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REAL WAGES AND EMPLOYMENT

by

Alan A. Powell
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(July 1984)
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1984 NEWCASTLE LECTURE IN POLITICAL ECONOMY

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A NOTE TO READERS

The responsibility for the opinions expressed in the papers published in this series rests solely with the author(s).
FOREWORD

The first Newcastle Lecture in Political Economy was given in 1976 to commemorate the Bi-Centenary of the publication of Adam Smith's *An Inquiry into the Nature and Causes of the Wealth of Nations*. The Department of Economics hoped that it would be the forerunner of an annual public lecture of a similar nature "suitable for all students and staff with an interest in Economic History, History or Economics."

We are fortunate to have a distinguished economist and applied econometrician, Professor Alan Powell, Ritchie Professor of Research in Economics, the University of Melbourne, to deliver the Newcastle Lecture in Political Economy for 1984. His subject is Real Wages and Employment.

Alan Anthony Leslie Powell, B.Sc.Agr.(Syd.), Ph.D.(Syd.), F.A.S.S.A., was born in Sydney in 1937. In 1961 he was appointed Lecturer in Economics at the University of Adelaide. In 1964, he was awarded a Post-Doctoral Fellowship in Political Economy at the University of Chicago. This was followed by a Senior Lectureship (and then a Readership) in Economics at Monash University (1965-67) where he was appointed Professor of Econometrics in 1968. In 1979, he joined the University of Melbourne as Ritchie Professor of Research in Economics.

In the period March, 1974 to February, 1979, he was Director of the Commonwealth IMPACT Project and part-time Professor of Econometrics at Monash University. In 1968, he held, as a visiting Fulbright Fellow, an Associate Professorship at Rutgers University. During 1972, he was visiting Economist at the Development Research Center, World Bank, Washington, D.C.

Alan Powell's published books include:

*Structural Adaptation in an Ailing Macroeconomy*  

*The IMPACT Project: An Overview, March 1977*  

*Patterns in Household Demand and Savings*  

*Empirical Analytics of Demand Systems*  

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CLEM TISDELL  
Head of Department  
18.7.84.
REAL WAGES AND EMPLOYMENT

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ABSTRACT

The questions examined in this lecture are:

1. Do real wage rises destroy employment?
2. If so, why?
3. Is there any way out of the current unsatisfactorily high levels of unemployment?
4. Are the answers to the above questions mainly reflections of an economist's ideology, or can policy perspectives be reached which are largely independent of such subjective viewpoints?

** Without implicating him in any remaining errors, I wish to thank my colleague Brian R. Parmenter for critical comments on an earlier draft.
The Effect of Real Wages on Employment

By the real wage is meant the money wage deflated by some index of the general level of prices. For our purposes, the consumer price index (CPI) will serve as deflator. We need to distinguish between real wages as a cost to employers of labour, and real wages as take-home pay (i.e., as disposable income). The former is important for labour demand because to the users of labour it represents a major component of costs. As a very rough rule, in a typical industry total costs split about 50:50 between the purchase of inputs of materials and services, and the costs of labour and capital. The latter two are referred to collectively as 'primary factor costs', in which the typical split between labour and capital is of the order of 65:35. Thus directly labour represents about 33 per cent of total costs (i.e., 100 x 0.5 x 0.65). In an environment of wage indexation, however, the costs of material inputs and services tend to move with labour costs, so that a 10 per cent increase in real wages leads to an increase in costs greatly in excess of 3.3 per cent.

In emphasising the importance of real wages as a cost, we are following the neo-classical tradition. The Keynesian tradition, on the other hand, stresses the role of real wages as take-home pay. Before proceeding we should note that real wages as a cost and real wages as disposable income are not necessarily equal. First, and foremost, real wages as a cost include a host of items not normally thought of as 'take-home pay'. These include: workers' compensation insurance premiums, the cost of paid holidays, payroll tax, employers' contributions to superannuation, and (in some cases) several other fringe benefits. Many of
these items may correctly be regarded as income-in-kind; since they cannot be cashed and used at will for other purposes, however, they are not a discretionary component of individuals' expenditure.

An increase in disposable income leads to an increase in commodity demand. In a situation of general unemployment, such a fillip to the economy is magnified via a multiplier sequence. From this point of view, an increase in real wages as disposable income is desirable since it leads via the expansion of commodity demand to an increased demand for labour; i.e., to more employment. The proponents of this Keynesian view of the world tend not to be overly concerned with what happens on the cost side.

In a justly famous article, Professor Trevor Swan (1955) points out that in an economy which is open to international trade, both the level of aggregate commodity demand and the domestic (e.g., Australian) level of costs need to assume appropriate values if we are to have a satisfactory level of employment without experiencing difficulties with our balance of trade. Figure 1 illustrates his argument.

Increasing the aggregate level of real expenditure (also called real absorption or aggregate demand) in the economy tends to lead to a deterioration of the trade balance; i.e., to make imports increase and exports fall. This occurs firstly, because buoyant demand conditions spill into imports and as well lead to additional domestic use of exportables; and secondly, because of the inflationary impact of the additional expenditure. This second effect acts to restrain exports because their
prices are determined in world markets more or less independently of Australian export volumes: Australian producers are poorly placed, therefore, to pass on cost increases due to additional inflation. Moreover, our more vulnerable import-competing industries are disadvantaged relative to imports, and hence contract. In the face of the increase in aggregate demand, therefore, the trade balance can be preserved only if there is a compensating improvement in the international competitiveness of our import competing and exporting industries (which, of course, is the opposite of what tends to occur naturally). Such an improvement in Australian competitiveness could be achieved by a reduction in Australian real wage costs.

In Figure 1 the curves labelled $B_1$, $B_2$ and $B_3$ indicate combinations of Australian competitiveness and of aggregate demand in Australia which are consistent with given balance of trade positions. Thus, on each of these B-curves the balance of trade is constant. The trade balance on $B_1$ is more favourable than that on $B_2$ which in turn is more favourable than that on $B_3$. The reason that the $B_1$ curve lies above the others is that more favourable domestic cost conditions are required, at any level of aggregate demand, to achieve a large balance of trade surplus than would be required to achieve a small one.

Increases in real wages (i.e., decreases in our international competitiveness) lead to falls in employment. This is because of the deleterious effects (noted above) of the resultant cost increases on the performance of exporting and import-competing industries. In a situation of slack labour markets such as has been faced in Australia since the
Figure 1  Swan Diagram  The curves $A_1$, $A_2$ and $A_3$ show combinations of real wage levels and aggregate commodity demand which keep employment constant. The constant level of employment along $A_3$ is higher than that along $A_2$, which in turn exceeds that along $A_1$. The curves $B_1$, $B_2$ and $B_3$ represent three constant levels of the balance of trade surplus. The constant value of the surplus along $B_1$ exceeds that along $B_2$ which exceeds that along $B_3$. $A_2$ represents full employment. The $B$ curves become steep after their intersection with the $A_2$ curve because increases in real spending with a fixed trade balance, irrespective of Australian competitiveness, become impossible after all resources are fully employed. (After Swan (1955).)
mid-1970's, it is reasonable to assume that there is a virtually unlimited supply of labour available at the going real wage. An increase in real aggregate demand for commodities, therefore, leads to an increase in employment. Thus as real expenditure increases, employment demand will be kept to a given level only if there is a compensating deterioration in our international competitiveness. This explains why the curves $A_1$, $A_2$ and $A_3$ in Figure 1 slope downwards from left to right. On each of these curves the level of employment is fixed. $A_3$ shows a higher (fixed) level of employment than do the other curves. This is because at any given level of aggregate demand a lower real wage (i.e., a more favourable competitive position) will lead to a greater volume of employment.

The Swan diagram illustrates the following 2-instrument 2-target problem: having selected a desired level of employment and a desired balance of trade position, find the levels of aggregate demand and of real wages necessary to achieve these goals. If these desired levels are $A_2$ for employment and $B_2$ for the trade balance, then in terms of Figure 1 the solutions are $W^*$ for real wages (equivalently, $C^*$ for competitiveness) and $D^*$ for aggregate demand.

ORANI Estimates of the Swan Diagram

The policy debate in Australia largely hinges around different conceptions of the slopes and positions of the A and B trade-off curves shown in Figure 1. This is essentially an empirical matter. The characteristics of these curves depend on many hundreds of thousands of parameters relevant to the behaviour of economic agents in the Australian
community. To aggregate these micro behavioural parameters sensibly requires a formal modelling framework. Such a framework is provided by the ORANI model of the Australian economy (Dixon, Parmenter, Sutton and Vincent (1982)). With such a model it is possible to obtain quantitative estimates of the degree of restraint in real wages and of the expansion in aggregate demand which would be required to achieve given employment and balance of trade targets.

The ORANI model is solved in terms of percentage changes in its variables. It is designed to answer hypothetical questions such as: If the real wage were to be increased, relative to some control scenario, by x per cent, by what percentage would employment demand differ from the value it would have taken in the absence of this increase in real wages? We can think of the control scenario as the point E in Figure 1. In terms of percentage changes, this is represented by 0 (no change). Thus the point E in Figure 1 becomes the origin in the percentage change version of the Swan diagram shown as Figure 2. We have chosen as our external balance target no change on the balance of trade: hence the trade-off line for this goal passes through the origin. Implicit in this treatment is the assumption that the initial trade balance position E in Figure 1 is satisfactory. For our employment target, however, we have looked to an improvement of 5 per cent over the initial situation. (If we had selected a more ambitious employment target, the A trade-off line would have been located upwards, and to the right, of that shown in Figure 2.) According to a recent version of the ORANI model, to achieve our targets would require real wage costs to be restrained by about 5 per cent, and aggregate demand to be stimulated by about 4 per cent (Parmenter, 1983). (In an earlier version, the corresponding percentages were estimated as 6 and 3 respectively (Dixon, Powell and Parmenter (1979)).)
Figure 2  Percentage Change Version of Swan Diagram  The line B shows combinations of wage restraint and demand stimulation which maintain the initial balance of trade position. The A line shows combinations of these variables consistent with a 5 per cent improvement in employment. According to the ORANI model, simultaneous achievement of both targets requires an increase in real expenditure of 3.7 per cent accompanied by a reduction in real wage costs of 4.9 per cent. (Source: Parmenter (1983).)
Answers to Questions 1 and 2

We can now answer the first two questions posed in this essay. Yes, increases in real wages which are reflected in real labour costs do cause employment demand to be less than would otherwise be the case. In a situation in which employment is less than full, therefore, rises in real wage costs actually destroy employment. This conclusion is inescapable for an internationally trading economy because of the need for its exporters and import competing industries to keep their costs in line with their overseas competitors. To fail to do so leads to a balance of trade deficit which cannot be eliminated without a fall in aggregate demand and in employment.

This conclusion holds equally under pegged and flexible exchange rate regimes; that is to say, changes in the nominal exchange rate (SA per S.U.S., say) are only relevant to the extent that they change real cost levels in Australia. A nominal devaluation, therefore, cannot have more than transitory impact on our international competitiveness unless it succeeds in holding down real wage costs or the real return on capital. Because of the international mobility of the latter, a squeeze on profits cannot be maintained for long without a collapse of investment. (For a fuller discussion, see Corden (1974).)

Policy Options (An Attempt to Answer Question 3)

If alleviation of unemployment can be achieved by moderation in real wage costs and expansion of aggregate demand, one may well ask why governments have not implemented such a policy. One answer, of course, is
that they have tried to do so. The problem is that neither real wage costs nor real aggregate demand are under the direct control of the government.

In the case of wages, the Arbitration Commission makes decisions whose independence is guaranteed by statute. The Federal and State governments of course can, and do, seek to influence such decisions by their submissions to the Commission (especially in national wage cases). Not all wage decisions, however, follow this institutionalized path; i.e., private treaties account for some of the wage bargains struck.

Governments, by borrowing and/or manipulating tax rates, within very wide limits are able to finance any targeted amount of nominal (viz., money) expenditure. True, to the extent that the rate of inflation is affected by the amount of government expenditure, government has less direct control over real expenditure than over its nominal value. Moreover, the possibility of 'crowding out' private sector investment and/or consumption means that a given injection of government spending may lead to an increase in total spending which is less than the amount injected. Nevertheless, it is reasonable to suppose that the Federal Government has much tighter control over aggregate real expenditure in the economy than it does over wage costs.

The Hawke Government has attempted to have wage restraint recognized by the organized labour movement as an essential element of a policy for economic recovery. Relative to what might otherwise have occurred, this attempt has been judged by many commentators to have been successful. Nevertheless, unemployment and hidden unemployment remain high. The reluctance of organized labour to accept a squeeze on real wage rates
at first seems reasonable: on closer examination it is less so for the following reasons:

(a) While demand for labour may not be very responsive to real wage costs in the very short run (3-6 months, say), in the longer run (1-2 years) it is almost certainly very responsive. (An identical conclusion is reached in the case of Belgium, another small trading economy (Drèze and Modigliani (1981)).) Employment is lower than would be the case under a regime of lower real wage costs.

(b) A lower level of real wages stimulates profits and thereby increases investment (and consumption) expenditure by profit earners. This is good for the labour market.

(c) The increased aggregate employment, and lower rate of inflation, engendered by real wage restraint, have favourable effects on the average propensity to consume. "Over the seventies, households spent a significantly reduced share of their disposable income - whereas the average savings ratio for the four years ending June 1972 was 9.1 per cent, in the four years ending June 1976 the corresponding figure was 15.3 per cent. Why, in view of the rapid depreciation in the real value of money, did households choose to save more? ... Two factors likely to be important in the explanation can be identified. First, the accelerated inflation of the 1970s led to large
reductions in the real value of the stock of households' savings. In an attempt to mitigate this decline households apparently chose to save a larger proportion of current income. . . . Second, the high inflation was accompanied by a much higher risk of unemployment [and the average length of a spell of unemployment increased dramatically]. Households' savings are used partly to tide workers and their dependants over periods of lay-off. Given that this risk became higher in the mid-seventies, households had an additional reason for saving. If these arguments are accepted, then it follows that a reduction in unemployment and inflation, via a reduction in real wages, could stimulate aggregate household expenditure by reducing the average propensity to save. It also follows that the standard of living need not fall, even of those who are employed before the reduction in real wages. (It is clear that the standard of living of formerly unemployed people who find a job at the lower real wage will be raised.)" (Dixon, Powell and Parmenter (1979)) Thus even if real household income were reduced (not a likely outcome), the improved macroeconomic climate could nevertheless allow households to maintain real expenditure because of diminished needs to repair the inroads of inflation into their assets and to carry liquidity as unemployment insurance.

Many observers consider it politically naive to expect Australian union leaders to be persuaded by the force of such arguments. Whilst this is not
a good reason for failing to engage unionists in discussion of the issues, it does make it more attractive for government to attempt to lower real wages as a cost without any cut in real take-home pay. Since the biggest component of the gap between the hourly rate of expense incurred by employers in obtaining labour services and the hourly take-home rate of pay are PAYE (income) taxes, a "wage-tax bargain" offers scope for restraining real costs without cutting take-home remuneration.

The prospects for successfully implementing a wage-tax bargain depend on two key factors. The first is the compliance of organized labour. Once the bargain is struck it must be "adhered to by the unions even when unemployment is substantially reduced as a result of the associated demand expansion" (Corden and Dixon (1980), p.210). The second is technical and empirical: the additional product demand engendered by the conditions pertaining in the environment of the wage-tax bargain must be capable of being satisfied by the additional supply made possible by the cut in costs. An initial exploration of this issue by Corden and Dixon (1980) was not optimistic about the chances of satisfying this technical requirement; at least one of the authors (Dixon (1984)), however, now believes that there is a chance of the package working, and that this chance is better than the alternative of doing nothing. The crucial unknown in assessing the technical viability of any particular wage-tax proposal is the willingness of the public to accept paper assets issued by the government in exchange for claims on current production which their money incomes would otherwise entail.
Model Results and Ideology

We have seen above that real wage restraint is an essential element of any policy aimed at improving the overall level of employment. Equally essential is an expansion in real aggregate demand. Estimates of the Swan diagram, which shows the relevant trade-offs involved, have been reported. They were based on the ORANI model when used in a standard neo-classical fashion. It is also possible to use the model in a neo-Keynesian way. The latter involves the allowance of less substitution possibilities between capital and labour, the application of fixed mark-ups on capital services in use in industries other than agriculture, the assumption of an excess capacity of such services at the going mark-ups, and the assumption that Australian exports are completely unresponsive to changes in local cost conditions. Dixon, Powell and Parmenter (1979) have provided estimates of the Swan diagram based on these assumptions. The results differ only marginally from those obtained under neo-classical assumptions. This robustness stems from the following consideration. Under the neo-Keynesian assumptions, demand expansion generates more employment per unit deterioration in the balance of trade than in the neo-classical case. This is (1) because producers' costs, and hence the domestic price level, rise less rapidly as output expands; and (2) because a smaller proportion of the economy is vulnerable to the adverse effects of cost increases. In particular, exporters are no longer allowed to reduce their outputs in the face of declining profitability (nor to increase them when profits rise). So while factor (1) implies that demand expansion is less inflationary and therefore less damaging to the trade balance, factor (2) (namely, the reduced sensitivity of the economy to cost changes) implies
that in order to correct any given deterioration in the balance of trade, a larger cut in real wages is required in the neo-Keynesian than in the neo-classical case. The net outcome is to make the required amounts of wage restraint and demand expansion roughly equal under the two sets of assumptions (see Dixon, Powell and Parmenter (1979) pages 36 - 40).

This robustness is not confined to conclusions based on the work of a single group of authors. Using a variety of approaches, a large number of researchers have reached qualitatively similar results about the essential nature of real wage restraint in policies for economic recovery. For instance, on the basis of entirely different methods to those underlying ORANI, Valentine (1980) concluded:

These results indicate that a successful policy to deal with unemployment would combine wage restraint with a moderate expansion of government spending ... A similar conclusion was reached [by Valentine (1978)] in a study of the depression period ... It is unfortunate that those people who support one of these policies are usually opposed, for reasons which are largely ideological rather than analytical, to the other one.

Valentine's perspective is, I believe, representative of current thinking among Australian policy economists (see Lasliegals (1984), p.6).

Question 4 can now be answered with reasonable confidence. A satisfactory strategy for a restoration of macroeconomic health involves an essential element of real wage restraint. I see this view as largely independent of the ideological stances taken by individual economic analysts.
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