

THE AUSTRALIAN NATIONAL UNIVERSITY
Centre for Economic Policy Research

DISCUSSION PAPERS

*PAPERS ARISING FROM THE CONFERENCE:
RECENT AUSTRALIAN ECONOMIC GROWTH*

THE ROLE AND CONSEQUENCES OF
LABOUR MARKET ARRANGEMENTS

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DISCUSSION PAPER NO. 165

MARCH 1987

G.P.O. Box 4, Canberra 2601, Australia

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March 1987

ISBN: 0 949293 80 6

ISSN: 0725 430X

* Paper presented to the Conference: **Recent Australian Economic Growth**, held in honour of Professor F.H. Gruen, Australian National University, 24-26 November 1986.

TABLE OF CONTENTS

	Page
Summary	i
Introduction	1
I. The Australian Labour Market	2
II. Labour Supply	5
III. Unemployment	8
IV. Productivity Performance	15
V. Labour Allocation	20
IV. Concluding Comments	26
Endnotes	29
References	37
Comments of First Discussant: Bruce Chapman	44
Comments of Second Discussant: Gerry Gutman	54
List of Discussion Papers Arising From The Conference: Recent Australian Economic Growth	60
 TABLES	
Table 1 Some indicators of growth of the potential and actual labour force in Australia over the post-war period	31
Table 2 Some indicators of changes in the composition of the labour input	32
Table 3 Comparison of unemployment rates in selected countries over the post-war period	33
Table 4 Unemployment rates and some indicators of annual rates of increases of nominal and real wages and labour costs	34
Table 5 Labour and total factor productivity growth for the total economy in Australia and selected overseas countries over the post-war period	35
Table 6 Working days lost due to industrial stoppages	36

SUMMARY

Increases in the quantity of labour inputs and in labour productivity were responsible for a large share of Australia's post-war economic growth, but the realised contributions could have been larger. During the 1950s and 1960s the annual growth in the labour input (measured as hours worked) exceeded 2 percent, it fell during the 1970s and by the 1980s the rate of growth was less than 1 percent. The principal reason for the decline was a sharp jump in unemployment from under 2 percent in the 1950s and 1960s to 5-7 percent in the late 1970s and over 8 percent in the 1980s. As was the experience of other developed countries, the growth rate of labour productivity tended to decline after the mid 1970s. But over the post-war period Australian labour productivity growth at 2 percent per annum was one of the lowest among all OECD countries.

The chapter explores ways in which peculiarities of the Australian labour market assisted and hindered post-war economic growth. It is concluded that on balance the relatively high immigration rate, of itself, had a neutral effect on unemployment and on productivity growth. Large and sharp jumps in real labour costs, including 1973-75 and 1981-82, together with a slow wind-back of these excesses, were instrumental in the jump of unemployment and the fall-off in growth of labour force participation rates. A combination of small changes in relative wages and more importantly in wage-like factors (such as different lengths of unemployment and vacancy queues and hiring and promotion criteria) effected large changes in the industry, occupation and geographic composition of the workforce. Deficiencies in the design and operation of the labour market provide a part explanation for Australia's somewhat low productivity growth rate. These include the lack of an incentive and reward system at the enterprise level, rigidities in job classifications and craft unions, and unsatisfactory management/worker relationships.

CONFERENCE: POST-WAR AUSTRALIAN ECONOMIC GROWTH
ANU, NOVEMBER, 1986

The Role and Consequences of Labour Market Arrangements*

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Labour services were the most important input in the post-war Australian economy. Between 55 and 65 percent of GDP was absorbed by labour costs. Key influences on achievable and realised economic growth were growth of the labour input supply and the way in which the economy utilised the available supply.

Some of the reasons for the relatively slow growth rate of the Australian post-war economy can be traced to the labour market. While Australia was a high population growth country, in large part because of active immigration policies,¹ the realised growth rate of the labour input used by the economy measured as hours of work was much less. Between 1970-71 and 1984-85 the growth rate in hours worked fell to one percent per annum. This slow growth rate can be traced primarily to the sharp jump in unemployment rates, and to a lesser extent to falls in labour force participation rates and a shift in preferences towards shorter hours and part-time work. Using labour productivity and total factor productivity growth rates as measures of the effectiveness with which employed labour was utilised places Australia toward the lower end of developed country experiences over the post-war period. An objective of this paper is to assess the ways in which the structure and operation of the Australian labour market encouraged and hindered growth of the utilised labour input and labour productivity.

Particular attention is given to two features of the post-war Australian labour market which distinguish it from other OECD countries, namely high immigration rates and its distinctive conciliation and arbitration system, as well as factors common to the experiences of most developed countries. By way of background, Section I discusses some characteristics of the Australian labour market. Labour supply growth, both in aggregate and changes in its composition, and some of the factors influencing trends are discussed in Section II. Section III considers the growth of unemployment in the post - 1974 period and focuses on the role of the labour market and its operation on the observed slow growth

of the labour input over the last decade. The effectiveness with which labour has been employed in terms of productivity growth and labour allocation is assessed in Sections IV and V, respectively. Both sections include consideration of the role of migration and of the institutional structures in facilitating the microeconomic efficiency of the labour market. A concluding section brings together an assessment of the role of labour and of labour markets in Australia's post-war economic growth.

I. THE AUSTRALIAN LABOUR MARKET

The structure and methods of operation of the Australian labour market, together with some comparisons with other countries, provides a set of constraints and also a basis for understanding factors affecting growth of the labour input and growth of labour productivity. Like labour markets in other countries, the Australian labour market is concerned with the tasks of co-ordinating the requirements of employers seeking labour services and the willingness of employees to provide those services, and of establishing mutually agreeable conditions of work and remuneration.

Labour markets are complex. The importance of intertemporal linkages and of the human element distinguishes labour markets from the text book models which find greater applicability to most commodities and financial instruments markets. Current and potential employees are concerned not only with today's wage rate but also with future remuneration, promotion prospects and work conditions over their careers. Similarly, employers take a longer term view of their work force needs because of the long lives of investment in both physical and human capital. Because of the human and social element of workers as people, worker motivation and effort and industrial harmony are influenced by interpersonal and intertemporal comparisons of wages and work conditions. Considerable economic resources and other costs are incurred in the frequent renegotiation of labour contracts. For these reasons labour supply and demand decisions are based on perceptions of intermediate and longer term circumstances as well as current conditions, and there are many more dimensions to labour force participation, employment and work effort decisions than today's wage rate.

Even within the narrow context of current period remuneration packages a wide interpretation is required. Labour costs to an employer on which hiring and production decisions are made include not just wages and salaries but also the labour on-costs of time paid for but not worked (e.g. holiday and long service leave), superannuation, payments in kind (e.g. business cars for private use and concessional interest rate loans), workers' compensation and payroll tax. In Australia over the post-war period (and in other developed countries), on-costs have been growing in relative importance, and, for many employers, they currently exceed 30 per cent of total labour costs.² For an employee deciding on labour force participation and job choice, the returns to work include after-tax wages and salaries, superannuation and fringe benefits, holiday and other leave provisions, and job satisfaction. Income tax, workers' compensation and payroll tax, for example, place a significant wedge between employer labour costs and employee returns from work. Further, the wedge has grown over the post-war period. Then, wage rates represent a crude proxy variable for the measures of employer labour costs and of employee returns from work. Such realities of labour market transactions call for caution in interpreting many quantitative studies of the Australian labour market which have used wages as explanatory variables.³

Australia has developed a unique system for the negotiation, administration and enforcement of labour contracts between employees and employers. For most of the post-war period the Australian Conciliation and Arbitration Commission (ACAC) has taken the lead role in establishing nominal (as distinct from real) wage rates and other conditions of work such as leave provisions. Within the centralised tribunal framework the criteria used by the Commission in setting wages and work conditions has varied over the post-war period; and of course the Commission itself has responded in its deliberations to changing arguments presented by representatives of employers, by unions and by governments. For example, up to 1966 the Commission operated a dual wage system with separate determinations for the basic wage and for margins for skill, etc; thereafter the concept of a total wage was adopted. Up to 1953 the basic wage was indexed automatically for movements in the retail price index. A variety of indicators of economic performance, up to seven, were considered in

determining wage increases in the late 1950s and in the 1960s. In 1975 there was a return to indexation, often partial and plateau rather than full, but this was discontinued in 1981. Indexation again became the dominant principle of nominal wage setting under the Hawke government. Wages and conditions set by the Commission were adopted rapidly by other tribunals. They become minimum improvements, and often the accepted improvements, (although upward flexibility remained), of conditions of employment for all industries and occupations across the country.

Disputes between employees and employers regarding wages and other conditions of work quickly moved from the work place to the tribunals, first by conciliation and then by arbitration. In general, and especially after the 1969 O'Shea case, the post-war Australian labour market operated in the absence of enforceable contracts and of sanctions binding on both employers and unions. The procedures used by tribunals and the presiding commissioners to settle disputes have varied over time and with the particular individuals involved.

Relative to other OECD countries Australia has a high proportion of its work force as members of unions, and for the most part these are craft unions rather than industry unions. There has been a tendency over the post-war period for the amalgamation of unions and for the umbrella ACTU to exercise greater influence relative to individual unions in advancing employee claims for improvements in wages and conditions of work.

To summarise, Australian labour markets, like labour markets in other countries, are complex. Many factors influence the decisions of employers and employees. Interpersonal and intertemporal comparisons of wages and conditions of work are important. Australia has a somewhat unique system of settling wages and other disputes using third party tribunals. Decisions of the ACAC determine minimum improvements which often, but not always, become also the maximum improvements to wages and other conditions of work throughout the economy.

II. LABOUR SUPPLY

This section provides a description of trends in the potential supply and in the utilisation of labour at an aggregate level and of changes in the composition of the aggregate work force in Australia over the post-war period. Also, it considers the influence of economic conditions as determinants of some of the trends.

A summary of post war trends in the supply and utilisation of labour as an aggregate input is given in Table 1. The Table begins with work-age population growth, due to natural increase and migration. This provides a broad indicator of potential labour supply. It then moves sequentially through growth rates of the workforce in which participation rates are important, then to those employed, and ends with hours of work actually undertaken. The later measure provides an indication of the growth rate of the labour input used by the economy, although some corrections for changes in labour quality might be made.

Interestingly, growth of the potential Australian workforce measured as persons 15 and over has been fairly steady at just under two percent per annum over the post-war period. Changes in the age composition of the population have counter-balanced the fall in the growth rate of the total population from over two percent in the 1950s to under 1.5 percent today. Over the entire post-war period migrants have contributed 45 percent of the growth of the workforce age population.

Conditions in the Australian labour market have had an influence on the migration rate, although the causation has been indirect via government policy reaction functions, and they have had an influence on the composition of the net inflow. For most of the post war period the Australian government effectively regulated the migration intake such that at the aggregate level desired net migration was restricted. However, Kelly and Schmidt (1979) and Norman and Meilke (1985) find that the government target was sensitive to Australian economic conditions, including the domestic unemployment rate. At a disaggregated level, studies by Pope (1976), Langley (1977) and others found that migration rates from particular

countries were influenced by relative incomes and employment prospects in the home country relative to those in Australia as predicted by a model of rational location choice.⁴

Participation rates in Australia have undertaken trend changes over the post-war period and they have differed from overseas experiences.⁵ The aggregate Australian participation rate grew from around 65 percent in the immediate post-war period to 70 percent in 1970 and since then it has stabilised at this level. The aggregate figure disguises a marked jump in the participation rates for married women, and some fall-off for younger people and a large decline for those in the 55 and over age cohorts. At around 1960 the aggregate Australian participation rate was above that of Canada, about the same as the US, and below the rates of Japan and most European countries. By around 1980 the Australian figure was above the rates in most European countries and below those of the US, Canada and Japan. These diverging patterns are consistent with positive relationships between participation rates and conditions of the labour market together with relative buoyancy of the Japanese and North American labour markets relative to conditions in Europe in the 1980s.

Studies of Australian participation rates, for example Gregory and Sheehan (1973), Gregory and Paterson (1980), Merrilees (1982) and BLMR (1982) have found that the rates for women, the young, and older males have been significantly influenced by unemployment rates (used as a proxy measure of chances of obtaining a job) and in the case of older people also by the ratio of after tax wage income relative to social security benefits.

Up to around 1974 employment rose at about the same rate as the workforce, that is around two percent per annum. Since then, employment growth has been much slower at around 1.3 percent per annum. The next section discusses in some detail the story behind the growth of unemployment.

Throughout the post-war period the number of hours worked per person has fallen steadily. Reduced hours have come from Commission decisions on leave provisions - introduction of the 40 hour and 38 hour

standard working week in 1948 and 1982, respectively, extension of annual holidays from 1 to 2 weeks in 1945 to 3 weeks in 1963 and to 4 weeks in 1974, and improved provisions for sick, long service, maternity and other leave. In addition, there has been a shift from full-time to part-time work. While some growth of the part-time employment might be attributed to depressed labour market conditions, ABS data for Australia and OECD data for other countries indicate that for most part-time workers this is their preferred state. The growth rate of hours worked has been considerably less than for employment since data was collected from 1966-67. Over the last fifteen years labour input usage measured as hours worked has grown by about one percent per annum.

Table 2 provides some details on the composition of the labour force and of changes in its composition over the last 20 years. Full-time males dominate the labour force and account for two-thirds of all hours worked. There has been a trend for an increase in the relative importance of part-time work by both males and females. An increasing share of the workforce has come from people in the 20 to 54 age category. They represent about 80 percent of the workforce in 1980. There has been a marked decline in the relative share of those aged 55 and over and a smaller decline in the share of those under 20 in the work force.

Most indicators point to trend increases in the average skill of the Australian work force over the post-war period, as has occurred in other countries, but there is much uncertainty and little evidence about the magnitude. Participation rates at tertiary institutions increased several fold between 1947 and 1981, although the formal education participation rates of Australian males and females in the 15 to 24 age category remain below the OECD average.⁶ Butlin's paper to this conference shows a sharp increase in public spending on human capital formation as a share of GDP over the post-war period. Even so, most studies of the private returns from formal secondary and tertiary education (e.g. Selby-Smith, 1975, Miller, 1981, and Blandy and Goldsworthy, 1984) find that the returns exceed the opportunity costs, suggesting an underinvestment in these activities. Norris and Mulvey (1985) cite US data indicating that up to a half of the work skills exercised by employees are acquired while on the job rather than through formal

education. In this context it might be argued that increased workforce participation by females and by part-time workers has been associated with a fall in work experience and on-the-job training. By the same reasoning, the smaller share of young people in the work force would have the opposite effect. The net effect of these demographic changes on the aggregate skills of the work force is difficult to quantify and I am unaware of any compelling estimates. The Working Party on Productivity Measurement (1975) asserted that labour quality in Australia rose on average by between 0.1 and 0.5 percent per annum, but gave no formal justification for these numbers. Studies of productivity growth in the US attribute an important role to improvements in labour quality, e.g. Denison (1967) and Kendrick and Grossman (1980) attribute changes in quality of labour, principally education and training, with productivity increases of 0.6 percent per annum between 1948-66 and 0.5 percent per annum between 1966-76. Overall, the skills of the post-war Australian labour force have risen, but it is likely that the rate of increase lags behind those of other OECD countries, and there are no generally accepted estimates of the magnitude of the improvement.

Growth in labour input usage in the Australian economy has fallen from around two percent per annum in the 1950s and 1960s to one percent in the post 1974 period. This is due primarily to the rise in unemployment and to a lesser but still important extent to falls in the participation rate and in hours worked per person. Because of improvements over time in skills, these quantity numbers underestimate the growth rate of the effective labour input by an unknown amount. Economic conditions in the labour market influenced the migration rate, workforce participation rates, the unemployment rate, and perhaps also the hours worked and skills acquired variables.

III. UNEMPLOYMENT

Australia, like other developed countries, did not fully utilise its potential labour input supply over the 1970s and 1980s. After reviewing the evidence this section considers whether there were features of the

operation of the labour market which contributed to this under-use of potential productive capacity.

Up to 1974 unemployment in Australia rarely exceeded 2 percent and the Australian level was at the lower end of the international league (Table 3). In 1975 unemployment jumped to 5 percent and remained in the 5-7 percent band until 1982, when it jumped again reaching a maximum of 10 percent in 1983 (Table 4). Australian unemployment rose more, in relative terms, between the 1970s and 1980s from its low base of the 1950s and 1960s, than for OECD countries as an aggregate (Table 3).

The unemployment figures ignore the hidden unemployed, i.e. people who have declined to join the workforce because of the low prospects of gaining a job (the lower participation rate discussed in the last section). Sheehan and Stricker (1982) estimated that the number of hidden unemployed was about the same number as those employed. Then, by the 1980s Australia failed to utilise up to 20 percent of its potential labour input.

An important question is what was different between the first two decades of the post-war period when the workforce was fully utilised and the last decade and a half of high unemployment, and to what extent did the labour market contribute? Labour market causes can be saddled with a portion of the blame under a number of circumstances.⁷ First, if employment is sensitive to real wage rates, then failure of real wages to adjust downwards in response to increased unemployment provides one argument. This argument is advanced by, for example, Gruen (1986). Second, it might be argued that the labour market imposed rigidities at the micro level which hindered necessary adjustment to changed structural circumstances.

The too high real wages argument hinges on the twin assumptions that employment is sensitive to real wages and that real wages are not very sensitive to unemployment, and that for some reason real wages were too high. There has been a long debate in Australia as to the sensitivity of employment to real wages. The Treasury on one hand has been a strong

advocate, with the Institute of Applied Economics and Social Research of the 1970s taking a counter position.⁸ The Hancock Committee (1985) doubted that the real wages unemployment link was very strong. A slightly over-simplified Treasury view has three lines of causation: higher real wages squeeze profits and induce firms to restrain production, investment and employment; they cause a substitution of capital for labour; and they have adverse effects on international competitiveness, especially in the 1970s' world of a quasi-fixed exchange rate.⁹ Given the importance of time lags found in labour market adjustments noted in section I, these causal links take some time to take effect. An additional and indirect line of causation between too high a growth rate of nominal wages (which in practice also meant too high a growth rate of real wages) and unemployment can be traced to government perceptions and policies of the 1970s. Assuming a Phillips curve world, tight fiscal and monetary policies were used to restrain economic and employment growth in order to achieve a desired objective of lower inflation.¹⁰

The counter arguments posed by the Melbourne Institute, at least for not significantly reducing real wages in order to increase employment, can be characterised as follows. Maintaining or increasing real wages would increase household disposable incomes resulting in multiplier and accelerator increases in aggregate expenditure, output and employment. Also, the resulting increased utilisation of excess capacity would lower production costs, and thereby reduce one source of inflationary pressures. Relative to the Treasury position, the Melbourne Institute assumed implicitly that the squeeze on capital incomes would have a negligible effect on investment and that there would be little factor substitution essentially because of the fixed coefficients technology of existing capital.

Reasons for doubt in the causal connection between real wages and unemployment according to the Hancock Committee were two-fold. First, on the international competitiveness argument the Committee took the view that off-setting currency changes would work to counteract the loss of competitiveness of Australian labour costs and inflation rising above rates in overseas countries. The supporting data on constancy of the real exchange rate, e.g. in McKenzie (1986), deny such constancy. Second, while

the Committee accepted the substitutability of capital for labour argument, in their view increased labour costs also quickly flow into increased capital costs. While it is true that much of capital is embodied labour, such a direct and quick link seems doubtful, especially in Australia where much of the capital equipment is imported.

A review of the literature offers mixed evidence in favour of and against the various assumptions that lie behind the divergent arguments of the Treasury and 1970s Melbourne Institute. Production function studies, e.g. Caddy (1974), Clark (1976), Turnosky et al., (1982), invariably report significant capital/labour substitution elasticities. These models generally ignore adjustment lags and hence are likely to result in underestimates of the true elasticities. Econometric studies of investment have provided mixed results. Accelerator type models often achieved better statistical and explanatory properties than neoclassical and profit driven models, see for example, Hawkins (1979) and Higgins, Johnston and Coghlan (1976). A recent study by Kohli and Ryan (1986) provides much stronger support for the Treasury position. While consumption function studies clearly support the Melbourne Institute position that increased household disposable income increases, with some lags, private consumption, at the same time higher nominal wages raise inflation and the inflation has a depressing effect on real consumption (see Freebairn, 1978, and Anstie et al, 1982). Also, if the higher wages reduce employment some of the aggregate expenditure expansion effect is lost. Direct estimates of labour demand functions, e.g. Gruen (1978), Johnston, Campbell and Simes (1978), Holmes (1978), and Phipps (1982), provide cautious support for a significant negative relationship between real wages and employment. McMahon and Robinson (1981) and Pitchford (1983) find that labour costs, along with other factors, had a significant positive effect on unemployment rates. These types of studies might be criticised because of the data used, e.g. wages rather than total labour costs, and because of doubts about an appropriate dynamic specification. In general, econometric studies using data not extending beyond 1973 found difficulties in estimating significant negative relationships between real wages and employment, while those using more recent data, a period which contains more variation of real wages, employment growth and unemployment, found significant relationships.¹¹ In

a review of the implications of available macroeconomic models (NIF, RBA, ORANI and IMP) Challen (1985) found a significant negative relationship between real wages and employment and summarised the magnitude of the relationship as: "a 10 percent money wage cut will produce an increase of employment of more than 3 percent after two years or a little more" (p. 39). Nowadays few economists, including the author, disagree with the proposition that higher real wages, *ceteris paribus*, reduce employment and raise unemployment.

A second key assumption is the lack of sensitivity of real wages to the level of unemployment. National Wage Cases during the indexation periods of 1975-81 and 1983-86 placed primacy on the maintenance of real wages. However, in principle indexation was not to be automatic and in practice there was less than full indexation. But, the arguments for partial or plateau indexation seldom were dominated by consideration of unemployment levels; discounting for increases in government taxes and charges in the late 1970s and for the currency depreciation of the 1980s were the main arguments, although the 1982-83 wage freeze was motivated in part by the surge in unemployment. A number of regression studies, e.g. Grubb et al. (1983), indicate some sensitivity of nominal and in turn real wages to the unemployment level in OECD countries over the 1970s, and that Australian wage flexibility was above average. Even so, the data in Table 4 and the supporting reasoning for decisions made by the Commission in National Wage Case decisions of the 1970s and 1980s indicates only limited flexibility of Australian real wages to the level of unemployment.

The post-1974 period of high unemployment in Australia can be related to two instances of large increases in labour costs and of a protracted period of readjustment (as can be seen from Table 4). Following a period of high real labour cost growth, although fairly stable real unit labour costs, in the late 1960s and early 1970s, labour costs jumped dramatically in 1974 and 1975 under the new Labor government. The Federal Public service was used as a wage setter and there were increases in labour on costs from better leave provisions, introduction of the holiday leave loading, and higher payroll taxes.¹² Under comparative wage justice these gains rapidly spread to the rest of the economy. Real wages, real labour costs and real

unit labour costs jumped by 10, 15 and 9 percent, respectively, over 1973-5. During the indexation period that followed it took the rest of the decade, via a combination of partial indexation and productivity growth, before real unit labour costs returned to the 1972-3 level. Another explosion of labour costs in 1981 and 1982 flowed from the 1981 metal industry agreement on wages and from further increases in labour on costs including a shorter working week, the spread of superannuation, and higher payroll taxes and workers' compensation rates.

It is interesting to compare the experiences of the 1970s and 1980s with those of the 1950s. Certainly the Korean War commodity boom caused a sharp jump in Australian inflation and nominal wages, but there was no significant jump in real wages. Further, in 1953 basic wage indexation was discontinued. By contrast, following large jumps in real labour costs the experiences of the 1970s and 1980 allowed continuation of significantly higher real labour costs for many years. The contrasting unemployment experiences are consistent with the divergent real wages movements; but, no doubt, this analysis over-simplifies a complex relationship and it provides an incomplete rationale of the growth of unemployment in the 1970s.

The second potential mechanism by which Australian labour markets could have contributed to the high unemployment levels of the 1970s and 1980s was their inflexibility to facilitate adjustment to structural changes in the economy. Did they unwittingly support barriers against necessary adjustments of relative wages both in a macro sense and in a micro sense in the face of supply side changes in relative energy prices, the mineral expansion, the fall in rural commodity prices, the decline of international competitiveness of labour intensive low skill manufacturing industries, and technological change? Clearly other rigidities in the product and capital markets contributed as well. It is arguable whether the structural changes faced in the 1970s and 1980s were more or less than those of the 1950s and 1960s in which full employment and relatively low inflation were achieved.¹³ For reasons which are advanced in more detail in section V below, it is doubtful if rigidity in the labour markets which could have restricted the reallocation of labour across occupations and industries was a major cause of the growth of unemployment in the 1970s and 1980s. This position is

less clear in the case of restrictions and rigidities adversely affecting the growth of productivity. This issue is considered in detail in Section IV below.

There is little substance to the contention that Australia's relatively high immigration rate contributed either to the growth of unemployment in the 1970s and 1980s or to its relatively poor performance when compared with other OECD countries. Migrants in particular, and population increases in general, influence both the supply of and demand for labour. The obvious contribution of migrants to labour supply is heightened by the observation that Australian post-war migration contained a higher proportion of persons of working age and with a higher work force participation rate than the indigenous population. In addition to increasing labour supply, migrants add to the demand for labour via increasing aggregate expenditure directly themselves and through increased industrial and social expenditure undertaken on their behalf. In theory the net effect is to increase aggregate employment, including for the indigenous work force (see Harrison, 1982), and the effect on total unemployment is ambiguous. In post-war Australia empirical results suggested that the net effect of the supply shift and of the demand shift for new employees has approximated the migration induced increase in people looking for work at the ruling wage rates. Econometric work by Withers and Pope (1985) and by Norman and Meilke (1985) find no evidence of a statistically significant impact of migration on either Australian wages or unemployment. The observation that the net migration rate was higher in the 1950s and 1960s, years of low unemployment, than in the 1970s and 1980s, years of high unemployment, lend support to the conclusion that, of itself, migration has not being a causal factor behind low employment growth in recent years.

To summarise, the operation of the Australian labour market must accept an important component of the blame for the low rate of employment growth and for the growth of unemployment (both measured and hidden) in the 1970s and 1980s. At the macro level the market permitted two episodes in 1973-75 and 1981-82 for large increases in real wages and labour costs which could not be justified by real national income increases, and it took many years to adjust to these shocks. Although

there are a number of complex relationships with some working in different directions, the net effect of the excessive real labour costs was to reduce the rate of growth of employment and hence of labour factor usage by the economy.

IV. PRODUCTIVITY PERFORMANCE

Economic growth depends not only on the increase in factors used for production but also on the effective use made of these inputs. This section considers available measures of Australian post-war productivity growth and it assesses some of the ways in which the structure and operation of the labour market hindered and encouraged productivity growth.

Productivity measures provide a crude guide to how effectively resources, including labour, are used in production. They are measures of the ratios of output to one or a combination of inputs, and productivity growth refers to changes over time in these ratios. The present discussion uses measures of labour productivity (real output divided by labour input measured as number of persons employed or as hours of work) and total factor productivity (real output divided by a weighted average of labour and capital inputs). Caution is required in interpreting statistics on productivity. First, there are conceptual and empirical difficulties in measuring heterogeneous bundles of outputs and inputs. These problems are worse in making cross country comparisons. Second, there are two-way endogenous causal relationships between physical quantities of outputs and inputs on the one hand and on the other hand the prices of the outputs and inputs. Subject to these reservations, productivity figures provide a rough indication of the efficiency of resource usage.

Only little data is available for making comparisons of absolute productivity ratios in Australia with similar ratios overseas. Haig (1986) compares the ratio of output per person employed in Australia, Britain, Germany and the US by industry sectors. Australian agricultural and mining sectors, the principal sources of the country's exports, lead the other countries; and the Fitzgerald et al. paper given at this conference

reports relatively high labour productivity growth rates over the post-war period for these industries. For the manufacturing and services sectors Australian output to labour ratios are below those of the other countries with the exception of UK manufacturing. Kasper and Masih (1979) compare labour and total factor productivity ratios for the manufacturing sector of Australia, W. Germany and the US and find the Australian ratios 20 to 40 percent below those of the US and Germany. While international comparisons of the type reported here are subject to numerous approximations and measurement errors, they provide evidence of a considerable shortfall in the effective use of Australian resources in the manufacturing and service sectors, over 80 percent of the economy.

Some estimates of annual growth rates of productivity in Australia and selected OECD countries over the post-war period are collated in Table 5. Since common approximations are made over time for each series these measures can be used with more confidence than the comparisons based on absolute productivity measures. Australia's post-war labour productivity growth rate of under 2.5 percent per annum and its total factor productivity growth rate of 1.5 percent per annum places it well below the rates experienced by Japan and the Continental European countries and at about the same rates as experienced in the US and the UK. As was the case with the other OECD countries, Australia experienced a slow-down in productivity growth, both labour and total factor, in the later part of the post-war period. Robertson (1974), Kasper (1980), IAC (1983), Blandy et al. (1985) and EPAC (1986) have made reference to Australia's relatively poor productivity growth rates over the post-war period with Blandy et al. referring to the phenomena as "Australia's productivity underhang syndrome" (as distinct from a "real wage overhang syndrome").

A number of factors have been advanced as reasons for Australia's relatively poor post-war productivity performance, and clearly many factors have contributed. Some of these are considered in other papers presented at the conference, especially Elek and Camelleri on technology and Carmichael and Dews on investment and capital. In this section the discussion is restricted to the contribution of issues related to the labour market.¹⁴

One issue is whether Australia's high rate of migration (and of population increase) has contributed directly or indirectly to its relatively low productivity performance over the post-war period. Gruen (1986) and Dowrick and Nguyen (this conference) report estimated equations for OECD cross-country comparisons in which high population growth rates, along with high starting GDP per capita levels and low capital formation rates, are associated with low GDP per capita growth rates, but little in the way of expression of the causal mechanisms is provided. Using a simple correlation analysis we find for Australia relatively high growth rates for labour input usage and for the productivity indexes in the 1950s and 1960s (around 2 percent for hours worked and 2.9 and 1.8 percent for labour productivity and total factor productivity) and much lower rates for the 1970s and 1980s (around 1 percent for hours worked and 2.3 and 1.4 percent for the productivity measures). This result conflicts with the cross-country regression estimates of Gruen and Dowrick and Nguyen of a negative relationship between population growth and GDP per capita growth; but of course other things were not equal. In terms of human capital, data compiled by Chiswick and Miller (1985) from the 1981 Census indicate only small differences between the Australian born and the overseas born; on average the Australian and overseas born have similar formal education (11.0 versus 10.9 years) the overseas born have a higher proportion with a qualification certificate (31.2 versus 28.9 percent), slightly longer work experience (24.5 versus 25.8 years) and less English proficiency. This somewhat incomplete and partial analysis provides no support for the hypothesis that Australia's high rate of post-war net migration has, of itself, contributed in any significant way to Australia's relatively poor productivity performance.

A number of characteristics of the operation of Australian labour markets over the post-war period (and also in the earlier decades of the century) might be attributed as part contributors to the relatively low productivity performance. These include: a lack of incentives and rewards for changes in management and work practices and in management/labour relations; a breakdown of a generally supported and enforceable labour contract system setting out the rights and responsibilities of both employers and employees; a rather confrontational industrial relations system with

remote third party settlement procedures as opposed to a more direct enterprise based approach in which the benefits of co-operation are highlighted; slow evolution of labour management systems aimed at encouraging and rewarding a motivated and efficient workforce; and slower improvements in labour skills, both from formal education and from on-the-job training and retraining than in other countries as discussed in section I and in EPAC (1986). It is extremely difficult, if not impossible, to isolate and quantify the effects of these different factors in what is a complex system where many other things are changing.

Several features of the institutional structure and operation of post-war Australian labour markets dull incentives for rapid productivity growth. First, because of the centralised wage setting system whereby gains in national productivity are distributed nearly equally across the entire workforce there are limited opportunities for rewarding workers at the enterprise level with higher wages for changes in work conditions. While there is some upward-flexibility in setting particular wages, for example, work value cases, greater employment security and promotion prospects, and some wages drift, for most of the post-war period an important device for enticing and rewarding enterprise productivity has not been available.

Second, the craft union structure and rigid job specifications and classifications in effect have worked to restrict the stated skill capabilities and accepted tasks for much of the workforce. Then, changes in production practices associated with the adoption of technology and productivity improvement have been perceived as placing at risk many jobs as they currently are specified. By contrast, a Japanese-type life-time contract or an industry focus tends to take a more general view of sustained industry employment, and generally one where job classifications and skills and work practices evolve over time. In this system retraining and on-the-job training are an integral component of labour development and management. The lack of incentives and rewards for change, together with artificial rigidities designed to protect the status quo, in large part explain the adherence to established work practices, job classifications and so forth, and the resistance to the introduction of new technology in post-war Australia.¹⁵

Relationships between employers and employees in post-war Australia frequently have been far from harmonious and conducive to productivity growth. The rights and responsibilities of employees and employers with supporting sanctions and grievance procedures have been deficient in either a formal sense or in a generally understood and supported informal sense. Disputes rapidly shift from the enterprise level to become a formal dispute for consideration initially by conciliation and then by arbitration before a third party industrial tribunal. In some cases the system encourages a formal dispute relative to direct employer/employee discussion. At the industrial tribunal, extreme positions are presented more in the form of an adversarial battle over a zero-sum game than as a means of reaching a mutually beneficial agreement. Further, on occasions employers or unions do not adhere to tribunal decisions and they do this with small risk of legal sanctions being applied. Brown and Rowe (1983), Gutman (1986) and others argue that the transfer of direct employer/employee responsibility for the settlement of disputes to third party tribunals concurrently results in a loss of employer/employee trust in each other and it removes desirable lines of communication for achieving day-by-day potential improvements in productivity. Post-war Australia was slow in moving from the Taylorism management school view that sees employees very much as another machine to more modern management systems which recognise workers as human beings who have feelings and expectations and who can be motivated by attention to the work and social environment.

Some aspects of the structure of the Australian labour market favour established power groups and support the Olson model of an atrophied industrial structure (see for example Olson, 1982, Gutman, 1986, and Gruen, 1986). The registration conditions and operation of the Arbitration system favour established trade unions and peak employer organisations as the bodies responsible for negotiating changes in wages and other conditions of employment. Barriers to entry to the "Industrial Relations Club" operate to suppress the development and expression of new ideas and to reduce the opportunities for change. Yet, change is the key to productivity growth.

Industrial disputes directly and indirectly have adverse effects on productivity. On the criteria of days lost per employee per annum

Australia's post-war record is one of the worst of all OECD countries - 16 out of 20 shown in Table 6 - and contrary to average OECD experience the Australian record was worse in the 1970s than the 1960s. Australian strikes generally were of short duration and more frequent than in the typical OECD country experience and there was uncertainty as to when strikes will occur. In terms of their direct adverse effects the cost of strikes tends to be exaggerated. Over the 1970-83 period Dabscheck (1986) reports that the average length of time spent by an Australian employee on strike was 0.628 days per year or 0.278 percent of the time available for work; this figure was much worse for particular industries and better for others. Strikes and the threat of strikes have a number of indirect adverse effects on productivity such as the requirement to hold larger inventories and management reticence to introduce changes that might provoke industrial disputation. No estimate of these indirect costs are known to the author. The relatively adverse history of Australian industrial relations over the post-war period has contributed both directly and indirectly to the lower rate of productivity and of productivity growth of the post-war Australian economy.

To summarise, relative to most other OECD countries, the productivity performance of the Australian economy in terms of absolute levels in the manufacturing and service sectors and in terms of growth rates for the total economy of labour and total factor productivity over the post-war period has been low. A number of characteristics of the structure and operation of the labour market, including the absence of incentives for change, rigidities to change, and the lack of strong, cooperative and trusting employer/employee working relationships, have contributed to the poor performance.

V. LABOUR ALLOCATION

A major function of the labour market is to facilitate the co-ordination of the availability of the skills and preferences of people wishing to work with the requirements of employers seeking labour services. The more successful and quickly the matching process is achieved, particularly

in response to changes on both the demand and supply sides, the greater is the contribution of the labour market to economic growth by mobilising available labour inputs and placing them in their most productive use. The labour allocation task is essentially a microeconomic efficiency issue. Therefore, the task, and its assessment, needs to be made at a highly disaggregated level and it needs to focus on the dynamic adjustment paths.

The post-war Australian labour market has witnessed very large changes in its composition. Changing patterns are evident for classifications by industry, by occupation, by geographical location, by sex, by age and so forth (see, for example, tabular data on these topics in Norton and Kennedy, 1986, and the papers presented at this conference by Dixon and Smith). In some cases absolute numbers have fallen, e.g. in agriculture and some metal trades, and in other cases the numbers have trebled or more, e.g. in finance and graduates. Underlying reasons for the changing pattern come from the demand side, e.g. changes in buyer requirements with rising incomes and changes in technology and methods of production, and they come from the supply side, e.g. changes in work preferences and in education participation.

Numerous avenues of responding to changes in labour demand and supply by occupation, industry, location and so forth have been used. These include non-replacement of voluntary retirements (so called natural attrition), forced retirements and retrenchments, attracting new labour force entrants, including youth and migrants, to growth areas, and switching employment of those already in the work force. All avenues have been part of the Australian post-war history.

There has been much debate in Australia about the mechanisms which provide the incentives, inducements and rewards for changes in the allocation of labour in response to shifts in demand and supply for particular industries, occupations, and so forth. This debate needs to be considered in the context of the labour market described in section I. In particular, employment decisions are based not just on today's conditions but also on expectations about future conditions, employees are humans with social and other dimensions as well as purely economic dimensions, and

implicit contracts are rife. Decisions on employment, hiring, firing, etc. therefore are motivated by a number of factors in addition to today's wage rates.

The simple text book model predicts wage rises for those areas where demand shifts (associated with, for example, output growth and labour using technical changes) exceed supply shifts (associated with, for example, demographic and education factors), and wage falls for areas where the supply shifts are greater than the demand shifts. The extent of any relative wage change will vary with the elasticities of supply and demand. These elasticities will be greater the longer the time period of interest. Also, as noted in section I, assessments of the shifts in supply and demand will be made over longer term as well as current time frames. In reality it becomes an enormous conceptual and empirical task to develop structural models at a high level of disaggregation and with time dynamics that would be required to fully assess the role of relative wage changes in achieving the reallocations of labour.

Because of the difficulties in specifying and estimating structural models most attempts to assess the role of relative wage changes in the labour market allocation and reallocation task have had to resort to reduced form models. A number of studies have compared patterns of relative wages over time and across countries for different occupations and industries, e.g. Hancock and Moore (1972), Hughes (1973), Brown et al. (1978), Henderson (1975), Mulvey (1982), Norris (1983) and Mitchell (1985). These studies have proceeded on the, often implicit, hypothesis that if wage changes provide a significant labour reallocative function then one would expect to find evidence of changes in wage patterns over time and across countries. In general the hypothesis gains little support. Specifically, the studies find: a high degree of constancy over time of relative wage patterns in Australia, and in other countries, as measured by partial correlation coefficients and Spearman rank correlation coefficients; but still some flexibility in both cyclical and trend contexts; and somewhat similar patterns in wage relativities in Australia and other countries such as the US, UK, Canada, Sweden and Australia, although there is some evidence of a greater compression of relative rates in Australia. Certainly one can

quibble about data deficiencies in these studies, however the more important limitations refer to the high level of aggregation and the limited attention to the time paths of adjustment, both factors which could hide much of the action. Also, the international comparisons are underpinned by the assumption of *ceteris paribus*, yet one can point to differences in workforce and industry heterogeneity which should affect wage dispersion patterns. Even so, the striking result of a high degree of constancy over time of relative wage patterns in conjunction with large changes over time in the composition of the labour force remains impressive.

A second line of analysis attempts to assess the importance of different forces in causing changes in relative wage patterns. There are some examples where social considerations have dominated economic forces in changing wage relativities, e.g. the equal pay for females decisions of 1969-75, plateau indexation decisions of 1975-79, and the indexation decisions of 1983 to present supported by the "no extra claims" clause. At other times decisions of the Commission have operated primarily to set minimum wage increases, with there being some freedom for particular rates to rise by more than the minimum, e.g. the dual wage fixing procedures of the 1950s and 1960s. The existence of some wages drift in most years and the growth of fringe benefits provide evidence of some role for market forces, or at least forces other than the Commission, in the setting of maximum wage increases for some occupations and industries. Keating (1983) finds evidence that relative wages respond to changes in excess demand pressures, but Withers et al. (1986) draw the opposite conclusion (not only for Australia, but also for the UK, US and Sweden). Because of the high level of aggregation, both in an industry sense and in a temporal sense, considerable caution is required in drawing very strong conclusions from the Keating and Withers et al. studies. In a more appropriate case study analysis, the volume by Blandy and Richardson (1982) provides evidence of some response of relative wages to excess supply and demand pressures. Reviewing the same set of studies the Hancock Committee (1985, p.20) concluded "Overall, the available evidence about the relation of relative wage changes to pressures of supply and demand is inconclusive." Given my reservations about the limitations of many of the studies, I would draw more favourable conclusions to the role of market forces in altering

relative wages in the upwards direction on account of the evidence of the more relevant Blandy and Richardson case studies and of the presence of wages drift in published statistics.

In addition to relative wage changes there are a number of wage-like factors which rational employers and employees use in assessing longer term relative labour costs and income receipts, respectively. These include relative unemployment queues and vacancy lists, promotion prospects, flexibility of criteria applied in hiring and promotion decisions, and early retirement decisions. Changes in these wage-like factors can raise and lower expected lifetime returns without distorting existing patterns of relativities that are important to workers as humans and social creatures. Some empirical support for the important allocative role played by wage-like factors is given in the particular labour market studies collated in Blandy and Richardson (1982).

Norris (1986) takes the model a little further. He poses a dual labour market. Most of the work force is held on internal labour market agreements in which, for reasons of industrial harmony and worker motivations, maintenance of relative wage rigidity is an important characteristic, as is the existence of implicit contracts ensuring extended periods of employment. A secondary or fringe labour market based on high turnover labour responding to wage-like variables provides the flexibility. Members of this secondary group face most of the burden of adjustment. It includes new labour market entrants, including the young, migrants and females re-entering the work force, and the unskilled. This type of model is consistent with the observed greater volatility of unemployment rates of migrants and youth and of the volatility of female labour force participation rates.

There is disagreement as to whether migration assisted the allocative function of the post-war Australian labour market. Menadue (1983) indicates that one aspect of immigration policy throughout most of the post-war period was to encourage the entry of persons with particular skills to help fill perceived labour shortages. Hughes (1975) and Gruen (1976) argue that migration did play an important role in meeting particular skill

shortages, but others disagree, including Chapman, Withers and Pope (1985) and Withers (1986). Rather than undertake a counterfactual study which allows for adjustments in labour supply and demand at a high level of disaggregation, each of the authors relied on partial indicators in drawing their inferences. For these reasons a complete assessment remains to be undertaken. However, given the lags in ascertaining particular labour shortages (and recognising errors in this task), the lags in seeking out and enticing immigrants of the required skills, and lags in their transportation (which was by sea in the 1950s and much of the 1960s) it seems doubtful that migration offered a speedy way of improving the market's reallocative function.

What is the evidence of success and failure of the post-war Australian labour market in reallocating labour from areas of declining need to those of greater need?. If we accept that employers hire labour up to the point where their marginal value product approximates marginal labour costs, and here we assume the longer term average calculation is made, and that these marginal benefits and costs approximate social benefits and costs, then the approximate test is one of observing for particular occupations, industries, regions, etc., substantial unemployment queues simultaneously with substantial and sustained vacancy lists for other industries, occupations and regions.

Throughout the 1950s and 1960s aggregate unemployment typically was under 2 percent, and this also was a period of relatively low inflation and few real labour cost break-outs. If we accept estimates of the natural rate of unemployment for that period of around 1.4 to 2 percent (for example, Parkin, 1973, Nevile, 1975, and Rao, 1977) then nearly the maximum achievable aggregate employment rate was reached. This is consistent with the absence of prolonged and large shortages of particular skills, etc. and prolonged and large surpluses of other skills, etc.

If labour markets of the 1950s and 1960s can be characterised as successful in achieving their reallocative functions it is difficult to conclude that they failed this task in the 1970s and 1980s. The extent of shifts in the demand and supply of labour for particular occupations, industries and

so forth were little different between the two periods as judged by observed compositional changes. Dixon's paper to this conference provides some supporting evidence for the case of the manufacturing sector. At the same time, aggregate unemployment was considerably higher, and growing, and thus providing ever increasing reserves of potential workers.

Certainly the unemployment queues of the 1970s and 1980s have been longer for some groups of the work force than others, in particular the young and migrants. As noted earlier, this is not inconsistent with the way the labour market operates, although it also probably reflects in part the lack of flexibility of relative wages in the downward direction (see, for example, Stone, 1983, and the BLMR, 1983, for assessments of reasons for the more rapid growth of youth unemployment). A guilty verdict on labour market allocation inefficiency would require in addition to evidence of differential unemployment queues also evidence of significant and sustained vacancy lists for particular industries, occupations, regions etc. Supporting systematic statistical evidence is scanty.

Overall, only a very weak case can be made that the Australian labour market failed its task of reallocating labour between occupations, industries and regions over the post-war period. Reallocations were achieved very little by changes in the pattern of relative wages although there were some changes. Rather, changes in unemployment queues and vacancy lists, and changes in other wage like factors such as promotion prospects and hiring and promotion criteria provided the most important signals of areas of attraction. The magnitude of reallocations achieved over the post-war period and the mechanisms used to coordinate the changes appear to have been similar in Australia and other developed countries.

IV. CONCLUDING COMMENTS

Increases in the labour input and in the productivity of labour contributed significantly to post-war Australian economic growth, however this contribution might have been much greater. From the 1970s onwards Australia failed to utilise an increasing share of the potential labour input.

By the mid 1980s as much as 20 percent of the potential labour supply was either unemployment or dissuaded from joining the workforce. The rate of growth of Australian productivity, whether measured as labour productivity or as total factor productivity, was at the lower end of international experiences, and the absolute productivity ratios for the large services and manufacturing sectors were below the best overseas experiences. Both sources of failure to make the most of available opportunities were due to a complex of factors. However some features of the operations of the labour markets cannot escape part of the blame.

Net migration was an important component of the post-war experience. It contributed about 45 percent of the workforce expansion. There is no evidence that migration, of itself, added to the unemployment problems or to the low productivity growth performance. It is doubtful that migration assisted or hindered the labour reallocation task.

The post-war period witnessed large changes in the workforce composition in terms of occupational and industry mix, geographical location and so forth. These were achieved by a mixture of relative wage changes and wage-like factor changes such as the relative length of unemployment queues and changes in hiring and promotion criteria. Although the centralised arbitration system of setting wages and work conditions directly and indirectly imposed some rigidities on the labour market, mainly in setting minimum conditions, there seems little evidence that the post-war labour markets failed their task of reallocating labour in response to shifts in supply and demand.

A critical set of questions is whether greater economic growth could have been achieved under alternative labour market institutional arrangements and with different attitudes and decisions by employers, employees and the tribunals. With hindsight the answer obviously is yes. For example, avoidance of the wage explosions of the early 1970s and 1980s and a quicker winding bank of those excesses would have resulted in much larger increases in employment than occurred. Greater attention to management-employee relations in a cooperative spirit of achieving mutual

benefits, introduction of a system of incentives and rewards for improved productivity growth at the enterprise level, more balanced and widely supported contracts between employees and employers, and less rigidities in the way of job specifications and adherence to established management and work practices would have provided a better environment for achieving changes necessary for greater productivity growth. Finally, the rate of growth of human capital from formal education and on-the-job training and retraining seems to have fallen further behind the more successful OECD countries.

ENDNOTES

- * I would like to acknowledge the comments on an earlier draft by Bruce Chapman, Fred Gruen, Michael Porter and other authors of papers to the Conference, but absolve them from the interpretations drawn in this version.
1. See Butlin's paper to the Conference and the Maddock and McLean (1987) volume for a discussion of immigration policies.
 2. See, for example, Covick (1986) for a recent survey and list of references.
 3. In practice even within the context of wage rates care is required in distinguishing between award wages, average weekly wages (award plus overaward, and an adjustment for changes in the mix of full-time and part-time work), and ordinary time earnings (award plus overaward pay for a normal period of work).
 4. Government policy also had a major influence on the composition of migration including the White Australia Policy up to 1972 and the changing provisions for refugees, family preferences, and work skills in short supply.
 5. The data underlying the discussion of this paragraph comes from Norton and Kennedy (1986).
 6. For details see Withers (1985), OECD (1979) and IAC (1982)
 7. Other explanations include the lack of effective demand associated with restrictive fiscal and monetary policies and an over-valued exchange rate. Some of the issues are discussed in the conference paper by Johnston et al. and the Carmichael and Dews paper addresses some of the same issues.
 8. The Treasury arguments can be found in the Budget Papers and National Wage Case submissions prepared during the Frazer Government, and they are outlined in the Hancock Report (1985). The Melbourne Institute views are found in various issues of the Australian Economic Review of the mid-1970s and in the Sheehan and Rosendale (1978) article.
 9. When discussing unemployment the additional effect of higher wages raising the participation rate was added to the analysis.

10. This argument is exemplified by the Frazer government's objective of "beat inflation first".
11. All econometric tests referred to the null hypothesis that wages had no significant effect on employment or unemployment. An equally plausible hypothesis that there was a negative relationship in the case of employment and a positive one in the case of unemployment would have been accepted in all studies reported.
12. Gruen (1976) and Pitchford (1983) attribute tight labour markets as partly responsible for, or at least accommodating to the rapid spread of, the labour cost increases.
13. Robert Dixon in his paper to this conference argues that within the manufacturing sector, some 20 percent of the economy, the structural changes were greater.
14. Some other factors were a slightly slower growth rate of the capital to labour ratio (down from 3.0 to 2.5 percent per annum), the beneficial effects of the mining industry expansion in the 1970s with its relatively high productivity levels, and a decline in the relative importance of the high productivity agricultural sector.
15. These labour market rigidities were supported by industry policies which attempted to insulate management from changes in general market pressures over much of the post-war period.

Table 1:

Some Indicators of Growth of the Potential and Actual Labour Force
in Australia over the Post-War Period
(average annual growth rate, percent)

	1945-50 to 1969-70	1970-71 to 1984-85	1949-50 to 1984-85	1966-67 to 1984-85
Population aged 15 and over	1.89	1.83	1.97	1.92
Labour Force	2.14	1.74	2.02	1.92
Employment	2.15	1.31	1.77	1.62
Hours worked	n.a.	1.01	n.a.	1.22

n.a. not available.

Source: Computed from Norton and Kennedy (1986).

Table 2:**Some Indicators of Changes in the Composition of the Labour Input**

	<u>Three Year Average Centred On</u>		
	1965	1975	1984
Labour force by sex (% of total):			
Male	70.6	64.0	62.9
Female	29.4	36.0	37.1
Employment by sex (% of total):			
Male - full time	68.3	62.8	58.2
part time	2.6	2.6	3.8
total	70.9	65.4	62.0
Female - full time	22.4	23.7	24.0
part time	6.6	10.9	14.0
total	29.0	34.6	38.0
Hours worked (% of total):			
Male	73.3	71.2	68.7
Female	26.7	28.8	31.3
Labour force by age (% of total)			
15 to 19	13.9	11.4	10.5
20 to 54	72.9	76.9	80.2
55 to 65	10.7	10.0	8.2
65 and over	2.5	1.8	1.1

Source: Computed from Norton and Kennedy (1986).

Table 3**Comparison of Unemployment Rates
in Selected Countries over the Post-War Period**

	Average of 3 years centred on:						
	1955	1960	1965	1970	1975	1980	1983
Australia	n.a	2.0	1.4	1.5	2.9	5.8	8.6
Canada	4.0	6.0	3.7	5.4	6.4	7.4	11.3
France	1.4	1.2	1.3	2.4	3.8	6.5	8.7
Germany	4.1	1.3	0.6	0.7	3.4	3.7	7.7
Japan	1.5	1.8	1.2	1.1	1.8	2.1	2.6
Sweden	n.a.	1.7	1.5	2.0	1.7	2.2	3.2
UK	1.3	1.4	1.2	2.3	3.4	6.3	10.9
USA	4.6	5.7	4.3	4.7	7.1	6.7	8.5

Source: Norton and Kennedy, (1986).

Table 4

**Unemployment Rates and Some Indicators of Annual Rates of Increases
of Nominal and Real Wages and Labour Costs
(percent change per annum)**

	Unemployment Rate at August	Full Time Adults Ordinary Time Earnings		Non-Farm Labour Costs per Hour Worked		Non Farm Real Unit Labour Costs+
		Nominal	Real*	Nominal	Real*	
1965-66	1.2	4.5	1.2	n.a.	n.a.	n.a.
66-67	1.6	6.7	3.2	n.a.	n.a.	n.a.
67-68	1.7	5.8	1.8	7.4	3.4	-1.9
68-69	1.6	7.5	3.5	8.3	4.3	-1.0
69-70	1.5	8.4	-3.1	8.4	3.1	0.0
1970-71	1.4	11.1	5.6	11.6	6.1	3.1
71-72	1.7	10.1	3.6	9.4	2.9	0.0
72-73	2.5	9.0	2.4	10.3	3.7	0.0
73-74	1.8	16.2	2.3	22.0	8.1	4.0
74-75	2.4	29.8	8.0	30.5	8.7	4.8
75-76	4.6	16.5	0.1	17.5	1.1	-2.4
76-77	4.7	12.4	1.1	14.8	3.5	-0.3
77-78	5.7	9.8	1.6	10.7	2.5	1.0
78-79	6.2	7.7	0.9	7.8	1.0	-3.2
79-80	5.8	9.4	-0.4	10.1	0.3	-0.6
1980-81	5.9	14.2	3.7	13.0	2.5	0.8
81-82	5.6	13.4	1.8	15.4	3.8	2.3
82-83	6.7	14.2	3.2	15.2	4.2	0.2
83-84	9.9	7.8	-	4.0	-3.8	-5.2
84-85	8.6	7.6	1.2	6.0	-0.4	-1.2

* Using non-farm GDP

+ This series also describes changes in the wages (and profit) share of non-farm GDP.

Sources: Unemployment - Survey data figures from Norton and Kennedy (1986).

Ordinary Time Earnings - up to 1973-4 average weekly earnings from Norton and Kennedy (1986) and then from Treasury Round-Up (various issues).

Labour Costs - non-farm wages, salaries and supplements plus payroll tax per hour worked by non-farm wage and salary earners, from Treasury Round-Up (various issues).

Unit Labour Costs - ratio of non-farm wages, salaries and supplements and payroll tax to gross non-farm product, from Treasury Round-Up (various issues).

Table 5

**Labour and Total Factor Productivity Growth for the Total Economy in
Australia and Selected Overseas Countries Over the Post-War Period**

(Average Annual Percentage Rates of Change)

1. Australia, 1950-51 to 1978-79, Kasper (1978)			
-	real GDP per hours workd		2.3
-	total factor productivity		1.4
2. Australia, 1966-67 to 1984-85, Business Council of Australia (1986)			
		1966-67	1973-74
		to	to
		1973-74	1984-85
		1966-67	1984-85
-	real GDP per person employed	2.6	1.7
-	real GDP per hour worked	2.9	2.3
-	total factor productivity	1.9	1.4
3. OECD Countries, 1950 to 1962, Denison (1967)			
	<u>Labour</u>	<u>Total</u>	
	<u>Productivity</u>	<u>Productivity</u>	
	2.3	1.4	
US	2.7	2.0	
Belgium	2.9	2.0	
Denmark	4.7	3.7	
France	6.9	4.5	
Germany	3.7	2.8	
Netherlands	3.6	2.4	
Norway	1.7	1.2	
UK	5.5	4.3	
Italy			
4. OECD Countries, 1960 to 1983, real GDP per person employed, OECD, Historical Statistics:			
	1960 to	1973 to	1960 to
	1973	1983	1983
Australia	2.5	1.4	2.0
US	2.1	0.2	1.2
Japan	8.4	2.8	6.0
Germany	4.2	2.3	3.4
France	4.9	2.3	3.7
UK	2.9	1.6	2.3

Table 6**Working Days Lost Due to Industrial Stoppages**

(days lost per year per 1000 employees)

Country	Average 1962-1981	Average 1962-1971	Average 1972-1981
Switzerland	3	4	2
Netherlands	25	15	40
Austria	27	44	10
Norway	43	38	45
Germany (FR)	47	37	34
Sweden	91	45	138
Japan	113	128	99
Denmark	162	31	294
Belgium	188	171	206
France	195	200	191
New Zealand	205	131	280
UK	386	239	534
Finland	448	346	550
Spain	474	51	1130
US	474	537	412
Australia	497	312	682
Irish Republic	695	712	679
Canada	765	585	944
Italy	1347	1285	1410
Iceland	1407	1784	1029

Source: Computed from Creigh (1986, Tables 2.3 and 2.4)

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COMMENTS OF FIRST DISCUSSANT:

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John Freebairn has provided us with a very useful overview of some of the most important questions related to Australian labour market arrangements and their implications for economic growth. This is a difficult and controversial area and much care is needed in the interpretation of the data and their relevance for policy formulation. In general his paper is characterised by such caution, although we disagree on some matters. I have chosen to focus on these issues in the discussion following, in part because they are fundamental to current debate. Those areas of his analysis not examined below are considered to be not contentious; silence should be interpreted as approval, of which there is considerable.

Three major issues raised in Freebairn's paper are examined. It is argued below that the data do not support several of his propositions and that the conceptual basis of his assessment is open to question. The topics addressed are Australian real wage flexibility, international comparisons of strike activity, and the relationship between government policy initiatives and labour market arrangements.

Real Wage Flexibility

Freebairn's contention that the Australian economy has exhibited real wage inflexibility is fundamental to his assessment that our labour market arrangements, in particular those related to wage indexation, have delivered relatively low growth. Two criticisms may be made of this perspective.

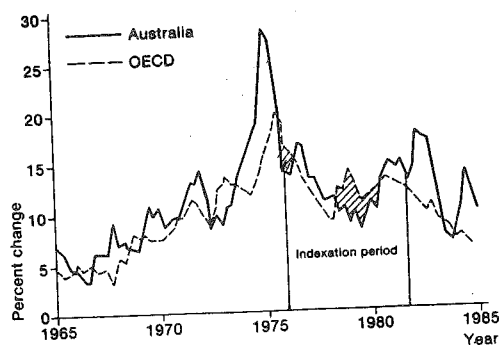
The first concerns international comparisons of real wage flexibility. Two pieces of comparative evidence for the 1970s exist on this issue. One, referred to by Freebairn, is an analysis by Grubb *et al* of both nominal and real wage flexibility in nineteen OECD countries for the period 1957-80. To quote Freebairn "[their analysis] indicate(s) some sensitivity of nominal and in turn real wages to the unemployment level in OECD countries and that Australian wage flexibility was above average over the 1970s" (p.11). Freebairn

* With thanks to John Beggs, Bob Gregory, Eva Klug and Marti Pascall. They have no responsibility for the analysis or opinions expressed.

apparently gives this evidence little weight, choosing instead to derive his conclusions mainly on the basis of Australian time series data. This implies his assessment is not based on cross-country comparisons.

Pursuing further international comparisons, it is of relevance to note that Gregory (1986) presents nominal earnings growth data for Australia and the rest of the OECD. The evidence, illustrated in Figure 1, does not support the case of relative Australian wage inflexibility after 1974. It is instead consistent with the view that Australian wage changes in the indexation period were quite similar to an (unweighted) average of other OECD countries.

Figure 1

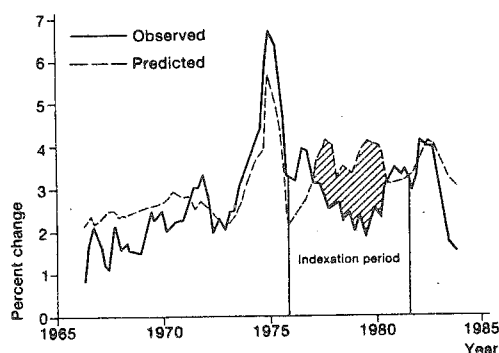


Annual rate of change of earnings: OECD hourly manufacturing wages v. Australian Average Weekly Earnings.

The second criticism of the view that Australian labour market arrangements have delivered inflexibility in the 1970s concerns the role of wage indexation. Gregory (1986) also analyses this issue, posing the counter-factual: what would Australian wage outcomes have been without wage indexation?

Using wage equation predictions across the indexation period, he argues that indexation decreased wage growth relative to what would otherwise have been expected.¹ This is illustrated in Figure 2.

Figure 2



Observed and predicted average weekly earnings using pre- and post-indexation overtime (moving average).

Admittedly, it is well known [Hughes (1985)] that wage equations are notoriously unstable and the results presented above should not be taken too seriously. However, as with the internationally comparative data, the basic point is that empirical attempts to determine the effects of Australian labour market arrangements on wage flexibility have not so far supported the rigidity case. A fair conclusion is that the evidence for this perspective is weak, at best.

Strike Activity

A major theme of Freebairn's paper is that the poor state of Australian industrial relations has contributed to low rates of productivity and productivity growth. As evidence for the case he presents comparative data on working days lost from strikes for 20 OECD countries for the 1962-81 period. Australia ranks 16th. Unfortunately these data have the potential for

distorting seriously assessments of industrial relations' environments effects on strike activity. Importantly, other factors affect strikes - for example, inflation and unemployment - and these variables have differed between the countries concerned. Because average statistics hide their influence there is a need for much caution in assessing strike activity differences as manifestations only of country-specific employee-employer relationships.

John Beggs and I have recently tested the role of Australia's industrial relations environment on strike activity in an international comparative context [Beggs and Chapman (1987)]. The method involved estimating the following equation on annual Australian data for the period 1964 to 1985:

$$WDL/E_i = a + bINF_i + cUN_i + dTIME_i + eACCORD + \epsilon \quad (1)$$

where, for year i , WDL/E is working days lost from strikes per employee, INF is the percentage change (from the previous year) in the consumer price index, UN is the aggregate unemployment rate, $TIME$ is self-explanatory, and $ACCORD$ is a dummy equal to 1 for the accord period (1983-85), equal to zero otherwise.

From theory [Hicks (1932)] and previous empirical work [Bentley and Hughes (1970); Phipps (1977); Beggs and Chapman (forthcoming)] the following signs were expected: $b > 0$, $c, e < 0$ and $d \geq 0$.

We interpret the (intercept and) coefficients as reflecting the impact of the Australian industrial relations environment on strikes. With this perspective it is possible to pose the question: what would strike activity have been in other countries if they had experienced the same inflation and unemployment as they did, but with the Australian industrial relations environment [coefficients from equation (1)]? A comparison of these predicted outcomes with WDL/E actually experienced in these countries gives an important indication of the relative harmony of industrial relations systems, at least as indicated by strikes. If predicted

strike activity exceeds that actually experienced, this suggests that imposing the Australian industrial relations environment would have increased industrial unrest in the country concerned. The opposite is true if predicted outcomes are less than actual.

Estimation of equation (1) in log-log form gave:

$$\text{WDL/E} = -1.867 + 0.583\text{INF} - 1.00\text{UN} + 0.107\text{TIME} - 0.621\text{ACCORD}$$

(9.53) (3.71) (3.19) (3.12) (2.28)

$$\bar{R}^2 = 0.66 \quad \text{D.W.} = 1.98.$$

with absolute t-statistics in parentheses.

Several comments on this result are in order. First, coefficient significance, the consistency of signs with expectations and the absence of (first, and other, order) serial correlation suggests that the model is useful. Second, the estimates are very similar to those obtained in a much more tested analysis of Australian quarterly data for the 1959(1) to 1986(2) period [Beggs and Chapman (forthcoming)]. Third, as a criticism of the simple equation it is arguable that the industrial relations environment itself influences inflation and unemployment and that the model is misspecified. While this may be true in theory, we note two things. One, if union activity increases both inflation and unemployment - the common perspective - this will tend to have counter-balancing implications for WDL/E because of the positive and negative signs, respectively, of the regressors. Two, endogeneity tests in the quarterly estimations did not reveal any significant empirical problem in this regard. In short, the estimation appears to be useful for its intended purpose.

The coefficients were used to predict strike activity for 12 OECD countries for which data were available in the 1964-85 period. The actual and predicted average WDL/E are presented in Table 1.

TABLE 1: Actual and Predicted Average WDL/E, 1964-85

Country	Actual (i)	Predicted (ii)	(iii) (i) - (ii)
Canada	0.751	0.268	0.483
USA	0.375	0.290	0.0851
UK	0.426	0.418	0.00804
Ireland	0.694	0.327	0.368
Italy	1.238	0.373	0.865
Spain	0.541	0.542	-0.00100
France	0.158	0.468	-0.310
Germany	0.0382	0.749	-0.710
Japan	0.0902	0.942	-0.852
Finland	0.419	0.618	-0.198
Norway	0.0384	1.081	-1.043
Sweden	0.0831	1.000	-0.918

Table 1 reveals the following. The Australian industrial relations environment, by this test, apparently delivers greater strike activity than do the industrial relations environments of Japan, Germany, France and the other Scandinavian countries, but lower strike activity than do the industrial relations environments of Italy, Ireland, Canada, the UK and the US. The conclusions differ somewhat for particular sub-periods.

Two major points arising from this exercise are the following. First, international strike comparisons not correcting for the influence of inflation and unemployment exaggerate Australian employee-employer conflict. It is not true that the Australian strike record is markedly and generally higher than the majority of OECD countries. Secondly, Australian strike activity is lower than, or about the same, as the culturally quite similar countries of Canada, the UK and the US.²

These and other related issues require much more investigation. The salient conclusion is that, as represented by strike activity, there is no compelling reason to believe that the Australian industrial relations environment is characterised by relative disharmony. If Australian productivity levels and rates of productivity growth are low because of employee-employer relationships, as alleged by Freebairn, it is important to note that international comparisons of strike activity are not evidence for this.

Government Policy Initiatives and Labour Market Arrangements

The clear implication of Freebairn's analysis is that the (alleged) intransigence of wage levels in the post-1974 period convict the Australian labour market of the charge of inefficiency. But it is important to note that this conclusion is based on somewhat selective evidence. The period of analysis exceeds forty years, so it is not obvious that 7 or 8 years of (alleged) mediocre performance imply negative assessments of the system. Several points may be made to illustrate and developed this issue.

First, Freebairn accepts that up to 1974 a compelling case cannot be made against Australian labour market arrangements. Unemployment levels were consistently low and there is no evidence that wage "explosions" or real wage inflexibility were present.

Secondly, little analysis is undertaken of the period of the prices and incomes accord (1983-86). But an inspection of international data shows that for these years Australian labour market outcomes were at least as good as the rest of the OECD [Chapman (1986)].

On this issue Hughes (1986) takes up the question of relative Australian wage flexibility in the 1981-85 period. His data reveal greater decreases in our real wages than was the case for Japan, Germany, France, Italy, Spain and the UK, and about the same decreases occurring as in the US, Canada and the Netherlands. These pieces of evidence suggest that the most recent period is definitely not one of relatively poor Australian performance.

Thirdly, and related to the above, is the possibility that it is the interaction of government policy initiatives with the Australian labour market institutions that produces relatively poor or good outcomes, rather than the labour market institutions *per se*. Freebairn argues that the ALP government of 1972-75 encouraged, or at least tolerated, large changes in nominal wages that were the root of the post-1974 difficulties. Similarly, a case may be made that the Liberal government influenced wage increases in 1981 through public reference to a forthcoming resources boom. Finally, the apparent initial success of the accord and the 1982 wages pause in limiting wage increases can be seen to be direct implications of government policy initiatives.

If the above perspective is correct, it would appear that assessing the distinct characteristics of the Australian labour market as if they themselves deliver wage outcomes is a misplaced endeavour. A more obvious conclusion is that the nature of our labour market institutions is such as to increase the extent and sphere of influence of government intervention. The point relevant to John Freebairn's paper is that Australian labour market outcomes cannot be judged as if they exist in isolation from government macroeconomic or wage policies.

Summary

Three major points have been made in this critique of Freebairn's paper. The first is that his assessment that Australian labour market arrangements resulted in a slow process of readjustment to the large 1974-75 wage increases is not obviously supported by international evidence. Grubb *et al.*, and Gregory (1986) both produce data pertinent to Australian wage flexibility. If the basis of the assessment is relative to the rest of the world, Freebairn's case is not established. Even if the case is put more specifically in terms of the rigidities inherent in wage indexation, Gregory's (1986) evidence does not support it.

Secondly, Freebairn alludes to the poor Australian industrial relations environment, alleging it has diminished productivity performance. The evidence he cites is international comparisons of average strike activity, where Australia apparently ranks poorly. However, these data are not corrected for the influence of other strike determinants. It has been shown that such a correction affects one's view of relative Australian industrial (dis)harmony. The evidence suggests that Australia is not obviously different from the median OECD country in this respect, and is much the same as the culturally and politically similar countries of the UK, Canada and the US.

Thirdly, a conceptual point was made concerning both choice of sub-periods and the role of government initiatives in influencing labour market outcomes. By choosing the 1950s and 1960s, or the 1983-85 period, for example, it is difficult to argue that Australian experience was relatively poor. It appears to be the case that labour market outcomes are quite sensitive to government policy changes, and that this probably is a result, in part, of Australian labour market arrangements. This in itself does not establish the case against the latter.

Footnotes

1. The data do support, however, Freebairn's opinion - uncontested in this critique - that the Australian "wage explosions" of 1974-5 and 1981 were relatively (and absolutely) high.
2. Given the relatively high degree of unionism in Canada and the UK, Australia's apparently better record may imply a positive role of the Conciliation and Arbitration Commission in decreasing working days lost from industrial dispute.

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COMMENT OF SECOND DISCUSSANT:

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We are much indebted to Professor Freebairn for a scholarly discussion of labour market problems. What I particularly liked was his evaluation of the literature and data on the economic effects of migration and on the key issue of the relationship between real wages and employment. I broadly agree with him on both counts and shall comment only briefly while looking forward to hear other people's views on the issues. Meanwhile, I should like to comment on some other aspects of Professor Freebairn's paper which I found challenging and then proceed to some more critical reflections on the paper's approach and the range of its analysis.

The statistical picture presented of what actually happened in terms of workforce growth, participation rates and labour input, I found very telling. Much of our current economic predicament is reflected in the single fact that from the beginning of the 1970s to the middle of the 1980s our labour force seems to have grown by 29% but aggregate hours worked by only 16%. The paper explains how this was brought about by shorter working hours, and higher unemployment and how combined with the slow growth in productivity it has been a major cause in our unsatisfactory growth performance.

The paper points out that the reduced working hours resulted from decisions by the Commission and that unemployment is higher than need be because of excessive real wages. This makes one ask what causes such negative phenomena? Before pursuing that question, let me first refer to the author's view that

'nowadays few economists, including the author, disagree with the proposition that higher real wages reduce employment and raise unemployment'.

Here one would perhaps need to note that some of the economists (and non-economists) adhering to the majority opinion are quite recent converts and that they do not include a doyen of labour market studies Professor K.W. Hancock. His Committee's report on Australian Industrial Relations Laws and Systems (according to Professor Corden, see CEPR Discussion Paper No.

134) suggested

'that there is no necessary or significant relationship between real wages and employment'.

The absence of any critical discussion of the Hancock report - the most comprehensive study on Australian labour market arrangements in human memory - is a puzzling feature of the paper. This brings me to what seems to me a certain lack of relationship between some of the paper's important conclusions and the analyses which it presents. Thus it blames low productivity on

'lack of incentives and rewards for changes in management and work practices and in management/labour relations;... slow evolution of labour management systems aimed at encouraging and rewarding a motivated and efficient workforce' etc.

Some of these, like the last mentioned, appear to be benevolent prescriptions rather than explanations: what evidence do we have, for example, of any slow evolution towards encouraging and rewarding a motivated and efficient workforce?

Again, in his concluding comments the author asks whether greater economic growth could have been achieved under alternative labour market institutional arrangements and with different attitudes and decisions by employers, employees, and the tribunals. He concludes that 'with hindsight, the answer is obviously "yes" '.

It so happens I agree with the author's conclusions; but what I miss is his analysis of our key labour market institutions, and his prescription for those alternative arrangements to which he alludes.

How will such alternatives achieve economic growth? What statistical evidence is there for that belief?

This very question actually, was asked of me by Professor Hancock when I gave evidence before his inquiry. Professor Hancock is one of those who maintain - mistakenly in my view - that things should not be changed (at least in the field of labour market arrangements) unless statistical evidence is available to prove that the changes would be for the better.

Members of the Industrial Relations Club generally argue for preserving the existing labour market arrangements and the existing institutional structure. Whether or not these things should be preserved and if not, how they should be changed, is the paramount question in today's debate on labour market arrangements.

The paper provides few clues on where the author stands on that key question. The paper's final paragraph contains a list of suggestions ranging from 'greater attention to management/employee relations in a cooperative spirit of mutual benefits', to 'less rigidities in the way of job specifications and adherence to established management and work practices' etc.. Yet the paper does not tell us what institutional changes, what structure of economic incentive is needed to procure these goodies for us.

Indeed, at times the paper seems to waver about its own final conclusions, e.g. if it tell us '...overall only a very weak case can be made that the Australian labour market failed its task of reallocating labour between occupations, industry and regions over the post-war period.'

I would have thought that what the paper says about the flattening of wage relativities, the absence of incentives, the inadequate growth in the acquisition of skills, the differential length of unemployment queues between young and old workers, skilled and unskilled, locally educated and immigrants and so forth; that all this provides ample evidence of failure of the Australian labour market to allocate.

All this left me somewhat confused on how the author arrived at this final conclusion. I have misgivings, too, about the conceptual framework behind his questions.

What exactly is meant by asking whether the Australian labour market has failed its task of reallocating labour between occupations? Such a question, it seems to me, abstracts from the institutional framework of arbitration tribunals and unions, from legislation about shopping hours, about compulsory unionism and tends to create a presumption that market forces and decisions by demanders and suppliers of labour are what govern the allocation of the workforce.

It seems to me that an examination of the Role and Consequences of Labour Market Arrangements (which is the subject of this paper) requires a critical evaluation of the economic

functions of these insitutional arrangements, and of how effectively they perform these functions.

On page 3 of the paper it says '...Australia has developed a unique system for the negotiation, administration and enforcement of labour contracts between employees and employers'. This seems to me to be somewhat misleading because one of the basic features of our unique system is that key matters are not governed by contracts between employees and employers, but by awards (that is: laws) made by tribunals. Nor would it be correct to suggest as the quotation does, that the relevant interaction in the process is between employees and employers. The Commission has often stated that it is not as a rule accessible to employees but deals with matters put to it by representatives of unions and employers associations.

Again it does not seem to me that the paper conveys the right impression of what the 'unique system' is all about when it states -

'...especially after the 1969 O'Shea case the post-war Austarlian labour market operated in the absence of enforceable contracts and of sanctions binding on both employers and unions'.

What this statement leaves unsaid is that the Commission enforced awards (which are not contracts) on employers but rarely on unions. Again the paper says 'the procedures used by tribunals and the presiding commissioners to settle disputes have varied over time and with particular individuals involved'.

This statement notes the absence of impartial law enforcement; with disputes being settled not in accordance with legal prescriptions but at the discretion of judicial Solomons. The paper does not examine the nature of what J. E. Isaac, one of the Commission's senior members, has described as 'accommodative arbitration'; nor is there any reference to the legal provision for preference to unionists which usually amounts to compulsory unionism; nor to the fact that the existing system, far from involving as the paper states (labour contracts between employees and employers) prevents them from entering into such contracts.

The author is aware, of course, that market forces play a minor role in Australia's labour market arrangements. He says 'the existence of some wages drift... and the growth of fringe benefits

provide evidence of some role for market forces'. Yet by focusing on market forces rather than on the massive institutional constraints the paper seems to aim at salting the tail of the problem rather than tackling the dog.

Surely, much work remains to be done by way of economic analysis and critical assessment of labour market arrangements such as the activities of tribunals; restrictive practices by both management and unions; the effect of such arrangements on resource allocation, productivity and the retardation of growth and whether and how more market related structures would yield better results.

I am conscious I may here appear to be grossly unfair to Professor Freebairn for haranguing him merely for adopting a framework for his paper which would appear normal and unexceptional to many academic economists.

Papers headed 'union wage demands and unemployment', 'costs and benefits of the transport workers' strike', 'the economic impact of the Accord' and so forth are hard to find in Australian economic literature. This has often puzzled me. Perhaps in order to stimulate our discussion here I might in concluding put forward some thoughts on what might possibly account for economists' reluctance in clamping the telescope to the sharp eye and focusing it on the institutions of our 'unique' industrial system.

In the first place such studies are often dismissed on the grounds that statistical evidence on such questions is inconclusive. This of course applies to most questions in the social sciences. There is no conclusive statistical evidence, that high taxation reduces incentives or that tariff cuts raise productivity and long term employment. It is not the function of the inductive method in economics to prove propositions beyond all reasonable doubt. Its function is rather to illustrate that what appear to be logically consistent propositions, are not flatly contradicted by evidence and can therefore - on the balance of possibilities - taken to be true.

In the second place, to put it simply, such institutional studies touch on issues which can arouse strong emotions and the ire of powerful vested interests.

I am not here suggesting of course, that economists allow themselves to be swayed by emotion or the disfavour (or favour) of vested interest. Yet such matters can involve questions of both good morals and good sense. The union movement in Australia is the focus of both myth and patriotic legend which make many people genuinely unwilling to participate in studies which may demonstrate that the influence of Australian unions has often been pernicious and needs to be reduced.

Moreover, to involve oneself in that debate is strikingly unrewarding and may even cause one to be called unpatriotic, treacherous or troglodytic by the very leadership of the nation.

Yet for those with a masochistic urge towards involvement in such issues let me point to a comforting analogy. The issue of tariffs and protection is nowadays much analysed; those still arguing for more protection form a dwindling and beleaguered group. And yet not many years ago import substitution behind high tariffs was not merely the accepted creed of all parties but a revered national institution, a sacred cow. The leading historian Sir Keith Hancock said in a book published 55 years ago:

Protection in Australia has been more than a policy, it has been a faith and dogma. Its critics during the second decade of the 20th century dwindled into a despised and detested sect suspected of nursing an anti-national heresy.

The parallel with the present status of unions and arbitration system seem to me illuminating particularly in view of the close historic linkage between our labour market arrangements and those for industrial protection.

To conclude where I began, I think this paper has lucidly evaluated the consequences of our labour market arrangements as reflected in the statistics. In doing so the paper seems to me to highlight the need to subject the role and economic effect of these arrangements and institutions to yet further critical analysis.

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(24-26 November 1986)

- | No. | |
|-----|--|
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| 165 | Freebairn, J., Australian Economic Growth: Labour Market Issues |
| 166 | Elek, A., A. Camilleri and M. Lester, The Role of Technological Change in Australian Economic Performance. (Note: this is a revised version of the paper presented to the Conference). |
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