

Unemployment or Tax Reform?

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1. Introduction

Different schools of thought in economics have divergent views on solutions for unemployment. This paper:

- argues the benefits of reform are large (estimating the gap between the current NAIRU and an achievable one at some 300 000 people);
- uses the Access Economics Macro (AEM) model to suggest the cost to real wages in lowering joblessness may not be as great as often imagined, with short-term belt-tightening having ongoing benefits to capital stocks and foreign debt (and so to jobs) even when the belt-tightening is over; and
- notes that now is a once in a decade opportunity for healthy Federal finances to build a coalition behind unemployment reform, using prospective surpluses to paper over some of the cracks between the different schools of thought on unemployment, but suggests success is unlikely – Federal surpluses are expected to be spent on tax reform rather than on lowering unemployment.

2. Why Unemployment Matters

Why is a solution to unemployment so important to achieve? Because its rise has been the chief economic policy failing in Australia and much of the OECD in the past twenty-five years. Subject to caveats on causality, Borland and Kennedy in this volume note links between unemployment on the one hand, and poor health, criminal activity and poor 'life satisfaction' on the other. Add to that the wastage of resources implicit in having 800 000 people unemployed (and an almost equivalent number underemployed), and it is hard to challenge unemployment for a position at the head of the priority list for Australian policy-makers.

Unemployment averaged a mere 1.7 per cent during the 1960s, but rose to 3.7 per cent in the 1970s, 7.6 per cent in the 1980s, and a depressing 9.2 per cent in the 1990s to date. Moreover, the quality of the jobs created over time has deteriorated. From its high-tide mark in July 1990, full-time employment has grown by just 0.3 per cent a year in the past eight years. That represents only 20 000 extra breadwinners a year, during a period when Australia's population has been rising by 200 000 people a year.

Yet we may have brought this on ourselves. As Treasury Secretary Ted Evans opined in October 1993, 'unemployment is a matter of choice' for Australian society. Our choice has been harsh for some. As a society, we have condemned a large number of people to

* I would like to thank my colleagues Stephen Corcoran and David Rumbens for research assistance, and David Chessell and Bob Hawkins for their comments on an earlier draft. All errors are mine.

be fringe dwellers, to suffer extreme unfairness so that the bulk of society enjoys the ‘fair go’ of Australian myth.

The numbers are large. At a rough cut, some 300 000 people are needlessly unemployed. Moreover, the urgency of a cure is on the rise. The ageing of the Australian population will raise the relative costs of supporting the unemployed. The current consensus in favour of reasonable income support for the jobless may waver as babyboomers feel the threat of the stretching in public sector resources.

Most important of all, aside from the macro equity- and efficiency-related issues, is the human angle to joblessness. It is hard to consider unemployment without remembering that ‘there but for the grace of God go I’.

3. What Causes Unemployment?

Cyclical unemployment can, at best, be smoothed. Frictional unemployment is not particularly amenable to improvement via government policy.¹ This paper will concentrate on structural unemployment – the chronic mismatch between the skills and cost of the available labour on the one hand, and the types of jobs and the level of wages offered by employers on the other.

There are several different (and overlapping) schools of thought to explain the rise in unemployment in Australia and Europe since the 1960s. First are the *populists*. This is the most potent school of thought on unemployment’s causes, as it is the most widely accepted through Australian society. Go to any barbecue and listen. Non-economists attribute unemployment to a range of supply-side factors including:

- high levels of immigration;
- a Luddite view that technology is stealing jobs;
- a related view that change is occurring too fast (such as the rollback of retail networks in banking), with the subsequent churning of jobs adding to frictional unemployment;
- a decline in the manufacturing sector;
- cheap Asian imports; and
- a view that unemployment is attributable to the presence of married females in the workforce.

Supply-side concerns are the focus of more serious analysis as well. The *supply-siders* school believes the answer to unemployment lies in lifting the quality of the supply side via active labour market policies (ALMP) to address the existing unemployment overhang.

Third are non-stability theorists, who also have supply-side concerns. This is a hybrid school looking to *hysteresis* to argue macro systems may lack the degree of system-stability properties that neoclassicists otherwise see. That is, the system will not ‘right’ itself automatically. Under those conditions, with labour markets divided into insiders and

1. Though there is a case for the Government to back its introduction of competition into job-search provision with increased subsidies to providers.

outsiders, the latter may become marginalised as a competitive force. That means that unemployment will have a tendency to ratchet up over time.

Fourth are the *demand-siders*, who believe the answer to unemployment lies in volume adjustment. Macro policy-makers should set their sails for growth, either in total (using both the fiscal and monetary levers) or specifically (using government spending in particular).

Fifth are the *anti-regulators*. This school believes the answer to unemployment lies in demand stimulation via price adjustment. The anti-regulators point to factors inhibiting the labour market from being efficient. These include institutional rigidities in wage relativities (notably quasi-legal wage-fixing arrangements), high marginal rates of personal taxation or benefit withdrawal (blunting incentives), restrictive dismissal laws (adding to labour mobility costs), monopolies among both capital and labour (directly and indirectly lowering employment), unemployment benefit systems (raising the reservation wage of the unemployed), and the rise of a ferocious culture of litigation.

Sixth are the *centralists*, who consider market outcomes have unfortunate effects at both the micro and macro levels, and prefer the adoption of a social compact. Like the demand-siders, they blame unemployment on a lack of growth, as well as the desire of employers to keep a pool of cheap labour available.

4. What are the Solutions to Unemployment?

Each school of thought has its preferred set of solutions. Sadly there is only a modest overlap, and that exists at the expense of Federal Budget surpluses. The *anti-regulators* look to free up the system, with reduced reliance on wage tribunals, a larger gap between awards and market pay rates, controls over access to and levels of unemployment assistance, and the like. In effect, anti-regulators put their trust in the market (and in particular its pricing mechanism) to achieve efficient outcomes. They note that many in Australian society already face full adjustment of their incomes to the prevailing economic winds, including farmers and those in small business.

However, there are clear negatives with the anti-regulators' package of solutions. Essentially, the school suggests that for Australia to lower unemployment, it must move towards more US-style policies. Jackman in this volume notes the underlying trade-off, that unemployment benefits 'may lead to higher unemployment but still be desirable on social grounds' (p. 49), while there is a risk that 'the American free enterprise approach has bought full employment at the expense of creating an "underclass" of people whose living standards fall well below a socially acceptable level' (p. 58). That is, an anti-regulation package may raise overall efficiency and see fairness improve for those among the unemployed who gain jobs, but worsen equity for the lower paid who lose purchasing power.

Some anti-regulators, recognising their policy settings would benefit the unemployed at the expense of the lower paid, look to mechanisms to compensate the latter (including the tax system). The work of Dawkins and Freebairn (1997) along these lines is well known.

The *demand-siders* look to Keynesian pump priming for a solution to unemployment, with particular emphasis on public works. Occasionally the prescription is more

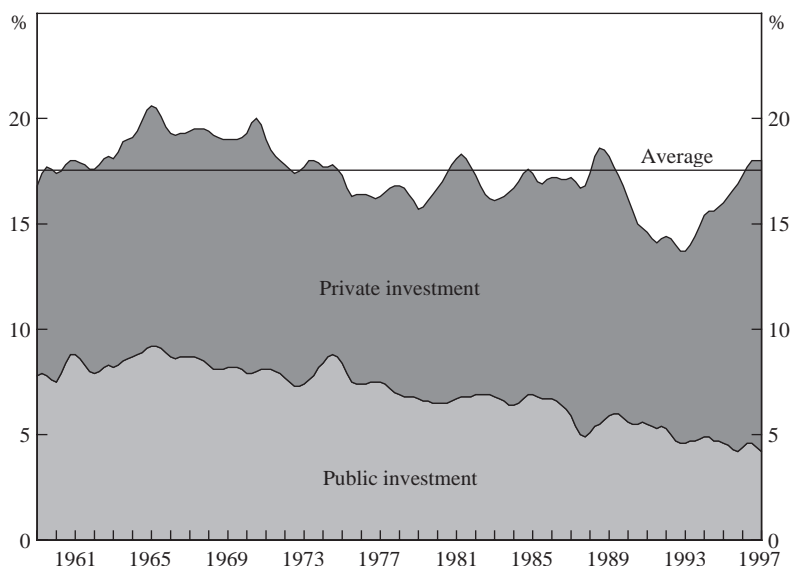
complex. For example, Langmore and Quiggin (1994) suggest switching policies to promote labour-intensive industries, while Mitchell and Watts (1997) suggest using the government as an employer of last resort at award minimum wages. The *supply-siders* look to picking the right labour market policies to raise the potential marginal product of the unemployed to prospective employers – Martin has considered such policies in his paper in this volume.² In essence, their aim is to move the short-run Phillips curve, so that speed limits to growth stand less in the way of reduced unemployment.

Both the demand-siders and the supply-siders look to the public sector purse to address unemployment. Both argue that not enough is being done. Demand-siders like Kenyon (1997) point out public sector investment spending has declined as a proportion of GDP. That is indisputable. From an average of around 8 per cent of national income in the 1960s and 1970s, public investment has been pegged back to an average of 6.5 per cent in the 1980s and 4.8 per cent in the 1990s to date. However, there are caveats:

- The decline in public investment is more apparent than real. As the likes of the Commonwealth Bank and Qantas have been privatised, their investment spending has been labelled ‘private’ rather than ‘public’. Similarly, State Governments have increasingly turned to private consortiums to build roads and stadiums (such as CityLink).
- Accordingly, it makes more sense to consider the sum of public investment and private business investment. That total, shown in Figure 1, has lost little ground over time, suffering mainly during the recession of the early 1990s.

Figure 1: Trend Real Investment Ratios

Percentage of GDP



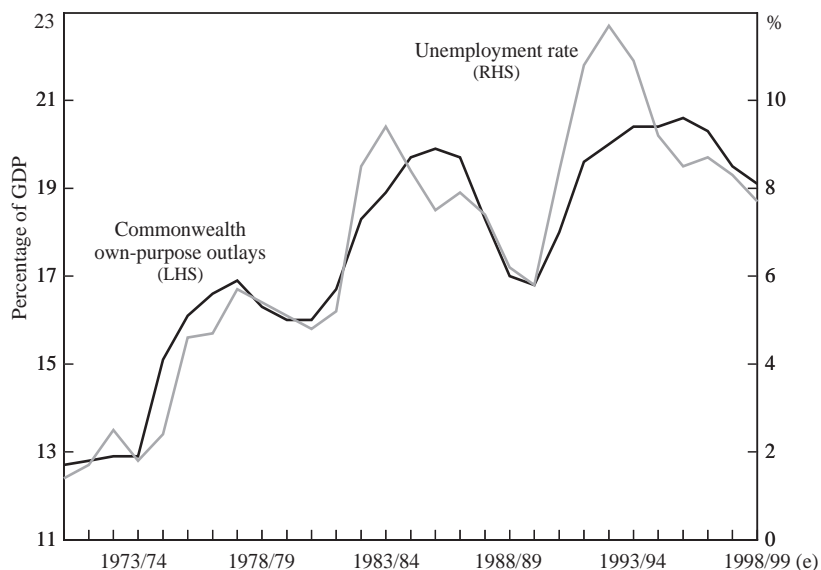
Source: ABS cat. no. 5206.0.

2. The ABS (cat. no. 6222.0) has produced some indirect insight into the Australian experience.

In addition, governments are spending more on social capital such as education than hitherto. Allowance for the latter suggests that governments have not been derelict in their spending duties.

Similarly, it is true that the Howard Government cut back the ALMP spending of *Working Nation*. That said, and as Figure 2 shows, governments are not averse to trying as hard as they can to use public monies to ‘address’ unemployment. The figure indicates that Commonwealth own-purpose outlays (that is, excluding grants to the States) rise pretty much in line with unemployment. As the Government pays for unemployment benefits and labour training programs, it is unsurprising joblessness and Federal spending move together in the figure. What is surprising is that increased unemployment benefits and spending on labour market programs account for only about one quarter of the increase in Federal spending over time.

Figure 2: The Lockstep Mystery – Unemployment and Federal Spending



Sources: Federal Budget Paper No. 1, pp. 7–28, Australian Bureau of Statistics and Access Economics.

Or, in other words, when Federal politicians have been faced by rising or stubborn unemployment, their typical response has been to throw money at the problem. The most recent example was the *One Nation* package. So, in a sense, money has not been the problem. The problem is that often this spending has been of a kind not considered particularly useful by either the demand-siders or the supply-siders.

The *centralist* school see the solution to unemployment as coming from a social compact which keeps real wage gains sufficiently limited to bolster job growth. The ability of governments to use wages as a macro policy lever is seen as raising the speed limits of growth. The high-water mark for that school was the early years of the Accord. That period saw subdued real wage behaviour relative to the speed of output growth, though this effect was also aided by an unemployment rate above the NAIRU (Simes and Richardson 1987).

The *hysteresis* school looks to policy-makers to intervene to improve the competitiveness of outsiders and to limit the collusion of insiders. This school therefore adopts hybrid solutions, looking for macro policies to be set such that the economy burns rubber as it exits a recession (a view drawn from the demand-siders), backed up by active labour market policies (with thanks to the supply-siders) and an assurance that award wages do not appropriate most of the gains to national income into an upturn (drawing on either the centralists or the anti-regulators).

In addition, the hysteresis school spends some time worrying about how to avoid recessions in the first place. In part that has been a catalyst behind policy reaction functions such as those proposed by Taylor (1993).

The *populists* look to cutbacks in immigration, mandated worksharing, picking sectoral winners (usually including manufacturing, but often IT development as well), the re-imposition of tariff walls, increased regulation of corporate activity (rights to hire and fire, but also to adopt new technology), an end to privatisation and the apparent endless search for new efficiencies, and policies aimed at intervention in favour of groups seen to be at risk in modern society (including the bush, kids and women).

5. What are the Potential Gains from ‘Better Policies’?

The task for policy-makers is to identify potential common ground among the solutions proffered by these schools, to identify the potential social losses to be balanced against any gains from lower unemployment, and to build the necessary coalitions at the political level to actually achieve lower unemployment.

The question of the potential gain from lower unemployment is related to the size of the available improvement in Australia’s NAIRU. If we assume that a NAIRU of 5 per cent is possible (witness the US experience), then how much of an improvement does that represent over the Australian NAIRU?

There have been a plethora of studies. Borland and Kennedy in this volume suggest the consensus NAIRU range for Australia is 6¹/₂ per cent to 7¹/₂ per cent. The wage equation in the AEM model also produces a NAIRU estimate. It is a deliberately simplistic inflation expectations augmented Phillips Curve. In the short run, wage growth is affected by the reciprocal of the unemployment rate, lagged four quarters. In the long run, there is no trade-off between inflation and unemployment.

The equation includes a measure of trend productivity arising from the model’s production function. This term – the model’s estimate of Harrod-neutral technical progress – attempts to capture increases in wages due to rising productivity.

Inflation enters the wage equation first via the expected inflation rate over the next ten years, which allows for future inflation to affect current wage bargaining. There is also a channel for recent inflation to have an influence on wage outcomes. The parameters on these inflation terms sum to one, with the inflation expectations term dominating the effects of recent inflation in the estimated equation.

The equation also includes the lagged change in unemployment as, even starting from a relatively high unemployment rate, a sudden fall in unemployment can give rise to wage pressures because of short-term job mismatch. It is therefore a partial channel for

hysteresis. Unlike the standard hysteresis model, however, the impact of the change in the unemployment rate is temporary. Were a hysteresis effect to be permanent, the model would have system instability risks:

$$\Delta w_t = \Delta prd_t + \alpha_1 + \alpha_2 \Delta un_{t-1} + \alpha_3 / un_{t-4} + (1 - \alpha_4 - \alpha_5) \Delta inf_{t-1} + \alpha_4 \Delta inf_{t-3} + \alpha_5 inf_{t-1} + \varepsilon_t \quad (1)$$

where *prd* is trend productivity, *un* is the unemployment rate, *inf* is current inflation and *infe* is long-run inflation expectations. The latter are measured (in history) as the difference between the 10-year bond and 10-year indexed bond yields.

Table 1: Estimation Results
1976:Q1 to 1997:Q4

Coefficient	Estimate	Standard error	t-statistic
α_1	-0.012	(0.0064)	-1.86
α_2	1.08	(0.36)	3.01
α_3	0.0008	(0.0004)	1.76
α_4	-0.11	(0.23)	-0.49
α_5	1.05	(0.25)	4.17
\bar{R}^2	0.22		
Standard error	0.012		
Durbin-Watson statistic	2.23		

Diagnostic tests		
Serial correlation	$\chi^2(4) = 4.43$	Prob = 0.35
Ramsey reset functional form	$\chi^2(4) = 9.47$	Prob = 0.002
Jarque-Bera normality	$\chi^2(4) = 0.13$	Prob = 0.94
Heteroscedasticity	$\chi^2(4) = 1.93$	Prob = 0.16
Chow stability	F(5,78) = 1.27	Prob = 0.29

The wage equation passes all diagnostic tests, except that for functional form. In part that is due to the reciprocal of the unemployment rate (the Phillips curve variable) being included in a linear equation.

In long-run equilibrium, the rate of wage inflation will equal the rate of price inflation plus the rate of technical progress, so the wage equation simplifies to:

$$0 = \alpha_1 + \alpha_3 / un \quad (2)$$

Solving for the long-run unemployment rate, or NAIRU, therefore produces:

$$un = -\alpha_3 / \alpha_1 \quad (3)$$

Over the period analysed, the estimate for the NAIRU is 6.7 per cent.³ Splitting the estimation period does suggest the NAIRU has increased over time. The estimate for the NAIRU from 1976 to 1988 is 6.4 per cent, while from 1988 to 1997 it is 7.7 per cent.

However, a cloud over the latter estimate of 7.7 per cent is the risk that Australia's NAIRU is higher still. Although nominal wage growth in Australia remains subdued, recent real wage gains have been the largest in a generation. Although wage inflation has been constant, price inflation has dipped sharply (mostly due to the strength of the \$A through to late 1996), leaving a substantial gap between the two. That suggests it is possible that, with unemployment rates the lowest they have been since 1990, a NAIRU effect has already been felt in labour market outcomes. (As always, it is difficult to know whether real wages have risen due to recent improved productivity growth, or whether the latter has in part been attributable to employers economising on labour as it becomes more expensive.)

Certainly it would be short-sighted not to admit to the possibility of a NAIRU of 8 per cent. In that light the potential gain to an improvement in it is large – reaching a US-like NAIRU of 5 per cent suggests Australia could bring 300 000 people back into the tent of insiders.

6. The Plan

How to lower the NAIRU from near 8 per cent to near 5 per cent? Building a consensus implies compromise and therefore a broad program of attack on unemployment. One possibility would:

- 1) Maintain the existing industrial relations system, but freeze increases in awards for a period over which they would otherwise have risen by 5 per cent.⁴ Maintenance of the system and its safeguards provides some consolation to the centralists, as would step three below.
- 2) Use the tax system to attempt a degree of compensation to losers (on the view that deadweight losses in the tax system may, post tax reform, be lower than those implicit in centralised wage bargaining). After all, with an election nigh, both sides are looking to give tax cuts anyway.
- 3) Use government spending to add to both outlays on ALMP (hopefully bringing the supply-siders on board) and on infrastructure (ditto the demand-siders).⁵ Among the

3. As always in this field, parameters are ill-defined. The standard errors on α_3 and α_1 are so wide that the NAIRU could range from 2 per cent to 20 per cent with 95 per cent significance.

4. There are many possible 'plans'. Each needs lateral thinking. One possibility would be to charge differential rates of payroll tax – higher for high-income earners, lower for the low paid. Given the existence of the PAYE system, compliance complexity would be minimal. Although this possibility raises labour supply elasticity issues, it might be a politically acceptable way to widen labour-cost skill differentials without disrupting equity.

5. I cannot claim to believe infrastructure spending would have other than a *short-term* impact on jobs. Presumably demand-siders could not claim to believe wage restraint would help jobs. However, both sides might come to a compromise at the expense of Federal surpluses. I would define 'infrastructure' broadly so as to include education/training spending – that might also help tempt ACOSS into the cart.

ALMP adopted would be spending to increase the return to job-search agencies for successful placement, but requiring that the increased returns go to the job consultant who succeeded in placing someone, rather than into a wider pool. (That is, ‘profit sharing’ rather than ‘employee share ownership’.)

- 4) As the first step would raise the relative attractiveness of unemployment benefits, there would also be a need to ensure that unemployment benefits were not an end unto themselves. The ALMP adopted would have that in mind. For example, eligibility for continued benefits would rely on agreement to undertake recommended training.

All the above would be expensive. Part financing would have to come via reductions in poorly targeted (‘middle class’) welfare. However, at least the plan is formulated against a background of rising Federal Budget surpluses. But any window of opportunity on the Budget front will be brief at best. There are reasons to doubt the long-run outlay projections in the Budget (Access Economics 1998), while the imminent election campaign may well see those surpluses returned as personal tax cuts to swinging voters.

7. The Necessary Shift in Wages

The key to implementing the above plan is the elasticity between wage restraint and employment gains. If the elasticity is too low, then any coalition of schools would break down fast.

Many commentators have addressed the issue of the necessary shift in wages to put a substantial hole in unemployment. Fewer have used a macro model to assess the same question, in part because most of the action would be in micro specifics. However, there are advantages in a macro assessment, in that the dynamics of stocks and flows arguably have positive implications for a price-based solution to unemployment. These advantages are explored here.

Table 2 sets out the Australia-wide impact of a 1 per cent decrease in nominal wages in the AEM model.

I should begin by noting that AEM has an equation for the unemployment rate. The latter performs better in a forecasting context than the separate modelling of labour supply. The unemployment equation has the long-run property that joblessness returns to the NAIRU. Therefore the variable of interest in Table 2 is employment rather than unemployment. Were we to allow the NAIRU in the model to ease back over time, there would be additional positive benefits (to variables such as public sector spending on transfer payments) not noted in Table 2.

The neo-Keynesian dynamics in AEM ensure the wage cut has several negative short-term impacts. The removal of \$3 billion in wages from the system acts as an immediate dampener. In particular, it cuts spending by consumers in Years 1 and 2. But gains in employment, profits (leading to an increase in community wealth) and the \$A combine with falls in interest rates and taxes to turn the impact on *private consumption* positive. As a simple proxy for welfare, the gain in long-run consumption suggests the Australian community as a whole is better off as a result of the pay cut.

The impact on investment in *housing* is positive, even though lower wages initially ease some people out of the market. This effect is dominated by the fall in short-term

Table 2: Impact of a 1 Per Cent Decline in Nominal Wages in the AEM Model

Percentage change (unless otherwise specified)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Private consumption	-0.22	-0.24	0.12	0.16	0.07	0.27	0.51	0.53	0.58
Private dwelling investment	0.00	0.32	1.73	1.12	-1.53	-0.93	1.48	0.70	-1.18
Private business fixed investment	-0.36	-1.42	1.88	2.37	-0.21	0.46	2.47	1.55	0.15
Stock of business fixed capital	-0.07	-0.32	0.04	0.41	0.31	0.35	0.71	0.86	0.77
Gross domestic product	-0.06	-0.11	0.61	0.69	0.24	0.43	0.89	0.77	0.54
Consumer price index	-0.39	-1.36	-1.46	-0.94	-0.98	-1.17	-0.77	-0.36	-0.40
Average earnings (nat. acc. basis)	-1.01	-1.41	-1.52	-1.15	-1.08	-1.20	-0.98	-0.63	-0.56
Real wages	-0.62	-0.05	-0.06	-0.21	-0.10	-0.03	-0.21	-0.27	-0.16
Employment	0.03	-0.05	0.36	0.65	0.43	0.40	0.70	0.78	0.63
Employment in persons	2 788	-4 160	32 431	58 515	39 289	37 177	67 005	75 537	62 097
Participation rate	0.01	-0.01	0.07	0.20	0.23	0.23	0.31	0.39	0.40
Unemployment rate	-0.02	0.03	-0.23	-0.32	-0.07	-0.03	-0.21	-0.18	-0.03
Unemployment in persons	-1 260	2 192	-18 125	-25 281	-3 263	-600	-14 428	-11 668	1 939
Nominal 90-day bill rate	-0.15	-1.08	-0.49	0.50	0.21	-0.22	0.22	0.49	0.14
Real 90-day bill rate	0.24	-0.11	-0.38	-0.02	0.25	-0.03	-0.17	0.07	0.18
Nominal 10-year bond rate	-0.01	-0.19	-0.30	-0.03	0.12	-0.01	-0.02	0.11	0.11
Nominal TWI exchange rate	0.15	0.12	-0.01	0.16	0.31	0.26	0.10	0.05	0.16
Real TWI exchange rate	-0.25	-1.24	-1.47	-0.78	-0.67	-0.90	-0.67	-0.31	-0.24
Government consumption spending/GDP	-0.05	0.02	-0.11	-0.13	-0.05	-0.08	-0.16	-0.15	-0.10
Public enterprise investment/GDP	0.00	-0.02	0.03	0.03	0.00	0.00	0.02	0.01	0.00
Tax revenue receipts/GDP	0.10	0.31	0.18	-0.13	-0.11	0.00	-0.07	-0.18	-0.16

continued

Table 2: Impact of a 1 Per Cent Decline in Nominal Wages in the AEM Model
(continued)

Percentage change (unless otherwise specified)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Net public sector deficit	-0.16	-0.32	-0.27	0.02	0.05	-0.08	-0.08	0.03	0.04
Net public sector deficit (\$ millions)	-\$743	-\$1 539	-\$1 361	\$88	\$292	-\$468	-\$472	\$176	\$240
Net public debt	-0.33	-1.32	-2.52	-2.61	-2.34	-2.80	-3.43	-3.41	-3.24
Net public debt (\$ millions)	-\$541	-\$2 169	-\$4 035	-\$4 233	-\$3 805	-\$4 426	-\$5 239	-\$5 069	-\$4 727
Ave rate of tax on wages (cents per \$)	\$0.03	\$0.06	-\$0.07	-\$0.17	-\$0.14	-\$0.16	-\$0.25	-\$0.30	-\$0.30
Foreign debt	-0.14	-0.70	-0.92	-1.21	-1.88	-2.33	-2.32	-2.57	-3.14
Foreign debt (\$ millions)	-\$334	-\$1 835	-\$2 711	-\$3 838	-\$6 388	-\$8 370	-\$8 706	-\$9 897	-\$12 443

interest rates, which is accompanied by lower mortgage rates. The fall in bill rates peaks in Year 2. Note that the impact on real bill rates is initially positive. However, liquidity constraints mean that nominal as well as real rates play a role in housing activity.

Unlike housing, *business investment* actually falls in Years 1 and 2, as employers switch towards people (who are now cheaper) and away from machines (now relatively more expensive). In addition, lower consumer spending and the modest initial fall in long-term interest rates (bond yields) also leave business flat-footed. However, that phase proves short-lived, as consumer spending bounces back, profits rise and the fall in long-term interest rates gathers pace. The effect on business investment spending turns positive in Year 3.

Total GDP (*national income*) falls in Years 1 and 2, spiralling down on the back of the Keynesian cut to demand via lower wages (lower consumption and investment is only partly offset by a contribution from net exports, resulting in a fall in output levels in Years 1 and 2). However, total national income begins to rise at the end of Year 2. It stays positive thereafter, given the lift in consumer and investment spending.

Prices are pushed down by *wages*. Initially the Australian economy produces no more or less as a result of the wage change, yet people have the capacity to buy less. The result is a fall in domestic prices. The fall in *real wages* is most notable in Year 1, but the fall in unemployment eats into the original dip in real and nominal wages. A minor effect lingers thereafter.

The initial decline in consumption and business investment reduces the demand for labour, while the dip in real wages adds to the demand for labour. The net balance leaves *employment* lower in Year 2. However, by Year 3 the gain in employment is substantial.

It peaks in Year 4 at 59 000, and again in Year 8 at 76 000. This cyclical pattern is the result of the shock imparted to housing, which runs a four-year cycle. In Year 9, the gain to employment is 0.63 per cent – a result whose underpinnings are discussed below.

The dip in *labour market participation* in Year 2 is a function of the bad employment news in that year and of the fall in real wages in Year 1. However, the unemployed soon regain enthusiasm for the job hunt as opportunities open up. That leaves participation higher. As discussed earlier, the decline in the number of *unemployed* is gradually whittled away.

The decline in *short-term interest rates* is driven by the drop in the inflation rate in the early years of the simulation. Note that the fall in the real (inflation-adjusted) bill rate is lagged, with an initial increase. Nominal rates are ultimately brought back above baseline by a combination of the passing of the disinflation peak, a rise in capacity utilisation, and a drop in the unemployment rate below the NAIRU. (Were the NAIRU to be dropping at the same time, the latter channel would not operate.)

The move in *long-term interest rates* mirrors that in short rates, following the nominal bill rate down. As bond yields react to expected changes in inflation over a ten-year horizon, the shift in real yields is essentially the same as the move in nominal yields shown in the table. However, as the dip in inflation is a one-off, the impact on *long-term* rates is quantitatively smaller. In the long run, nominal and real bill rates and bond yields end up essentially unchanged, aided back up by the long-run positive impact of stronger national income.

Lower inflation and an initial rise in real bill rates cause an increase in the nominal *exchange rate*, but the fall in prices ensures the real exchange rate goes the other way. That means the decline in domestic labour costs starts to price Australia into export markets (while improving the competitiveness of domestic industry against imports). The depreciation in the real exchange rate slowly withers, but a modest impact remains in the long run. As prices stay permanently lower, the nominal \$A is permanently higher.

Public enterprise investment fluctuates with the business investment cycle. However, the main impact on governments is via an increase in *tax revenue*, notably due to gains in employment (affecting PAYE and payroll taxes), corporate profits (company tax, superannuation tax, FBT and ‘other individuals’), and housing turnover and values (stamp duties). There is a loss to PAYE and payroll tax from lower nominal wages. The net impact leaves the Federal and State Governments better off by \$0.75 billion in Year 1 and \$1.5 billion in Year 2. That has a cumulative impact on *net public debt* (the impact is not exactly one-for-one with the cumulating surplus, as the net debt position is also affected by changes in interest and exchange rates). Note that AEM says that governments hand back the surplus thus created by cutting *personal income tax rates* rather than by increasing government services. Average tax rates eventually fall by 0.3 cents in the dollar.

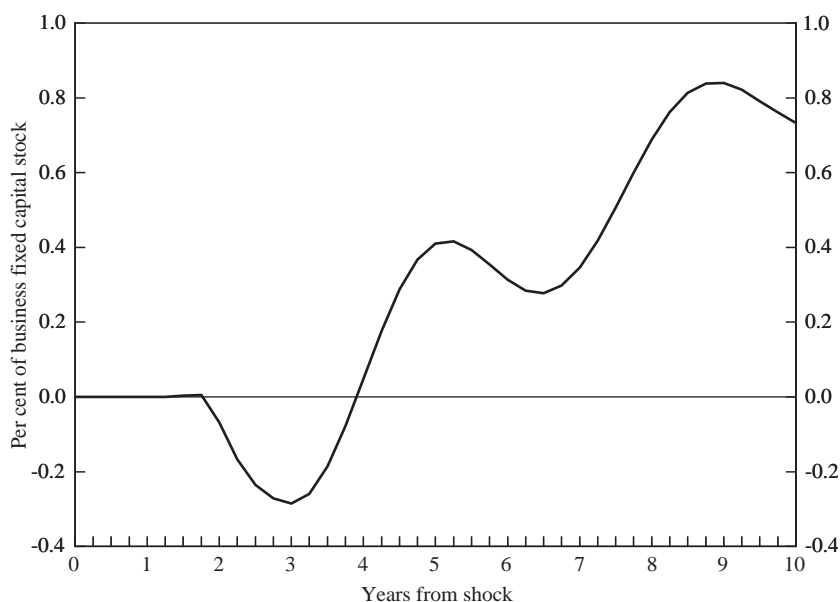
Imports fall and *exports* rise due to the lower domestic consumption (reduced domestic spending adds to the availability of product to go to export markets). Both these effects are magnified by the fall in the real exchange rate. The net impact is an improvement in the *trade deficit*. In addition, lower domestic interest rates mean that the cost of paying interest on Australia’s foreign debt falls – that is, the *net income deficit* goes down. That combination (trade better, net income better) reduces the *current*

account deficit. It is no surprise therefore that *Australia's foreign debt* goes down too (with an additional direct impact from the stronger nominal \$A). It ends up \$12.4 billion lower than it would otherwise be.

AEM sees no *long-term* change in real wages. However, despite that there is a long-run gain in jobs – an apparent Magic Pudding. The reason lies in the interaction of stocks and flows. The best analogy is perhaps that of the overweight dieter. If he stays on the wagon and lives on health food for a month, a return to cheesecake is bad for him. However, it does not of itself undo the gain of the previous month. Similarly, the removal of some \$3 billion a year in wage income means that consumers tighten their belts for a couple of years. In so doing they:

- *Leave foreign debt permanently lower*. That has a minor long-run positive effect on the wealth available to consumers to spend in the long run, helping add to consumption. The lower foreign debt also has a minor downward impact on the risk premium charged in *long-term* bond yields.
- *Leave the stock of business capital permanently higher* (Figure 3), due to increased consumer spending, the lower risk premium, and the depreciated real exchange rate. The latter has a leveraged effect as Australia is a small open economy selling on world markets, so output is elastic with respect to the real exchange rate (that is, output is elastic to small changes in import prices relative to export prices, and hence relative to business prices and the nominal wage). In turn, the higher capital stock feeds back into the wealth available to consumers to spend, acting as another addition to that spending.

Figure 3: The Long-run Gain to the Capital Stock



- *Leave national income permanently higher, with the gain in it matched by the equivalent gains in employment and the business capital stock.* The peak impact on employment (in Year 8) sees a 1 per cent decrease in nominal wages adding 0.78 per cent to jobs. In the long term (Year 9) the ratio is 0.63, while the equivalent ratio to the real wage at that time is 3.94.

Like the dieter, the impact of living on health food for a month aids the economy. Short of turning the clock back (by raising wages again), the economy gains some *long-term* benefits.

This result is a key one. The pain of achieving employment gains may not be as sharp as some stakeholders fear. It is also a result familiar to other Australian macro modellers – Stacey and Downes (1995) report a very similar result using Federal Treasury’s TRYM model (with a long-run employment to real wage ratio larger than that here).

8. A Concluding Thought

The above suggests that, at the macro level, 5 per cent nominal wage restraint would eventually produce little by way of real wage restraint but may provide 300 000 extra jobs. The Magic Pudding element arises because of the stocks involved – the lift in the capital stock and the fall in foreign debt (and the associated risk premium on Australian paper).

That long-run trade-off between real wages and employment is sufficiently good to suggest that an assault on unemployment is not impossible. But it seems an historic opportunity is passing us by. As a nation, we look to have the critical mass of public sector funding to underwrite a concerted attack on unemployment – with enough funding to address the concerns of a number of different schools. Such opportunities only crop up once a decade. However, as a nation it looks as though we are more likely to use the Federal nest egg to finance tax reform. Hopefully it is good reform.

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