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Unemployment: Causes, Costs and Solutions
16-17 February 1993

The Implications of Microeconomic and
Workplace Reform
John Freebairn
with a Comment by Glenn Withers

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The Implications of Microeconomic and Workplace Reform

John Freebairn,
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Microeconomic reform might be viewed as a form of exogenously imposed productivity improvement. In Australia it encompasses policy changes in capital and labour markets, taxation, industry assistance and regulation policies, and in the goals, management and sometimes ownership of general government and government business enterprises. Workplace reform is directed towards changing incentives and constraints so as to raise productivity, typically via greater enterprise level autonomy and responsibility. Productivity gains, and here the principal focus is more on multifactor productivity rather than labour productivity, may flow directly from technical efficiency gains associated with, for example, management and worker reforms and faster adoption of technology, and from improvements in allocative efficiency with, for example, prices more closely reflecting social benefits and costs. Higher levels of valued output per unit input provides a sustainable basis for higher real incomes and living standards, perhaps as much as 20% higher (Forsyth, 1992b).

Productivity improvements likely will influence a wide range of labour market outcomes at the macroeconomic and microeconomic levels. These include employment and unemployment, wages, labour costs and inflation, factor shares, work and life styles. Outcomes can be assessed at the economy wide average level, and in terms of patterns across industries, occupations, regions and so forth at the microeconomic level. The principal objective of this paper is to assess the direct and indirect effects of productivity growth associated with microeconomic and workplace reform on employment and unemployment at the aggregate economy level and at more disaggregated levels.

The assessment proceeds in five stages. Section 1 provides a theoretical discussion of the options for distribution of the first round benefits of productivity gains and of the ensuing second round effects on wages, prices and employment. Potential adverse effects of rapid microeconomic reform on structural unemployment, or the natural rate of unemployment, are presented in Section 2, partly as a medium for discussing short run adjustment issues. The conceptual background is used in Section 3 to interpret the results
of econometric modelling and of historical experience in Australia and overseas about the economic effects of productivity growth on labour market outcomes. Specific attention in Section 4 is given to arguments surrounding possible adverse effects of a more indirect nature associated with the muted shift to greater enterprise bargaining on employment via added risks to a vicious wage/price blow-out. A final section draws conclusions.

1. Theoretical Assessment of the Effects of Microeconomic Reforms

The initial or first round effect of microeconomic reform is observed as an increase in factor productivity, and in the context of effects on employment and unemployment as an increase in output, generally measured\(^1\), per unit labour input. In some simplistic assessments, output is held fixed and microeconomic reform is then said to lead to a fall in the number of employed persons and to a rise in unemployment.

However, this first round effect is only the beginning of a more complex story. The productivity benefits accrue to someone and they initiate subsequent reactions. The benefits may be passed on as lower output prices, as higher returns to labour, as higher returns to capital, or as some combination. This section explores the second and subsequent round general equilibrium effects of the different options for disbursing the income benefits of microeconomic reform on wages, prices and employment.

**Lower Product Prices**

By lowering costs per unit output, or by increasing output per unit input, microeconomic reform can be represented as an outward shift of the supply curve. Particularly in the context of individual products and of competitive or contestable markets, the supply curve shift results in both a fall in product price and an increase in product output. The productivity increase associated with microeconomic reform is passed on as lower prices to buyers and in turn to an expansion of output. We can look at the effects of these price and quantity changes on employment at several levels of aggregation.

First, take the case of a single good or service. Using a simple supply and demand diagram, and assuming no input factor substitution, the effect of technical change increasing labour productivity by \(x\%\) on employment is given as

\[
E = -x + [(e_0 e_3)/(e_0 + e_3)] \times (1 - x/100)
\]

(1)

where \(E\) is the percentage change in employment, \(x\) is the percentage increase in labour productivity, \(\alpha\) is the share of labour costs in total costs, and \(e_0\) and \(e_3\) are the (absolute
values of the elasticities of demand and supply, respectively. In (1), the first left hand term is the reduction in employment on existing output, and the second is the increase in employment on extra output generated by the product cost reduction. This second term can partly, fully, or more than fully offset the first term. The net effect on employment in the particular industry or firm tends to be positive the more elastic is supply or demand and the larger is the share of labour costs in total costs. As a special case, if the supply is perfectly elastic reflecting a constant cost industry, net employment expands if
\[ e_d a (1 - x/100) > 0 \]
since \( a < 1 \) and \( (1 - x/100) < 1 \), a net employment increase for the industry or firm requires that demand be elastic.

The employment effect of the simple model encapsulated in (1) and (2) would be greater if the assumption of fixed input-output technology is relaxed. With factor substitutability, microeconomic reform that primarily is labour saving would lead to some substitution of the relatively cheaper labour input for other inputs, thus reducing the \( x \) term. Also, the cost reduction effect would be larger, and increasing the second right hand term of (1).

Second, the above single good or service example needs to be extended further. Real incomes in society rise with productivity growth. With wage rates and capital returns held constant in nominal terms, the fall in output prices increase real income. Higher real incomes flow through to increased real expenditure, directly as higher consumption outlays and indirectly via increased saving feeding through to higher levels of investment and net exports. In turn, the increased real expenditure shows up as outward shifts of demand, increased output, and increased employment.

Further thought about the pattern of price and income elasticities of demand across products provide some insights into likely effects of microeconomic reform on the composition of national output and employment. Inspection of (1) and (2) indicates that changes in relative prices flowing from microeconomic reform will increase the share of outlays going to products experiencing the combinations of on the one hand either large cost savings and an elastic demand or on the other hand relatively small (or zero) cost savings and an inelastic demand. Interestingly, where demand is price inelastic and net employment is likely to fall in the particular industry directly affected by microeconomic reform (from equation (1)), the share of income spent on that product falls because of the
inelastic demand, and funds are released for greater expenditure on other products. The increase in real income flowing from microeconomic reform will lead to shifts in the composition of consumption from income inelastic products to income elastic products.

Third, a part of the output and employment expansion will arise from increased competitiveness of the traded sector, but, as noted by Forsyth (1990), Tease (1990) and others, this need not be associated with a change in the net current account position. Other things constant, including the nominal exchange rate, wages and capital returns, the productivity gains associated with microeconomic reform enable both exporters and import competitors to cut prices and gain market share. In fact, demand may be highly elastic leading to net increases in employment in these industries via equation (1). This first round effect points to an improvement in the current account and in turn to pressures for a currency appreciation. However, the associated real income increase and investment required to expand net exports themselves divert some potential exports to the domestic market and they flow into increased imports. At the same time, the real income increase will raise both aggregate savings and aggregate investment, but with a small net effect on the capital account portion of the balance of payments. Overall, the various changes to exports, imports, saving and investment initiated by microeconomic reform are likely to approximately cancel each other in the sense of having a negligible effect on the nominal exchange rate.

If the productivity gains of microeconomic reform are passed on as lower prices, the resulting increases in real incomes and output generate additional new jobs to offset the first round employment contraction. Many, but far from all, of the new jobs will be in the industries initially affected by the reforms.

*Higher Nominal Wages*

A second option is to distribute the benefits of productivity gains directly to workers as higher remuneration while holding product prices and returns to capital constant. This option might be used at the individual enterprise/firm/industry level as a form of direct incentive and reward to workers for undertaking the changes. Many proponents of a shift to greater decentralisation of Australia's labour markets place much weight on enterprise productivity remuneration arrangements. In a world characterised by either highly elastic labour supplies across enterprises/firms/industries and quickly adjusting competitive labour flows, or one characterised by strong social, political and moral mores of comparative wage
justice, there would seem to be practical limits, especially over the longer run, for particular enterprises/firms/industries to reward particular workers with enterprise level productivity wage differences. Where relative wage stability has much influence, for whatever reasons, incentives for enterprise level employees to pursue productivity might be rewarded directly via skill upgrading and job reclassification, or indirectly by greater security of employment, and by enhanced prospects of promotion.

Another version of the option is to distribute a measure of average productivity gains across the economy (or a large segment of it) as general wage increases. This is one of the rules advocated by employers, and in particular by the Confederation of Australian Industry, to be used by the Industrial Relations Commission during phases of centralised wage fixing. There are, of course, a range of versions falling between the two extremes of productivity based wage increases at the individual enterprise level and an average allocation determined centrally for all workers.

Two considerations lie behind the hypothesis that distributing the productivity benefits of microeconomic reform as higher wages will not reduce aggregate employment. First, the increase in nominal labour costs is just offset by the increase in productivity, and with nominal prices held constant, real unit labour costs remain unchanged. There, then, is no incentive for employers to adjust their employment levels. But, the productivity will flow into increased output.

Second, the higher real income of workers, being the increase in nominal wages against constant prices, provides the source of extra demand for that output. In a sense, whereas the price reduction option has the supply curve shifting outward against a given demand curve, the higher nominal wage option has the demand curve shifting out against a given supply curve. Workers' higher real incomes would work their way through to a shift in aggregate demand through several channels. A large portion would flow through as an increase in private final consumption expenditure, but some would be saved and some would move into increased taxation receipts. Government could either spend its windfall or allocate it to an increase in public saving. The increase in household and public saving would, in turn, lead to increases in domestic investment via lower interest rates (against assumed constant real labour costs and output prices) and an increase in net exports (driven by the associated fall in net overseas capital inflow and the required equilibrating adjustment of the current account component of the balance of payments).
There would be changes in the composition of industrial output and in the mix of employment by industries, occupations, skill categories and regions. Differences in income elasticities of demand, together with the real wage increase, and the direct effects of microeconomic reform, would be general forces for change. In addition, and in practice, with some degree of wage rigidity and lack of full correlation between productivity gains and wage increases at the microeconomic level, individual enterprises/firms/industries will experience rises or falls in real unit labour costs, which will provide incentives and pressures for changing relative prices and investment mixes.

**Higher Returns to Capital**

A third option is to pass on the productivity gains associated with microeconomic reform as higher returns to capital whilst retaining constant nominal wages and product prices. This option may have some importance in the short run, given capital's residual return status, until competitive pressures in the product and labour markets come into full play. Over the medium term and longer run, some form of monopolistic power, including that available to some government business enterprises and highly regulated private industries, would be required to lock in other than normal rates of return to capital because of capital's high mobility.

Higher capital incomes will find their way into higher expenditures than otherwise. The effect could be direct via increased investment encouraged by the higher returns to capital and by the increase in funds to support greater activity. Where the funds initially are saved or used to speed-up the retirement of debt, second round effects from the savings boost include lower interest rates and more investment and/or a reduced net overseas capital inflow and an associated increase in net exports. That is, directly and indirectly, the allocation of productivity gains to higher capital income leads to a sequence of second round adjustments resulting in an increase in aggregate demand and employment.

**Distribution in Practice**

A priori, it is difficult, if not impossible, to determine the way in which productivity benefits are distributed between lower prices, higher wages and higher capital returns. A complete general equilibrium framework with both real and nominal determinants is required. In practice, the host of factors influence observed prices, wages, capital returns, employment and so forth. Clearly, bivariate correlations can tell very little about causation and magnitudes. A priori reasoning and some quantitative studies provide some clues.
Underlying elasticities of factor and product demand and supply, the presence of competitive forces and institutional arrangements seem likely to be key determinants of the relative share of benefits distributed to lower product prices and higher factor returns than otherwise. Intense product competition would see most productivity gains quickly passed on as lower product prices as incumbents and new entrants expand production in apparently profitable new opportunities. Monopoly situations, including public business enterprises, clearly are an exception, and here government policy may well dominate the outcome. Notions of comparative wage justice seem likely to limit the allocation of benefits to wages at a highly decentralised level, but the use of productivity bargaining in national wage cases favours allocation of a share of national productivity gains as an overall wage increase. The high mobility of funds, and more recently the increased interdependence of the Australian and world capital markets, suggests capital will hold the gains only as short term innovations premiums, except for monopolistic sectors.

To a large extent, passing productivity on as lower prices or as higher wages generate similar patterns of relative prices and wages, and in turn of production, consumption and employment. Then, macroeconomic policy, and especially monetary policy, has a key role on nominal magnitudes. Thus, tight monetary policy would lean more to holding wages and cutting prices, whereas a loose or accommodating monetary policy would encourage nominal wage increases.

Data on labour productivity and real wages for Australia and other OECD countries closely track each other over time, although there are extended periods of marked differences attributed to cyclical and other factors. The longer term trends are consistent with most of productivity gains going to a combination of lower prices and higher wages, but the relative importance of each cannot be separated out. Data on relative wage patterns indicate a high level of consistency of relative wage patterns across industries and occupations, and also across countries. Further, correlations between changes in relative wages across industries and relative productivity growth are found to be low. Together, these data support the hypothesis that most productivity growth is distributed either as a general wage increase or as lower rates of inflation than otherwise, and that most of industry specific productivity change differences relative to the economy average go into relative price changes.
Several studies have made estimates for different sectors of the Australian economy of the distribution of productivity benefits. Forsyth (1992c) for selected government business enterprises over the 1984-5 to 1988-9 period, a period of extensive microeconomic reform, includes "... that of the total factor productivity growth, approximately 25-33% was applied to increasing the rate of return, and the remainder was applied to output price reductions" (p. 12), with none going to wages. Using data for manufacturing industry for the 1954-5 to 1981-2 period the Bureau of Industry Economics (1986) estimates "... approximately half of the gains from productivity growth were passed on as price reductions or as lower rates of price inflation" (p. ix) and the remainder to capital and labour (in unestimated shares). No estimates have been found for agriculture and mining, and in most service industries no estimates of productivity growth are possible given present data collection methods.

Overall, a priori argument and empirical evidence points to a large share of productivity benefits going to lower prices, or to lower rates of price increase, than otherwise. Some average productivity increase is distributed as general wage increases. Enterprise specific wage increases, and other than short term windfall increases in capital returns, seem to be less important.

2. The Natural Rate and Transition Problems

Microeconomic reform clearly involves changes in work patterns, in skills required, and in the mix of industries and products produced and consumed. The preceding section implicitly assumed away problems of adjustment to change, and perhaps easiest can be seen as a comparative static equilibrium assessment. A somewhat related issue is whether microeconomic and workplace reform will alter the natural rate of unemployment.

A number of conceptual arguments can be offered pro and con microeconomic reform creating short run barriers to employment and to raising the natural rate of unemployment. Microeconomic reform, by definition, involves change with the destruction of some old jobs, the creation of new jobs, and the need for training and skills improvement. In one sense these types of changes could be seen as raising frictional and structural unemployment with more square pegs facing round holes, and vice-versa. Policy changes underlying microeconomic reform typically entail added elements of uncertainty about the policy changes themselves and about their short, medium and longer term implications for particular industries, firms and workers. Added uncertainty may hold up adjustment, not
only to microeconomic reform but also to the host of other market demand, technological change and other disturbances to the economy.

A positive view of microeconomic reform would argue that the economy, its management and its workers, will become more flexible and adaptable with the reforms, and that these changes will actually facilitate rather than hinder the process of change and adjustment to the host of exogenous disturbances. This is part of moving from an inward looking domestic economy to a dynamic player in the international economy. It also sees greater flexibility of capital and labour, with the latter being more highly-skilled and multi-skilled. Prices respond to changing market forces rather than according to political manipulation, entry barriers are lowered, and success stories grow faster.

It is likely that there are elements of truth in both the optimistic and the pessimistic arguments. Also, some groups in society will see themselves as winners with the new opportunities, while others see change making them losers. Although microeconomic reform in aggregate is a positive sum game, it is difficult to design reforms in which there will be no losers.

A simple comparison of rates of productivity growth and estimates of the natural rate of unemployment in Australia provides no support for those arguing that change associated with productivity changes raise the natural rate (see Table 1). During the halcyon productivity growth rate days of the 1950s, 1960s and even 1970s, with labour productivity growth of up to 3% per annum and total factor productivity growth of nearly 2% per annum, estimates of the natural rate by Parkin (1973), Rao (1977) and Nevile (1975) were around 2%. By contrast, in the 1980s, productivity growth roughly halved the earlier levels, yet Mitchell (1987) estimates the natural unemployment rate to be between 4% to 4.5%, and others (quoted in EPAC, 1992, 9, Table 3.1) suggesting rates of around 6.5%. No doubt this bivariate comparison is overly simplified.

Data compiled and analysed by the Industry Commission (1992) suggest that structural change has been less over the recent recession period relative to the 1960s and 1970s. The structural change measures included changes in industry composition, regional composition, full- and part-time work, occupational mix and skill mix. Perhaps these broad measures of structural change disguise the full extent of change at a more disaggregated level. But also,
they serve to illustrate that policy changes, of which microeconomic reform is just a subset, are only one of many forms of ongoing structural changes affecting modern economies.

3. Some Model Estimates

Several studies using large scale econometric models, including the ORANI, Access Economics Murphy, and IMP models, and single equation employment and labour demand models can be used directly and indirectly to infer estimates of the effects of microeconomic reform on employment and other performance measures. This section reports on and reviews the results obtained from some of the studies.

The Industry Assistance Commission (1989) and the Industry Commission (1990) in its Annual Reports presented results of ORANI model estimates of the effects of microeconomic reforms. Results were given for individual reform areas, including lower costs of transport, electricity, water and telecommunications (usually represented by mixtures of labour saving and capital saving technology), lowering industry assistance, and contracting out some government services, and for the whole package of reforms. A long run (notionally 10 year) version of the model, FH-ORANI, was used, with assumptions of full employment, with real wages adjusting, constant industry rates of return and an infinite supply of foreign capital, maintenance of the real PSBR level. Given these assumptions, the package of reform options, and most of the particular reforms, are estimated to generate increases in real GDP (of 6.5% in the 1990 study), a larger increase in the aggregate capital stock and investment levels (of 7.2%), reduction in the CPI (by 7.2%), a rise in real wages (of 9.2%), very little change in the balance of trade (plus 0.5%), gains for all sectors using a broad classification but with losses for some industries and regions at a disaggregated level and for particular reforms. A similar pattern of results with a different set of experiments using ORANI-F is reported in a study by Adams, Dixon and Parmenter (1990).

Since full employment is assumed rather than estimated with the available long run ORANI studies, they cannot tell us directly of the effects of microeconomic reform on employment and unemployment. Even so, the results of significant real wage and real income gains, the even greater stimulus to investment, and the wide distribution of the gains throughout the economy provide valuable insights about a successful microeconomic reform process. Some might argue that the absence of adjustment costs and assumed relative high elasticities of factor and industry adjustment tend to overestimate achievable gains, even
over a 10 year period. As a counter, no consideration is given to potential dynamic efficiency gains.

A number of ORANI simulations in short run mode (essentially assuming fixed industry capital) and with employment endogenous provide direct insights into the effects of microeconomic reform on employment and unemployment. Adams and Parmenter (1992) consider examples of reforms represented as labour saving or as factor (labour and capital) saving technological change. In one special case, labour saving technology is shown to have a net offsetting reduction on the number of persons employed. The special case assumes labour immediately and fully takes the productivity gain at higher pre-tax wages so that real unit labour costs remain unchanged. This response, together with the assumption of a fixed (and fully utilised) capital stock, means no change in relative factor costs or in relative product prices, and with no change in real demand, combines to yield no changes in real output or activity.

Alternative and more plausible assumptions analysed by Adams and Parmenter result in short run ORANI simulations generating increases in real GDP, in effective hours worked, and often in more employment and a fall in unemployment. When part of the productivity increase goes to lower prices, rather than all to wage increases, real labour costs fall and employers hire more effective labour units. Where microeconomic reform is in part capital-saving, this expands the effective short-run capital stock and in turn leads to an increase in labour demand. If, as seems plausible, microeconomic reform provides a positive boost to investment, via greater confidence, the demand stimulus will flow into an outward shift in the labour demand curve and a rise in employment. The three modifications to the worst case and special case ORANI simulation result in increased employment of labour in terms of efficiency units, and often increased employment of labour in persons in the short run.

Studies of the employment effects of reductions in industry assistance using the ORANI model in short-run mode, including Dixon et al. (1982) and the Industry Assistance Commission, conclude that reductions in tariffs, quotas and other forms of specific industry assistance alter the composition of employment across industries and occupations, but the net aggregate employment effect is about zero.
Simulations with the Access Economics Murphy (AEM) model by Murphy (1991) are directly relevant. Murphy begins his simulations with the actual 1990-91 situation of high unemployment (10.2%) and projects the (quarterly) time path of response through to the end of the century. The relevant simulation compares scenarios (B and C) with a 0.4% per annum increase in labour productivity from 1993-4 to 1999-00, an approximation of the productivity gains from microeconomic reform given in the Industry Commission (1990) discussed above. The model price and wage equations allocate most of the productivity gains initially to lower unit labour costs and partly to lower output prices. Real wages do not rise until the later part of the simulation period. The productivity change leads to increases in employment in all periods (of 0.2% in 1993-4, 0.6% in 1996-7 and 3.5% in 1999-00). As with the ORANI assessments, the AEM results project rises in real income, and a larger investment stimulus, a fall in inflation and a reduction in the overseas debt to GDP ratios.

The National Institute of Economic and Industry Research Multi-Purpose Model (IMP) offers a different characterisation of the economy to the ORANI and AEM models, in particular with more weight on estimated behavioural equations for investment, output, employment and so forth, and with less weight on neoclassical equilibrium constraints. Brain (1992) employs the IMP model to examine the effects of a 2% increase in labour productivity associated with microeconomic reform over the 1992 to 2000 period. If the productivity increase is taken fully as a nominal wage increase, there are no real changes, including no change in effective labour usage so that employment falls to just offset the productivity increase. This context and outcome corresponds to those reported by Adams and Parmenter (1992) using ORANI. If the productivity increase is taken as lower output prices, IMP projects an increase in real output, with an investment boom, and an increase in use of effective labour inputs. However, the increase in labour usage is not sufficient to fully offset the labour saving technology so that employment of persons falls, although in the long run (after 2000) a return to previous levels is anticipated. Then, unlike the AEM projections, and to a lesser extent the short run ORANI projections, the IMP model estimates that microeconomic reform will cause short term unemployment. Reasons for the different outcome likely arise from less flexibility and lower response elasticities of employment and investment in the IMP model relative to the other models.

Estimates of single equation employment demand models typically find real unit labour costs and aggregate demand variables explain most employment variation, see, for example,
Russell and Tease (1991) and references therein. If we take the real unit labour cost variable of the Russell and Tease study, productivity growth, whether distributed as a nominal wage increase or as a price reduction, will leave real unit costs unchanged and therefore not alter employment numbers. If the benefits are taken as an increase in returns to capital, the equations imply any increase in labour productivity (not matched by product price falls and wage rises) will reduce unit labour costs and increase employment.

The conflicting projections of the effect on employment of distributing productivity gains initially as lower prices or as higher wages requires some explanation and comment. In a long run context the difference is negligible, essentially because relative prices and wages are the same, but at higher absolute levels with the higher wage option. The real income increase provides the increase in demand to purchase the extra output.

However, the models project different results for the short run. Where productivity goes to lower prices, employment in effective labour units increase, and usually employment in numbers increase. Employers see the productivity gains as a real cost saving, partly because prices fall or are perceived to fall more slowly and partly because returns to capital rise. The extra employment and higher real incomes expand demand.

By contrast, where the productivity gain goes to higher wages, the short run ORANI and IMP simulations project no change in employment in effective labour units because no relative prices or real aggregate demand change. Maybe the result is a consequence of the choice of price numeraire. In any event, with the threat of increased unemployment it is difficult to imagine a realistic scenario in which 100% of a productivity gain would directly go into higher wages. Evidence discussed above on the actual distribution of productivity strongly points to a sizeable proportion, probably more than half, going to lower prices rather than to higher wages. Also, the higher real wages for those remaining in employment, together with social security support for the newly unemployed, financed from a larger budget deficit (the automatic stabilizer mechanism), would flow into a higher level of real aggregate demand.

Overall, casting the various models in a realistic scenario supports drawing the conclusion that microeconomic reform will not adversely affect aggregate employment, and that in a short run disequilibrium unemployment situation of rigid wages, it is likely to facilitate employment growth. The aggregate picture, of course, hides a more diverse
pattern of employment growth rates, including some areas of contraction, at the individual
industry, occupation and region levels.

4. Labour Market Changes

So far the paper has focused on the flow-on effects of productivity changes of
microeconomic reform under the assumption that these changes, including labour market
reforms, have no other indirect effects on macroeconomic outcomes and employment. This
section considers arguments that labour market reform changes, particularly those involving
less reliance on the centralised determination of wages, awards and worker conditions, and
a shift towards decentralised enterprise level decision making, as well as directly raising
productivity may also affect macroeconomic outcomes in other ways and thereby have
additional indirect effects on employment and unemployment.

Enterprise bargaining is a loose term meaning different things to different people; see,
for example, the views of Borland, Chapman and Rimmer (1992), contributors to a recent
EPAC symposium (EPAC, 1992) and Sloan (1992). Several, including Chapman (1990) and
Buchanan (1992), caution that a rapid, radical and careless jump to a US-type decentralised
system could increase the probability of a wages explosion and of a wage-price spiral
leading to higher unemployment than otherwise. While the arguments are not universally
accepted, if valid, they imply a potential counterweight to the productivity gains of a shift
to enterprise bargaining or, more accurately, they indicate the necessity for attention to the
time pattern and processes of labour market reforms directed at raising productivity.

There seem to be at least three threads of the argument that a high level of centralised
control and influence over Australian labour markets, such as the Accord of the 1980s, has
in the past and will continue in the future to be important in achieving better
macroeconomic outcomes. The first is a conservative argument. Australia’s history, in
terms of attitudes and institutions, is of a centralised system (Hancock, 1985). Change to
a decentralised system, especially with the dearth of experience of both employers and
employees, involves risks of miscalculation and immaturity. Second, a centralised system
is better suited to internalising macroeconomic concerns, and the concerns of outsiders and
the unemployed, in labour market decisions than a decentralised system (Chapman, 1990).
In particular, the chances of particular maverick decisions made at individual enterprises
or industries, whether or not they are backed by productivity improvements, rapidly
spreading throughout the economy, especially given the importance of notions of
comparative wage justice, are much higher with a decentralised system than with a centralised system.

There are, of course, conceptual arguments claiming superiority of a decentralised enterprise bargaining system over a centralised system in achieving price stability. Particularly if there are strong competitive forces in the product markets, firms making maverick industrial agreements quickly will incur losses and be driven out of business. Consistently applied and believable monetary and fiscal policies which do not accommodate excessive wage agreements will facilitate reasonable wage and price outcomes. While centralists claim an advantage of the system in its ability to facilitate greater coordination of wages and macroeconomic policy instruments (for example, Hancock, 1985), critics sometimes point to the adverse effects of corporate agreements, such as wage-tax trade-offs effectively constraining the scope for altering fiscal and monetary policy (for example, Moore, 1989). Enterprise bargaining with its more direct focus on differing particular and specific circumstances, rather than on some industry or even wider community average, encourage or even force the development of direct and closer relationships between employer and employee, rather than reliance on a third party tribunal intermediary. Also, improved links between productivity incentives and rewards at the local level, rather than national productivity deals with associated free rider opportunities of a centralised system, often are argued to increase productivity growth rates over time and to keep price inflation down.

The above abbreviated summary of some of the arguments of an a priori nature pro and con different industrial relations systems is inconclusive. Clearly, the story is much more complex, involving many more factors in interacting ways which are not fully understood.

Similarly, the results and interpretations of econometric studies and of cross-time and cross-country comparisons of the comparative macroeconomic outcomes with different industrial relations systems, including comparisons between centralised systems and those based more on enterprise bargaining are contentious. Resolving the claims and counter claims encounters the unsolvable problem of whether appropriate allowance has been made for other differences. For the specific Australian experience of the 1980s, Chapman (1990) collates results from a number of econometric models supporting the hypothesis that the Accord delivered lower nominal and real wage outcomes than otherwise, although the
differences were not significantly different from zero at conventional levels for two of the five models. Moore (1989) argues that other structural changes, rather than the Accord, can explain the macroeconomic outcomes of the 1980s. Cross-country studies, which are particularly subjected to the problem of establishing ceteris paribus conditions, and studies for other countries over time, yield mixed results about the effects of different industrial relations systems on macroeconomic performance.

5. Conclusions

The productivity benefits of microeconomic reform in realistic settings contribute to increased employment at an aggregate level, and the reforms cause changes in the composition of employment.

Initially a large part, likely more than a half, of productivity cost savings are passed forward as lower product prices. Only a small portion finds its way into higher wages at the individual enterprise level because of the combination of competitive pressures and comparative wage relativities, and because of measurement difficulties. Existing unemployment and tight monetary policy would further reduce any direct flow-on to higher wages. Capital returns may increase in the short run, but competitive pressures quickly erode temporary windfall gains. Real unit labour costs fall, leading to a rise in demand for labour. Capital augmenting productivity growth and any favourable influence on investment "animal spirits" further shift demand. Concurrently, higher real incomes provide the extra demand to purchase the extra output generated by the productivity improvements.

Microeconomic reform has uneven effects across the economy. Technical and productivity changes affect different production methods and different products differently. Changes in industry assistance and regulatory policies directly alter relative prices. The higher real incomes, together with different income elasticities of demand, initiate another set of structural changes. In total, microeconomic reform involves structural changes altering the composition of the economy, including employment by industry, occupation and region. Amid these structural changes there are likely to be some losers even though the majority gain.

The effects of microeconomic reform on the natural rate of unemployment are mixed. Because reform is only a subset of the structural changes requiring continual reallocations of labour, changes in required skills and so forth, it is difficult to ascertain from observed
data the net effect, if any, of microeconomic reform on the mismatching of labour supply and demand at a highly disaggregated level.
Several studies have been made of the distribution of price increases between business enterprises over the period of microeconomic reform, including Dodgson and Stiglitz (1981) and Blankson and Naidoo (1985), who found that microeconomic reforms applied to increasing the price of goods. In the 1954-5 to 1981-2 period, approximately half of the gains were passed on to consumers or as lower rates of price inflation (or unexplained shares). No estimates for service industries were made in the report.

Overall, a priori arguments about productivity benefits going to consumers, especially in specific price increases, must take account of the role of price changes in the mix of industries and product markets as well as the role of other factors such as R&D and training. Further analysis of the role of microeconomic and workplace reforms is necessary.

2. The Natural Rate and Transitory Shocks

Microeconomic reforms clearly have implications for the natural rate of unemployment. The transitory shocks to the economy and product markets, and the role of microeconomic reforms in achieving them, are an important area for further research. A number of conceptual arguments about the role of microeconomic reforms are presented in the report.

A number of conceptual arguments are presented in the report, including the creation of new jobs, and the need for microeconomic reforms to create new markets for these types of changes could be seen as the creation of new jobs. Microeconomic reforms typically entail the creation of new markets for new products, and the role of microeconomic reforms in creating these new markets is an important area for further research. Additionally, it is important to note that microeconomic reforms typically entail the creation of new markets for new products, and the role of microeconomic reforms in creating these new markets is an important area for further research.

Endnotes

1. By a general measure of productivity growth I mean better meeting consumer needs as well as lower cost per unit of homogeneous output.

2. As an example, for the Australian iron and steel industry, Reason (1978) calculates that the factor substitution effects reduce the direct reduction in wages of 0.75% to 0.5% of wages, by 30 percent.

3. Empirical studies for Australia over time, and comparisons of Australian and other countries, indicate a high level of relative wage rigidity across observables and regions, see, for example, Brown and Fuller (1978), Brown et al. (1973), Keating (1983), Mulvey (1986), Norris (1977, 1986, 1989) and Rowley and Whittingham (1986).

4. See, for example, Bureau of Industry Economics (1986) for Australia and McConnell and Bruce (1992) for US industries.
Endnotes

1. By a general measure of productivity growth I mean better meeting consumer needs as well as lower costs per unit of homogenous output.

2. As an example, for the Australian iron and steel industry, Rimmer (1989) estimates that the factor substitution effects reduce the direct reduction in employment effect, x of (1) and (2), by 30 percent.


4. See, for example, Bureau of Industry Economics (1986) for Australian manufacturing and McConnell and Bruce (1992) for US industries.
Table 1: Some Aggregate Measures of Productivity Growth and Labour Market Outcomes: Average Annual Growth Rates Between Growth Cycle Peaks, 1964-5 to 1988-9

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<tbody>
<tr>
<td>1. Productivity Growth Measures</td>
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<tr>
<td>Output per hour worked (%)</td>
<td>2.7</td>
<td>2.8</td>
<td>2.4</td>
<td>1.0</td>
<td>2.5</td>
</tr>
<tr>
<td>Productivity (%)</td>
<td>1.8</td>
<td>1.9</td>
<td>1.6</td>
<td>0.8</td>
<td>1.7</td>
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<tr>
<td>2. Labour Quantities</td>
<td></td>
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<tr>
<td>Growth of employed persons (%)</td>
<td>2.5</td>
<td>1.1</td>
<td>1.1</td>
<td>3.8</td>
<td>2.6</td>
</tr>
<tr>
<td>August unemployment rate (%)</td>
<td>1.7</td>
<td>2.3</td>
<td>3.2</td>
<td>2.1</td>
<td>2.6</td>
</tr>
<tr>
<td>3. Growth in Wage Rates</td>
<td></td>
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<tr>
<td>Nominal male AWE (%)</td>
<td>8.7</td>
<td>13.9</td>
<td>9.8</td>
<td>6.9</td>
<td>10.3</td>
</tr>
<tr>
<td>Real male AWH (%)</td>
<td>3.7</td>
<td>2.3</td>
<td>1.5</td>
<td>-1.3</td>
<td>2.1</td>
</tr>
<tr>
<td>4. Change in Labour Costs</td>
<td></td>
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<tr>
<td>Real unit labour cost (%)</td>
<td>0.5</td>
<td>0.5</td>
<td>-1.2</td>
<td>-1.5</td>
<td>-1.5</td>
</tr>
<tr>
<td>5. Inflation CPI (%)</td>
<td>5.0</td>
<td>11.6</td>
<td>8.3</td>
<td>8.1</td>
<td>8.2</td>
</tr>
</tbody>
</table>

1. For Non-farm market sector.
2. Deflated using CPI.
3. From 1966-7 onwards only.

References


Forsyth, P.J. (1990), 'Competitiveness, Microeconomic Reform and the Current Account Deficit', Centre for Economic Policy Research Discussion Paper No. 228, ANU.


The Implications of Microeconomic and Workplace Reform

A Comment by Glenn Withers

Office of the Economic Planning Advisory Council

General

The paper is a particularly good one because of its focus on substance. John has absorbed Paul Krugman's reminder (in Age of Diminished Expectations) that the real issues are jobs, productivity and distribution. John deals with all of these as his focus, even if not with all dimensions of them. For example, unemployment itself is a crucial part of distribution, though there are others best dealt with separately elsewhere.

The basic question posed is: how will the productivity benefits of micro reform (including workplace reform) affect employment and unemployment?

The answer given is essentially an exercise in comprehensively rebutting a simple-minded view all too often accepted: that increasing productivity with output fixed means less jobs and therefore we should not strongly pursue microeconomic reform during recession. This proposition is shown to be wrong. Why?

Theory

First of all theory does provide some guidance. Even comparative static theory, provided one is sensible enough to use a general equilibrium approach, does this as follows:

- Productivity gains can be distributed as product price reductions, higher wages or increased return to capital. The most significant is product prices.
- When productivity is distributed as price reduction, instead of output fixed the following occurs:
  (a) product supply shifts out, reduces price and so expands output and employment;

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1 Views expressed are those of the author only and need not necessarily reflect those of EPAC.
(b) increased real income from reduced product price then ensues and so also expands output and employment.

- The precise pattern of effect will depend upon the pattern of supply and demand elasticities.

But what of the adjustment to a new equilibrium? There are negative effects of micro-reform in increased change, transaction costs and uncertainty. These are to be balanced against increased flexibility and adaptability.

Evidence

What is the evidence for (or against) long-run employment gain and a balanced transition path, as regards the effect of micro-economic reform on jobs?

Take the latter first. It is often of political importance. But my own view is that there is accumulating evidence that increased structural and frictional unemployment has not resulted from micro-reform.

As John Freebairn points out, micro reform structurally is but one subset of structural change (technology, tastes, etc) and studies which seek to relate structural change to unemployment for Australia find no significant relation. Certainly this is the finding in my own earlier work with David Pope (Economic Record, June 1985, p.561) and it is the finding of work to be released by EPAC (after the election) on structural change and economic growth. The important point to recognise about this work is that it does not impose special assumptions about smoothly adjusting markets. It allows for, and tests for, friction in adjustment and estimates the net extent of the consequences of such effects relative to other determinants of unemployment, e.g. real wages, capacity utilisation, income support.

What of the evidence on the non-Beveridge Curve (non-NRU) effects? i.e. of micro-reform on employment through productivity? Here John Freebairn reports that

- simulation system models e.g. ORANI, AEM
- semi-behavioural system models e.g. IMP
- behavioural single equation estimation analyses e.g. RBA

all agree that, if there is a significant flow-through to product price, then employment is benefited. At the micro level there is a lot of evidence (Forsyth, BIE and, in the past, Salter and Whitehead—the latter two for even less
competitive product markets than today's) that, special cases aside, the flow-on is to substantial price reductions and, to a lesser extent, to higher wages. This is in turn reflected in a long-term real wage productivity linkage.

Naturally there is always scope to challenge the simulation models' characterisation of the adaptability of the economy. This is why it is important to recognise that the direct behavioural analyses also are producing similar results, as is simple correlation. Each approach on its own, is subject to easy challenge. Their consensus is more impressive.

EPAC is examining this itself using the simulation approach (as opposed to our behavioural work on the adjustment issue), and its preliminary findings support these conclusions. We are using the industry (input-output) extension of the AEM model to review the effects of micro-economic reform. In long-run equilibrium we broadly confirm earlier studies. But we are taking this further by richer characterisation of the micro-reform process including

- improved specification of product market productivity benefits of micro reform (Swan Consulting and others for EPAC)
- improved price pass-on specifications (Office of EPAC Competition Policy Project)
- better scale economy estimates (IMPACT work for the National Population Council)
- improved labour market reform benefits specification (National Institute of Labour Studies work for the Business Council of Australia)

and by providing real time paths of adjustment for different pace of policy change and for different reform sequences and the macro-economic consequences of this. Our final results should be available mid-year.

**Labour Market Spillovers**

John Freebairn's analysis to this point does not distinguish labour market reform from other micro-economic reform. But he does suggest that for labour markets there may be indirect macro-economic effects beyond those resulting from productivity enhancement.

In particular the question is posed: will decentralisation increase the prospects of wage spillovers by sacrificing more centralised co-ordination?

Certainly, Treasury has expressed the view that this may happen. But it is argued that in the present low inflation environment some loss of wages control is
worth the productivity gain, i.e. labour policy should be targeted to productivity and not nominal wages. Treasury is willing to lose that arm of macro-policy.

What if the inflation stick is not broken? EPAC has some forthcoming commissioned work by Dowrick (ANU) and Willy Brown (Cambridge) which indicates that

- the trade-off may not be so sharp as some fear
- it may be possible to shift the bargaining locus for workplace matters to the enterprise while still developing wider firm and union co-ordination (encompassing) mechanisms for wage outcomes.

Nevertheless this will have to be worked at. Neither the dangers of spillovers nor the adequacy of mechanisms for dealing with them can be assumed away.

Conclusion
This review of John Freebairn’s paper and further associated evidence leads to me conclude that:

- Micro-reform is not a short-term solution to our unemployment problems. But nor is it a significant net contributor to those problems. Yes, it creates job loss but it also creates as much more job gain. Resultant mis-matching is a genuine problem, especially as the labour market does not and never will adjust as smoothly as an auction market. But dealing with this is better done by active labour market and income support policies, not by slowing reform.

- Micro-reform is a major element of the medium-term solution, though it need not be the only major element. In this latter respect there is a strong case for stressing how a set of policies for infrastructure provision including human resource development should be seen as crucial complements to the micro-reform process, if sustainable and not just ‘one-off’ productivity benefits are to be realised.

Getting on with the micro-reform process and with necessary complementary policies, with a sense of urgency and priority, must be a major task of the government that is elected on March 13. Early in a new term provides an appropriate opportunity to do this.

The remaining creative policy task is to find, and build in for the future, measures that can better assist the unemployed and mute the business cycle and
its impact and to do so without inhibiting micro-economic and work-place reform.

To not press on with micro reform will be to sell out our longer-term prospects for dealing with unemployment effectively.
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