EMPLOYMENT IN NEW ZEALAND: THEN AND NOW

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Abstract

Explaining postwar employment and unemployment in New Zealand is problematic for neoclassical economic theory. Up until the late 1970s the economy was overlaid with controls and 'rigidities' of many sorts, interfering with the operation of 'free' market forces. Yet it delivered virtually zero unemployment without being unusually prone to inflationary pressures. From the 1980s onwards, our economy has been subjected to a remarkable regime of policy 'reform', involving the opening up of markets to overseas competition, the dismantling or emasculating of centralised and/or collectivist institutions, and the adoption of an extreme version of monetarist ideology. Yet throughout these years of actions aimed at fostering 'free markets', the actual macroeconomic performance of the markets, measured by the mismatch between supply and demand in the labour market (unemployment) has persistently deteriorated, with unemployment rates rising from less than half of one percent as late as 1977 to above 10% in the early 1990s. That is, the more market-oriented we became, the worse the markets performed. How can this be? The research program on which the present paper is a progress report tests hypotheses that can explain how both Keynesian and monetarist orthodoxies miss important aspects of New Zealand reality, and develops a model based on empathy between supply and demand sides of the labour market that is consistent with non-inflationary over-full employment.

Explaining postwar employment and unemployment in New Zealand is problematic for neoclassical economic theory. The last four decades divide into two periods. In the first period, which ended some time in the late 1970s, the economy was overlaid with controls and 'rigidities' of many sorts, interfering with the operation of 'free' market forces. Yet it delivered virtually zero unemployment without being unusually prone to inflationary pressures, contrary to the doctrine of the Phillips Curve 'tradeoff' (discovered, ironically, by a New Zealander, though of course using data from another country - Britain).

Then, in the second period, our economy has been subjected to a remarkable regime of policy 'reform', involving the opening up of markets to overseas competition, the dismantling or emasculating of centralised and/or collectivist institutions, and the adoption of an extreme version of monetarist ideology. Yet throughout these years of actions aimed at fostering 'free markets', the actual macroeconomic performance of the markets, measured by the mismatch between supply and demand in the labour market (unemployment) has persistently deteriorated, with unemployment rates rising from less than half of one percent as late as 1977 to above 10% in the early 1990s.

That is, the more market-oriented we became, the worse the markets performed. How can this be? The research program on which the present paper is a progress report is aimed at testing the following hypothesis: The interesting thing is not that unemployment is high now, but that it was so low then. Mass unemployment is to be expected and possibly welcomed in a 'market' economy (in a sense to be elucidated below). Conventional theory has no difficulty in rationalising this. What we do lack is a cohesive theory which can explain the non-inflationary full employment in the two decades up to the mid-1970s.

The fourth section of the paper offers the framework of such a theory. First, though, in the second section, I outline the two (Keynesian and monetarist) orthodoxies and then in the following section suggest that neither of these is adequate to explain the NZ experience. The fifth section brings the Employment Contracts Act into the story. The next section lists and exonerates some of the 'usual suspects' that have been proposed as possible culprits for our deteriorating employment performance. The final section introduces the database and modelling strategy to be used to test the hypothesis, and reports on preliminary results.

Two Orthodoxies on Employment and Unemployment

In macroeconomic theory and practice, the first quarter century after the Second World War belonged to the Keynesians (Keynes himself having established macroeconomics as an independent field in the 1930s),

whereas the quarter century now ending has seen monetarists ascendant.[1] To put it at its simplest, Keynesians thought that demand made things happen; monetarists stressed the supply side. I think they are both at least partially wrong, but more on that below.

The Keynesian model assumes that the level of total or aggregate demand determines how much is supplied (GDP, employment), and stresses the importance of autonomous determinants of demand, such as exports, investment, and government spending and taxes, all of which could therefore be used as policy 'levers' to keep aggregate demand and aggregate supply in balance.

This was all very well while it worked, which it seemed to be doing (at least in the English-speaking countries - Europe and Japan were less concerned about macroeconomics; more interested in economic growth) through the 1950s and early 1960s. But with the new phenomenon of persistent full-ish employment (or near-zero unemployment) came another -persistent upward pressure on prices. Most New Zealanders have experienced nothing but inflation - a positive trend in the price level - and so probably don't realise how odd it is, from a historical perspective. But prices used to rise in good years and fall in bad. No particular trend was discernible at the time, though with hindsight we can see in the data an apparent faint upward movement over the millenia. Periods of price rises were called 'reflations', and were greatly welcomed as being conducive to profitability, optimism and investment.[2]

The relationship between inflation and unemployment was first analysed statistically by an expatriate New Zealander, A.W. (Bill) Phillips, in a 1958 paper which became an instant classic. Phillips discovered a negative relationship - the Phillips Curve, as it was quickly dubbed, though not by him, of course - between historical data on annual wage rate changes and annual average levels of unemployment in the UK. This caused great excitement because it seemed to offer a trade-off, and economists love tradeoffs, which are, indeed, the foundation of economics as the 'science of choice'. Policymakers could choose, say, to accept a higher rate of unemployment in exchange for lower rate of inflation.

In fact the relationship was not linear - consumer prices would be stable (inflation = zero) at around 2.5% unemployment: at lower unemployment rates inflation would start to increase quite sharply, whereas allowing unemployment to rise appreciably above 2.5% would not bring much in the way of further declines in the price level (though who would want price declines, anyway?).

However, the relationship appeared to be stable, in the sense that data for the 1948-57 period, during which wage changes were positive in every year, fitted very neatly the curve estimated with data from the years 1861 to 1913, over which half century there had been about as many years in which wages were stable or fell as years when they increased.

Now, accepting two and a half percent unemployment rates in exchange for zero inflation seems from today's perspective to be not a very painful trade-off to have to make, and this highlights the problem: the trade-off turned out to be not stable - it deteriorated - and Keynesianism became vulnerable to attack. If one examines the macroeconomic performance of each of the three big 'Keynesian' economies - the UK, the US, Canada - over the quarter century following the end of Phillips database (that is, from 1958 through 1982), one finds that, for all three countries, average inflation was higher in each five year period than the preceding period. Nor was this traded-off against lower unemployment or higher growth: following the boom mid-1960s period, unemployment rose and productivity growth fell in each succeeding five-year period, in each of these economies.

So there seemed to be something funny afoot with Keynesian doctrine, and the right wing of the economics profession, which had been resentfully quiescent during the Keynesian heyday, were quick to sniff it out. What became known as the monetarist challenge to Keynesian macroeconomics is usually dated from Milton Friedman's presidential address to the American Economic Association, published in 1968, bolstered soon afterwards by the book edited by Edmund Phelps on the 'New Microeconomics' of employment theory.

The Keynesians were vulnerable to attack on theoretical grounds. Orthodox (neoclassical) American and British Keynesians, led by Paul Samuelson, had never dared follow their master in suggesting that capitalism's propensity to cycles and slumps was due to chronic market failure (basically, failure of supply and demand curves to intersect, especially when risk and uncertainty were involved). Instead, they preserved the old neoclassical postulate of perfectly competitive markets, and explained the failure of demand and supply to equate in the labour market by assuming that wages and prices were somehow 'sticky' or even 'rigid', so that they stubbornly stayed above their market-clearing levels.

Sticky wages and prices served the purpose of the Keynesians well enough, in that it allowed them to justify the proposition that government spending, augmented by the famous 'multiplier', could be used to shift demand curves, to bring them into balance with supply without recourse to wage cuts.

But this was too much for monetarists like Friedman, with their highly developed faith in the strength of equilibrating market forces. If wages were too high to give everyone who wanted to work a job, why didn't the market reduce them, given that the currently unemployed had every incentive to offer to work at wages that would attract employers? Why were wages so 'sticky'? What was the rational ('choice theoretic', in the jargon) reason for failure to make the necessary adjustments?

Keynesians muttered about minimum wage laws and trade unions (the latter particularly in Britain; less so in the much less heavily unionised US), but, given that they had never cast out the old perfect competition dogma, their excuses were not whole-hearted, and certainly failed to convince the hard-line market monetarists. Indeed, the two theorists - Robert Barro and Herschel Grossman - who developed the first formal general equilibrium model of a sticky wage and price economy were so horrified by their creation that they quickly abandoned it, Barro moving far to the right to help formulate 'New Classical' doctrine; Grossman shifting to the less extreme territory of Implicit Contract theory.

Within the neoclassical paradigm accepted by both sides, the monetarists did have theoretical consistency in their favour. But what about the facts of the real world, in particular, the ever more evident fact of unemployment? How could the monetarists rationalise what (to a layperson, anyway) seems like an obvious and chronic failure of supply and demand to match up? Well, rationalise it they did, applying a technique which in the hands of clever people like Milton Friedman and his 'Chicago School' colleagues has been a remarkably potent corrective to the policy activism of Keynesians and other would-be meddlers in the great self-ordering scheme of things.

The technique has two steps to it. First, when confronted with some apparently unattractive or even unsavoury practice, think up an 'efficiency defence', shewing why it really serves humanity's interests. Then, second, ram the point home by demonstrating that any well-meaning attempt by government to interfere with the practice will actually make matters worse.

Chicago economists have applied this technique with great ingenuity to monopolies, to resale price maintenance, to defending the trade in ivory. And they have applied it to justifying unemployment. Here is the argument: since markets function well, anyone who wants to work will be able to. Therefore anyone in the labour force but not currently working must have chosen not to. Why would they do this? They must be engaged in full-time and productive 'search activity'. In a world of costly information it takes real resources, including time, to seek out the various job offers to find the one that best fits. Search unemployment is actually a rational and efficient investment in improving the allocation of resources. So there!

And what about the government-only-makes-things-worse argument? Chicago-style economists actually *know* this to be true in any circumstance, as a corollary of their fundamental theorem that unimpeded market forces deliver the best of possible worlds, but the monetarist variant of the argument is worth spelling out. Suppose the Minister of Finance forces, at gunpoint, the Governor of the Reserve Bank to expand the money supply. This will have an immediate effect on wages and prices. Currently unemployed job searchers will tend to receive higher wage offers, and accept these, thus reducing search time and so the rate of unemployment below its 'natural' rate. But when they go out and spend their higher wages, they will find that prices have also risen, so that the *real* wage on which their labour supply decision is based has not really changed. When word gets around about this, wage and price expectations will be adjusted upwards, and search activity and thus unemployment will drift back to their previous level.

That is, government's well-meaning intervention will have resulted in no permanent gain in employment, but inflation will have permanently ratcheted upwards (to be brought down again only by a painful bout of disinflation, involving unemployment temporarily higher than its natural rate).

This is the economic model (technically termed the 'Expectations augmented Phillips Curve') that the current Governor of the Reserve Bank of New Zealand, Dr Brash, is relying on when he makes his announcements to the effect that using cheap money to buy jobs depends on 'fooling people.'[3]

Dr Brash is not rash enough to spell the model out to his audiences, who no doubt would be as quick as Keynesian economists are to point out its extraordinary implausibilities.

First, take the notion of job search being more efficiently undertaken full-time. Common experience and empirical evidence tell us that, for almost all people, it is more efficient to search for a new job from an existing one -you get paid while you do it; you have opportunities to get information from other employed workers; and your current job status is a good signal to prospective employers that you are capable of putting in useful day's work.

Nor is the idea of being fooled about prices particularly plausible or empirically supported. The whole idea that, in a situation of substantial unemployment, it is the supply side of the labour market that determines employment is implausible, and countered by the evidence that most searching workers accept the first job they are offered. And why has unemployment risen so much over the last twenty years? Has search efficiency deteriorated drastically? In the 1970s some monetarists attributed increasing unemployment to rising unemployment benefits (which make it possible for people to search longer), but in the 1980s most countries cut back on benefits, yet unemployment continued its inexorable increase.

Theories and the New Zealand Experience

Neither standard Keynesian nor monetarist stories seem to fit what has happened in New Zealand. Underpinning (Keynesians believed) the Phillips Curve was the demand-side notion that resources, including labour, had continually to be reallocated to different firms and industries, as the economy grew and changed, and that expanding industries could hire their labour either from the 'pool' of unemployed at the going wage or by bidding them away from their current jobs, with wage increases. The smaller

the unemployment pool, the more would wage increases be needed, with the size of these (as employers increasingly bid against each other) becoming very large at very low unemployment rates, according to the apparent non-linear shape of the Phillips curve trade-off.

Yet, in New Zealand, where up until 1977 labour moved happily between jobs and firms and industries with almost literally zero time spent in the unemployment pool, inflation was not at all out of the ordinary, compared with other slow-growing economies.

And the clear fact that no-one chose to 'invest' in voluntary full-time search despite quite generous unemployment benefits was - and is! - a terrific counter example to the monetarist rationalisation of unemployment.

On balance, though, this country would have to be said to have given weight to a Keynesian view of the world, in the very important sense of demonstrating the possibility of full employment.

I know that standard explanations of New Zealand's once-remarkable unemployment record rely on 'hidden unemployment' - over-manning - made possible by protection from external and (it is claimed) internal competition. I do in fact believe that 'over-manning' is part of the true story, but the key point here is that it cannot explain the absence of a Phillips trade-off[4] within the Keynesian framework; nor the absence of full-time search unemployment required for stability in the monetarist model.

Such considerations did not impress the radical right-wingers who were gathering their forces for the Rogernomics coup. In 1981, Rod Deane (then with the Reserve Bank) noted the existence of 'a body of monetarist and new classical analysis which has barely been tapped in New Zealand'[5], and soon this body of analysis was being fitted in with the other ingredients of the supply-side revolution. Roger Douglas's 1986 Budget contained the passage: 'full employment depends on the ability of prices to respond quickly and the speed with which resources can shift,'[6] and subsequent policy changes, notably the Employment Contracts Act of 1991, were aimed at effecting rapid responses of prices and resources.

The result? Unemployment increased three-fold from 1986 to 1991 and is still, after a couple of years of unusually high growth, twice what it was before the revolution (and a hundred times larger than during all those 'rigid' and 'protected' years when prices supposedly could not respond quickly and resources not shift easily). It is all very strange.

A Hypothesis

So how *do* we unravel the two great puzzles of modern New Zealand economic history - the non-inflationary zero-unemployment epoch and the sharp deterioration that followed? There must be something wrong with both Keynesian and monetarist models, since neither can fully explain what happened. My hypothesis is that what is (mainly) wrong is something the models share, namely their conception of the labour 'market'.

Recall that this is based on the notion of perfect competition, with its assumed separation between supply and demand. In the labour market, each supplier of labour services operates independently, not only of other suppliers but also of the demanders or purchasers of labour. Each agent works out how much they want to offer or purchase at the going wage and bids accordingly. A mysterious super-calculating 'auctioneer' collates all the bids and adjusts the wage up or down to bring the aggregate of supply offers into balance with the aggregate of demand offers.

Criticism of this model has focussed on the unrealism of the assumption of the perfect but costless arbitraging auctioneer. Thus we have the monetarist notion of search unemployment, which, even if it is wrong about the relative efficacy of search on and off the job, at least brings in explicitly the important consideration that, in the real world, finding out about wages and prices and jobs uses up real resources, and may have to be done by the supplying and demanding parties themselves, in the absence of an auctioneer or arbitrager in the literal sense.

I will return to these 'transaction costs' below. They are quite important in the context of the Employment Contracts Act. But first I would like to draw attention to another implicit assumption of the model which is especially problematic in the labour context. Each agent is assumed to believe that their actions will not affect any other agents in the market, and so does not consider the welfare of other agents when deciding what to do. Indeed, they may not even know who the other agents are. Now, this is quite reasonable for something like wheat, of which there are many small suppliers of a homogeneous product. The miller either knows nor cares whence came the wheat for the flour, so long as it meets the grade.

But it does not match what happens in the 'market' for labour. For a start, it is hard to maintain anonymity. The identities of the supplier and purchaser of labour services will in general be known to each other.[7] Nor will the result be a simple bilateral transaction, in most cases. Most people work with other people in organisations of various sorts, such organisations being - as Coase and others have noted - devices for escaping from markets, in that resources are allocated within them by administrative fiat, rather than through prices intermediated by an auctioneer. Much useful activity is best accomplished in teams.

Now a feature of teams is that the members develop feelings for each other. Marx and other 'left' writers have of course made much of the antipathy of interests (though not necessarily of feeling) between employing and employed classes, and would perceive cooperation in the workplace as extending only as far as the joint interests of

master and man - that is, to the extent of exploiting economies of scale and division of labour that increase the size of the pie the shares of which are then to be bitterly fought over in the struggle between classes.

It would be romantic to pretend that worker and capitalist have ever been members of one great happy family in New Zealand. But I suggest that, in the first decades after the war, our society was such that there was a good deal of empathy in the workplace - of goodwill between those paying and those receiving wages and salaries. We had the shared experiences of the war and the Great Depression. We had the shared institution of a state-run education system that, perhaps more than any other in the world, gave a reasonably equal chance to rich and poor, rural and urban children to make their way in the economy according to their ability. We did not have ostentious markers of class - differences in culture and language. If our distribution of taxed income was possibly not as egalitarian as we remember[8], we did not see the lurid displays of great wealth and extravagance to be observed in the deregulated era.

Technically, empathy means that the utility or well-being of others enters positively into the individual's utility function. This is not a revolutionary concept for economic theory, which has always been prepared implicitly or explicitly to admit empathy into discussion of the economics of the family, but economists have not, to my knowledge, investigated the implications of empathy in the workplace.

These implications may be quite important. Consider the situation of an employer faced with a downturn in demand. From the point of view of profitability, the rational thing will be to reduce costs by firing some workers. But if the well-being of those workers is a consideration alongside profitability, then the employer may decide to maintain employment levels until demand picks up again. In general, an employer confronted with someone wanting a job would say: 'So you want to work, do you? Well, I suppose we'd better find something for you to do.' Then, at the other end of the cycle, when demand is high and labour in short supply, workers may forego the opportunity to press for large wage increases out of sympathy with their employers.

Technically, empathetic behaviour means that demand and supply curves are not independent: if more work is offered, employers will tend to hire more.[9]

The interesting thing about such 'nice' behaviour is that, although from a short-term individualistic perspective it seems 'irrational', from a long-run, system point of view it may not be. Reduced year-to-year fluctuations in employment and inflation encourage investments in human and physical capital. And the macroeconomic implications are self-reinforcing: by not laying off workers in a downturn, each employer contributes to maintaining incomes and thus the demand for each others' output, nipping in the bud the multiplier that otherwise magnifies an initial disturbance to aggregate demand.

The hypothesis is, then, that a degree of mutual sympathy led employers and employees to exercise forbearance in their exploitation of short-term bargaining power, with the result that the macro-economy largely escaped from the Phillips Curve tradeoff.

What about the second puzzle, the deterioration of unemployment performance from the 1970s? My hypothesis here is that changes in the economic environment have eroded mutuality: it has become more costly to indulge in empathetic behaviour, and our inclination to do so has lessened -we have become less nice to each other in the workplace. This has happened as a byproduct of the microeconomic reforms that 'opened' and 'deregulated' the economy. In a protected economy, firms may have the reserves of profitability that enable them to hold 'stocks' of 'excess' labour. Such reserves become too costly to maintain in the face of an onslaught of cut-price import competition, or in the situation of being forced to export to survive, or in the case of a government department undergoing corporatisation with its attendant shift to 'commercial' operating procedures. The change is analogous to the US automobile industry being forced to move from 'just in case' towards 'just in time' inventory management practices by the success of Japanese manufacturers in the North American market. Now the costs of maintaining the inventories of spare workers are thrown onto the community at large.

So, the move towards a more 'market'-oriented economy makes it more costly to indulge in unselfish behaviour. As well, it probably reduces the desire to do so - inculcation of a more 'businesslike' spirit in managers and workers erodes warm/fuzzy notions of caring for one another, which are even seen as actively subversive to the operation of an efficient market economy.[10]

Thus, the labour market becomes more like an impersonal 'commodity' market, like the market for wheat or dead fish or cooking ranges. And, as in the markets for wheat and ranges (if not dead fish), it may seem natural that a buffer stock of unemployed resources be maintained to cope with unforeseen fluctuations in supply and demand. From this perspective, it may even seem that an unemployment rate for labour of seven or eight percent is quite reasonable.

This argument should not be pushed too far. Labour is different from inanimate objects like wheat and ranges in that it does not deteriorate with use. On the contrary, labour deteriorates with disuse, implying that, even from a purely rationalist point of view, the optimal stocks of unemployed labour would be smaller than those for other commodities - the benefits of having labour standing by to be redeployed as needed must be set against the deterioration in human capital from idleness. I expect that the prime economic function of unemployment in a commodity market environment is to mitigate workers' bargaining power, the better to contain inflation and twist the distribution of

income in favour of management and (possibly) shareholders.

The Employment Contracts Act

One of the two most momentous and radical pieces of policy 'reform' was the ECA (the other being the Reserve Bank Act). As Walsh points out, this replaced the multiple goals of earlier industrial relations legislation (including social equity and industrial stability) with the single goal of promoting 'an efficient labour market', which it was to effect by sweeping away various rules and regulations (such as penal rates for weekend work) and by promoting direct bilateral bargaining between man and master, without the intermediation of the hated trade unions (who do not appear, at least by name, in the legislation).

Like most of the radical neo-liberal legislation, the ECA can be criticised on two grounds: that 'efficiency' is too limited an objective for policy (especially policy affecting peoples' working conditions and remuneration), and that it may not even be effective in promoting efficiency because the underlying economic model is flawed.

I argue that there is more than a hint of paradox here: The ECA is generally believed - by supporters and detractors - to be a 'more-market' piece of legislation, but in fact it may be destructive of markets in the proper sense.

A good 'thick' market is defined as a situation in which anyone can buy or sell without affecting the price. There are two preconditions for this: that there be many buyers and sellers, and that none of these be large relative to the whole market. The old New Zealand labour market was something like this. Wages were given in general wage orders and in national craft awards, setting at least the minimum rate for each trade and occupation.

The advantages of a thick labour market are as follows: (a) it economizes on transaction costs, since one set of negotiations does duty for all; (b) since they can't do anything about the wage, employers' attentions are focused on improving productivity as the way to increase profits; (c) workers (and firms) in a weak bargaining position are not exploited.

The disadvantage, supposedly, is that it results in inefficiencies due to 'rigidities'. Workers are not homogeneous like bushells of wheat, so that one wage may not fit the needs and capabilities of all members of an occupation. This, of course, is the ostensible reason for the ECA, which encourages bilateral agreements tailored to suit each circumstance.

However, the determination of the price of labour is awkward. In an efficient market, the price of something should, over the long run, reflect the costs of producing it. Labour is not, in the crude sense, a 'produced input', though the value added to a worker by time spent in training was always reflected in differentials for skills. These across-the-board loadings are at risk from the ECA. But the major factor is that their wage income is what most workers rely to feed, clothe and house themselves and their families. In the old New Zealand, there was a widely accepted assumption that the level of the wage should be such that a reasonably reliable and diligent (though not necessarily highly skilled) worker would earn enough to maintain a family at a decent standard of living. I expect that most New Zealanders still support this notion, but the ECA has helped undermine the institutions that delivered equity in income distribution.

Instead, we have the argument that individual productivity should be the sole determinant of pay differentials. A 'good' carpenter should make more than a 'mediocre' carpenter. Along with the moral difficulties in pursuing this criterion to the exclusion of input-based measures of worth, there are real efficiency concerns that labour economists can raise. As noted above, most work takes place in 'teams', which have the important characteristic that the output of each member of the team depends significantly on what other members do. Team production is interdependent. This has two consequences: first, it is usually difficult or even impossible to isolate the contribution to output of individual members of the team; second, productivity depends on members helping each other and sharing information.

Both these considerations militate against paying workers for their 'individual' contribution. Instead, the smart way to get output out of a team is to make individual remuneration dependent on total team output.

Of course the ECA does not proscribe team-based remuneration systems, and may even have facilitated them, in particular circumstances. But it also has fostered situations (such as that of the Air New Zealand pilots) where some workers are covered by a collective agreement negotiated by the traditional union, others are looked after by a scab union, and a third group have signed individual contracts offered by the employer. Such divisiveness is unlikely to be good for morale and efficiency.

It is my opinion that the changes introduced with the ECA go well beyond those efficiency-enhancing innovations to the flexibility of the job place that could have been (and were being) introduced gradually as part of a less draconian reform process.

But perhaps I am being naive in discussing the matter in terms of the pros and cons for efficiency. Given the important role (ascribed by Walsh) of the Business Roundtable in lobbying for the ECA, it is plausible that it just represents an old-fashioned power-grab - a successful effort to shift the balance of bargaining power from workers to employers by weakening the collectivist institutions that looked after workers' interests.

If so, then we should be aware of the macroeconomic consequences. Although the ECA didn't cause our mas-

sive increase in unemployment, it may stand in the way of New Zealand returning to genuine full employment, because, in a system in which wages are determined by bilateral bargaining, the threat of unemployment is needed to prevent inflationary wage increases in periods of growth. If we didn't have our own Phillips curve trade-off before, we do now.

Other Causes and Cures for Unemployment

I should perhaps touch on - with no claims to completeness or conclusiveness - some of the other factors that have been suggested to contribute to declines in employment performance.

(a) Technological Change

It is common to see labour-saving technologies blamed for unemployment. Economists, who are trained to see the system-wide implications, disagree. Labour-saving means higher real incomes (lower prices and/or higher profits) which must be spent on new production which will require more labour. The net long-term effect on employment is about zero.

For two hundred years or so, the economists have been right on this. Could something have changed recently? For example, if the profits from cost-savings are leaving the country rather than recycling to create more jobs inside New Zealand? Perhaps, but it is not obvious.

(b) Skills and Training

When employers start complaining that they can't get workers with the training they need, it is tempting to see skill shortages as the employment bottleneck. Tempting, but dangerous. Some mis-match between demand and supply is a normal and inevitable part of the market process. It is these mis-matches that provide the signals to workers and employers where to direct their investments in human capital. Just as with physical capital (plant and buildings), government can intervene with a very heavy hand here. Training has a long lead time. How do we know what skills will be at a premium in five years or so? We don't even know what the overall trends are: to a de-skilled labour force of 'hamburger flippers', or to a highly educated cohort of computer-whizzes?

(c) Job Sharing

Despairing of ever finding employment for everyone, some propose that 'existing' jobs be shared. Economists call this the 'lump of work fallacy' - the notion that there is only just so much work that needs to be done. Certainly, it would be good to have the flexibility that permits people who do not wish to work a standard 37.5 hour week to be able to meet their needs. But the real problem is a shortage of well paid full-time jobs, and this problem can only be reshuffled, not solved, by forced job sharing.

(d) Poverty Traps

The poor in this country face implicit marginal tax rates that would horrify the well-to-do classes. An interesting case can be made for the abolition of all means-tested benefits, including the unemployment benefit, as a spur to eliminating poverty and encouraging job creation from the supply side.

(e) External Policy Settings

The conventional wisdom is that New Zealand's future prosperity depends on being whole-heartedly integrated with the world economy. Certainly, no developed economy has moved so far so quickly from protectionism to liberalism as we have. But have we overdone it? It can be argued that in a trading world dominated by huge transnational firms external and internal economies are essentially decoupled, in the sense that there is no reason why the forces determining international trade and investment flows should bring about domestic supply/demand balance (full employment). Only with a more inward-oriented policy stance can we hope to 'close the loops' between supply and demand that could restore full employment.

Testing the Hypothesis

A disturbing feature of the economic policy debate in New Zealand - apart from its lopsideness in favour of the reformers - is its lack of empirical foundations. Arguments are made and policy formulated on the basis of fairly simple *a priori* reasoning leavened sometimes with selective citing of overseas research. The present paper cannot be excepted from these strictures, because my own research program is not yet far enough advanced to constitute a full-fledged empirical test. However, I can report on the design of the research and on results thus far.

I am using annual data, from 1960 to 1992, for nineteen industries (including eight manufacturing industries). These data are, for the most part, from the database assembled for Professor Brian Philpott's Research Project on Economic Planning, and kindly made available by him.

The idea is to estimate 'employment functions', which econometrically explain year to year changes in levels of employment in each industry as dependent on appropriate variables. Standard specifications of employment functions have in common that employment is believed to be basically demand determined, but can differ as to how demand is modelled. Early formulations emphasized real output as determining the desired level of employment, on a simple Keynesian hypothesis. More recently, neoclassical price (real wage) variables have found their way into the specifications. The change seems to reflect not just intellectual fashions, but a genuine shift in the economic structures of OECD economies - employment-wage elasticities do seemed to have been increasing in size and significance, presumably as economies have been deregulated to conform more closely to the neo-liberal

ideal type.

The current (1991) version of the Reserve Bank model has both output and the real wage as determinants of hours worked - an eclectic but not quite satisfying mix.[11] The Reserve Bank model follows standard practice in allowing for lags in the adjustment of actual employment to the 'desired' level, which could be due both to supply-side difficulties in hiring and firing workers, and to demand-side caution about responding precipitously to what may be temporary changes in output.

My work to date has resulted in estimates, for each of the nineteen industries, of standard employment function models. Only for the manufacturing industries does the standard model 'work', with output and lagged employment (denoting partial adjustment to desired levels) as significant variables. The role of price variables is yet to be settled. In both the primary and tertiary sectors of the economy neither output nor price variables are significant, leaving employment to be 'explained' by its lagged (previous year) value and by a simple time trend.

The data do, in most industries, show signs of a structural break in the employment time series, with this always being negative, in the sense of less labour being needed in later years than, ceteris paribus, would be expected from earlier experience. Many, but not all, of these structural breaks occur after 1986; some appear to date from the late 1970s or early 1980s. The time series of industry output show, in almost all industries, a clear break in the mid-1970s; growth being lower after about 1975.

Future research

The results thus far fall well short of resolving the New Zealand puzzles or testing the empathy hypothesis. I see two paths for future research to follow. First, the econometric modelling needs further development, focussing on searching for chagnes in the structure of the processes determining employment and output at the industry level. We can hypothesize that the speed of adjustment of actual to desired levels of employment will have quickened as employers are forced by a more 'competitive' market environment to maintian input levels close to short run cost-minimising levels, rather than hold reserves of labour through periods of reduced demand in the (partially self-fulfilling) expectation that labout shortages will soon resurface.

Changes in adjustment speeds can be quite easily tested for within the standard employment function framework. More difficult will be taking the analysis a step back from the adjustment of actual to desired employment to the explanation of the determinants of desired employment itself. I noted above the evidence of increasingly important 'price' (real wage) effects - these need to be carefully scrutinised at the industry level, as do other components of the demand for labour. As for identifying the presence (or absence) in the data of direct interdependencies between supply and demand due, for example, to empathy, I propose to test for this by including in the model factors extraneous to the short run profitability of the employer. What difference, for example, should overall labour market conditions make to the adjustment of employment in a particular industry facing a short term downturn in demand? If empathy is a positive factor, then the industry would lay off fewer workers the weaker the overall labour market situation, since it will be concerned with the likelihood of its workers finding alternative employment. In contrast, a narrowly profit-maximising perspective could result in larger layoffs in a weak aggregate labout market, because employers will be less worried about finding replacement workers when demand eventually turns up again.

The second research path involves following up the macroeconomic implications of changes in microeconomic adjustment behaviour, given that one firms' employment decision will affect the demand of other firms' output, through the spending of wages and salaries. This will be explored at first by means of a fairly simple two sector dynamic general equilibrium model.

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Acknowledgements

Comments received at the conference from Brian Easton, Paul Dalziel, Brian Philpott, Bob Buckle, Fraser Jackson and others are gratefully acknowledged.

Notes

1 This is to exaggerate the cyclical nature of economic fashions. In fact there has been a great deal of cumulative progress made in the techniques of macroeconomic management, revealed most strikingly after the stock market crash in October 1987, when nothing much happened - in contrast to the calamities that followed the 1929 Crash. The 'monetarist' central bankers and their Finance Ministers had learnt enough Keynesian doctrine about the interdependency of the world's economies to act quickly so that the 'real' economy would not be affected by the temporary collapse of paper asset values.

2 It is an interesting possibility that the New Zealand economy has been so shorn of its Keynesian and other centralist institutions that the current 'inflationary' pressure might best be seen as an appropriate reflation of prices depressed by the years of severe recession.

3 See his speech to the Wellington Chamber of Commerce (Brash, 1994).

4 Early New Zealand researchers did discover a relationship between wage changes and labour market conditions measured by the vacancy rate - markets forces were functioning! - but the point is the lack of a pool of available unemployed. See Brownlie and Hampton (1967) and Hall (1972).

5 Quoted in A.M. Endres (1989, p133).

6 *ibid*, p141.

7 A counterexample would be people who supply their labour electronically, such as the Indians who write computer software on contract to Western companies, who receive the output 'down the wire'. But this sort of arrangement remains rare.

8 Gould reports (pp 32-6) international comparisons of income distribution for around 1970 which do not show New Zealand to have been unusually egalitarian. He notes that these findings 'meet with some disbelief amongst well-informed New Zealanders', that inequality may have increased at about this time, and that another study does find New Zealand incomes to be relatively equally distributed.

9 This direct interdependence is to be distinguished from the orthodox Keynesian indirect or general equilibrium interdependence analysed, for example, by Barro and Grossman, whereby the aggregate of all households' spending on goods and services determines the aggregate of all the firms' spending on households' wages and dividends.

10 Cf Milton Friedman's famous dictum that the only social responsibility of management is to make as much money as possible for the shareholders.

11 In a multivariate regression, the interpretation of a variable's coefficient is that it predicts the effect of a change in that variable on the dependent variable, holding all other variables constant. But it is difficult to see how a change in the real wage could affect employment, holding output constant. A lower wage could encourage substitution of labour for other inputs, but then the wage should be measured relative to the price of the other inputs, not (as in the Reserve Bank model) relative to the price of output. The t-statistic on the real wage variable is also suspiciously huge (at 49.5), which might imply some spuriousness, possibly resulting from constraining the output coefficient to be one.

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