discussion Paper no. 34, PO Box 7240, D-53072, Bonn, Germany.
- Sheehan, P. and Gregory, R.G. (1998) 'Poverty and the Collapse of Full Employment' in Fincher, R. and Nieuwenhuysen, J. (eds.) *Poverty Then and Now*, Victoria University Press, Melbourne.
- Stegman, T. (1997) 'Implications for Wages Policy in Australia of the Living Wage Case'. *Economic and Labour Relations Review*, 8(1), 143-55.
- Stone, J. (1997) 'The Wage Curve' (book review), *Industrial and Labor Relations Review*, 50(3), 526-27.
- Treasury (1996) *Macroeconomics of the TRYM Model of the Australian Economy*, AGPS, Canberra.
- Treasury (1998) *The Socio-Economic Consequences of the National Competition Policy*. AGPS Canberra
- Treasury (1999) *Budget Paper No. 1: Budget Strategy and Outlook*, AGPS, Canberra.
- Watts, M.J. (1999) 'Flaws in the OECD Labour Market Reform Agenda: Training, Wages and Jobs in the Buffer Stock Model', Paper presented to the *ISS International Conference*, Taegu, Korea, October 1999.